

# An Empirical Study of the Adoption of an Indoor Location-Based Service: Finding Reading Rooms

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## ABSTRACT

This research examined the adoption of indoor location-based services in Norway. By expanding the Technology Acceptance Model (TAM), a research model, known as the mobile services acceptance model, was used. Based on the research model, seven research hypotheses were presented. The proposed research model and hypotheses were empirically tested using data collected from a survey of users of an indoor location-based service, finding reading rooms, at a Norwegian university. Support was found for five of the seven research hypotheses. Among the factors, the perceived usefulness has the strongest influence on the intention to use. The finding also indicated that trust did not have a direct positive effect on intention to use.

## KEYWORDS

Context, Finding Reading Rooms, Indoor Location-Based Services, Personal Initiatives and Characteristics, Technology Adoption, Trust

## 1. INTRODUCTION

In the past few years, the rapid development of mobile technology resulted in the domination of mobile devices as the main channel through which we conduct most of our daily communication, business and leisure activities. Mobile services can benefit users by providing information, entertainment, travel information, healthcare, lifestyle information, photography, and social networks (Xu et al., 2011) (Gao et al., 2014a).

Despite the rapid global diffusion of mobile devices, some mobile services have experienced much slower uptake from consumers. Mobile services have been the fastest diffusing technology in history, but acceptance of innovative mobile services has varied between different services (Gao et al., 2014b). Location-based service is a kind of mobile services. Location-based services can be defined as services that integrate a mobile device's location with other information so as to provide

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## **APPENDIX: MEASUREMENT ITEMS**

The items are based on the validated instrument measure in (Gao et al., 2011).

### **Perceived Usefulness (PU)**

By using this service:

- PU 1. I can quickly and easily find an available reading room
- PU2. I quickly find a nearby reading room
- PU3. It is more likely that I will find a reading room I did not know of before
- PU4. It is more likely that I use reading rooms in the university campus
- PU5. It will be easier to schedule which reading room I will go to before I go to campus

### **Context (CT)**

- CT1. I would use the service while I am on campus
- CT2. I would use the service if it was available on mobile devices

### **Personal Initiatives and Characteristics (PIC)**

- PIC1. I have fun using this service.
- PIC2. I prefer to be the first one using the service.
- PIC3. Using this service will give me an advantage over those who do not.
- PIC4. I find that using this service is a good idea.

### **Trust (TU)**

I could use the service:

- TU1. If I have a clear conception of the functionality of the service
- TU2. If it protects the privacy of its users
- TU3. IF I feel confident that I can keep the service under control
- TU4. IF I feel data from the service is reliable

### **Perceived Ease of Use (PEOU)**

- PEOU1. Learning to operate the service would easy for me.
- PEOU2. I would easily find the information I am looking for using the service.
- PEOU3. I would find the service to be flexible to interact with.
- PEOU4. I would find the service to easy to use (user-friendly).

### **Intention to Use (IU)**

- IU1. Assuming I have access to the service, I intend to use it.
- IU2. Given that I have access to the service, I predict that I would use it.

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