

Towards Understanding of Early Adopters as Influential Users of Innovative Technologies

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Abstract. As the Information Technology is rapidly evolving and the development of technological innovations is continuously increasing, the user acceptance of an innovative technology is more than ever a necessary concern. While IT companies, developers, and researchers are exerting a lot of effort to evaluate product features and functions to suit user requirements and to increase the rate of acceptance, the structure of the target users' social network composing of different types of interconnected individuals with different adoption behaviors must also be given as much attention. A special group of users is highly influential in accelerating the adoption and acceptance of new innovations, called the *early adopters*. This study aims to better understand the roles, characteristics, and behavior of early adopters and how they contribute in accelerating the adoption and acceptance of technological innovations.

Keywords: adoption, early adopters, innovative technologies, interpersonal communication, user acceptance.

1 Introduction

As the ICT environment is rapidly evolving, more and more technological innovations are emerging each year. Some have been successful but many others have failed to gain a wide mass market acceptance. Because of this, the determinants for the successful diffusion of technological innovation have been an essential research concern [1]. Many companies are focusing on the product's usability evaluations to suit the product features and functions with the user requirements to ensure user acceptance, but little attention is given to the internal structure of the community of target users which can be regarded as a network of interconnected individuals. How the information about a new innovation is acquired and disseminated between these individuals is also a key factor for influencing the adoption and acceptance of a wider range of users [2]. Adoption behavior is influenced by a learning process through interpersonal communication as emphasized by Everett M. Rogers in his book *Diffusion of Innovations* [2], [3]. He categorized the different types of consumers, or adopters, with one group that is highly influencing the adoption decision of others in

the community thus, helping an innovation to accelerate its acceptance rate. This especial group of users is called the *early adopters*.

In this study, we highlight the understanding of the roles, behavior, and characteristics of such group of users in the hope of maximizing their potential in accelerating the acceptance of technological innovations.

2 Background: Adopter Categories

When a newly developed innovation is launched for commercial use, not all target users adopt at the same time. Rogers categorized these adopters according their innovativeness and time of adoption, each having different characteristics and behavior [3]. The first to adopt an innovation having the highest level of innovativeness is called *innovators*. They are very venturesome and cosmopolite which leads them out of the local circle of peer network. The second group of adopters is called *early adopters* who are more integrated part of the local social system and have the highest degree of opinion leadership among the group of adopters. They are respected by their peers for their judicious innovation-decisions. The next group of adopters is called the *early majority* with less opinion leadership, and they deliberate for some time before adopting a new idea. The *late majority* follows in adopting new ideas. They are skeptical toward innovations, thus they do not adopt until the uncertainties about the product are removed. The *laggards* are the last to adopt due to their limited resources. They want to make sure that the new idea will not fail.

Among the described groups of adopters, the most influential to their peers is the early adopters due to their being localities and possessing the highest degree of opinion leadership. Thus they play a big role in influencing others to adopt and in speeding the rate of diffusion.

3 Characteristics of Early Adopters

Looking deeper into the characteristics of early adopters will help us better understand their adoption behavior as well as their influence in the adoption of other potential users.

Higher social status. Early adopters have more years of formal education making them more likely to be literate than late adopters [3]. They also have higher income, thus, a reliable group of spenders [4], [5]. It is easier for them to adopt an innovation regardless of the cost and the risk of losses from possible failure of a still immature technology [6].

Greater innovativeness. Being risk-takers, they have the desire to be the first in their social network to acquire new technologies [5], [6]. They have more favorable attitude towards change, new ideas, and in using IT innovations [6], [7]. The study on the acceptance of MMS in the adoption of mobile internet showed that early adopters have more positive perceptions towards such service [8].

Independent decision makers. While adoption decision of later adopters is influenced by communicated experience by others [9], early adopters make innovation decisions independently. They are self-reliant and inner-directed that makes them willing to try out new products with less interpersonal influence [11].

Experts. Their innovativeness is accounted from their heavy exposure and experience in using computers [11]. In identifying the early adopters of Windows 95, the said group of users showed more computer experience than late adopters [9].

Greater social participation. Early adopters are more socially active and connected to interpersonal networks in the social system [5], [7]. They are also more cosmopolite that they communicate with people outside of the social system they belong to, more often than later adopters [3].

Information seeker. They seek information more actively to check for new products on the market, or to dig deeper for information to support their adoption decisions and to mitigate risks. Due to their desire to acquire as much information as they can, they have greater exposure to mass media communication channels [5].

4 The Roles of Early Adopters

Possessing characteristics that distinguish them from later adopters, early adopters are able to perform crucial roles in the adoption and diffusion process of technological innovations.

Adoption Initiator. While majority of the target users are skeptical on trying a new product, early adopters are not hesitant to initiate adoption. IT companies and developers rely on this behavior to have someone act as a role model and prove the new product's advantage to other potential users, thus encouraging further adoption. In the study of Pedersen [8], later adopters of MMS have higher tendency to use the mobile service when they are able to observe the use of such by others.

Information Disseminator. Early adopters tend to spread information about a new product in their social network through interpersonal communication, which is seen as a key factor accounting for the speed of diffusion [2]. Being socially active and with the existence of social networking sites and activities over digital media nowadays, they can disseminate information and influence a wide range of potential adopters. As an example, Youtube gained its popularity when its early users, way back in 1995, began sending links of a particular video around the internet [5].

Opinion Leader. Their influence on other users to adopt is also accounted from their high degree of opinion leadership. Because of their personal experience and expertise on the subject matter, their opinions about an innovation can influence the adoption decision of others. According to Flynn et al, consumers even trust the opinion of their peers more than the media advertisements to reduce risks [9].

Product Evaluator. Early adopters can also act as good test users. Louis Gray, an early adopter, shared the questions that they ask themselves when trying a new product and analyze its advantages and usability: "What are we already doing that these new tools make better? What can I do that I couldn't do before [5]?" In marketing wearable computers to consumers [10], the researchers used early adopter consumers in examining the features and functionalities as well as the issues and

attitudes they had about the product. The early adopters later on gave suggestions for improvement of the device.

5 Conclusion

The introduction of a new innovation and convincing the target users to adopt is a very critical stage. But by collaborating with early adopters we can maximize the potential of a successful diffusion as reflected by the roles they perform in their social network. For instance, their role as a good product evaluator will make them the suitable participants for product evaluations before the new innovation is launched for commercial use. Their high degree of opinion leadership can be accounted for higher adoption and acceptance rate.

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