

# Mobile Technologies and Disadvantaged Women: A Mixed Methods Study of Information Behavior in a Developing Nation Context

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## ABSTRACT

This dissertation research studies the role of mobile technologies in shaping information behavior of financially disadvantaged women, who own and use mobile cell phones, and earn less than US \$1 per day, by working at a domestic business set up in rural India. Wilson's global model of human information behavior will be used to study the information behavior of a sample population. The research findings will be of great use to public sector organizations, academia as well as private sector organizations in a variety of different ways.

## Categories and Subject Descriptors

H.1.2 [Information Systems]: User/Machine Systems – *Human Factors, Human Information Processing.*

## General Terms

Measurement, Economics, Human Factors

## Keywords

Mobile Technologies, Information Behavior, Disadvantaged Women, Developing Nation

## 1. INTRODUCTION

As a catalyst for achieving Millennium Development Goals (MDG), Information and Communication Technologies (ICTs) have been championed by the United Nations as one of the key media to bring socio-economic opportunities into the lives of disadvantaged populations from developing nations. Various studies revealing the role of ICTs as information infrastructure providers lead us to believe that the introduction of ICTs alone is not good enough to bring socio-economic changes in their lives. In fact, after being introduced to ICTs, users' overall information behavior changes, which enables them to take advantage of socio-economic opportunities introduced and facilitated by ICTs. This

research study plans to explore the linkage between ICTs and the information behavior of disadvantaged populations from developing nations; and the role of ICTs in shaping that information behavior.

## 2. SAMPLING

Income, health and education are some of the most widely used criteria to measure the extent to which a population is disadvantaged [1]. By applying income as a criterion, a sample of disadvantaged population is identified. India has the world's largest number of individuals under the poverty line in a single country. Hence, India is the context for this research study. After applying a stratified purposive sampling with 6 filters, backward class (the term backward class is coined and defined by Government of India as a set of socio-economically and educationally disadvantaged population) women (see Figure 1), who own and use mobile cell phones and earn less than US \$1 per day, by working at a domestic business set up in rural India are discovered as one of the most disadvantaged populations from developing nations.



Figure 1: An old, blue collar woman using her mobile cell phone (Source: MaharashtraTimes, A local newspaper in India, 11/27/07)

### 3. THEORETICAL FRAMEWORK

Human Information Behavior is defined as "...the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking, and information use. Thus, it includes face-to-face communication with others, as well as the passive reception of information as in, for example, watching TV advertisements, without any intention to act on the information given." [5]

To study the information behavior of this filtered sample, the global model of human information behavior, one of the most comprehensive and widely accepted human information behavior models, will be used. The model has been evolved as a result of the extensive research carried-out for more than a couple of decades [2]. Based upon the formal body of scholarly research, this model explores different aspects associated with the human information behavior informed by allied research areas, including but not limited to decision-making, innovation, consumer behavior research, marketing, psychology, health communication research and information systems design that take into account users as the focus of interest [2][3]. This model is based upon two key prepositions. The first is that information needs are a secondary type of needs arose out of a set of primary needs in everyday life; and the second preposition focuses on various barriers encountered by users on their ways to information search and acquisition [4].

### 4. RESEARCH DESIGN

Using a sequential explanatory mixed methods research design, quantitative data collected in the first phase are expected to be explained by qualitative data from the second phase carried out in a sequence. In the first phase, quantitative data will be collected from a stratified purposive sample of approximately 121 disadvantaged women, working in a small village called Bhor located in one of the western states in India. To select participants for in-depth interviews in the second phase, trends or patterns in information behavior of respondents from the first phase will be categorized based upon demographic factors such as age or education or marital status. 10 participants from each category will be interviewed telephonically in Marathi, a native language, to understand respondents' information behavior due to the use of mobile cell phones. Results would reveal a journey of information behavior of the backward class, financially disadvantaged women from rural India, when using mobile cell phones.

### 5. APPLICATIONS OF RESEARCH

The research is expected to enrich the field of human information behavior in the context of ICTs and disadvantaged populations from developing nations. Research, will serve as a scholarly reference while crafting policy frameworks and designing dollar-aid strategies for building sustainable development using effective deployment of ICTs in developing nations. Research findings could benefit government policy makers, when designing mobile-Government policies and developing execution plans. The private sector could apply a set of research findings for better human-centered product designs and interfaces for mobile technologies, especially mobile cell phones; and developing marketing strategies for profitable sales of mobile technologies in colossal markets of developing nations.

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