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# ASSESSING THE FIT BETWEEN MOBILE TECHNOLOGY ON SELF-SERVICE AND INDIVIDUAL DIFFERENCE IN THE EXHIBITION INDUSTRY

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## Abstract

The concept of self-service is getting popular. Many firms and users adopt the SST (Self-service Technology) due to its lower cost and saving time. Mobile technology is an emerging technology and because of its characteristics such as identity and location-sensitivity that it is quite suitable for Self-Service in terms of people can easily obtain information tailored for them. Individual difference is one the factors that affect the user adoption. This research is to find out what kind of mobile self-service fits with the certain individual characteristic that generates the better task performance. The result can guide service providers to develop attractive self-service through mobile technology.

**Keywords:** Mobile Technology, Self-service, Service Taxonomy, Exhibition Industry, Individual Difference

## Introduction

The concept of Self-Service is getting popular these years. With appropriate technology support, customers can serve themselves to reduce the interaction time with service provider and without the limitation of the place and time, and therefore it is more convenient and saving time.

Mobile technology, such as cellular phone, PDA, or other hand-held mobile devices, is one of the service delivery channels of the Self-Service, and is in widespread use in the recent years. Due to its characteristics of reachability and mobility as well as functions such as identity and location-sensitivity [9], mobile technology is quite suitable for Self-Service in terms of people can easily obtain information tailored for them. Many previous studies try to find out the factors that impact people's adoption of SST (Self-Service Technology) and mobile technology. Among them, individual difference is one of the important factors that affect people using these emerging technologies, such as self-efficacy, demographics, or technology anxiety [12] [14]. With the impact of the popular information services provided by I-phone and G-phone, companies seek to develop many innovative and useful services on

mobile device to attract people. For example, the exhibition department in TAITRA (Taiwan External Trade Development Council) requested SSRC (Service Science Research Center) in NCCU (National Cheng-chi University) for developing innovative services that can be used in exhibition environment. SSRC formed a team named U2EX to support the project and the team design several services on PDA which is called "Narvi". You can use Narvi to help you collect DM, exchange business cards, search for products, and many other services in the exhibition place. This research is to find out what kind of mobile self-service fits with the certain individual characteristic that generates the better task performance. The result can guide service providers to develop attractive self-service through mobile technology. Below are the research questions:

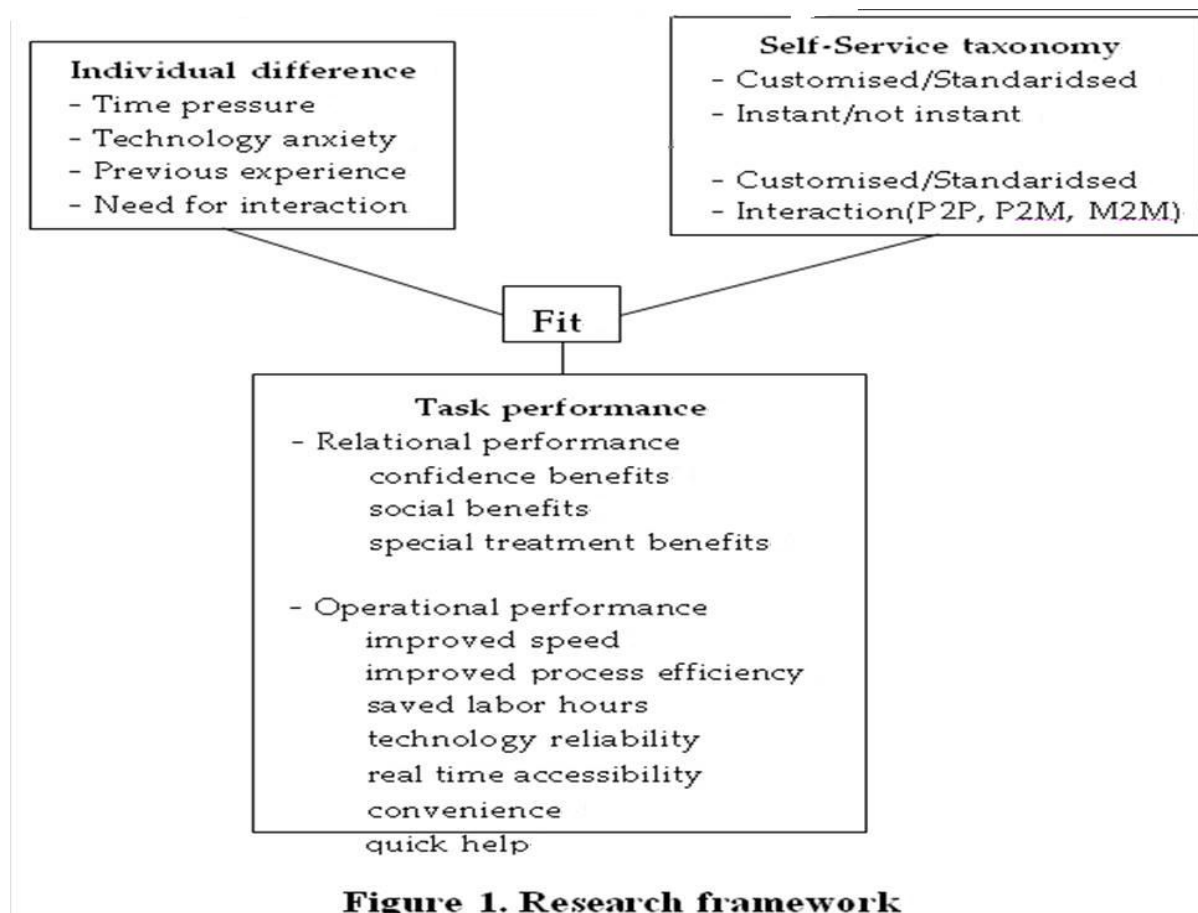
1. How do alternative mobile self-services fit with individual difference to result in better task performance?
2. What are the critical mobile self-service characteristics that moderate the use of mobile technology on self-service?

## Literature Review

SST is an interface created by certain technology and customers can use it to produce service independently instead of service employees involving [15]. It rapidly proliferates in our daily life, such as ATM, hotel reservation, and online shopping. Mobile technology is an emerging technology that is suitable for developing self service due to its unique features of identity [11] [20] and location-sensitivity [6] [19]. Many SST researchers focus on classifying the service [1] [8] [10]. [2] use the service taxonomy characteristics from previous research and multidimensional scaling (MDS) analysis to successfully classify 12 SSTs. Some other studies extend from TAM (technology acceptance model) to discuss the SST use intention [5] [3] [16] and consider the importance of individual difference [5] [14] [17]. This research exploits the fit as moderation [22] concept to test the fitness between self-service and individual difference and develop a map for self-service technology design. Service synchronously, which are instant. People always notice the interface design of the mobile device, but

they ignore that mobile devices might also be the medium that people use to interact with each other or devices could interchange information. These

dimensions could properly categorize the services provided by “Narvi”.



### Research Framework

#### Self-service taxonomy

Task performance is the dependent variable. We argue that different self-services will have various performances when used by different individuals and therefore propose that individual difference moderates the relationship between self-service and task performance. [2] found that customization can be used to appropriately categorize the chosen SSTs. Besides customization, we also choose instant and interaction types as the other two dimension of self-service taxonomy. As we know, the service cannot be saved when you interact with the service employee, but with self-services, it's not so limitary. You can receive any service on the go when using some services, which are not instant and you might have to use and receive the other

#### Individual difference

##### Time pressure

Customers always think their time as valued resource and don't want to waste [17]. Especially in the exhibition, buyers want to find business opportunity

in the limited time so that they might have time pressure.

##### Technology anxiety

Technology anxiety is an important factor in the user acceptance literature. Some people believe that they can accomplish tasks without the assistance of the technology. They are unwilling to use the new technology because of their ability or mistrust of the technology [13] [14] [23].

##### Previous experience

The previous experience is rare to see in the past literature. With more experience could possibly increase the users' confidence and ability of using the technology-related tools [13]. People who have much more experience in using the mobile device very often certainly will be easier to accept or get used to these mobile self-services.

##### Need for interaction

Some customers consider that it is more safety and reliable to interact with service employees instead of machines [3] [4] [5]. How to attract these customers

to use the service we provide will be a challenge to the service design.

### Task performance

When buyers attend the exhibition, they not only do routines like exchanging business cards or looking for new products but also maintain the relationship with business suppliers. Every buyer represents a firm. They must have to derive something from the exhibition. We measure the task performance from two dimensions, relational performance and operational relationship [21]. With relational performance, we consider the confidence, social and special treatment benefits [7]. With operational performance we derive the measure from [18], including improved speed, improved process efficiency, saved labor hours, technology reliability, real time accessibility, convenience, and quick help.

### Research Plan

Exhibition is a newly-risen industry in the world. It's a critical medium for firms to find customers and customers to find suppliers. People always get lost or couldn't find target stalls in the exhibition place. Like the project mentioned in the introduction, SSRC (Service Science Research Center) in NCCU (National Cheng-chi University) designs several Self-services on PDA named Narvi for exhibition use. We are going to send questionnaire in the real exhibition to survey the people who use the Narvi. Then we can conduct statistical analysis to test the model we proposed.

### Expected Contribution

We can find many interface and functionality design research in previous literature but less research conduct the service design choice [2]. With rapid developing technology, people have more and more choices that knowing what kind of self-service suit customers' wants and needs is quite important. This research offer SST developers a way to design appropriate self-services for people with certain characteristics.

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