

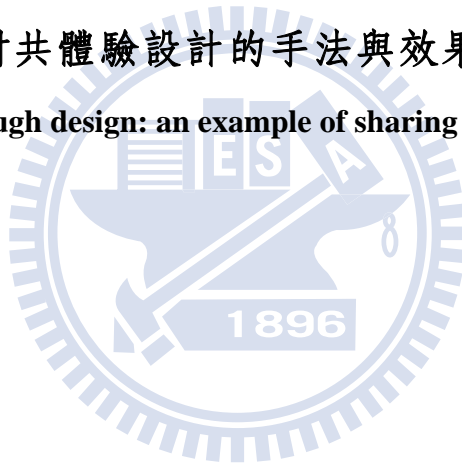
國立交通大學

應用藝術研究所

碩士論文

探討共體驗設計的手法與效果之對應

Co-experience through design: an example of sharing show watching experience



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中華民國九十九年三月

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摘 要

人們常有跟朋友或家人分享經驗的習慣。過去人們以面對面溝通的方式分享著資訊或經驗。隨著網路與科技的發展和普及，網路上亦有越來越多的經驗分享平台。因此，如何創造出好的共體驗已經成為亟需探討的議題。然而，共體驗的平台設計大多牽扯的層面較廣，而目前並沒有相關的設計準則供設計師參考，設計師僅能參考類似的案例。因此，本研究的目的即是瞭解現有平台的共體驗，並進一步討論設計手法與效果的關係，希望提出設計建議供設計師或設計團隊參考。

雖然網路上有越來越多的共體驗平台，然而實體空間中也需要共體驗平台的設計。而公共空間因為具備有任何人都能進入的特點，即是最容易發生共體驗的場域。新竹的東門城是附近居民的大公園，平日或週末時常有樂團或歌手的表演，居民亦會到此活動。因此本研究針對東門城的看表演分享活動做研究。首先，針對看表演活動做訪談，詢問人們對於看表演活動以及分享的經驗，以瞭解現有平台中人們的經驗是如何傳遞與流動。接著，針對東門城的環境選出三個共體驗的概念設計，並將其設置於東門城的場域中，招募使用者做深度訪談，探索使用者對於共體驗平台設計的反應、期待與接受度；並比較設計手法與效果對應的關係。

進一步討論使用者心理的期待與使用的顧忌，及探討不同手法具有的不同意義，並且提出共體驗流程的模型，以供設計師做手法的選擇與設計時的考量，並使共體驗的理論更加清楚與完整。本研究提出的設計建議主要分為：一、符合共體驗流程的建議，二、達到好的共體驗效果之建議，三、共體驗平台的設計需注意的要點。本研究實際操作共體驗平台的設計，並且貼近使用者以獲得使用者對於共體驗的看法，包括對於共體驗平台的期待、期望被滿足的心理需求、以及必需考慮的互動方式。提出之設計建議對於設計師或設計團隊有實際的參考價值。在未來，建議可針對不同手法對應之強度，或者對於虛擬平台與實體空間對人的影響及如何搭配做進一步的研究。

關鍵字：分享、共體驗、原型、設計手法、效果

ABSTRACT

People have the habits of sharing experiences with friends, families, or even strangers. In the past, people shared their information and experiences through face-to-face communication. With the popularization and development of internet and technology, there are more and more experience-sharing platforms on the network.

As a designer, designing a product which has an inviting appearance and practical function does no longer satisfy users nowadays. Consequently, how to create a good user experience in social interaction has become a significant issue which designers pay attention to. However, there were not enough design guidelines for designers to follow up. The aim of this research is to reveal the users' experiences in co-experience, and to discuss design techniques and the reception expectations of users. Moreover, to provide design suggestions for designing co-experience platform is the ultimate goal.

The research plan could be separated into two stages. Firstly, the primary investigating stage was to collect and analyze data from interviewees to obtain a general understanding about current sharing platform. Secondly, the users' opinions were brought up by means of designed prototypes and field-testing. With the investigation of interview, a thorough understanding of current experience-sharing platform was explored. By means of prototype testing we discovered the thoughts of users and presented design suggestions of co-experience to designers.

In the end, users' expectation and concern in co-experience platform were discovered. The roles of different design techniques were also compared to discuss the effects to users. Furthermore, the co-experience model was built up. Moreover, the design suggestions which acquired from the discussion about the design techniques and the effects might be a valuable reference for designers. The suggestions contained three parts: satisfying the process model of co-experience, achieving good effects of co-experience, and the key points need to be noticed. This research gained the user-ended data to understand users' need and worry with prototypes as a research tool. In the future, the intensive of different design techniques could be on direction to be further investigated.

Key word: sharing experience, co-experience, prototype, design technique, effect

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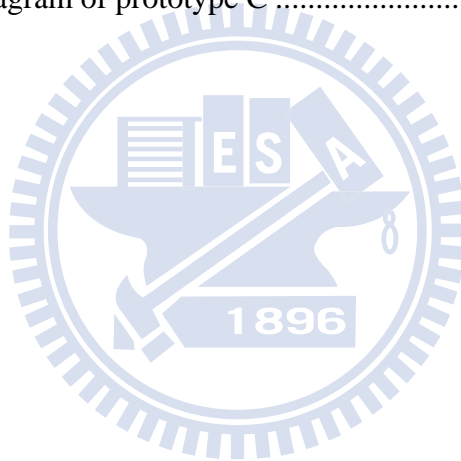
CONTENTS

摘要	i
ABSTRACT	ii
誌謝	iii
CONTENTS	iv
FIGURES	vii
TABLES.....	vii
- Chapter 1 -	
INTRODUCTION	1
1.1 Background	1
1.2 Motivation	3
1.3 Objectives	4
1.4 Research issue	4
1.5 Scope	5
1.6 Limitations	6
1.7 Outline of thesis	6
- Chapter 2 -	
LITERATURE REVIEW	7
2.1 Co-experience.....	7
2.1.1 Definition of co-experience	7
2.1.2 Interaction-centered framework of an experience	7
2.1.3 Principles of co-experience	9
2.1.4 Designing for co-experience.....	9
2.2 Social interaction	10
2.2.1 Social relationship.....	11
2.2.2 Social influence	11
2.2.3 Sharing emotions	12
2.3 Research methodology	13
2.3.1 In-depth interview	13
2.3.2 Affinity Diagram.....	14
2.3.3 Means-End Analysis	14
2.3.4 Group discussion with prototypes.....	15
- Chapter 3 -	
METHODOLOGY	17
3.1 Research issues.....	17

3.2 Research structure.....	17
3.2.1 Interview.....	18
3.2.2 Analysis.....	19
3.2.3 Concept Design.....	20
3.2.4 Prototype sieving.....	21
3.2.5 Field testing.....	22
- Chapter 4 -	
RESULTS AND FINDINGS	25
4.1 Current platform	25
4.1.1 Affinity diagram results	26
4.1.2 Means-end-attribute framework.....	29
4.1.3 Current sharing platform	30
4.1.4 Summary	31
4.2 Discussion with prototypes	31
4.2.1 Prototypes.....	32
4.2.2 Users opinions about prototypes	35
4.2.3 Summary	39
4.3 Design techniques and effect.....	40
4.4 Findings	42
4.4.1 Purpose of attending the show.....	42
4.4.2 Assistance: to increase inclination.....	43
4.4.3 Resistance: to block inclination.....	44
4.4.4 Expectation to the platform.....	44
4.4.5 Opinions about co-experience	45
- Chapter 5 -	
DISCUSSIONS	46
5.1 Roles of different design techniques.....	46
5.2 Mental expectation	49
5.2.1 Purpose for sharing	49
5.2.2 Need satisfaction	50
5.3 Mental worry	52
5.3.1 Personal privacy	52
5.3.2 Platform usage	52
5.4 Co-experience process	53
5.4.1 Co-experience happens	53
5.4.2 Co-experience continues	54
5.4.3 Co-experience process model.....	55
5.5 Design suggestions	58

- Chapter 6 -

CONCLUSIONS	60
6.1 Conclusions of findings	60
6.2 Contributions	61
6.3 Recommendation to future work	62
REFERENCE	63
Appendix A : Questionnaire for interview	66
Appendix B : Scenarios of three prototypes.....	68
Appendix C : Affinity Diagram result of “ends”	73
Appendix D : Affinity Diagram result of “means”	77
Appendix E : Affinity Diagram result of “attributes”	81
Appendix F : Means-end-attributes routes	84
Appendix G : Affinity Diagram of prototype A.....	85
Appendix H : Affinity Diagram of prototype B.....	87
Appendix I : Affinity Diagram of prototype C	89



FIGURES

Fig.1-1 The East-Gate City in Hsinchu	5
Fig.1-2 Variety of activities in East-Gate	5
Fig.2-1 The dynamics of experience in interaction	8
Fig.3-1 The research structure including the process and the deliveries.....	18
Fig.3-2, 3-3 Affinity diagram operation process.	20
Fig.3-4 Design sketches of co-experience platforms.....	21
Fig.3-5 Card-boarding prototypes	22
Fig.3-6.3-7 Field testing in The East Gate.....	24
Fig.4-1 Affinity Diagram result of “ends”	26
Fig.4-2 Affinity Diagram results of “means”	27
Fig.4-3 Affinity Diagram results of “attributes”.....	28
Fig.4-4 Current ways of sharing show watching information.....	31
Fig.4-5 Photo sharing platform displayed on the screen in East Gate.....	32
Fig.4-6 Furthered information and action screen	33
Fig.4-7 The screen shows the atmosphere of the live show was set outside The East Gate	33
Fig.4-8 The bell changed colors with the frequency of shaking	34
Fig.4-9 The East Gate passport.....	34
Fig.4-10 The postcard for inviting friends.....	34
Fig.4-11 Affinity Diagram of prototype A.....	35
Fig.4-12 Affinity Diagram of prototype B.....	36
Fig.4-13 Affinity Diagram of prototype C.....	37
Fig. 5-1 Process flow of platform A (A and B represents one of audiences).....	55
Fig. 5-2 Process flow of platform B	56
Fig. 5-3 Process flow of platform C	57
Fig. 5-4 Co-experience process model	57

TABLES

Table. 3-1. The issues and following questions in the questionnaire.	19
Table. 3-2 The framework of prototyping attributes analysis.....	22
Table. 3-3 The issues and following questions in the interview script.....	23
Table. 4-1 The means-end-attribute framework of show-watching	29
Table.4-2 The synthetic framework of three prototypes.....	38
Table.4-3 The framework of the mapping between design attributes and effects	40

Table. 5-1 The effects of different medias of sharing.....	47
Table. 5-2 The effects of physical artifacts.....	47
Table. 5-3 The effects of different length of remaining.....	48
Table. 5-4 The effects of time and location	48
Table. 5-5 The effects of virtual or real space	49
Table. 5-6 The effects of ease of giving feedbacks	49



INTRODUCTION

People do sharing their life experiences with friends, families, or even strangers. In the past, people shared their daily life through face-to-face communication. With the popularization and development of internet and technology, there are more and more experience-sharing platforms on the network. There were more and more related sharing activities are shifting to virtual platform. For example, people shared their daily life or impression on blogs, or they shared their photos on Flickr or Facebook. A survey of social networks conducted by comScore (2010) has shown that Facebook and MySpace are now the largest social network in the world. In the end of 2009, Facebook had more than 300 million visitors, and they are also the fastest growing social network in the world. With the growing of virtual social platform, it shows that people have more diverse channels to communicate with others by means of new technologies.

In order to explore the new directions for designing future social interaction platform, the essence of social interaction has become the key issue in the research. We especially focus on the social interaction in the experience-sharing platform, such as BBS, blogs, or Facebook. Therefore, the idea of co-experience talked about the user experience in social interaction was brought into the investigation. A study on sharing experiences of show-watching in the public space was conducted to explore the user experience and the requirement in the whole sharing process through different kinds of communication mediums. We argued that investigating the activity of sharing experience could provide the insights of users' experiences, and point out the new directions for future co-experience platform design.

1.1 Background

As a designer, designing a product with an inviting appearance and a practical function is fundamental. In the past 20 years, designers have exerted themselves to design impressive products. They put aesthetic elements into real-life products and gave them more attractive appearances. They have also taken the relationship between the form and the functions into consideration. Designers have become magicians who grant new life to a product.

However, there is a gap between users and designers. (Norman, 1988) Besides appearances and functions of products, user experience has become one of the significant issues that designers and researchers pay attention to. Nowadays, users' demands no longer focus on functional realizations and good usability. In order to satisfy users' needs, designers need to produce products that can raise users' experiences in the reception level. In the era of "experience economy", people look forward to gaining more and more pleasant experiences than function-oriented products. (Joseph & Gilmore, 1998) How people feel has become a more significant aspect than what products provide in the first place.

More noteworthy is the user experience found in social interaction, which is called "co-experience". (Battarbee, 2003a) Comparing with a simply attractive product, creating more chances to interact with family members or friends brings much deeper user experience to users. People like to have joyful user experience when communicating with friends through products or devices. Therefore, how to create a good co-experience has become a new issue which designers pay attention to. This subject deserves more than a passing notice.

Human being lives in groups. In other words, people can not live without their families or friends. Gregarious instinct is the reason why human beings have social meanings. (McDougall, 1924) People like to spend time hanging together, keeping each other company and that's why social activities exist in people's daily life. From the western party culture to the reunion dinner of easterners, it's clearly demonstrated that not only do people need to cluster with others but they also enjoy it. Therefore, for designers, it is much more important to provide more opportunities for users to enjoy being together with family and friends. (Battarbee, 2003a)

As sociable beings, people also like to share their daily life or life experience to their friends, (Battarbee, 2005) whether it is good or bad experience. For example, when a person finds a particular cuisine from a restaurant delicious, he would share the news with friends and finds it satisfying to know they likewise enjoy the meal. On the contrary, if his experience in the restaurant is as bad as having unsavory food or incompetent services, he would inform his friends.

Through sharing experiences, emotions could be expressed psychologically. By telling their experience, as if telling a story, people expect it to influence their friends, and to gain good interactions with others. Through the exchange of feelings, emotions and affections, people know each other more and deeper.

With the exception of interacting with friends or family, providing a better user experience in social interaction will lead to a finer and more valuable life. While it is beneficial to human being, little attention has been dedicated to it. If designers can promote social and emotional interactions, extra satisfaction will be obtained psychologically by users. Therefore, how to promote social interactions through designs has become an important issue.

Meanwhile, public spaces, such as town squares, parks, or government buildings, are important platform for co-experience. A public space refers to an area or place that is open and accessible to all citizens, regardless of gender, race, or age. People go there without paying any tickets so that it becomes the gathering place of citizens. A variety activities were took place here, such as walking, relaxing in a cool place, chatting, or playing chess. Therefore, the public space is the most frequently place that people have chances to interact with each other.

1.2 Motivation

Nowadays, the concept of “co-experience” is still novel to most people and the current references for designers to follow up are extremely limited. What designers could do is referring to other similar cases, but the key concept is still beyond reach, and they have no means to follow up the design cases of co-experience. In addition, most of co-experience design cases were complicated and the users’ emotional feelings should be considered by ways of psychology. That is to say, a co-experience design usually involves a spectrum of aspects and therefore not easy to carry out.

In addition to face-to-face communication, it is common for people to share with each other via virtual environment. With the popularization and development of internet, more and more experience-sharing platforms can be found on the network. For example, BBS is one of the oldest experience-sharing platforms in the world. There are various “discussion boards” featuring a wide variety of topics---- studying abroad, shopping, exercising, etc. Enthusiastic discussions and debates fill the boards on BBS. Nowadays, people write articles more often on their own blogs to record their life experiences. The articles have become not only the record of life, but also the references of other blog viewers. Other social platforms, like “Yahoo! Knowledge+”, “Flicker”, and “Facebook”, are especially popular with the younger generation. Through sharing their experiences on those platforms, people could express their emotions in mind. By telling their experiences, making them stories, people expect their experiences to affect their friends. In addition, they are eager to gain connection with their friends through any possible mediums.

Meanwhile, technological progresses have freed designers of some limitations. They could make use of information and communication technology---- such as RFID (Radio-frequency identification), WiMax (Worldwide Interoperability for Microwave Access) ---- to assist them in designing platforms or service. In response to the coming era where the users' demands may undergo dramatic changes, how to make good apply technology and information to create a better interaction experience can be regarded as an important and urgent topic.

1.3 Objectives

Though there is no denying that the social interaction design plays a more and more significant role in our communication life, designers are still mired by the fact that designing such complex systems is challenging. Therefore, our objectives in this research are as follows:

- a. to have a understanding about the user experience in watching shows and how co-experience happened in the current platform.
- b. to figure out what users care about in co-experience platform
- c. to comprehend the mapping between the designing approaches and its corresponding effects in users' co-experience.
- d. to present to designers design suggestions based on social interaction or co-experience.

1.4 Research issue

The research aims to figure out what users' need and how users feel in co-experience. We would like to obtain users' opinions on sharing experience of shows watching. The research issue is to discover what kind of design techniques ware corresponding to high effect of co-experience, including how users sharing their experience, whether they need a better ways to share, and how they think about the co-experience platforms.

Thinking of public space as a gathering place, we chose The East Gate in Hsinchu specifically to be our researching area. The East Gate is the heart of Hsinchu city, and a famous historic spot for sightseers. It also functions as a city park for residents to spent time in. On weekends, there are outdoor live shows in The East Gate. Most shows are underground live bands, and some are sentimental folk music. We choose to observe the sharing live show watching experience in here as our research object.



Fig.1-1 The East-Gate City in Hsinchu

The data was collected from the common publics who went to The East Gate to watch the show. Target users include both the local citizens and students from cities other than Hsinchu. Please be noted that all informants are Taiwanese users.



Fig.1-2 Variety of activities in East-Gate, such as children feeding fishes, students dancing, live-band singing.

The research of the current sharing platforms can applied to all activities of sharing experiences----sharing experience is the keyword. When people share their own experience, they would simultaneously share their opinions, information, and emotions. All kinds of experience-sharing will be looked into in this research.

1.5 Scope

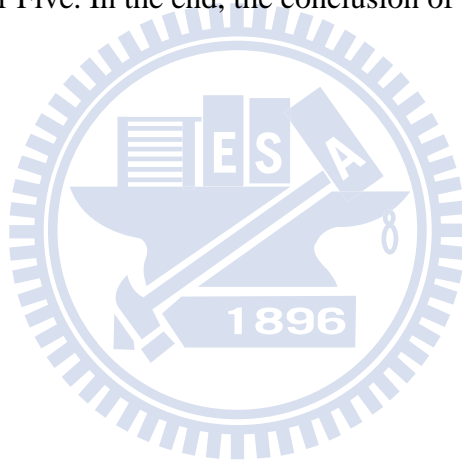
This paper is intended as an investigation to mediums of experience-sharing. Therefore, the commercial propaganda applied, the types of show, and their related contents are not our concerns here. The results of this study could be possible references for design in the domain of social interaction; yet, they are not suitable for purposes of propagation or management.

1.6 Limitations

Since the study was planned under geographical limitations, the informant as a whole was chosen from Taiwan; and the limited time constrained researchers to budge down the informants by recruiting between ages twenty to thirty. And we are also limited financially and therefore were not allowed to make original-sized models as seen in the reality field.

1.7 Outline of thesis

This thesis consists of five chapters. The background, the motivation, the objectives, the research issue, the scope, the limitations, and the outline of thesis are introduced in Chapter One. Relevant studies of co-experience, sharing experience, and research methodologies are reviewed in Chapter Two. The method for data collection and analysis are described in Chapter Three. The analyzed results of two research phases and summarized findings are presented in Chapter Four. The discussion and the design suggestions are in Chapter Five. In the end, the conclusion of this thesis is in Chapter Six.



LITERATURE REVIEW

The purpose of this thesis is to obtain the present understanding of users' sharing experiences via face-to-face communication or digital media in show-watching activities. In order to facilitate the following discussion about the research scope and its main direction, we begin by reviewing existing researches that are relevant to user experience, especially those on social interaction and the methodologies for user experience research.

2.1 Co-experience

As time progresses, designers' focus has been gradually shifted to the user experiences about the interaction of using product, and also the experience of interacting with others. In other words, the concept of user experience needs to be expanded to encircle not only the aspects of individual experience, but also to take into account the social aspects. (Battarbee, 2003a) For this reason, designers should no longer focus solely on a product. To good designers, a successful design aims at "co-experience" and all the elements that would help achieving interactions will be taken into consideration. (Forlizzi & Ford, 2000)

2.1.1 Definition of co-experience

The user experience which is created in social interaction is called "co-experience" (Battarbee, 2003a). Through the development of personal communication technologies and digital media products (Battarbee, 2003b), the first idea of co-experience was brought up by James (1996). Co-experience has been broadened and completed the ways in which user experience and design professions has concentrated. (Battarbee & Koskinen, 2005)

As Katja Battarbee(2003b) pointed out, "co-experience is the seamless blend of user experience of products and social interaction." When people use technological products to communicate with others, they produce much more creativity and interesting experiences. (Sanders, 2002) And to do something together for fun will bring out different emotions and satisfaction while social ties will be strengthened as well.

2.1.2 Interaction-centered framework of an experience

To talk about experience in a systematic way, a framework of user experience in the interactive system is applied here. The framework yielded by Forlizzi & Ford (2004)

states three levels of experience: “experience”, “an experience”, and “co-experience”. The first one, experience, is the constant stream of “self-talk” that happens while we are conscious. “An experience” is something that could be expressed or articulated, and it often inspires emotional or behavioral influences on others. Finally, “co-experience” takes place when experiences are created together, or when lifting up experiences are shared with others.

An easy instance to explain: to go visit a restaurant is “experiencing,” which is a continuous “self-talk” that happens when we interact with products. After experiencing, you talk to your friend about the restaurant in ways of storytelling. (Forlizzi & Ford, 2000) At the moment, “experiencing” became “an experience”. If the friend goes to the same place and comments on it as feedbacks to you, then both of you are having “co-experience”.(see Fig. 2-1)

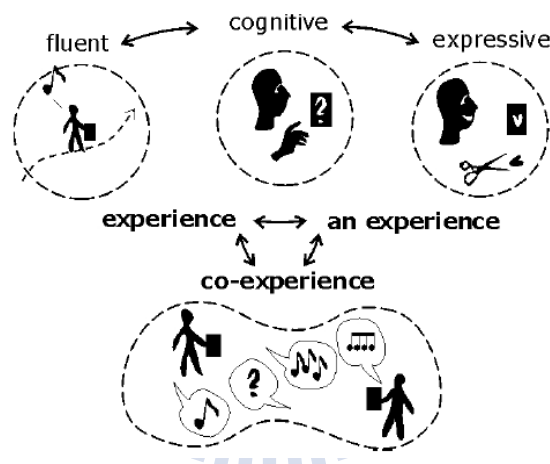


Fig. 2-1 The dynamics of experience in interaction

Note. Cited from “Understanding experience in interactive systems”, by Jodi Forlizzi & Katja Battarbee(2004), Proceedings of the 5th conference on Designing interactive systems: processes, practices, methods, and techniques, August 01-04, 2004, Cambridge, MA, USA

Furthermore, there are migrations happened between different levels, from the center of attention to the periphery or into stories and acts of personalization and back again. We could see the general ways of migrations as bellows,

a. Lifting up experiences to shared attention

Through a social process, subconscious experience often migrates to become “an experience”. People constantly lift things from their everyday life and communicate them to others. They will evaluate whether the event is worthy to be told or not.

b. Exchanging experiences

Once experience is lifted up, recipients' would react accordingly in terms of acknowledge, information, and their responses. For example, they may reciprocate by sharing their own similar experiences or simply offer a sympathetic response.

c. Rejecting experiences

Finally, experiences brought to the attention of others may also be rejected or downgraded by others. For example, something that is important for one person may be too familiar, uninteresting or even offensive to others. They may indicate this in various ways to soften the rejection. (Battarbee & Koskinen, 2005)

2.1.3 Principles of co-experience

Since the concept of co-experience was brought up, the role of designers in co-experience should be considered. That is to say, what designer cared about will be the essence of co-experiences. In other words, high quality of co-experience designs should conform to the following criteria:

a. Co-experience is social

Co-experience depends on human communication. In social interaction, the responses will create the incentive to respond and continue.

b. Co-experience is multi-mode

With various communication technologies, co-experience takes place in many forms. Except face-to-face communication, there are many other ways to technologically connect with others.

c. Co-experience is creative

People shared their focus of everyday life. Co-experience should be a creative resource which motivates social innovation. It is the way with which participants make things meaningful for others, as well as the way people use to gain experiences.

d. Co-experience is for fun

Co-experience is something people do for pleasure. They do it to have fun together, to keep in touch with one another and to strengthen social ties. (Battarbee & Koskinen, 2005)

2.1.4 Designing for co-experience

For the purpose of co-experience, Battarbee(2004) proposed some principles on designing:

- a. People are involved and present in a user-centered process to overcome studio-based contemplation of irrelevant issues.
- b. More than one person is involved in a unit of study, to create the conditions for co-experience in a manner that is appropriate for the design context.

- c. The interactions and co-experiencing take place in a real context, not a laboratory.
- d. People are the authors of their own experiences. They are involved as creative actors, who can and will engage with available products that support them in their interests, their social interaction and experiences that they find meaningful.
- e. Experiences are followed over time, with an eye to trace the trajectory and path of the experiences after the “first five minutes” and the “first five days” and to be sensitive to the process of exploration and redefinition that takes place.

2.1.5 Summary

Based on the definition and the principles of co-experience yielded by several savants, the essences and the characters of co-experience were comprehended. In the following research, we referred their definition and findings to develop co-experience concepts. Except for being the help for concept phase, the principles are also the standard of evaluating if achieving the effect of co-experience.

According to the principles on designing co-experience proposed by Battarbee (2004), the design principles also influenced our research structure. For example, he mentioned that the interactions and co-experience would happen in a real context instead of a laboratory, so we chose a real public space, The East Gate, for our research field. It became the platform we designed for and the field we did research as well.

2.2 Social interaction

In the past, many methodologies or theories have been constructed assist in the effort to understanding user experience. In order to adapt to and thus satisfy designers' demands, more and more ethnographic methods is being applied to the field of design in both academic and business sense. Moreover, designers also use ethnographic methods adapted from anthropology, and methods from social and behavioral science to explore the form, the function, and the content of the products. Even so, the focus is the interactions between human and products, and the experiences results from the interactions. These experiences include physical, sensual, cognitive, emotional, and aesthetic ones. (Forlizzi & Battarbee, 2004)

A particular example is the interaction design, to which more designers have devoted themselves. Their concerns no longer fixate on single product attribute. Instead, they need to refocus on user experiences that are generated from the interaction of using product, its context, and also the interactions with others. (Liu & Deng, 2004)

2.2.1 Social relationship

People are believed to be group-oriented. As long as there are social interactions, people would gain senses of satisfaction and even happiness. In the discipline of social psychology, “gregarious instinct” could be the explanation of why people tend to interact with others. (McDougall, 2000) Nowadays we can easily see the effects of “gregarious instinct” in our civilized society. To cite an instance: instead of watching TV broadcast alone at home, people like to watch football or baseball game as live entertainment where crazy fans fill the court. Even when they have no options but to watch the broadcast, they would choose to watch the game with friends or with a group of strangers accidentally met at the bar. That’s because people enjoy the atmosphere of shouting and clapping at the same time, especially the idea that everyone is caring about the same thing. (McDougall, 2000)

People establish all sorts of interpersonal relationships through associating with others such as friends, families, classmates, and the instructor-apprentice relationships. The relationships give first place to the mental affections which is the reason why it was different from other social relationships. The interpersonal communication which people exchange information, thoughts, and emotions is also the most important interaction behavior. (Chen, Chung, Feng, Chou & Yen, 2004) Moreover, these relationships usually include some level of “interdependence.” People in a relationship tend to influence each other, share their thoughts and feelings, and engage in activities together. Consequently, through the interdependence, most things that change or impact one member of the relationship will have some level of impact on the other member as well. (Joseph & Gilmore, 1998)

McMillan & Chavis (1986) defined “sense of community” as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together.”. He also proposed that “sense of community” is composed of four elements : membership 、 influence 、 exchange of support among members 、 shared emotional connections. He said that shared emotional connections include shared history and shared participation (or at least identification with the history).

2.2.2 Social influence

Referring to McMillan & Chavis’s(1986) theory, the elements of “sense of community”, in purpose of influence was pointed out as followed: “Influence works both ways: members need to feel that they have some influence in the group, and some influence by the group on its members is needed for group cohesion.”

Social influence occurs when an individual's thoughts or actions are affected by other people. Social influence takes many forms and can be seen in conformity, socialization, peer pressure, obedience, leadership, persuasion, sales, and marketing. Herbert Kelman identified three broad varieties of social influence.

- a. Compliance -when people appear to agree with others, but actually keep their dissenting opinions private.
- b. Identification - when people are influenced by someone who is liked and respected, such as a famous or a favorite celebrity.
- c. Internalization - when people accept a belief or behavior and agree both publicly and privately. (Kelman, 1958)

2.2.3 Sharing emotions

In social interaction, empathy has been taken as the foundation for people to understand each other. Empathy is one of the emotion and affect functions. When someone has emotions, he can not only feel it by himself but also be conscious by others through his expression. Once the feeling became unanimous, the affection sympathy would come into existence. (Chen et.al, 2004)

Through constant sharing emotions with others, people attempt to find satisfactions. When someone shares our emotions, they would be further strengthened by empathy, and therefore more happiness would be produced.(Mc Dougall, 2000) In other words, the affect will change or strengthen the original feeling through sharing what they feel. (Chen et.al, 2004)

2.2.4 Summary

Through the related social psychology research, we knew that people have the instinct to interact with others, and then construct social relationships. In the varieties of relationships, people gradually develop sense of interdependence. From the social influence aspects, everyone needs to see their impact on others. Besides, by means of understanding the elements of “sense of community”, they indicate what helps co-experiences happen in the public space. Based on those references, what people need and how people behave were brought out. They were referred to in the following concept design, data interpretation, and discussion the co-experience process phases.

2.3 Research methodology

There are several main methodologies which were applied in the research. The “In-depth interview” is the method of acquiring data from users’ thoughts. The “Affinity Diagram” and “Means-End Analysis” are the method to analyze a great quantity of data. Furthermore, “Group discussion with prototypes” is the way to probe users’ ideas about the design and the issues.

2.3.1 In-depth interview

In-depth, qualitative interviews are excellent tools to use in probing users’ thoughts and evaluating systems. An in-depth interview is an open-ended, discovery-oriented method that is well suited for describing both system processes and outcomes from the perspective of the target audience. The goal of the interview is to deeply explore the respondent's point of view, feelings and perspectives. In this sense, in-depth interviews yield information.

There are key characteristics that differentiate an in-depth, qualitative research interview from a regular interview. Some key characteristics of in-depth interviews include:

a. Open-ended Questions.

Questions should be worded so that respondents cannot simply answer yes or no, but must expound on the topic.

b. Semi-structured Format.

Although you should have some pre-planned questions to ask during the interview, you must also allow questions to flow naturally, based on information provided by the respondent.

c. Seek understanding and interpretation.

You should try to interpret what you are hearing, as well as seek clarity and a deeper understanding from the respondent throughout the interview.

d. Conversational.

You should be conversational, but your role is primarily that of a listener. There should be smooth transitions from one topic to the next.

e. Record responses.

The responses are recorded, typically with audiotape and written notes (i.e., field notes)

f. Record observations.

You observe and record non-verbal behaviors on the field notes as they occur.

g. Record reflections.

You record your views and feelings immediately after the interview as well. (Guion, 2001)

In this research, this method was adopted in the investigation stage to interview the informants about their past experience watching live shows. In this phase, the questions were easier to answer and the total time is shorter around 30 to 45 minutes, because the purpose of the first stage is to comprehend the overall situation. Though, the process of interviewing still followed the guidelines above. In addition, the method was also applied in the discussion with prototypes stage. When the informants were invited to The East Gate, they were interviewed with more deep questions in around 1 to 1.5 hour to find out what they think about the prototypes.

2.3.2 Affinity Diagram

The Affinity Diagram was devised by Jiro Kawakita in the 1960s and is sometimes referred to as the KJ Method. The affinity diagram is a tool used to gather and organize ideas, opinions, issues, etc. The tool is commonly used within project management and allows large numbers of ideas to be sorted into groups for review and analysis. Ishikawa(1990) recommends using the affinity diagram when facts or thoughts are uncertain and need to be organized, when preexisting ideas or paradigms need to be clarified, and when unity within a team needs to be created.

In this study, the Affinity Diagram is used for sorting and organizing informants' opinions about sharing experiences into related groups. After interviewing several informants, we need to organize and consolidate each idea from different informants. Some statements were similar and some were not so important to be notice. In this purpose, we simply marked keynotes from interviews and wrote on 3" x 5" cards or Post-it (cards are more durable, but Post-its stay where they are put—even on vertical surfaces). The cards with similar statements or ideas may then be moved into similar groups. Each group is named with a header card and the groups are again grouped into larger groups. In this way a hierarchy or tree is built, bottom-up. The result is known as an Affinity Diagram. From the diagram, some issues which were worthy to be noticed would be raised up. Then the results would help us to do further qualitative interpretations. To sum up, it is the method that helps us researchers to have a clear standpoint to control a large number of gathered information from users' opinions.

2.3.3 Means-End Analysis

Means-End Analysis(MEA) is one of the oldest ideas in Artificial Intelligence for controlling search in problem solving computer programs. It was named and studied by Newell, Shaw, and Simon in the 1950s, and was the key idea behind the General Problem Solver (GPS) (McDermott, 1966) It is also a technique used as a creativity tool, most frequently mentioned in engineering books on design methods. Means-End Chain is also a

technique in marketing for categorizing customer goals.

The Means-End Chain theory is based on the assumption that consumers connect the motivation to purchase a product with positive emotions. A hierarchical value system (eg, comfort) of the consumers towards a product mean that buyers ask for brands as a set of characteristics (means) to achieve desirable states (ends) to. Often these value hierarchies are unconscious and therefore difficult to measure the resulting decision behavior. The Means-End Chain theory provides methods represent these cognitive mental decision processes. (Herrmann Andreas, 1996)

In this research, MEA is used to organize keynotes from interviews to three levels which are ends (objectives), means (methods), and attributes (characteristics). The operation process of Means-End Analysis for analyze data from interview are as follows,

- a. Take out the functional, social or psychological objectives and put them in the “ends” category.
- b. Collect the following ways or actions for the individual purpose and put them into “means” category.
- c. Gather concrete and abstract characteristics of a product or an activity and put them into “attributes” category.

After sorting all data into three categories, three categories were arranged and presented horizontally as a framework. Meanwhile, the MEA method was collocated with an Affinity Diagram in this research. All keynotes gathered from each informants were sorted into three categories followed with MEA, then arranged those keynotes in each categories with Affinity Diagram. From the framework, researchers could find out the association in each subcategory and interpret the relationships in between.

2.3.4 Group discussion with prototypes

Prototyping puts concrete interfaces into the hands of users much earlier than the final product, albeit limited in features, shows and stability. A prototype is an original type, form, or instance of something serving as a typical example, basis, or standard for other things of the same category. Prototypes are used to confirm and verify consumer interest in a proposed design whereas other prototypes will attempt to verify the shows or suitability of a specific design approach.

In general, an iterative series of prototypes will be designed, constructed and tested as the final design emerges and is prepared for production. With rare exceptions, multiple

iterations of prototypes are used to progressively refine the design. A common strategy is to design, test, evaluate and then modify the design based on analysis of the prototype.

Interaction designers use a variety of prototyping techniques to test aspects of design ideas. These can be roughly divided into three classes: those that test the role of an artifact, those that test its look and feel and those that test its implementation. Sometimes, these are called experience prototypes to emphasize their interactive nature. Prototypes can be physical or digital, high or low-fidelity. (Borchers, 2001)

To let informants experience prototypes is any kind of representation, in any medium, that is designed to understand, explore or communicate what it might be like to engage with the product, space or system we are designing. Obviously this can include design prototyping techniques such as storyboards, scenarios, sketches, videos, or steps through simulations, all of which certainly add value by communicating elements that make up an experience. (Buchenau & Suri, 2000)

In order to gain what users care for and their reception about the design techniques in this research, the method of prototyping was adopted to probe informants' idea about the co-experience design concepts. In the prototyping phase, we developed concepts and chose three designs which has different attributes, then made the prototypes on card boards and put them in the research field. Several informants were invited to the field and experienced those prototypes. After experiencing, they discuss what they have experienced and how they felt. In a word, prototypes as a probing research tool to grasp users' ideas about the design and help researcher to sort users' thoughts about design techniques.

- Chapter 3 -

METHODOLOGY

This research aims at discussing designing techniques and corresponding effects by way of analyzing users' feeling and thoughts in co-experience. The prototypes serve as research tools to explore what users care and need in co-experience platforms. The research plan could be separated into two stages. Firstly, the primary investigating stage was to collect and analyze data from interviewees to obtain a general understanding about current sharing platform. Secondly, the users' opinions were brought up by means of designing prototypes and field-testing.

In this research, the main issues involved the whole context of sharing experiences in social interactions and unintelligible thoughts of users. We focus on the shared-experience of watching live-show, such as music, drama show, or any kinds of ball games, as our main investigated activities. The results can be applied to all sorts of sharing experience platforms.

3.1 Research issues

The research aims to figure out what users' need and how users feel in co-experience. The first phase is to understand how people shared their information and experiences about the show-watching and why they tend to share. Moreover, we tried to understand the characteristics and the advantages and disadvantages in different ways of sharing. In the second phase, the main issue is to know how users feel about different prototypes with different attributes. To discover users' true desire is the main objective of co-experience designers. In the second phase, we compared users' corresponding feelings toward different design prototypes.

3.2 Research structure

To explore the issues, there are two phases in our research.(see figure 2) The first is the investigation procedure where we try to reach a general understanding of current ways of sharing in terms of show-watching experience. It was carried out by holding interviews and doing Means-Ends Analysis. With full-scale understanding, design elements and the users' perspectives of present communication platform are emerged. The second phase is to discuss prototyping processes. According to the exploration in the previous stage, three

prototypes were designed with different attributes as probes to find out in depth about users' reception.

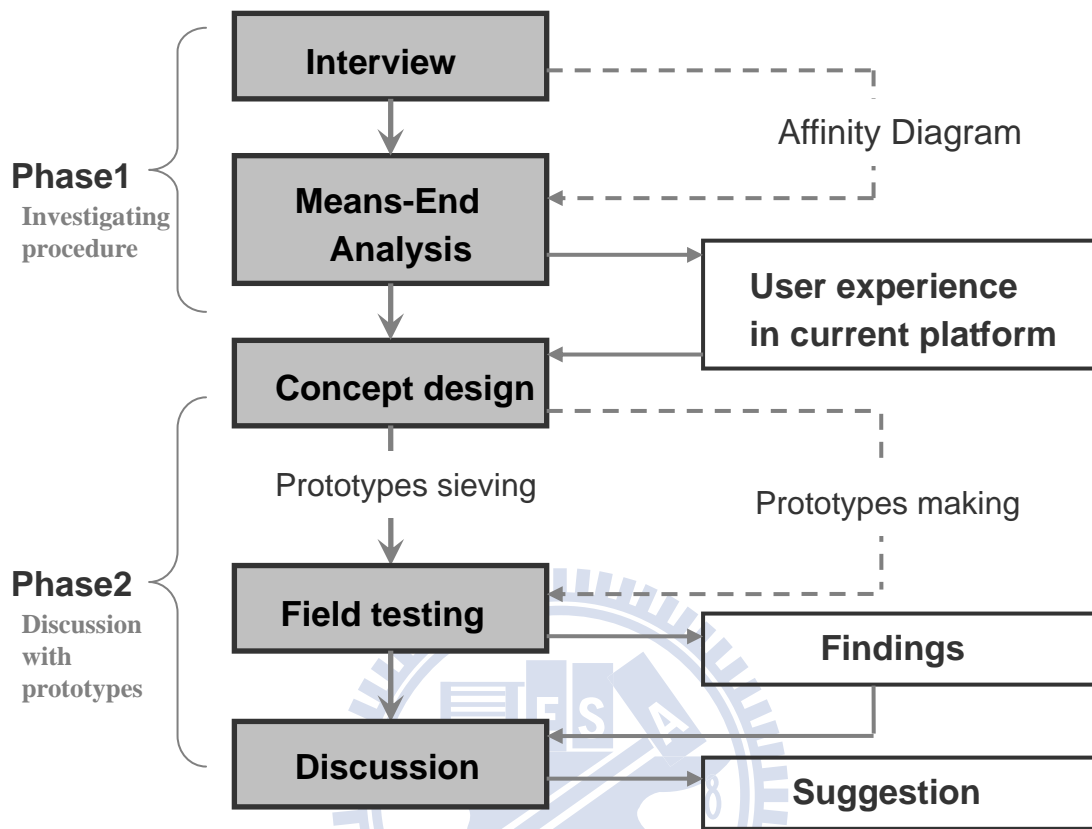


Fig.3-1 The research structure including the process and the deliveries

3.2.1 Interview

In the first stage, we tried to understand how audience shares their show-watching experiences and what they think about them. Fifteen informants, from teenagers to youths, were recruited to participate in the interviews. All the participants had enjoyed live shows such as theatre show, music concerts, baseball games, or street acrobatics, for more than twice. To thoroughly apprehend how the idea of sharing experience works, informants' past experiences have been conducted during the interview: how they had been informed of the show, what had encouraged them to join, and finally the sharing experience they had had with their family and friends.

In interviews, the first part includes informants' personal information---- names, ages, sex, occupations, and so on. The second part is to record their past experience of going to a live show. The type of the show, the appeal that attracted them to watch the show, and the channels through which they gathered related information. Finally the third part, we explore the sharing experience. It involves the targets they shared with, ways of sharing,

and how they consequently felt about it.

In the questionnaire, there were few main issues that we would figure out, such as the motivation to attend the show or the channels of expressing the information about the show. Meanwhile, several questions were drawn up to investigate those issues. For example, in order to know the motivations to attend the show, we asked their past experiences and the reasons why they decide to do it. The following table shows the mapping between the issues which we were curious about and the questions in the questionnaire. (see Table. 3-1, for details please refer to Appendix A) The list of questions was standardized only in part since we did not want to limit our observation to a narrow scope in the first phase. Therefore some questions were listed as standard ones while others were included as open questions that could be applied according to actual circumstance.

Table. 3-1. The issues and following questions in the questionnaire.

Issues	Questions
Motivation to attend the show	1. What kind of show did you ever attend?
	2. Why did you go for the show in the beginning?
Channels to express the show information	3. How did you get the information or messages about the show?
	4. Will you search more related information about the show?
	5. Have you ever join a show under someone's influence?
Objects of sharing experiences	6. Who would you share with after watching the show?
	7. Will you give the feedback to someone who provide you the information?
Ways of sharing experiences	8. How would you share the experience?
	9. If you write your experience on your blog, what would you post on?
Feelings after sharing	10. How did you feel after sharing?

3.2.2 Analysis

After interviewing 15 informants, we gathered four designing experts who had over four years of designing experience to analysis the data. First of all, we reviewed the interview recording and picked up the important sentences as keynotes, then wrote down on Post-it. Secondly, for the purpose of clearly understand the current sharing platform of The East Gate, all the extracted keynotes were sorted into three groups following the Means-End Analysis. Means-End Analysis is a method of categorization process which is

borrowed from marketing. Three groups were defined separately as: “ends” means the purpose (why); “means” indicates the channel (what); and “attributes” implies the content (how).

At one time, in order to simplify all the opinions from each informants and extracting key issues, we did data-sorting with Affinity Diagram. Affinity Diagram is an approach applied to organize those notes into hierarchic clusters that disclose certain issues. First step is to collect similar keynotes in one group and name it with one header. Then do the same step until each keynotes were sorted and there were around three to four groups.



Fig.3-2, 3-3 Affinity diagram operation process.

The analyzed data were then arranged to form a framework showing the overall understanding about users’ experiences of show watching. From the framework, we can see the content of different levels and their interactive relationships. It also reveals the unapparent social interaction in the experiences. Besides, we focus on the co-experiences which people communicating their experiences about show watching. The sharing contents are such as their feelings, points of views or the related information about shows.

3.2.3 Concept Design

In order to discuss the design techniques and the effects, co-experience concept designs were involved into The East Gate. After investigating the user experience in the current sharing platform, several concepts which aim to make The East Gate become a co-experience platform of sharing the experience of show watching were developed. Hence, four design experts which had more than three years designing experiences were invited to develop the co-experience design to The East Gate. In concept development, the primary research results are as the references of the current ways that people sharing their experiences. Referring to Battarbee & Koskinen’(2005) research and comparing to several design cases (see p.11), the essence of co-experience was captured by designers. Those references and the design cases helped designers to create ideas about making The East

Gate a co-experience platform.

The concept design goal is to add new design activities or equipments which can make users have co-experience in The East Gate. Besides, for the sake of discussing different design techniques, we planned to design different co-experience activities in The East Gate which have different gradation. For example, the design may be different on the sharing targets, such as sharing experience with close friends or family, their friends who have the same interests, or those who they don't know each other. During concept development, the technological limitations and costs were not included in our consideration. (see Fig.3-4)



Fig.3-4 Design sketches of co-experience platforms

3.2.4 Prototype sieving

We aim at sieving three prototypes from those concept designs to compare and further discuss the design techniques and their actual effects. By examining the attributes of each of our design solutions, a framework using all the concepts obtaining from the examination was established. From the framework, three designs which have the most diverse characteristics in each dimension were selected. Meanwhile, we adjusted the designs to make each selected designs has different characteristic in different dimension, so that we can discuss the effects in the end. Demonstrated clearly in the framework (Table. 3-2) were the three prototypes with different contents, different mediums for sharing, different special relations, and different physical properties to enhance co-experience. Then the prototypes were displayed with card boards (Fig.3-5) to simulate the actual situation. (see three prototypes in Appendix B)

Table. 3-2 The framework of prototyping attributes analysis

Dimension \ Prototype	A. photoshare	B. high or not?!	C. memory passport
a. content of sharing	photos about activities or the field	live atmosphere	experience reminde
b. medium of sharing	photos of activities	degree color	words and a film
c. time and place	differnet time, the same place	the same time, the same or differnet place	differnet time, differnet place
d. physical product	without	with	with
e. real or virtual space	real and virtual space	real place	virtual space
f. ease of feedback	not so easy	easy and instant	easy
g. expression of emotion	weak	strong	medium
i. remains after sharing experience	visible	remain for a while	visible and preservable
j. properties	camera and cellphone	a stick for encourage	post card and memory passport



Fig.3-5 Card-boarding prototypes

3.2.5 Field testing

To test the prototypes by obtaining users' opinions, instead of staying in the laboratory, we organized the collected prototypes in East Gate of Hsincu as a filed study. (see Fig.3-6,3-7)The properties, prototypes in card boards, and the indicator lines were set up in East Gate.

In order to collect people's opinions on the design prototypes, seven informants were recruited to experience these three prototypes as actual design implements and were interviewed in depth afterwards. All informants are from the younger generation and had had several past experiences of watching live band shows in The East Gate before.

The impressions on and feeling about the prototypes were proposed as questions in the interview. The main issues we desired to survey are: their acceptance toward design implications displayed in a co-experience environment; which ways of sharing are more

effective to users; and what they expect to acquire psychologically. The questions were open-structured and they were individually about the advantages and disadvantages of three prototypes, the feelings, and the comparison with the current platform. (see Table. 3-3) For example, we were curious about what users care for in co-experience platforms, then we introduced the prototypes and asked their point of views and feelings, and any part are what they like or dislike most. Moreover, the reasons why they like or dislike were dogged out.

Table. 3-3 The issues and following questions in the interview script.

Issues	Questions
What they care for in co-experience platform	• How do you think of the prototype if it is real in The East Gate?
	• Which part do you like it? And why?
	• Which part do you dislike it? And why?
Receptance to co-experience designs	• Would you desire to use it to share your experience? Why yes? Why not?
	• Anything is attractive to you?
	• Anything is inconvenient to you?
Expectation to the co-experience platform	• Which part do you think needed to be improved?
	• How about your suggestion to the prototypes?
	• What do you expect to get after experiencing the prototype as real equipments?
Difference between the current platform	• What do you think about the prototype in comparison with the existing way?
	• Which part is better? And why?
	• Which part is worth? And why?
Co-experience feelings between three prototypes	• In comparison with three prototypes, which one do you like most? And Why?
	• In comparison with three prototypes, which one do think you would have more interaction with others?
	• In comparison with three prototypes, which one do think you would have deeper interaction with others?
	• In comparison with three prototypes, which one do think you would enjoy it most?



Fig.3-6.3-7 Field testing in The East Gate

Users' opinions about the reasons why they like or dislike the platform, the acceptance of the usage, and the improvement they expected were appeared through the informants answering these questions in the interview. The data collecting and analyzing approach are qualitative. All the relevant information on the designed experience sharing platforms gathered through the field testing is detailed, disorderly, and confused. Therefore after the field testing, the taped interview conversations were transferred into transcripts and key notes. Later those notes of three prototypes were analyzed by affinity diagram and interpreted. Finally, the results of overall understanding about the present sharing platform, users' thoughts on the three designed prototypes, and the findings about the design techniques were presented in the next chapter.

RESULTS AND FINDINGS

In this chapter, the results were presented after analyzing the two researching stages. The primary investigation stage is to understand through interviews how people shared their information and experiences about the show-watching; and the interview was then followed by Means-End Analysis and affinity diagram. The results of this phase demonstrate user experience about sharing experience of current show-watching platform. Meanwhile, the current platform was collected. In the second phase, the purpose is to figure out users' opinions on three platforms which were designed to achieve the effect of co-experience by interviewing in actual surroundings. The results here present users' concerns and expectations. Finally, the mapping between design techniques and their possible effects were produced in the end.

4.1 Current platform

In the investigating phase, a large number of notes were taken out from fifteen interviews with different informants. Notes related to sharing experience of show-watching were sorted out to three groups which were categorized respectively as “ends”, “means”, and “attributes”---- the three constitute a hierarchic relationship. On the top is the “Ends,” the motivation of sharing experience. Under it is “means,” how people share the experience, followed by “Attributes,” which is what people get through sharing experiences.

The first group, “Ends”, is the reason or purpose for actions. They may be the reason that attracts people to or encourage them to make decisions about watching a show. “means,” on the other hand, is how gaining and sharing of experience are performed. For example, the information of the show, how viewers get to know more about the content, and the time of the show----all these information is acquired in advance. “Attributes,” last but not least, includes the contents or the information people share about the show, such as the quality of singers in a particular show or simply viewers' points of view are included.

4.1.1 Affinity diagram results

After sorting, the notes in three different groups were analyzed with affinity diagram. Affinity diagram is also a sorting method which can handle a great quantity of data.

1. **Ends**— purpose or reasons (Fig.4-1, and see details in Appendix C)

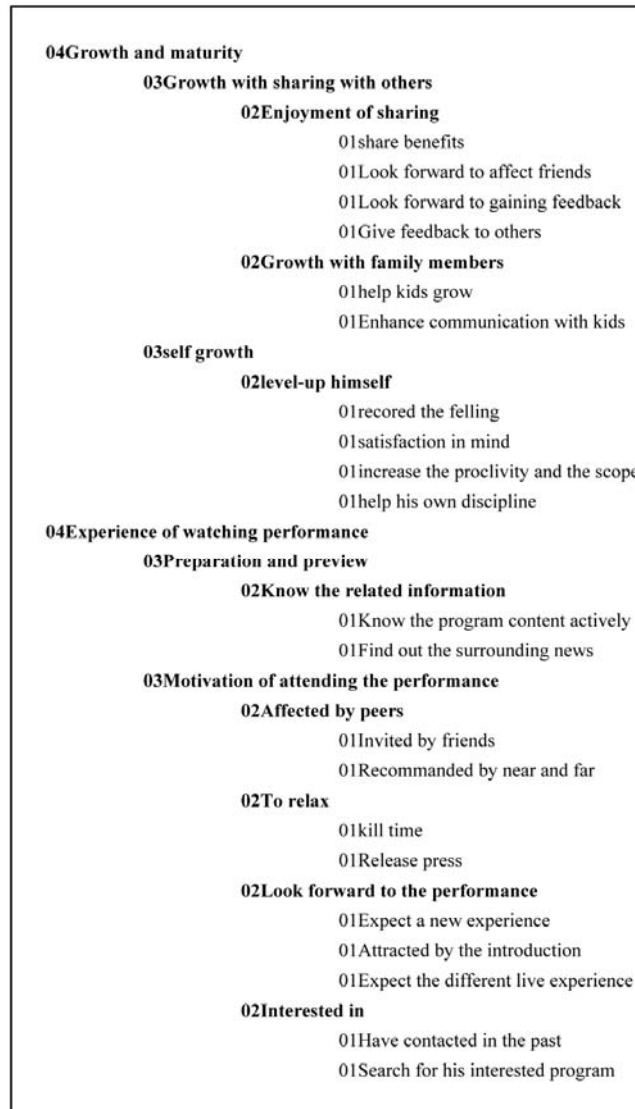


Fig.4-1 Affinity Diagram result of “ends”

The figure was ordered and simplified. There two main groups which has “The sense of growth” and “the experience of watching show” are also the highest level of them. “The sense of growth” includes two aspects, self-growth and the growing sentiments. Self-growth is to feel like being leveled-up since the increase in proclivity and the broadening of visions. A sense of satisfaction is also acquired from the process. Another growth is the growth in sentiments gained by sharing with others. Moreover, growth feeling with sharing with others includes “enjoyment of sharing” and “growth with family

members”.

a. There are four main motivations they attend the show which are affected by peers, just to relax, self-interest, expect the new show. Except for the influence by friends such as the invitation or recommendations, others are they have related experiences in watching the same or related shows.

b. If they got interested on the show, they would do some preparation or preview the related information about the show, such as the programs, the introductions, or the news.

2. Means— ways or manners (Fig.4-2, and see details in Appendix D)

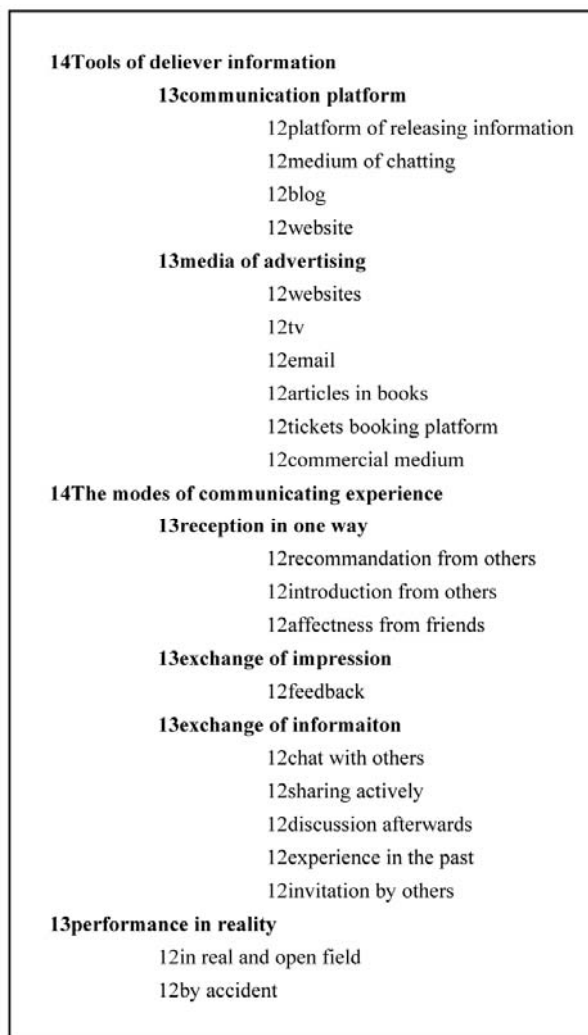


Fig.4-2 Affinity Diagram results of “means”

- a. The ways of circulating information contain the communication platforms, such as websites or blogs, the advertising mediums, and the “word-of-mouth”.
- b. People share their experience in two ways. One is one-way sharing which just

recommend or introduce to others. Another one is exchange experiences which include the information and their impression, and sometimes they would exchange their points of views through discussing it afterwards.

3. Attributes— contents (Fig.4-3, and see details in Appendix E)

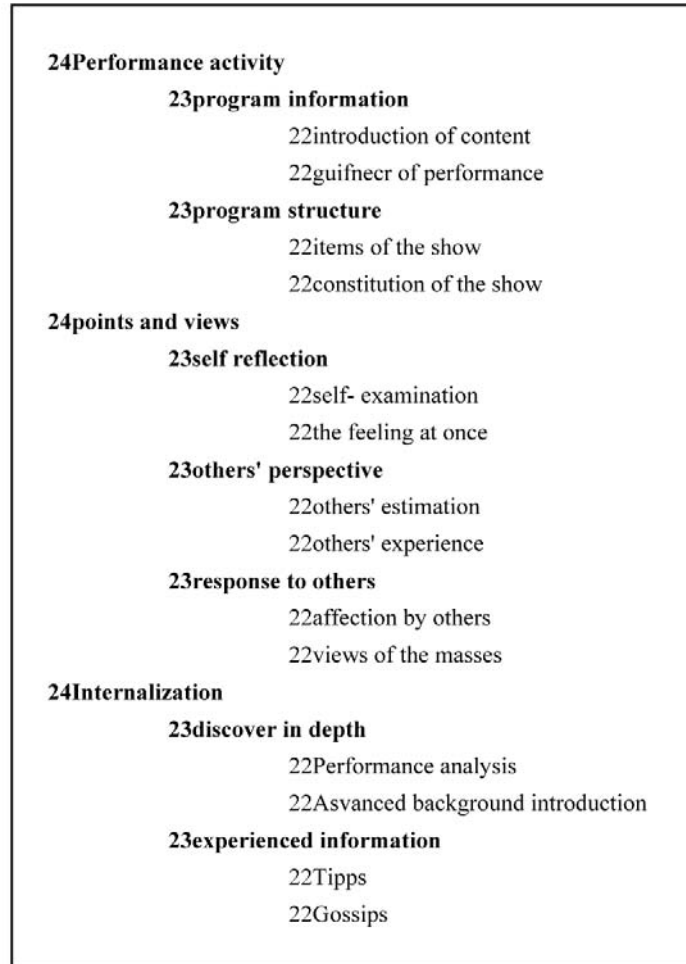


Fig.4-3 Affinity Diagram results of “attributes”

- a. The information contents delivered through the show-watching process embraced the show related information, such as the introduction about the show or the famous singer’s name. Moreover it also contained the points and views and some internalized or specialized impression.
- b. In the whole process, when people shared their points of views, they experienced the self reflection, such as the emotions at the moment and the self- examination. Then they would share their impression after settling themselves.
- c. Others’ perspective also give them a broaden vision on it.

4.1.2 Means-end-attribute framework

The complete structure of show-watching were presented in a parallel way which included “ends”, “means”, and “attributes”. Then reviewed the interview record, the routes between three columns were marked the connection. (see details in Appendix F) The connected lines represent the relationship between three levels. The more lines they have between two columns, the stronger relationships they are. For example, through exchanging self-impression to each other, people gain senses of growth. We found that “exchanging of impresion” and “growth with sharing with others” have inseparable relationship. Besides, their relationship between two columns are hierarchical.

Based on the routes, the means-end-attribute framework which shows three levels and their main conneciton were arranged. According to the framework, we found the intersection of “co-experience”, “sharing”, and “show-watching” as our marin scope that we were interested in this research. For example, co-experience is the user experience happened in social interaction, so the one-way advertising platform such as official websites or TV is not in our field of research. Then, the means-end-attribute framework of show-watching which marked the main scope and the main routes was proposed as Table. 4-1. According to the structure, we’ve reached some concluding results:

Table. 4-1 The means-end-attribute framework of show-watching

END	MEANS	ATTRIBUTES
Growth and maturity Growth with sharing with others Enjoyment of sharing Go share benefits Look forward to affect friends Look forward to gain feedbacks Give feedbacks to others Growth with family members help kids grow Enhance communication with kids Experience of seeing show Preparation and preview Know the related information Know the program content actively Find out the surrounding news Motivation of attending the performance Affected by peers Invited by friends Recommended by near and far To relax just kill time Release press Look forward to the show Expect a new experience Attracted by the introduction Expect the different live experience self interested in Have contacted in the past Search for his interested program	Tools of deliever information communication platform platform of releasing information medium of chatting blog website email media of advertising official websites tv articles in books tickets booking platform commercial medium The modes of communicating experience reception in one way recommandation from others introduction from others affectness from friends exchange of impresion feedback discussion afterwards exchange of informaiton chat with others sharing actively experience in the past invitation by others performance in reality in real and open field saw it by accident	show activity program information introduction of content guidline of the show program structure items of the show constitution of the show points and views self reflection self- examination the instantsl feeling others' perspective others' estimation others' experience response to others affection by others views of the masses Internalization discovery in depth further analysis Advanced background introduction experienced information Tipsps Gossips

a. From “end” and “means” columns, we found that exchanging experience is the main approach to achieve co-experience. Communicating experience includes changing show information and audience’s impression is the main way for people to enhance their interactions. Meanwhile, they would gain sense of growth and enjoyment of sharing. Besides, we found that except for self-interests, influences from friends and family are also common reasons for show-goers. Recommendations or invitation by friends would gradually grow interests in it.

b. From “means” and “attributes” columns, we found that people share their impression through the communication platform, such as blogs and websites, or face-to-face communication. However, what they share about is different from the medium of sharing. For example, people may share their points and views and introduce the show related information through communication platforms. And the internalization such as advanced background introduction may be the further searching after the show. In the meantime, some experienced information such as tips or gossips about the actors may be exchanged through face-to-face chatting.

c. From the whole framework, we found that sharing self and others’ points of view through different kinds of communicating platform will bring forth a sense of growth and obtainment. Furthermore, sharing self impression would also influence others’ willing to watch the show. In other words, when making a decision, people were influenced by someone else’s points of view or what the information their friends shared. The user experience related to the show became others’ reference to make a decision. For example, if you shared more about your past experience and the feeling on the show or the performer when inviting your friend to the show together, your friend would be aroused the interest to the show more.

4.1.3 Current sharing platform

We had discovered from the interview that there are few sharing platforms. From the result of Means-End Analysis, the tools of delivering information were collected in the category “means”. The tool contains “communication platform” and “media for advertising”, however, the advertising mediums are not in our consideration. The platforms include physical advertisement, virtual websites, and interpersonal communication. The virtual websites are such as the drama forum in the BBS, blogs or the websites which recommend popular shows or articles. The physical advertisements such as posters were the extra information that people use when talking about their experience. By gathering those present platforms of sharing experience, interpersonal communication is the recommendation or the invitation from friends. (see Fig.4-4)

However, the current platform has only limited effect on exchanging experience. For example, it is good to express ideas face-to-face, but it is not easy to pass around the entire information package related to the show. On the other hand, blogs or facebook is a good platform to post complete information, yet it is still limited when emotions were made through mere words to express how touching the show was.

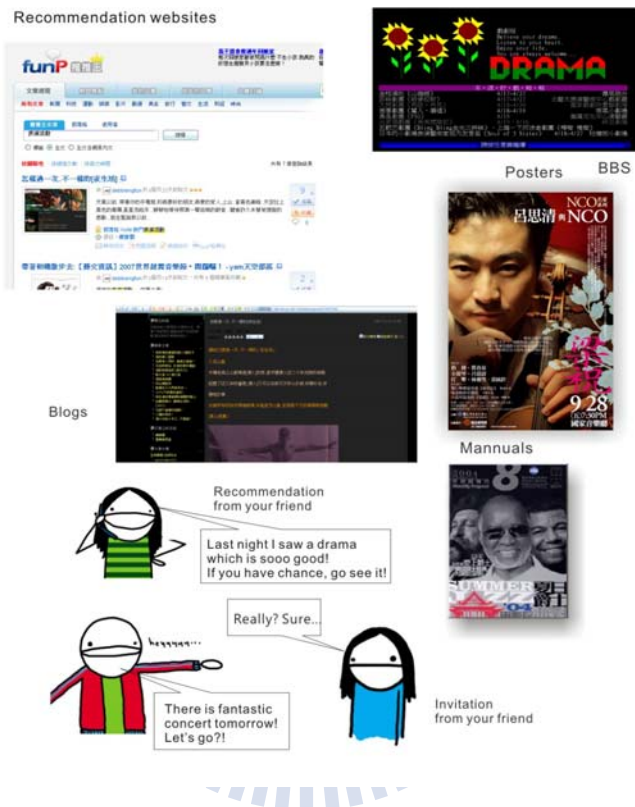


Fig.4-4 Current ways of sharing show watching information

4.1.4 Summary

In the first exploring stage, the means-end-attribute framework about the activity of show watching were constructed. An overall and clear understanding was shown. We found that people's experience fluting was the most important way to make co-experience occur. Nevertheless, we knew that the current platform has limited effect to obtain co-experience. Therefore, in the next section, some intensive concepts were designed to dig out what users think about the co-experience platform.

4.2 Discussion with prototypes

In the second stage, in order to discuss users' acceptance and their thought about co-experience, there were three design prototypes chosen with different attributes

illustrated as scenarios and posted on card boards were set in East Gate of Hsinchu. Then informants were recruited to experience the prototypes and ask their opinions. Finally, we discuss the relationship between design techniques and effect.

4.2.1 Prototypes

After developing concepts, there were several ideas which aim to more co-experience in The East Gate were created. In order to discuss different design techniques, we analyzed those attributes of each idea. For example, the media of sharing is one attributes of the prototypes; it maybe photos, numbers, or colors. By examine those attributes of ideas, we selected three of them that have different dimensions and different design elements and adjusted those attributes became staggered. Finally, there are three platform prototypes which aim to improve co-experience about watching shows in The East Gate. The brief introduction of the prototypes were as following: (see detailed prototypes in Appendix B)

1. Prototype A: Share you photos!

It was a photo-sharing platform displayed on the big screen (see Fig.4-5) in center of The East Gate and on the websites. In East Gate, people could upload any photos related to The East Gate with their cell phones or cameras, such as a special concert show or a view of The East Gate. The screen showed the latest photos randomly so that people could see the recent situation nearby The East Gate when they walk into the field. They also could see the furthered information about the photos and even can download it with the cell phone (see Fig.4-6). Meanwhile, people can also upload and download the photos shared on it. Even, they can trace the old photos from it.

Through the photos-sharing platform, people could find the photos which they were interested in. In addition, they could interact with other citizens who came to the field, and even know new friends who have the same interests or love the same singers.



Fig.4-5 Photo sharing platform displayed on the screen in East Gate.

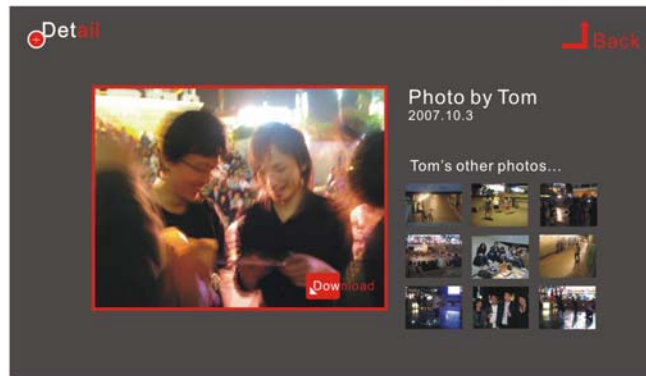


Fig.4-6 Furthered information and action screen

2. Prototype B: Big fans

It's a platform of sharing the live show ambience. There was a big screen outside The East Gate showed the degree of high atmosphere inside by live broadcasting, the lights with changing color and a dynamic graphic.(see Fig.4-7) The color with high saturation, such as orange or red, represented higher live atmosphere. At the same time, when people get into the live show, they would get a bell which could play an accompaniment with the music and express their support and feelings to the performers immediately. The bell which was changing colors with the frequency of shaking can cheer the performers on.(see Fig.4-8) Therefore, the citizens who were walking around The East Gate may be attracted by the big screen and get into the field. On the other hand, the performers will exert themselves on show, and the ambience will get higher and higher.



Fig.4-7 The screen shows the atmosphere of the live show was set outside The East Gate



Fig.4-8 The bell changed colors with the frequency of shaking

3. Prototype C: East-Gate passport

There is an electronic card named East-Gate passport.(see Fig.4-9) It could gather the time when you and your friend join the same show. If you collect enough shows, you would get the coupon of shops or restaurants in HsinChu city. Every time you bring this to The East Gate and it recorded the date and the show you joined. It could record what you and your friend discussed about which song is the best or what part of the show impressed you most. After you went home, you can review it and put it on the blog. Meanwhile, the East-Gate would produce postcards which have the photos of the live show and you can send it to your friend to invite them to watch the show next time. (see Fig.4-10)

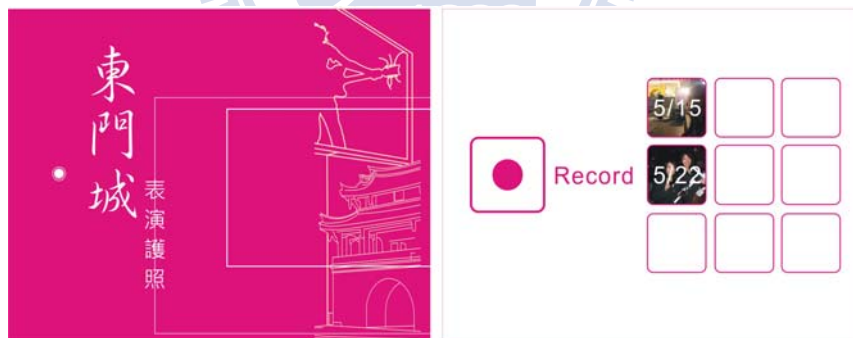


Fig.4-9 The East Gate passport



Fig.4-10 The postcard for inviting friends

4.2.2 Users opinions about prototypes

After setting the prototypes above, a total of seven informants were recruited to join the field testing. Informants' opinions about the three prototypes were made into notes and analyzed with affinity diagram to produce a clear and arranged result.

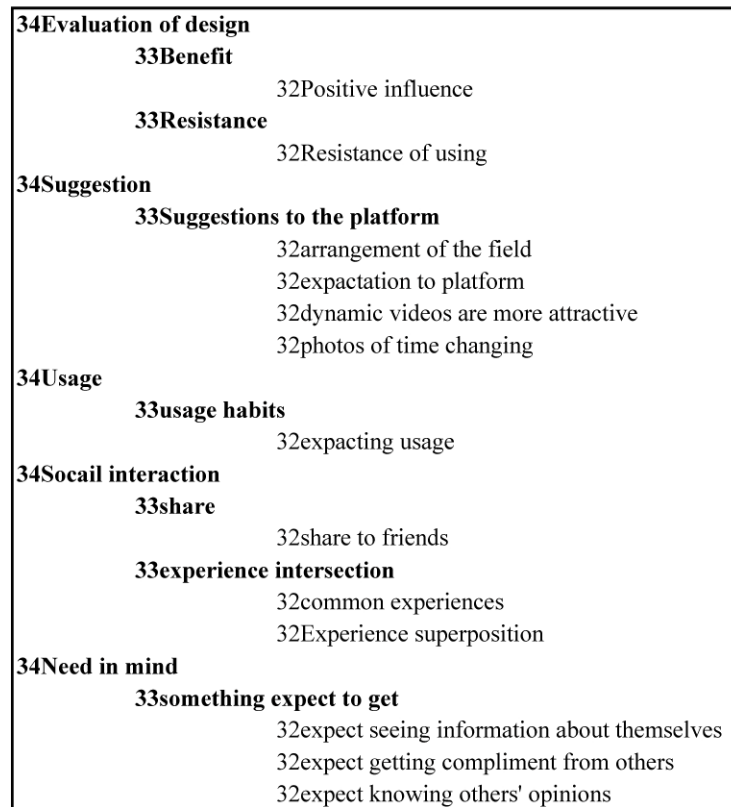


Fig.4-11 Affinity Diagram of prototype A

There are five themes consolidated from all informants opinions to prototype A which are evaluation, suggestions, usage, social interaction, need in mind.(see Fig.4-11 and details in Appendix G) In the “evaluation” subject, the platform A has positive attraction and the resistance of acceptance. And they have furthered suggestions to the platform which were about their expectation and what they care about, such as . In addition, the purpose they use the sharing platform are that they want to enhance social relationship from sharing experiences. Finally, they are eager to get feedbacks, compliment, or any opinions from others in mind.

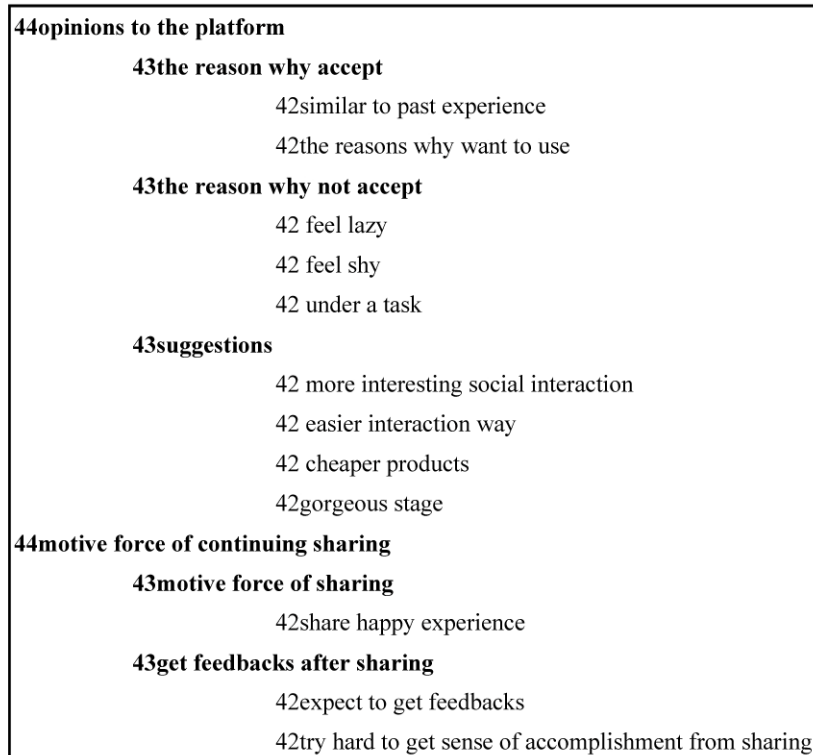


Fig.4-12 Affinity Diagram of prototype B

In prototype B, informants mentioned the reasons why they accept and reject the platform, even addressed their suggestions on it. (see Fig.4-12 and details in Appendix H) Talking about their accept reasons, one is that there are something related to their past experience, such as they felt they can play like games. Another is the reasons why they want to use, such as they felt fresh or interesting. The reasons why not accept are such as they just want to take a walk or they feel shy. To make the platform more interesting, they also mentioned that they hope it became a public club, or the stage could become more resplendent, etc.

Besides, they noted the motive force of continuing sharing experience which are sharing happy experience and get feedbacks from it. People they want to share their experience is because they got the delight experience, they especially want to share to others at once. People expect to get feedbacks which are such as they can see they have common experiences or feeling with someone who unknown.

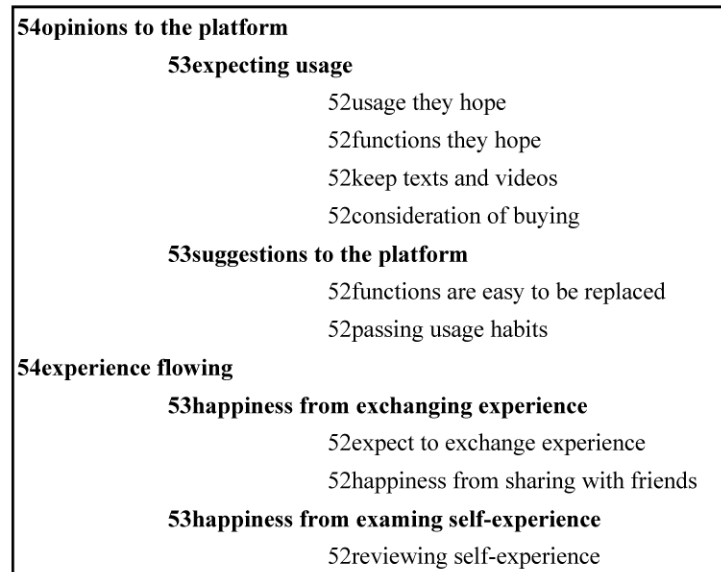


Fig.4-13 Affinity Diagram of prototype C

Talking about prototype C, informants mentioned more about the expecting usage and suggestions, because this prototype has much more particularly products and interaction ways. (see Fig.4-13 and details in Appendix I) For example, they want to keep both words and videos to record the high atmosphere in the show, and they hope they can invite their friends with blogs or videos instead of post cards. Moreover, they hope The East Gate passport could contain more additional functions, such as mp3 so that they can also use it in daily life.

Especially, they referred more about the happiness from the experience flowing, such as exchanging experience and examining their self-experience. For example, they want to watch the videos together with friends and recall the situation at that day. Reviewing self words or videos also would generate different feelings. Finally, a synthetic framework were brought forth more clearly as the following (Table.4-2) :

Table.4-2 The synthetic framework of three prototypes

	PrototypeA: share your photos	Prototype B: big fans	PrototypeC: East Gate passport
Design attributes	<ul style="list-style-type: none"> Content of sharing: photos Media of sharing: photos Different time, same place No physical products In real and virtual space Not easy to feedback Weak emotion expression Visible stuff after sharing 	<ul style="list-style-type: none"> Content of sharing: live atmosphere Media of sharing: degree color and number Same time, same place With physical products In real place Easy and instant feedback Strong emotion expression Remain record for a while 	<ul style="list-style-type: none"> Content of sharing: instant feeling and memory Media of sharing: words or videos Different time, different place With physical products Virtual space Easy to feedback Medium emotion expression Visible and preservable stuff
The assistance	<ol style="list-style-type: none"> personal and social space know someone who unknown recreational functional 	<ol style="list-style-type: none"> recreational properties keep as souvenirs limited the quantity high ambiance 	<ol style="list-style-type: none"> can share with friends far away immediately keep the records of being here
The resistance	<ol style="list-style-type: none"> privacy problem under a task 	<ol style="list-style-type: none"> under a task shy personality feel it's impractical 	<ol style="list-style-type: none"> need to bring the passport that have the same functions as camera or cell phone not meet their passing using habits
Expectations to platforms	<ol style="list-style-type: none"> add immediate and direct interaction ways easy and convenient activity information add competition mechanism dynamic videos are more interesting narrative 	<ol style="list-style-type: none"> add an open fans club more gorgeous interactive stage more different interaction 	<ol style="list-style-type: none"> sharing at once products can combine other functions keep both text and video records
About co-experience	<p>What they expect in mind</p> <ol style="list-style-type: none"> compliment for their devoting know other's opinions and experiences see the records about themselves see they have common experiences with others 	<p>Power for sharing continuously</p> <ol style="list-style-type: none"> want to share happy experiences expect to get feedbacks get the sense of accomplishment of seeing feedbacks 	<p>happiness from the experience</p> <ol style="list-style-type: none"> happiness form examine self-experiences happiness through sharing experiences

Based on the interview, what informants mentioned could be sorted into four subjects which are “the assistance”, “the resistance”, “the expectations to the platforms”, and “other thoughts about co-experience”. The informants care different aspects on different prototypes. In prototype A column, the attractions to them are the recreational and functional equipment. Moreover, they can have the opportunity to know someone who unknown. However, they considered privacy problem at the time. If they have other task, their willing to join the platform also would be reduced. Meanwhile, they also brought up their expectations to the platforms, such as adding competition mechanism and immediate interaction ways. They also revealed their expectations in mind, such as knowing other’s opinions and experiences, or seeing they have common experiences with others.

In prototype B, they feel the limited quantity of property is the big assistance to them. And they can enhance their high emotion and enjoy the time shouting with others on the spot. In the meantime, if they were a shy person or under a task, they would reject to share their emotion. To talk about the expectation to the platform, they hope they may have more gorgeous interactive stage and more different interaction. The power of sharing continuously also was mentioned. The desire they want to share delight experience and the expectation of getting feedbacks and sense of accomplishment drove them to share more and more.

Finally, the reasons they like the platform C were they can share with friends who far way immediately and they can keep the records of being there. On the contrary, what they feel inconvenient are that they need to bring the passport additionally and it doesn’t match their past using habits. What they expect to the platform are that The East Gate passport could combine other functions, such as mp3 or notes. And they hope they could keep both texts and video records to preserve memories. In the end, examining self-records and through sharing experience also brought forth happy feeling to them.

4.2.3 Summary

In the field-testing stage, a large amount of valuable opinions from users’ aspects were collected. What’s appealing and what’s repelling were made obvious through the interview. Meanwhile, the expectation to the experience-sharing platform was turned over. Furthermore, users’ requirements and preferences about co-experience were clarified.

4.3 Design techniques and effect

By comparing the three prototypes and their attributes, the mapping between designing techniques and their effectiveness was organized into a chart. There are five effects which include: strong emotional expressions, meaningful memory preservations, interesting feelings, profound sharing and abundant co-experience. The framework of the mapping is as follows.(see Table.4-3)

Table.4-3 The framework of the mapping between design attributes and effects

Design attributes	Effect
1. easy to give feedbacks 2. promptness 3. happen simultaneously in the same place 4. physical artifacts	emotional expressions
1. preservable souvenirs 2. static information(opinions) 3. dynamic information(videos)	memory preservations
1. dynamic videos 2. interact with others 3. narratives	interesting feelings
1.at different time or different places 2. opinion sharing	profound sharing
1. real and virtual spaces 2. experience accumulating with others	abundant co-experience

1. Strong emotional expressions

To get more strong emotional expressions, the design of the platform should provide easy access for people to give feedbacks and to give responses immediately---- at the same time and in the same place while physical artifacts are provided. If people can give response or share their experience immediately, the emotions would be expressed immediately and smoothly. In addition, physical artifacts such as the cheering aspect of a product can strengthen the atmosphere in a live show.

2. Meaningful memory preservations

To preserve meaningful memories, the platform can provide unique artifacts to be preserved as particular souvenirs. Besides, the platform should provide people with tools or approaches to keep their memories as static or dynamic information. Static information can be leaving messages about certain feelings or to write down one's points of view after the

show. Dynamic information may be a video recording, and this kind of memory is more related to the ambience or the atmosphere.

3. Interesting feelings

Some design attributes can improve the results to provide users with interesting feelings. First of all, a dynamic video is eye-catching and it appeals to people's interests since it would be fun to see themselves in the video recording. Secondly, it provides more opportunity for users to interact with others and to show their connections with them. Finally, narratives could also be one of the interesting interactions. For example, hiding a part of the information and users will be surprised to discover certain coincidence or special features.

4. Profound idea-sharing

Let people share their points of view afterwards will lead to a more profound sharing process. People need time to think more and organize their emotions and ideas before they share their profound experience in mind. Providing different time or different place attributes can help people to express their profound ideas anytime and anyplace.

5. Abundant co-experience

The accumulated experiences which are collected from the common public will bring more co-experience. Provide a real platform and a virtual platform showing different information will also generate an abundance of co-experience. For example, the real platform shows the most attractive and immediate information, and the virtual one shows the historical and valuable information.

4.4 Findings

Based on the results of two researching stages, some findings were made about the sharing of show-watching. The findings can be sorted into several themes that allow designers who design co-experience platforms to know more about what users need and what kind of design techniques or elements would gain better responses and acceptance for them.

4.4.1 Purpose of attending the show

People attended shows because of their primary, personal interests and also because they were influenced by peers. Here, people could be separated into three types of users. The first type of people are those who are interested in shows would take the initiative to search for interesting shows. Since they have experiences of watching shows in the past, their expectations toward the latest show may be a simple glance through the introduction or to relax and release the pressure. The second type is the one with friends interested in watching shows. They may be invited by their friends or family members to watch the show together or recommended by them and go see it someday. The third type of people is the one who accidentally run into the show, and they go to the show just for fun. For example: an outdoor show encountered by travelers.

The objectives they want to achieve when sharing experience are as follows:

1. **growth with others**

Through watching the show with family or friends, they got the sense of enjoyment and ideas from it. After sharing to each other, they would feel like growing together with others.

2. **enhance communication**

Except for the sense of growth, they felt like they enhanced their communication with friends and family, especially with kids. Through the discussion, they understand each other more.

3. **enjoy the happiness of sharing**

Based on the interview, most informants enjoy sharing with friends or family members. People like to share “good news” with friends and they look forward to gain feedback at the same time. With sharing to each other, they got the simple happiness from it.

4.4.2 Assistance: to increase inclination

New, inventive designs usually have strong appeals to motivate people into using; for example, something that is interesting, some artifacts that can be used as souvenirs, or a chance to meet new friends----these are appeals.

1. interesting interaction

“Interesting” was an element repeatedly mentioned in the three prototypes. Some informants had pointed out that they like to use certain platform simply because it is like an amusement park, while others keep the habit just to play games. In other words, entertainments provided by the platform also attract them to use it continuously.

2. enhancing social ties

Specifically, to make users feel interested, the product itself or the interface is not the only element to look after, social interaction must be considered as well.

In prototype A, informant B mentioned:

“It would be such an exciting and interesting experience if there is a person I don’t know, and one day I meet him through the platform! It feels like we are having a weak but fantastic connection by some coincidence.”

In prototype C, informant A also mentioned:

“It would be very fascinating if I can share the live atmosphere to my friends far away!”

According to the interview, we know that people prefer using something with entertaining aspects to enhance their social connection at the same time, with friends or even someone they barely know.

3. abundant records

People like to record their memory through artifacts and by means of digital camera or words. Except recording their own experience, sharing memories with others and getting feedbacks of various colorful memories of others is also an attractive appeal for users.

4. unique information and artifacts

Informant G mentioned:

“The bell can only be found in this place so I would keep it as a unique souvenir.”

And informant F mentioned:

“The specific information about the shows in East-Gate may attract me to come here and get the information I want to know”

Here “unique” means you can acquire the information or artifacts exclusively in East-Gate when there are distinguishing features about the local spot. For instance, the bell which cheers and encourages performers is the artifact you can get in East Gate. You won’t see it elsewhere and it becomes one of the unique and commemorative products of East-Gate.

4.4.3 Resistance: to block inclination

In the meanwhile, there are some resistances that users concerned about, such as privacy problem or the gap between the design and their habits in the past.

1. Privacy

When people share their experience, they worry about personal privacy. For example, informant B mentioned:

“When I share my photos on the photo-sharing platform, I will choose photos that include more than just me...”

Some informants also mentioned that they don't want to post their blogs publicly. For those who are willing to share, they still withhold much of their self-information.

2. Personality

Shyness and laziness are two deciding personality that may lower one's willing to share his or her emotions. People of these kinds are hardly influenced by surrounding atmospheres.

3. Habits acquired in the past

Some informants mentioned that they don't want to leave the message on the photo-sharing platform because they had gained used to viewing real photos from past experiences. Some informants said that they won't bring the East-Gate passport, because they were used to take a walk in East-Gate with only a wallet in the pocket.

4.4.4 Expectation to the platform

From users' expectations toward the platform, we discovered some aspects users emphasized:

1. Instantaneity

“I hope I can leave some messages or draw something at once...”

“I love sharing emotions I feel at the moment because the sharing strengthens the atmosphere immediately...”

Sharing emotions or impressions instantly seems to be the most direct way for users and they expect it inwardly as well.

2. Interesting interactions

“It can be a voting system so that we can know whose photo is the most popular one for today...”

“It can become a public fans club. I can make new friends who love the same singer as I do!...”

Users expect more interesting interactions upon sharing experiences. Besides, they also expect it to be game-like. Presumably, it would be more fascinating to have certain competitions or opportunities to form a relationship with others.

3. Memory preservations

People desired to preserve personal memories by recording videos and words. Different media record different memories. As informant E said “*videos and words preserve different memories with different meanings.*” Either way, people expect to record the experiences and preserve them because they want to keep their valuable memories safe.

4. User-friendliness

Except for interesting interactions, users also expect the platform to be easy and convenient in terms of using. The way of giving feedbacks or sharing photos should be as easy as possible. Moreover, they hope to find information showing on the platform quickly without difficulty.

5. Narrative

In the photo-sharing platform, some informants expect that the platform has some narrative. He mentioned that:

“If I can see the photos taken in different time, I can see the time is flowing...If I saw myself in other’s photos, I would feel that the world is so small and the feeling would be very special...”. They expect something narrative so that they could get the surprise from discovering the coincident.

4.4.5 Opinions about co-experience

When the activity of watching show was brought up to share, experiences would definitely bring user happiness. In addition, we found that there are “happiness from reviewing the experiences” and “happiness from exchanging their experiences” from the interview.

“Every time I review what I wrote in the past, I felt differently about it...”

“I want to record some videos because I think it would be fun to see myself on the video afterwards...”

Moreover, happiness comes from certain psychological expectations. Everyone expects to get compliments about their devotions, points of view from others, personal records, and the experience of social interactions.

“To know that I have common experience with someone I don’t know would be very nice! I don’t really want to know who he is, but I still feel happy because it seems like we are sharing a secret...”

These expectations are not obvious, but they represent people’s eagerness to interact with others in depth through co-experiences.

Finally, the motivating force of constant sharing makes co-experience a continuous cycle. People share their good experience and look forward to see other’s feedback. Whenever they get feedbacks or realize the influence they have on others, the sense of accomplishment will motivate them to share more.

DISCUSSIONS

Through this research, what users' think about co-experience was exposed. In this chapter, we want to discuss the delicate thoughts in users' mind in co-experience and to propose some design techniques for designers to follow up. In the principles of interaction designs, there exist some differences. There are several main ideas to be discussed; "the role of different design techniques", "the mental expectation", "the mental worry", and "the co-experience process". Furthermore, the co-experience model was built up. In addition, design suggestions were proposed to improve co-experience design.

5.1 Roles of different design techniques

To go a step further, we compared the results and the attributes of three prototypes to figure out the mapping between design attributes and the effects. What design attributes we used could be one of design techniques that designers refer to in co-experience design. Based on the results of design techniques and the effects, we discussed the meaning of different design attributes so that designers could refer them to do the co-experience design. According to the field testing interview and the attributes of three prototypes, there are some valuable and significant findings in terms of the medium applied to the design or the means for sharing experiences.

1. medias of sharing

In the first place, both static and dynamic information are important and indispensable. Written words or photos belong to static information while videos or voice recording being categorized as dynamic ones. Photo is the media that users feel interesting and recreational because when can see other photos through the other perspective and they can enhance the effects of experience sharing through it. Color or numbers could play the role of information representation. People would easily to understand the meaning of it and react in very short time. For users, they think videos are more eye-catching and interesting; words are more meaningful. (see table 5-1) Both of static and dynamic information keep different levels of experiences, so that designers should consider its effects and meaning. To explain their different roles, one of the informant's statements is quoted here:

"Videos are used to record the most glittering sections, they was much more novel and eye-catching. They would be more interesting to share with friends; on the other hand, words are used to write down my extended ideas, comments or what touched me the

most. For me, they may be much more meaningful. If I want to share my experience of show-watching, I would share the photos and the words on my blog, and the videos would be an extra point that attracts blog-viewers...

Table. 5-1 The effects of different medias of sharing

Media of sharing	Effects
photos	Record the interesting and memorial second
Color or numbers	Represent and show the meaning of information
words	Record more deeply impression
videos	Record dynamic live atmosphere

2. physical artifacts

In the second place, from the effects of with or without physical artifacts, we found that physical products would be helpful to the expression of emotions or the surrounding atmosphere. (see table 5-2) One good example of physical products is the bell provided in The East Gate which makes sounds or radiates to cheer the performers. *“It’s like the “refueling stick” we used when watching a live baseball game. It worked the crowd into a frenzy.”* Meanwhile, any physical artifact such as a stub of the ticket also has the function of preserving memories, when it became a souvenir. On the contrary, yet without physical artifacts, it also became a block to give feedback and preserve memory.

Table. 5-2 The effects of physical artifacts

Physical artifacts	Effects
Without (prototype A)	Not so easy to give feedback
With (prototype B)	Highly emotion expression
With (prototype C)	Memory preserving

3. Remainder after sharing

Something visible remained after sharing experience may prolong the sharing process and therefore allows co-experience to come into existence more easily. (see Table. 5-3) For example, photos shared on the blog can be downloaded by others for several times. They could see their efforts being appreciated by others and a sense of accomplishment would be generated to encourage them to share more. Moreover, if there was something preservable continuously, it could be a self-reminder which recalls the memory easily. For example, one of the informants mentioned:

“I would treasure the post car I got from my friend, because it was very special and meaningful. It maybe preserve my friends’ memory and it also maybe our common memories...”

Table. 5-3 The effects of different length of remaining

Length of remaining	Effects
Remain for a while	Influencing more users to generate interests
Visible for long time	Generate more intersection of experiences
Preservable continuously	Could be a self-recall easily

4. time and location

Time and location are two important aspects in experience sharing. There are four different combinations of the time and location. (see Table. 5-4) The intensity of experience sharing in the same place and at the same time was most strong. Some informants said that the feeling of co-experience in prototype B was most obvious. And some informants said that they like to share their emotions at once since the emotions decreased after they went home.

However, it doesn't mean that other combinations would generate bad effects. Take prototype A for example, the photo-sharing action took place in the same place, but at different time. Sharing photos can be done whenever they want. And it still has different meaning for users. If it was in different time and place, users would be freely to share, and it could generate more deep experience sharing.

Table. 5-4 The effects of time and location

Time / location	Effects
Same time / same location	Highly emotion expression, shallow experience sharing
Same time / different location	Highly emotion expression, Immediately
Different time/ same location	interesting Accumulated experience
Different time/ different location	Freely to share, deeper experience sharing

5. reality and virtual space

In Table 5-5, there are three kinds of situation, one is in real space, another is in virtual space, and the other one is both in real and virtual space. (see Table. 5-5) They also play different roles in the process. The real platform could be a space for immediate display and express emotion easily. However, the virtual space could show more related further information about the show and deeply impression. In real and virtual space, they carry different levels of experience sharing. In the meantime, it also provides no limitation by time and location. Users could share their experience freely in any time and any place.

Table. 5-5 The effects of virtual or real space

Space	Effects
Real space	Highly emotion expression
Virtual space	More related information and deeply impression
Real + virtual space	Different levels of experience sharing, no limitation on time and location

6. Ease of giving feedbacks

The ease of giving feedback is proportional to the intensity of emotions expressed. (see Table. 5-6) The easy and instant way to give feedbacks generates high and immediate emotion expression. For example, one of the informants mentioned that they want to give feedback at once, or they would forget after going home. If they can just draw something or simply press a button to express their feeling or opinions, the willing of giving feedbacks would be increased. We found that the easier the interaction, the more users' desires to give feedbacks. With ideal interactions, people express emotions more often and stronger. However, if it was not so easy to give feedback, it may also gather deeper experience sharing. Because they need to think deeper then give feedbacks, such as through websites.

Table. 5-6 The effects of ease of giving feedbacks

Ease of giving feedbacks	Effects
Easy and instant	Highly emotion expression, immediately
easy	High emotion expression, more interaction
Not so easy	Less interaction, more deeper sharing

5.2 Mental expectation

First of all, we would like to discuss users' expectation in co-experience processes. In this study, we made efforts to collect information and to understand users' expectation for the prototypes. The interview had also revealed one of interviewees' concerns, and therefore in the following discussion, we are going to explore what users care psychologically.

5.2.1 Purpose for sharing

By viewing all results, we found that users have expectations from their mental. People share their experience in order to get the satisfaction that benefit to themselves and also enhance the social connection with others. The following are what they expect to in their psychological level.

1. expect to have common experiences

According to the earlier interviews and prototyping results, most people are looking for an opportunity to encounter others, whether they are intimate family members, friends, or a perfect stranger. When interacting with others, their experience may bring an enriched life and a broader vision. One may find a person who shares same passion toward a singer and through interaction, they know more about the singer through each other's eyes. The more they share, the more common experiences they may find.

2. share to gain satisfactions

Besides, the importance of sharing experience cannot be overemphasized. People share their own experience with others for the purpose of acquiring satisfaction. The satisfaction could come from the sense of accomplishment, the admiration from others, or friends' attentions. Meanwhile, it also comes from the happiness gained by sharing with friends or family. One of the informants mentioned, *"I would like to edit those videos by myself and share it with my friends because I want to see them happy. Their smiles cheer me up, too..."*

3. sharing experiences brings a sense of growth

The sharing of experiences also brings them a sense of growth. Experiences that are kept in the memory bring happiness when a person looks back on his self experiences; sharing experiences brings the feeling of becoming maturity. The user experiences of interacting with others make people's life experiences rich and colorful.

5.2.2 Need satisfaction

According to our findings above, expectations came from users' inner needs were exposed. These psychological expectations need to be satisfied in the co-experience process.

1. Need to be acknowledged

When sharing their experiences, people tend to devote their time and sentiments to it, and therefore, they expect to get admiration from others.

2. Need of feeling substantial

When they get opinions from others' experiences, they will feel a sense of mental growth inside them since they need to feel their own worth.

3. Need of intimacy

People like to interact with others, especially when they share common experience or commonalities which might bind them closer and tighter than before----this is the need of intimacy. The need of intimacy doesn't confine itself to friends or family members, but includes even strangers.

4. Need of attentions

When people share their experiences, they are eager to get responses. Attentions from

others are feedbacks people need from sharing.

5. Need to be happy

The results demonstrate that users expect more interesting interactions and are engaged to keep using the platform because they need the sense of happiness obtained from the process.

According to Maslow's (1943) hierarchy of needs, after physiological and safety needs are fulfilled, on the third layer of human needs waiting to be fulfilled are social needs. Maslow's concept of hierarchy involves emotionally-based relationships in general such as friendship, family, and intimacy. Intimacy generally refers to the feeling of being in a close bond and the sense of belonging together. Through sharing experiences, human being is psychologically satisfied. Everyone expects to gain intimacy through interacting with others.

Psychologically speaking, what makes sharing an indispensable role which can enhance co-experience was that sharing strengthens experiences. When we inform someone of our shared emotions, these emotions will be strengthened by sympathizing; (McDougall, 2000) then the act of sharing consequently brings us more joy and happiness. Besides emotions, past experiences and memories will also be strengthened at the same time.

Furthermore, the need of affiliation is another reason to explain why people desire to share. Psychologist Schachler suggested that fears force people to seek admissions to a social group. Being in a group decreases anxiety (Schachler, 1959) since group members provide advices and helps whenever they are needed. Therefore, people look for the peace of mind in the simple act of sharing.

To conclude, sharing experiences is a very significant part of co-experiences. Without sharing, chances to interact with others will be dismissed. On the contrary, Co-experience depends on human communication.(Battarbee, 2003b) People would enhance their communication and social ties through sharing experiences at the same time.

5.3 Mental worry

Except for users' expectation, there are still some reasons why users hesitated. What they concern about in mind was listed as follows.

5.3.1 Personal privacy

People start to consider the possibility of their private information being published when sharing experience in open spaces is in discussion. For example, when uploading pictures to a photo-sharing platform, people tend to choose photos that include someone else. To protect personal privacy, they would choose the safer way to protect themselves.

As Altman said, "we don't want very close relationships with everyone, because we need privacy." (Altman, 1975) Most of the time, we tend to share different things with different friends. Private subjects that may contain secrets can only be discussed with close friends while common subjects are to general friends. The more the intimacy, the more information people share with each other. On the contrary, unfamiliarity reduces the amount of information shared in between.

In a co-experience platform, targets for interactions are mostly friends and strangers. When privacy is being considered, some parts of user information should be hidden or blurred. With only some part of the information revealed and connected, interesting and poetic interaction still exists to satisfy users.

5.3.2 Platform usage

Users of a co-experience platform may have problems when starting to use the new design. The complications and inconvenience found in the platform may trouble them, and chances are they need to alter their old habits. Because the platform of co-experiences is complicated and a great number of information are flowing inside it, users desire a more simple and intuitive way to control the system.

According to Ben Shneiderman(2003), usability is composed of five factors: learnability, memorability, efficiency, errors, and satisfaction. Though co-experience is the user experience found in social interaction, users' concern is still not limited to the usability proposed by Shneiderman. In the co-experience platform, users spend time enjoying interactions with others and efficiency is probably not an important issue to their concern. Instead, learnability may be one that users pay initial attention.

Except for the design techniques that influence what users think about, the following usages are also what users care about at the same time.

1. habits in the past

As technology is being applied in co-experience designs, brand-new approaches compared with people's old using habits would influence their acceptance of new designs. If the gap between the new approach and their usage habits in the past is far too great, acceptance would decrease dramatically.

2. limited usage

Users don't like the limited usage in the co-experience platform, such as only can upload or download the photos. Instead, co-experience should be creative.(Battarbee, 2005) Users are full of creativities and ingenuity, too. We found that users are full of creativities and ingenuity. They are eager to explore new and exciting ways of using their sharing platform.

3. inconvenient portable products

Users hope the platform can provide functions other than the basic requirement----generating interactions. Interaction could be made simply by a cell phone or a camera without bringing another card to take a note for the sharing later on. When considering the inconvenience of carrying, the existing portable products users carry every day are better choices.

5.4 Co-experience process

In Forlizzi and Battarbee's(2004) research, there are three types of experience, which are experience, an experience, and co-experience. However, the three types of experience are sequential. In order to describe the flowing process the experience, here we are going to discuss "how was co-experience design happened" and "how to continue co-experience design," and the model of co-experience design was therefore proposed.

5.4.1 Co-experience happens

Whether through face-to-face communication or other experience-sharing platform, co-experience occurs in the reserving and the sharing of experiences. Reserving is the process with which people keep their memories in safe preservation, and sharing is the way people interact with each other. These two conditions must be satisfied, then co-experiences between one person and friends or strangers would arise.

We found that "sharing" is something natural to do among human activities. Based on our research results, people enjoy sharing their experience with friends because they look forward to share "good news" and hope to be treated the same way. Moreover, they hope to enhance the communication with family members through sharing. After discussing with others, they learn new things and consequently gain a sense of growth. To feel that one has grown with his own family is especially welcomed by users.

In the meanwhile, humans hope they can influence others by telling their experiences in way of storytelling. They tell stories through personal opinions and emotions, and the experiences are expounded from their own perspectives. It can be described as storytelling which means the experience was narrated as a personal story from the subjective aspects. As Jodi claimed, “Through the particular and unique interactions, users bestow meaning on situations, creating life stories and stories of product use.”

Most of the time, people expect themselves to be noticed through sharing their experiences. No one likes the feelings of being ignored. Apart from this, an old slang goes like this: “Courtesy demands reciprocity.” is also one of the motivations that people give responses. In addition, people expect others to look into the experiences he or she mentioned and hopes that it can influence others. Whether it’s a thought or an action, people desires to be agreed upon or to be influential when they share.

5.4.2 Co-experience continues

Feedbacks, once again, motivate people to share. Getting feedbacks is to get others’ responses from small compliments to feedback opinions; even a change of behavior is included. A feedback which represents more meaningful changes will inspire much enthusiasm.

Besides gaining what they desired for themselves, they also expect to have some emotional and behavioral impacts on others. For example, when someone share their happiness aroused by seeing a respective speaker, he hopes his friend to share the same feeling with him. Moreover, he hopes that his friend can start to notice and appreciate the speaker, even go to his speech one day. This is due to the need of recognition. Hence, if users can see their own impacts on others, he would be motivated to share his experience again and again.

Rewards or punishments can influence one’s behaviors. A reward such as a smile, a stare, an agreement, or a nod are expanded based on the desire to be part of a group. (Argyle, 1995) A reward is a positive way to encourage changing. In co-experience platforms, giving feedbacks is the most powerful reward, which belongs to social influence, to make users share constantly. (Kelman, H. 1958).

To make it short, the most important addition to be made is the feedback from others that motivates users to share experience continuously and to achieve the goal of acquiring splendid effects in co-experience design.

5.4.3 Co-experience process model

Based on Jodi & Katja's framework of user experience which relates to the design of interactive systems, there are three levels of experience, including experience, an experience, and co-experience. The first one, "experience", is the constant stream of "self-talk" that happens when we interact with products or systems. "An experience" is something that could be expressed or articulated. Finally, "co-experience" takes place when experiences are being created together, or as the lifting up experiences shared with others. (Forlizzi & Bartarbee, 2004) However, the three types of experience should be sequential and there should be a model to show the process of co-experience. Apart from the reference, we analyzed the process flow of three prototypes to deduce a model for designer to follow up. Three prototypes which represent three kinds of experiences illustrated as follows.

1. Platform A: sharing experiences with friends and other unknown people

Platform A belongs to a kind of experience that people sharing photos to both their friends and others who interested in watching live show. People sharing their experience through photos and they can share it at once or at home. The process should be like figure 5-1.

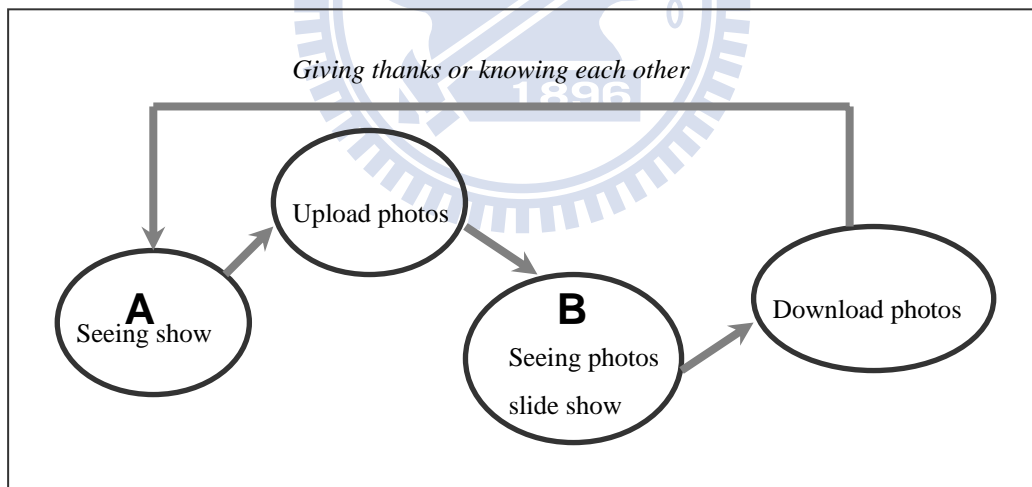


Fig. 5-1 Process flow of platform A (A and B represents one of audiences)

In the process of platform A, user A goes to watch the show and share his photos to the public. When B sees those photos slide show, he may download whatever he likes and even can see the related information about the photo provider. Then user B may give thanks to him through the websites or at once. Meanwhile, they may know each other from the interaction.

2. Platform B: sharing experiences with performers and other unknown people

Platform B represents one kind of experience that people share live atmosphere. No matter the performers, fans, or outside seers, they have co-experience together. The process of platform B was illustrated as figure 5-2.

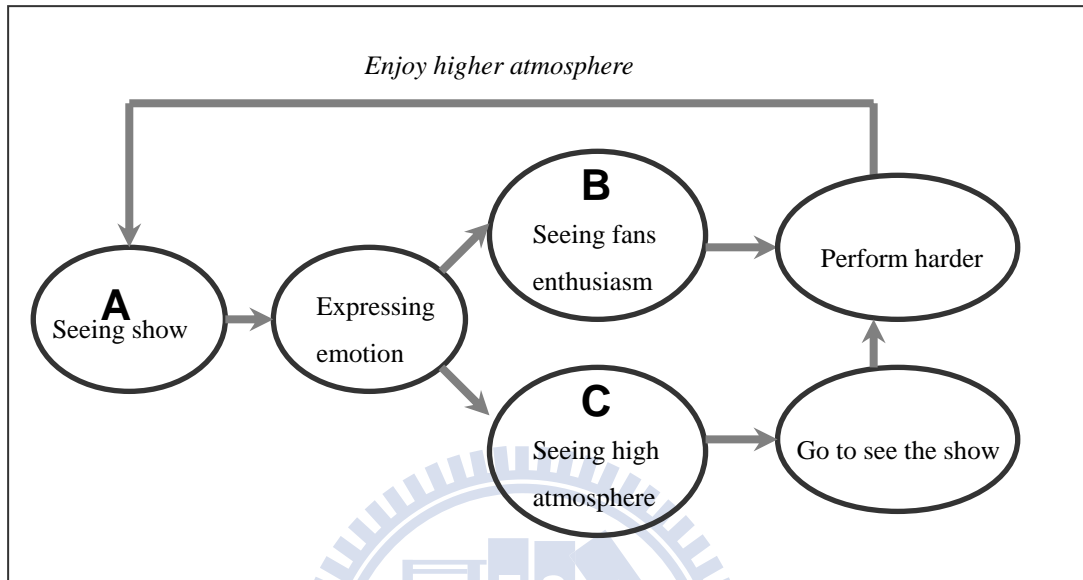


Fig. 5-2 Process flow of platform B (A represents one audience, B represents performers, and C represents people who walk by The East Gate)

In the platform B, user A as one of audience goes to watch the show, the express their emotion though the property, and performers would play harder whenever they see their enthusiasm. At the same time, people who walk through The East Gate may see the display sett outside and see the high atmosphere maybe attracted to get inside and join the show. Finally, all of them enjoy the higher atmosphere together.

3. Platform C: sharing experiences with friends

Platform C belongs to a kind of experience that people share their impression with their friends. This kind of experience take times and what they shared is much more deep thinking or feeling. The process flow of platform C was illustrated as figure 5-3.

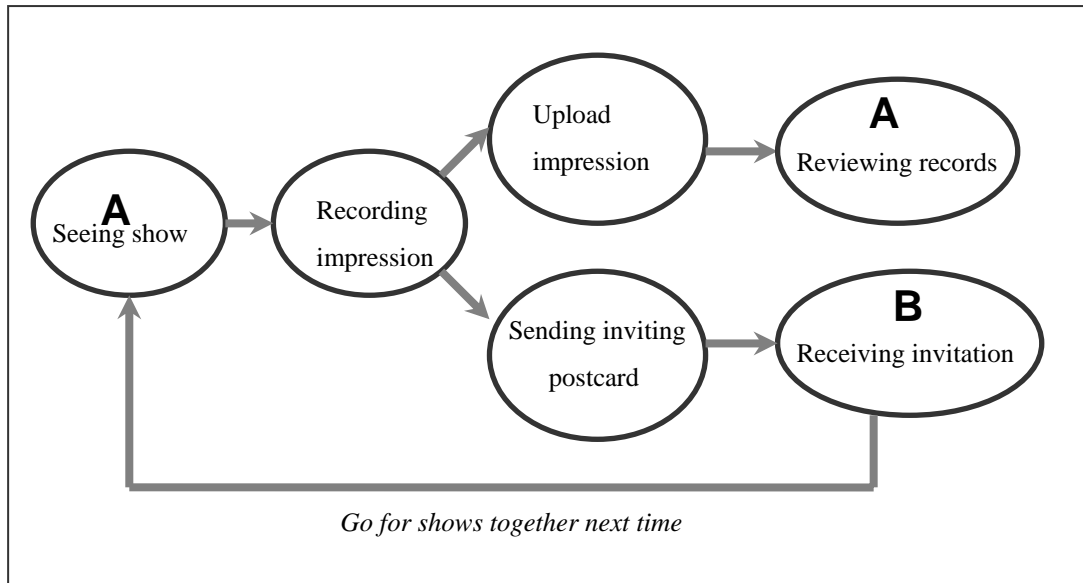


Fig. 5-3 Process flow of platform C (A represents one audience, and B represents one of A's friend.)

In platform C, user A goes for the show and records what he and his friends' impression. Through upload his own impression, he can review his memory in the show. At the same time, he can send inviting postcard which written on his points and views to his friend. User B would receive the invitation and go for shows with A together next time.

From three process flows, we collected the key process and compile the figure 2-1 which was proposed by Jodi & Katja, then the model of co-experience process was produced. (see fig. 5-4)

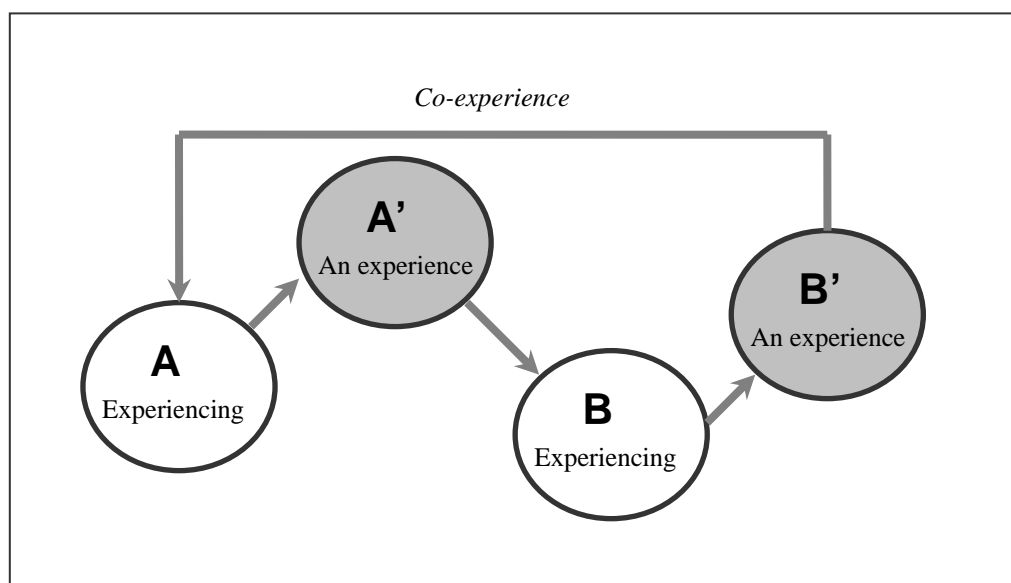


Fig. 5-4 Co-experience process model

In the figure of co-experience process, three levels of experience were put in the sequence model. A and B represent users, and A' and B' represent their personal experiences. A produce his experience by storytelling after experiencing a product or a service. A's experience is henceforth passed on to B through sharing. B may be influenced by A's experience to experience the same product or service, and then B expresses his own experience. If B's experience went back to A, then it can be said that A and B have co-experience. Meanwhile, the co-experience process forms a cycle and the experiences will be flowing in the system continuously.

It is a completed sequence model to show the dynamic of experience flowing in co-experience. It can be a significant reference for designers to follow when designing a platform which aim at providing co-experience.

5.5 Design suggestions

To talk about the design for co-experience, there are some factors ton which designers should focus. First of all, we attempt to emphasize that sharing experience is one of the desirable and profitable ways of achieving co-experience. Secondly, designers need to consider the past experience and their prospects in thinking in terms of usability. Finally, to make an effort on satisfying users' inherent and psychological expectations is the most significant issue. Battarbee & Koskinen talked about the essence of co-experience as being social, multi-modal, creative, and for fun. It is also the criteria for high quality co-experience design which designers could exert themselves to do. Based on the references and the results of this research, some design suggestions which could help designers to do co-experience designs were discussed as follows.

5.5.1 Satisfy co-experience process model

To design an interactive service or platform which has co-experience, the first priority is to satisfy the co-experience process model. The suggestions are addressed as follows.

1. Users could give feedbacks to others easily whether it is just a word, a drawing, or long, written comment. For example, people could leave messages on what they shared, no matter they were agree or disagree with his opinions.
2. Let users see their own influences on others, especially seeing that they can change others' mind or behaviors. For example, if he share his experience on blog, and he got the message that someone who also went to watch the show and gain a lot from it on his blog one day.
3. Show users how their experiences intersect after interacting with others to know

someone has common experience with him. And the technique of expression could be creative and interesting. For example, provide the platform which could display all photos from fans who love the same band.

5.5.2 Achieve good effect of co-experience

Referred to Battarbee & Koskinen's principles of co-experience(2005) and the results of this research, there were some suggestions were proposed as follows.

1. Provide multi-coexperience channels. Single co-experience channel would not lead to flexible and plentiful of co-experiences. For example, people could share their emotion through face-to-face and share their impression or photos through websites.
2. Increase interesting interactions, including interactions with platforms as well as with humans. Co-experience is something people do it to have fun together. And they want to strengthen social relationships at the same time.
3. Record memories and display abundant and meaningful accumulated experiences. For example, re-organized photos taken for people around East-Gate. Provide an easy and intuitive user interface.
4. Satisfy the need of prompt sharing with others. People have the desire to share good news or their emotion at once. For example, provide an instant video sharing function in the platform.

5.5.3 Need to take notice

Except for meeting the process model of co-experience and trying hard to achieving good effects of co-experience, there are still some points need to be considered, such as:

1. Consider users' past usage habits. For example, if they don't have the habits of bring additional equipment to the field, think of other solution, such as cell phones or other portable equipments.
2. Leave some space for users and let them create their own ways of using and personal meanings. For example, provide the source for users to edit their photos together so that they could make the photos have different meanings.
3. Concern the privacy problem. Do not ask users share too much personal information, such as identify numbers or the salary.

CONCLUSIONS

Nowadays, interaction design has become more and more significant issue which designers and researchers pay attention to. Designers were making their efforts to design products which were more convenient, more easily to use, and more attractive. However, what people need at heart is to have more contacts with their family and friends instead of being company with products. In case of adding the concept of “co-experience” into the design development process, it will definitely increase the social interaction and push the interaction proceed continuously

Take the cell phone for example, it is no longer just a tool to call others but a platform that people contact to each other. If we put the co-experience concept inside, we may discover that there will be more possibility of it. It may be changed by a wide margin on its service, the interaction ways or even the product usability.

Nevertheless, designers lack of enough research and design cases to refer to in the current time. But co-experience design was usually involved in a complicated design scope. Designers need to consider not only the system functions but also the users’ emotional requirement. Therefore, they require more guidelines about users’ emotional need and design techniques to follow up.

6.1 Conclusions of findings

The objectives of this research are to figure out what users care about in co-experience and what kind of design techniques corresponding to positive and strong effect. By means of designing co-experience platform which have different attributes, and interviewing users’ reasons why like it or dislike it, some concluded findings were proposed as follows.

1. The co-experience platform should basically fulfill the process model of co-experience, so that the experience could keep flowing continuously. (see Fig. 5-1)The key of the co-experience process model are the experience sharing and the influence be perceiving phase. With sharing experience and gaining feedbacks from others, the circle of the process will circulate more and more smoothly and increasingly.

2. Co-experience depends on social interaction.(Battarbee, 2005) Designers should exert them selves to satisfy users' expectation in mind. What people expect from human communication is to gaining the sense of growth and the enjoyment of communicating with others. The permanent motivation they share experience to each other is having fun together and strengthening social ties.
3. Except for satisfying users' expectation, designers should mind users' privacy and usage. In public space, users' personal information should be concerned when publishing their experiences.
4. To design a co-experience platform, designers can refer to the design suggestions proposed by this research and consider different design techniques depending on different requirement of different projects.

To sum up, we discovered that, first of all, “sharing experience” is one of the desirable and influential ways of achieving co-experience. Secondly, designers need to consider the past experience and their anticipated ways of using in usability aspect. Finally, to make an effort on satisfying users' inherent expectations in psychological aspect is most significant.

6.2 Contributions

This research gained the user-ended data to understand users' need and worry with designed prototypes as a research tool. Though it was not the real implement in the real field, it still has the symbolic index. Moreover, the design suggestions which acquired from the discussion about the design techniques and the effects might be a valuable reference for designers who strive to strengthen user experience in social interaction. The following are the furthered contributions:

1. Under the theory of co-experience, we operated practical concept design and provided design suggestion to be referred for design teams.
2. Providing the co-experience process model to make the theory more cleared and solid. It also can be the reference for design teams following up.
3. The theory and design cases could be consideration for those who planning the public space or the interactive websites designers.

6.3 Recommendation to future work

Through the research, what users care and design techniques for designing co-experience platform were revealed. Some subjects that are worthy to go a step further were listed as follows:

1. The effect corresponds to the design techniques was figured out. In future work, researcher can examine the intensity of different design techniques. To find out what kind of attributes would gain stronger effect of co-experience.
2. Through the social websites developed dramatically nowadays, the impact to users daily life could be surveyed and be examined what kind of influence brought to humans' life. Then to search out the difference of users' care between the virtual websites platform and the real space platform.



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Appendix A : Questionnaire for interview

國立交通大學 應用藝術研究所 / Institute of Applied Art, National Chiao Tung University

共體驗手法與效果之對應研究

研究生 吳采芳 指導老師鄧怡莘

觀賞表演之經驗訪談問卷

第一部份、基本資料

姓名_____

性別 男 女

年齡_____歲

學生

職業 學生 工作 工作性質_____

最高學歷 國中 高中 大專 研究所 學校系所名稱_____

平常獲得資訊之方式 報紙 雜誌 電視 書籍 網站 BBS blog

第二部份、觀賞表演之經驗

1.最喜歡看(曾經看過)以下何種表演？

- 演唱會 演唱者?_____
- 音樂會 樂器種類?_____
- 戲劇表演 劇團名稱?_____
- 地下樂團 樂團名稱?_____
- 舞蹈表演 舞蹈種類?_____
- 球賽 哪種球類比賽?_____
- 街頭表演 魔術表演

2.請回憶一開始是因為什麼緣故去看的?(複選)

- 本來就對該**表演團體**有興趣 本來就對該**表演形式**有興趣
- 聽朋友推薦心動 被朋友拉去看 捧朋友的場
- 路過不小心看到 看他人看過的心得
- 電視、廣播、雜誌或書籍的介紹
- 海報、DM、網宣

3.從何種管道知道該表演的資訊?(複選)

- 朋友推薦 海報、DM、網宣 他人轉錄的資訊(BBS/blog)
- 電視、廣播介紹 雜誌或書籍的介紹 表演團體的家族/官方網站/部落格
- 其他_____

4.會從哪些管道搜尋相關介紹或他人心得?(複選)

- 朋友 海報、DM、網宣 他人轉錄的資訊(BBS/blog)
- 電視、廣播介紹 雜誌或書籍的介紹 表演團體的家族/官方網站/部落格
- 其他_____原因_____

5.曾經有受他人影響而去接觸的新表演型態或團體嗎？

是 請說明如何受影響_____

否

第三部份、分享表演之經驗

6.看完表演後之感想會想跟誰分享? (複選)

同學

老師

朋友 何種關係之朋友?

家人 長輩或同輩或晚輩?

一起去看該表演的人

同樣支持該表演型態的人

同樣支持該表演團體的人

其他_____

7.會回饋給當初提供你資訊的人嗎

分享該表演資訊給你的朋友

分享該表演感想給你但不認識的人(ex. blog 看到)

不會

8.會選擇以何種方式分享? (複選)

口頭描述 MSN BBS 班版 BBS 個人版 個人部落格

email 表演團體的家族 post 文章 手機/電話

回覆或接續在朋友的相關文章後頭 其他_____

9.若發表文章會貼上哪些資訊? (複選)

表演之時間地點資訊 表演之購票資訊 表演內容之圖文 DM 等介紹

表演之團體介紹 看表演時的照片 看表演後的感想

其他_____

10.分享後會有什麼感受?

滿足的 開心的 成長的 親密的 其他_____

--Thank you--

Appendix B : Scenarios of three prototypes

1. PrototypA: Share your photos! —照片分享平台

情境：

某天晚上，你到東門城附近逛逛。

經過東門城時，看到東門城表演的照片 slide show，便好奇的停下來。



東門城隨機播放著這個月的民眾上傳的照片。

你選了最近兩個禮拜的照片，想看看這兩個禮拜的東門城有什麼新鮮事。



看到獵紅幫別人簽名的照片!!

PHOTO SHARING PLATFORM

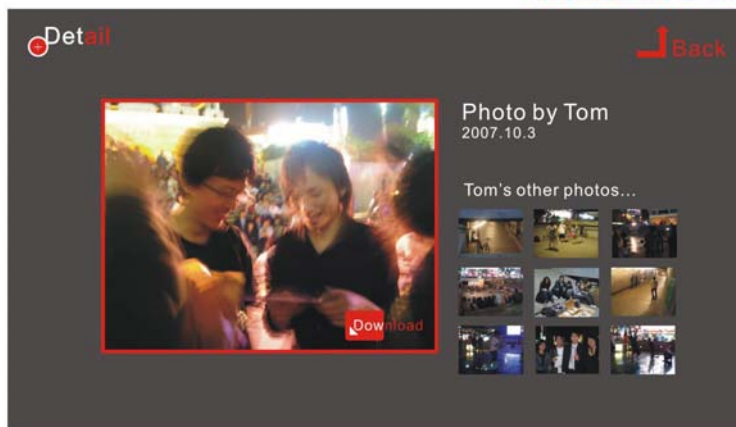
東門城照片分享平台



點進去照片放大詳細端詳，原來是湯姆先生的照片，從他的照片中發現他似乎對樂團表演都挺有興趣的，進一步發現別的樂團也很有趣，想著下次來看看...
這張獵紅的吉他手近照，趕緊用手機下載帶回家珍藏。

PHOTO SHARING PLATFORM

東門城照片分享平台



回到家中你上網到這個分享平台，看更多更久的照片，並且到湯姆的相簿留言謝謝他拍的照片。

2. Prototyp2 Big fans — 氣氛感染分享

情境：

某個星期六晚上，你和朋友一起到東門城附近逛街。

經過東門城時，看到...閃爍的現場表演轉播與熱鬧的聲音。



這時...

好奇心驅使你們往東門城走進去一探究竟，在進場時拿到一個 [愛老虎油沙沙搖鈴]。



道具說明：

[愛老虎油沙沙搖鈴]

表達愛意、High 度與伴奏樂器。

1. 可作為演唱會氣氛節拍伴奏樂器，隨著音樂打節拍。
2. 隨著搖晃次數越多，搖鈴會越來越紅，此時東門城外的螢幕亦會顯示城內所有人的累積 high 度。
3. 搖鈴越紅，I love U 的字樣越清楚，表演者可看到現場一片發亮的 I love U，會越演越烈。

表演結束後，剛剛熱情的 high 度會留在東門城附近伴隨演唱會很 high 的照片會以 slide show 播放一個月。



3. Prototyp3 East Gate passport — 分享心得感想

情境：

某個星期五晚上，你和三、五好友一起到東門城看某樂團的表演。

表演結束人潮漸散，你們興奮地各自說起剛剛看表演的感想...

Ex：哪個樂手彈得超強、哪首歌最好聽、哪個時刻氣氛最 high...

這時...

你拿出 [東門城表演護照]，幫大家把當下討論的感想錄下。



道具：

[東門城表演護照]

蒐集看表演經驗與紀念用。

1. 鏡頭可拍一次照片並自動紀錄日期在顯示於空格中，集滿可得到東門城附近商家的特惠，並可留下作為限量的紀念護照。
2. 可記錄下最值得紀念的時刻，在回家後可上傳到自己的 blog。
3. 可選取照片製作出演唱會表演的 [紀念卡]，可自己留著做紀念，並可當邀請卡邀請其他朋友一起參加下次的演唱會。



回家後，你把今天的錄影(音)以無線傳輸到電腦中，看看今天討論的熱烈強況與回顧今日的表演，就洋洋灑灑的打了一篇大家心得的 blog，同時朋友看到你的 blog 也給予回應。

Appendix C : Affinity Diagram result of “ends”

04 成長的感覺

03 與他人分享而成長

02 喜歡與人分享

01 好康倒相報

想把花錢花時間花心力去看的分享給人

好康倒相報

施比受更有福

把自己覺得好的分享給別人

01 期待朋友受自己影響

好看的希望朋友也去支持

影響同學或姊姊下次一起去看

期待別人聽的津津有味

希望朋友下次一起去

講很多話很開心

01 期待得到回饋

期待同理心回應

期待對同一個表演別人有 feed back

對該表演有所瞭解,可與他人討論

期望與對方有共鳴

回饋

希望別人 enjoy 我的分享

想知道他人的感受(認同感/不同看法)

分享過的影響深遠

要大家別去(難看的)

有共同的 touch 點

希望看自己喜歡的是否也有人喜歡

期待有共鳴

尋求認同感

發現自己沒想到的觀點

期待別人有一樣的經驗

看是否與我有相同或不同之感想

引起熱烈回應

希望看到回應

01 回饋他人

鼓勵他人繼續寫

謝謝他人的分享

回饋當初邀我去的

02 與家人共同成長

01 為讓家人成長

鼓勵家人出門接觸人群

鼓勵孩子正面發展

為讓小孩與學習有成長

讓家中小孩藝術感染

對小孩有激勵作用

01 促進親子交流

孩子易理會父母的感受

與孩子有共同話題

父母易進入孩子的世界
家人間有交流
與孩子一起成長的感覺

03 可讓自己 level up

02 讓自己提升層次

- 01 心理的滿足感受
 - 滿足的感覺
 - 開心的感覺
 - 成長的感覺
 - 有獲得的感覺
 - 有意義，沒有白花時間的感覺
- 01 對自己的學習有幫助
 - 找到邊緣領域可以應用在自己領域的地方
 - 為修課寫報告
 - 為了跳舞要有創意
 - 想學幾招娛樂人
 - 觀摩他人厲害之處
 - 得到反省自己創作的養分
 - 對學習領域有幫助
 - 看到多元的專業
- 01 增加氣質與廣度
 - 可增加文藝氣質
 - 開展視野
 - 增廣見聞
 - 從表演、藝術看人生
 - 從不同角度會發現深刻細膩的地方
 - 心靈改革
 - 心靈有平靜
- 01 記下自己的感受
 - 不期待影響別人
 - 評斷是否值得看

04 看表演的經驗

03 做功課

02 事前瞭解演出相關資訊

- 01 主動瞭解內容
 - 瞭解演出內容
 - 易融入表演
 - 知道演出活動
- 01 主動找周邊訊息
 - 決定票價
 - survey 找資訊
 - 怕看到難看的
 - 知道是否知名
 - 先做功課以防看不懂
 - 爲了以防到時因語言看不懂
 - 不同角度之介紹

03 看表演的動機

02 受同儕影響

01 身邊朋友邀約

- 捧朋友的場
- 支持團契活動
- 姊妹都喜歡，陪去
- 幫班上加油
- 大家一起幫中華隊加油
- 支持球隊
- 朋友招待

02 放鬆心情

01 殺時間

- 買晚餐順便去看
- 單純 for fun
- 不用門票可以免費看

02 對表演有期待感

01 對新體驗的期待

- 種類多樣化
- 好奇心
- 有吸引力會想停下來看
- 想看該表演想表現什麼
- 性質特殊想看
- 看奇怪的表演
- 爲了不同型態的表演
- 想看街頭表演在幹嘛

01 被表演介紹所吸引

- 表演本身有趣
- 被表演傳遞的概念吸引
- 想看爆破藝術家的舞台效果處理
- 預想東方與西方融合應該很有趣

01 過去有接觸期待現場體驗

- 想看新作品
- 以前就聽過,想搶先聽新歌
- 想親眼看有名演出者
- 想親眼看世界級選手之功力
- 看現場感覺與想像有什麼差別
- 想知道一堆人唱知名曲是什麼感覺
- 長久想聽現場的慾望
- 想看認識的演員演戲
- 爲了體驗百老匯
- 想聽流行音樂的演唱會
- 想知道用什麼方式呈現戲劇
- 體會現場臨場感
- 看有名的藝人

02 自己有興趣

01 過去有接觸該活動而有興趣

自己無法達到的境界只能欣賞他人
愛打籃球也愛看
想看(本身有學)
自己有打球有興趣
想知道他人唱怎樣(自己也有在唱)
與過去聽過的歌曲做對照

01 對看表演有興趣

主動去找喜歡的
對表演性質有興趣
有興趣想看
看曲目是否有興趣
看演出者是否有興趣
找有興趣之表演節目
做篩選
週期性找表演



Appendix D : Affinity Diagram result of “means”

13 訊息傳遞的工具

12 交流平台

11 自己發佈消息的平台

自己 blog+link

BBS 個人版

自己 blog

11 聊天媒介

MSN

手機(電話)

11 他人 blog

朋友的 blog

不認識的人的 blog

11 網路交流平台

交流論壇

戲劇家族

funp.com

背包客網站

奇摩知識+

11 網路平台

搜尋網路(wiki/google)

BBS

google

BBS(html 形式)

網路新聞

網路

BBS 網宣

blog

12 宣傳媒介

11 官方網路宣傳

官方網站

球隊官方網站

新竹市網站

百老匯網站

演唱會 Vlog

基本入門介紹

11 宣傳的媒體

媒體宣傳

奇摩首頁廣告

報紙新聞

廣播

電視

11email 的宣傳

贊助基金會發的 email

email 收到的電子報

寄 email

訂閱的電子報



11 書籍介紹的資訊

書籍
Art 雜誌
旅遊書

11 售票平台

年代售票網
兩廳院售票網
售票網站
訂票店面

11 平面宣傳

海報
海報(圖書館)
表演簡介
表演 DM
表演單位節目本
每月節目表(2 廳院)
DM 賽程表
演出曲目
電視球賽賽程表
DM(文化局)
DM(學校或展覽地方放的)
DM(書店、音樂廳)
DM 新竹文化中心
DM 市政府
DM(交大藝文中心)
活動表
月節目表(兩廳院)

13 經驗交流的模式

12 單方接收的訊息

11 他人推薦

學長鼓勵去看
老師推薦
教會公佈消息
朋友推薦

11 從學校獲得的

老師的課程資料
老師上課講到
表演藝術課
通識課老師
學校老師放 VCD(教材)
老師講解
錄影帶
老師放過知名演員的表演

11 受身邊的人影響

同學很瘋
剛交往的朋友
妹妹在家放音樂
老師帶去看

自己是工作人員
旅遊團的套裝行程
朋友 show

12 感想交換

11 回饋

分享回去
跟給資訊的人討論

12 表演資訊和經驗交換

11 與別人聊天

朋友說
口頭分享
聽聞
口耳相傳
口頭提一下
同事聊
聊天聊到
家人說

11 主動分享

主動分享給好朋友
詢問朋友
孩子主動分享
專業的朋友
詢問看過的人
問其他有經驗之留學生
詢問專業人員

11 看完後討論

與同學討論
與一起看的人討論
演完討論
與家人討論

13 動機

12 引發看表演的動機

11 過去有經驗

聽過的音樂家
聽過表演者練習
聽過片段
認識表演者
唸過劇本
看過該團其他表演
高中教過
幫忙做海報

11 他人邀約

表演者邀請(親戚朋友)
爸媽找球賽資訊
親友邀請
親友送票
受邀請
朋友邀約
互相邀約

哥哥帶去

11 偶然看到表演

經過火車站看到

經過市集看到

逛夜市看到

逛東門城看到

出去走不小心看到

路上撞見

大廣場老建築旁

紐約地鐵看到

聽到唱歌聲音

醒目人潮多的地方

聽到很吵的聲音



Appendix E : Affinity Diagram result of “attributes”

23 表演活動

22 表演訊息(主辦提供)

21 基本介紹

演出時間
演出地點
演出團體
曲目介紹
音樂家介紹
專有名詞介紹
音樂家介紹
演出性質
演出內容
演出劇情
球賽規則
劇情預告
官網連結
球員姓名
故事內容
團體介紹
專輯的歌
活動名稱
表演屬性

21 活動指引

安全
購票方式
各國住宿
交通

22 表演架構

21 表演項目

舞蹈
打擊樂
古典樂
街頭樂器合奏
magic
街頭表演本身
街舞練習/表演

21 節目構成

橋段
氣氛
道具
效果
佈景
舞台設計
特效
劇本
人物
導演



編劇
演員

23 觀點感想

22 自己的回應

21 自己的省思

特別的感想
自己有收穫的
與自己生活的連結
學到的人生功課
有睡著的地方
傳遞有趣的訊息
活動是否特別
觀察到的地方

21 自己當下的感受

正面感受
品質在期望之下
是否值得去看
每首的感覺
當下感動
與平常聽 CD 不同
當下想法
正面評價
負面評價
演得怎樣
看後之感想
印象深刻的地方
不錯的演出品質
喜好的表演人
對活動的感受

22 他人觀點

21 他人評價

沒去可惜
評價好
推薦與否
推薦帶小孩去看
引起人好奇的字句
他人回應

21 他人經驗

是否看過
看過的經驗分享
他人舞蹈的專業說法
先看過的人的心得
看表演拍的照片
不同看法
他人介紹的連結
看表演的照片
他人心得
熟悉的表演人



22 回應他人

21 受他人影響

邀約

下次也要一起去

回應 blog 提到的幾句話

21 大眾觀感

有名演員

知名程度

受歡迎程度

23 深入內化

22 深入探索

21 表演分析

演員表現

球員打法

現場同步解說

不同著眼點

分析表演

團隊特點

團隊長處

注意的地方是否一致

著眼點深入

誰唱得好

21 背景進階介紹

曲風介紹

背景介紹

歷史源由介紹

音樂的產生背景

籠統的概念

相關資料

22know-how

21 撇步

什麼時候便宜

去哪裡排隊

偷錄的幾首歌

怎樣偷偷有好位子

21 小道消息

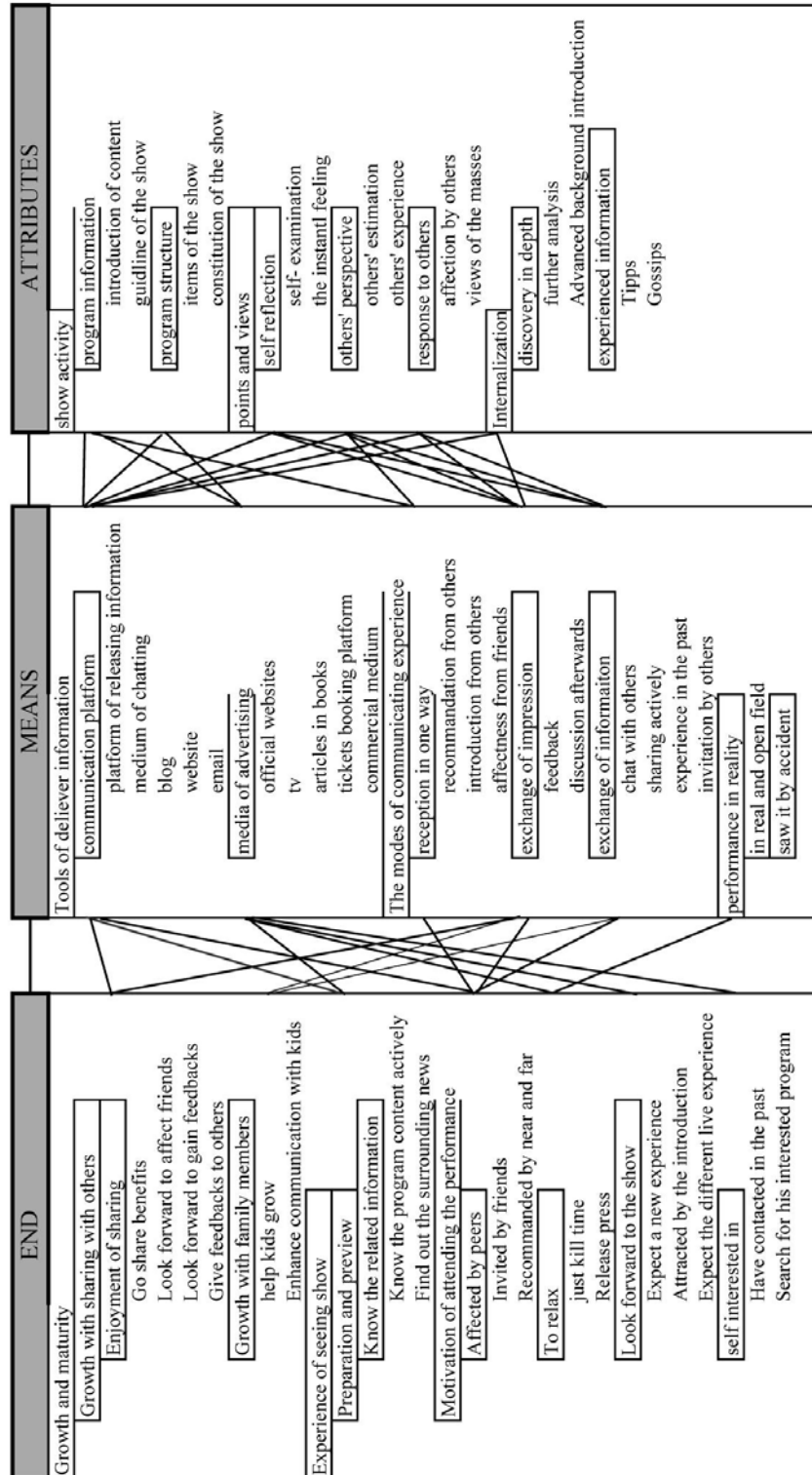
排練情況

排練辛苦

精心策劃程度



Appendix F : Means-end-attributes routes



Appendix G: Affinity Diagram of prototype A

33 設計的評估

32 效益

31 正面影響

照片會一直累積，越來越豐富
可留言，記憶會累積，有交流空間與個人 show off 的空間
像 BBS 讓原本沒交集的人認識
也可造福觀光客了解東門城
像遊樂區
實用性高
有相片.影音.表演資訊很實用

32 阻力

31 使用的阻力

怕隱私權，會挑合照上傳，讓認識的人看到
像是把家裡螢幕搬到公開場合。
希望可以留言，但是怕有負面留言
出門就不想接觸電子類的東西想看自然的。

33 設計的建議

32 設備的建議

31 場域的安排

放東門城外邊較適合
有引導指示走到東門城內

31 對平台設計的期望

想看最高點閱率最 popular 的照片
可留言或塗鴉，較直接.即時
希望是很長的佈告欄，分活動性質有不同區塊的照片
加入投票機制，例如今日最夯
在意使用平台的福利，例如容量空間多大。
太混雜會產生疲倦，明確的分類，便利性高會比較吸引。
不需花太多時間就可找到清楚的資訊，例如這週有什麼活動。
可以設置場景.音樂讓人拍主題照(觀光照片)
按照拍照時間分類
有不同的分類方式可以搜尋
想找特地樂團或特定日期的分類
可以有不時拍不同角落的相機

31 動態資訊比靜態吸引

練舞人的影片會比靜態照片有趣
光看照片了解太少，娛樂性不夠
照片太安靜
照片 show 像展覽，影片像辦活動
在東門城動態的會停下來看，靜態就不想。
照片與陌生人的互動較少
影片會較想下載，因為可回味.分享，像 youtube 一樣
可回顧表演
影片會較想看和帶回家

31 照片的時間變化

體會到時間的流動，會較想親自進來看

有故事性的感覺，同一場域從時間軸看到不同景象
照不同時刻同一角度，可體會到這裡的變化
著名景點播放歷史.著名的人事的照片別人才會想看

33 Usage

32 使用習慣

31 預期的使用方式

照片 SHOW 會停下看一下，但不會想帶回家或留言，因為習慣默默看。
會想好好經營因為是要公佈出來的
有感而發的感想會放在 blog。
會查周末有什麼活動
來這看看會較多瀏覽，是否下載要看什麼類的表演。
手機上網就可知道東門城內有什麼表演

33 與人的互動

32 分享

31 分享給認識的朋友

會介紹東門城好玩的地方的照片給朋友
會帶朋友來看因為別的地方沒有
想分享會針對有興趣的人用各種方式找到她，不鎖定人就寫在 BLOG。
會介紹給身邊的同好或者想嚐鮮的朋友

32 經驗交集

31 有相同的體驗

原來這裡很多人跟我一樣
現場一起看影片的人就有共同的體驗

31 與別人的經驗疊合

喜歡平淡中突然有小小甜蜜的感覺
希望與別人的經驗疊合，呈現更不同的經驗
看到別人的照片背景有我，有 "世界原來我們這麼近" 的感覺

33 心理需求

32 期待得到的東西

31 在意自己有關的資訊

只會想看與自己有關的照片
身為表演者會想看到與我自己有關的資訊或照片
常常在東門城活動的人會比較想用，但自己較無興趣。

31 期望得到肯定

希望自己的影片成爲今日最夯
想得到更實質的獎賞
像打電動積分，在虛擬世界得到肯定

31 期待知道他人看法

可看到別人在這裡想什麼.做什麼
可與別人互動(留言)
想看別人的留言與回應
強迫留言才可下載，亦可知道人氣數
想得到大家對表演的共鳴點
分享後會期待他人回應
身為路過的人會想看別人的經驗

Appendix H : Affinity Diagram of prototype B

43 設計上的意見

42 接受的原因

41 與過去經驗相像的地方

像在打電動給分
像造勢晚會

41 會想用的原因

可愛又不吵的道具可表達自己的情感
很漂亮會留著紀念
好的道具.很有趣
每次來都會想帶
不需要拍手.會痛
限量的會想搶
專門為東門城設計只有這裡才有
會變色很有趣會想帶回家
會想使用因為公共空間少有精心規劃的，還有小道具
會想一直放影片上去
不知道幹麻時會進來
經過看到裡面狀況的確會想進來，有宣傳作用
新鮮感
有趣
像加油棒或瓦斯喇叭，可助長現場氣氛，HIGH 度會變高
大家很 high 的時候就會用
變色有娛樂效果

42 不易接受的原因

在外面會看什麼團決定是否進去
喜歡享受當下而已
有心動但實用性不大
克服懶.害羞的問題
較難被氣氛感染或感染別人
只想散步會抗拒拿東西，因為自己手上也有相機或手機

42 設計上的建議

有些歌曲風不適合搖鈴伴奏
應該要不只一個螢幕
可把轉播螢幕範圍放廣一點到火車站
舞台會上升下降
可與設計一結合，使用於記錄影像.與佈告欄的互動
有環保問題，成本高
搖鈴有些麻煩，成本高，可在地板裝感應器
搖鈴計算 HIGH 度不一定準，不 HIGH 的人也只是拿在手上
搭配 HIGH 度有煙火.燈光，最後還可領爆米花
變成公開的歌迷俱樂部
較有時效性(一時的激情)
只有 high 的表演可以用

43 持續分享的動力

42 分享的動力

41 好的體驗想分享出去

想與朋友分享因為是好的體驗

好康道相報

很高興下次就還會想來，回去也會一直回味。

當下很開心就會想把這次經驗跟別人說

42 分享得到的回饋

41 分享期待的回饋

因為看到同一個表演秘密的和別人有共體驗

可留下照片.名字，想找看有沒有人跟我一樣(都看同樣的場)

因為這樣交到朋友也不錯，但是不是目的是 bonus

分享後期待有共鳴，很巧的感覺

期待別人有興趣聽我分享我的感受

41 努力看到回饋的成就感

本日最佳觀眾的證明

熱烈度與環境燈光.氣氛有關，會覺得自己是重要的一份子

"您的忠實就是我們的努力"

鼓勵表演者有種就來

可與台上表演者回應



Appendix I : Affinity Diagram of prototype C

53 設計的意見

52 預期的使用方式

51 希望如何使用

可遠端視訊給朋友看現場情況
會直接貼 BLOG 的連結給朋友當邀請，不會用明信片
會想用一小段話給表演人或邀請朋友
會用 EMAIL 邀請不會寄明信片
表演實況當背景+一小句心得
真的有些話想跟別人說(到此一遊的 fu)
可和他人現場交換較有趣
當下的分享比較好

51 希望具備的功能

可綜合不同的功能
不用的時候希望有別的功能，例如聽音樂
可集點較有吸引力
多一點食衣住行娛樂等一本搞定的護照，附加價值大
像旅遊護照一樣累積點數可門票免費

51 文字與影音都想留下

在自己 blog 會以錄下的影片+文字呈現
感動的部份會用文字寫
錄影是錄下當下精采的部份.最感動的一段
文字是寫下衍生的想法.註記.感動
文字留下的較有意義
影音留下的較表現
動態會用錄影
聊的東西事後會以文字記錄特別有感覺的
心裡想記的感動是經過內在的轉換，語言是經過時間的發酵
錄影的方式較新奇，較易被吸引
較有即時性.機動性.整體感

51 考量購買的點

在意拍攝的畫質與價錢
在意這樣產品的價錢

52 設計的改進建議

51 功能易被取代

會用自己的相機就好
功能與現有產品太相似，易被取代
身上的東西(相機.)都可做到
會被取代
還是會用原本的相機跟手機

51 原本的使用習慣

聊天錄音不自然.太刻意
聊天內容不會想錄下來
沒有寫在公共 blog 的習慣
不想 PO 在東門城公開的 BLOG
路過的比例比特地來的人多
會忘記帶

相機不一定會隨身帶
不知道東門城有什麼表演
回家後做太多動作熱情會冷卻
有區域性，當下想用，回家就懶得整理因為感覺不在了

53 經驗的流動

52 經驗交換的快樂

51 期待交換經驗

寫完希望看到有人回應，引起共鳴
透過東門城網頁連結到他人 blog 可看到其他的生活面向
看到有一樣的生活體驗會有交集的感覺
可呈現多面向
分享給不認識的人熱情持續較久
像是背書推薦給朋友

51 與朋友分享的快樂

會將錄下的影片自己剪輯，在好友聚集時分享，給朋友 surprise
在生活中製造樂趣，留下回憶很重要
與朋友一起看像在一天回到當天的情景
看朋友開心就很開心
輕薄的就會拿來記錄生活瑣碎的片段

52 自我檢視的快樂

51 回顧自己的體驗

會一直回頭再看自己寫的，產生不一樣的感覺
可看到我本人我的體驗
會想留下片段看以前的自己很好笑

