The Macrotheme Review

A multidisciplinary journal of global macro trends

Social Media from the Perspective of Diffusion of Innovation Approach

N. Gizem KOÇAK*, Seçil KAYA*, Evrim EROL**

*Anadolu University Open Education Faculty, Turkey**
*Dumlupınar University Educational Sciences Faculty, Turkey***
ngkocak@anadolu.edu.tr

Abstract

In parallel with the developments in information and communication technologies, diversifying social media emerges as platforms that almost everyone become familiar with. It is possible to associate the widespread use of social media platforms with the diversity of alternatives that meet individual needs such as entertainment, information, self-expression and interaction. Social media, which has leaked and become a part of our daily lives, is considered as a relatively new technology when compared to traditional media. It is also considered that the widespread use of social media is a result of a decision process like all technology-based applications. It is possible to associate this decision, approval, and expansion process with the diffusion of innovation approach. Decision-making process of innovation is described in five basic stages like knowledge, persuasion, decision, implementation and confirmation. In this study, the features and processes within the scope of diffusion of innovation has been associated with the emergence and spread of social media.

Keywords*: Social media, diffusion of innovation, decision-making process*

1. Introduction

Nowadays one of the most important developments in new media is Web 2.0 applications. Web 2.0 provided an interactive platform with its opportunity to enable create and share content by users. It has changed users' role from passive audience to active participants. Web 2.0 provides great opportunities for individuals by enabling them to produce and share their own contents (Koren, 2010, p.2). Technological infrastructure of Web 2.0 applications made social media platforms available and these platforms gained a huge popularity. The most prominent factor that made social media such a popular platform is its simple and user-friendly nature. This feature made social media accessible and usable not only for professionals as in the past; but also for anyone who doesn't have any web design skills.

Social media can be defined as online platforms that people use to share opinions and experiences including photos, videos, music, insides and perceptions with each other (Lai and Turban, 2008, p.389). Social media platforms are categorized in eight main titles: (1) social networking sites, (2) blogs, (3) microblogs, (4) content sharing sites, (5) wikis, (6) social bookmarking sites, (7) podcasts and (8) forums (Constantinides, 2009; Richardson, 2009).

Social media, which has leaked and become a part of our daily lives, is considered as a relatively new technology when compared to traditional media. Also the widespread use of social media can be considered as a result of a decision-making process like all technology-based applications. It is possible to associate this decision, approval, and expansion process with the diffusion of innovation approach.

2. Decision making process of innovation

Diffusion is the process by which an innovation communicated through certain channels over time among the members of a social system. Diffusion is special type of communication in which the massages are about a new idea (Rogers, 1995, p.5-6). Diffusion is also defined as the process by which an innovation is adopted and gained acceptance by members of a certain community. There are some major factors that influence the diffusion process like the innovation itself, how information about the innovation is communicated, time, and the nature of the social system into which the innovation is being introduced (Folorunso et. al., 2009, p.362).

Decision-making process of innovation is described in five basic stages like knowledge, persuasion, decision, implementation and confirmation. These stages which are laid down by Rogers (1995, s.163-190) are given in Figure 1.

Figure 1

Decision-making process of innovation
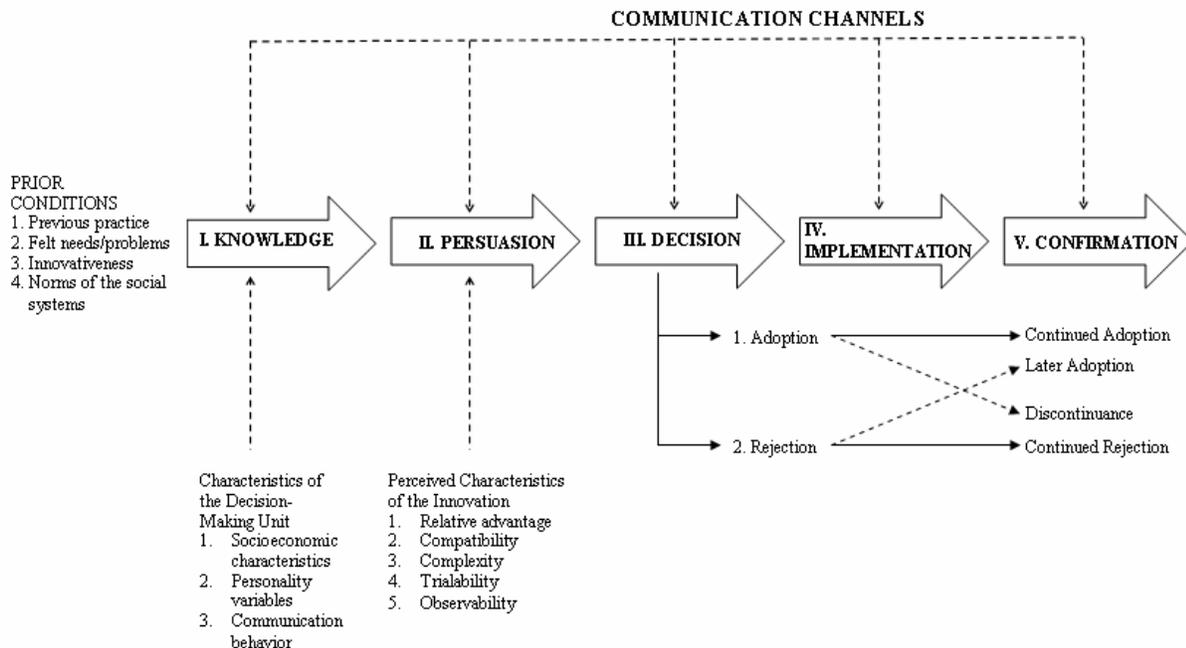
Source: Rogers, 1995, p.163

Decision-making process for innovation starts with being familiar with the innovation and continues until the stage of attitude development or confirmation related to innovation (Çakmak and Ocak, 2008, p.306). Each consecutive stage in Figure 1 is a prerequisite for the next stage. For example "persuasion" follows the "knowledge" stage; because individuals shape his or her attitude toward the innovation after he or she knows about the innovation. While the knowledge stage depends on knowing, the persuasion stage depends on feeling. Then in the decision stage, individuals choose to adopt or reject the innovation. The implementation stage follows the decision stage and in this stage individuals put innovation into practice. Although the innovation-decision already has been made, individuals look for support for his or her decision at the confirmation stage (Şahin, 2006, p.15-17). But it is possible to change the decisions of acceptance or rejection in implementation stage.

In the case of innovation, first of all within the knowledge stage, adopters must understand what quantity of an innovation to secure, how to use it correctly and so on. In persuasion stage, an individual usually wants to know the answers to such questions as "what are the innovations' consequences?" and "what will its advantages and disadvantages be in my situation?". In this context, it can be said that the individual becomes more psychologically involved with the innovation at the persuasion stage. After knowledge and persuasion stages, the individual faces with adoption or rejection of innovation. As adoption is a decision to make full use of an innovation as the best course of action available; rejection is a decision not to adapt to an innovation (Rogers, 1995, p.165-171).

Implementation follows the decision stage and it occurs when an individual puts an innovation into use. Rogers (1995, p.172-173) stated that until the implementation stage, the innovation decision process has been strictly mental exercises and he emphasized that a certain degree of uncertainty about the expected consequences of the innovation still exists for the individual at the implementation stage; even though the decision to adopt has been made previously. Also he specifies the questions that an individual particularly wants to know as "where do I obtain the innovation?", "how do I use it?", "how does it work?", "what operational problems am I likely to encounter, and how can I solve them?". Finally at the confirmation stage, the individual seeks reinforcement of the innovation decision already made or reverses a previous decision to adopt or reject the innovation if exposed to conflicting messages about the innovation (Rogers, 1995, p.181).

In summary, the innovation decision process is the process through which an individual passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision (Rogers, 1995, p.163).

3. Perceived characteristics of innovation

Widespread use of new technologies is associated with the four basic features within the Rogers' innovation diffusion model. Understanding these features will enable a more effective and efficient use of new technologies (Çakmak and Ocak, 2008, p.305). These features are; compatibility, complexity, trialability, observability and the relative benefit (Rogers, 1995, p.224-244). These features can be explained as below (Rogers, 1995, p.212-244):

- **Compatibility:** Compatibility is the degree to which an innovation is perceived as consistent with the existing value, past experiences, and needs of potential adopters. An

idea that is more compatible is less uncertain to the potential adopters, and fits more closely to the individual's life situation. Such compatibility helps the individual give meaning to the new idea so that is regarded as familiar.

- **Complexity:** Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use. The complexity of an innovation is negatively related to its rate of adoption.

- **Trialability:** Trialability is the degree to which an innovation is may be experimented with on a limited basis. The personal trying-out of is a way to give meaning to an innovation, to find out how it works under one's own conditions. This trial is a means to dispel uncertainty about the new idea.

- **Observability:** Observability is the degree to which the results of innovation are visible to others. The results of some ideas are easily observed and communicated to others, whereas some innovations are difficult to observe or to describe to others. Observability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption.

- **Relative Advantage:** Relative advantage is the degree to which an innovation is perceived as being better than the idea it supersedes. The degree of relative advantage is often expressed as economic profitability, social prestige, or other benefits. The greater relative benefit means a high rate of adaptation.

4. Diffusion of innovation and social media

Internet based applications has gained a great popularity in the last ten years with millions of users. As a consequence of expansion and diversification of the Internet applications, it becomes a part of individuals' daily lives. Today, people are so familiar with the Internet and the Internet based applications. Social media, which is the final step in the evaluation process of the Internet, can be considered as a great innovation. It is possible to associate the diffusion and widespread use of social media in the context of decision-making process for innovation.

When the social media is considered as an innovation, prior conditions like previous practices, individual needs, innovativeness and norms of the social system can also be associated with the social media usage. The huge expansion of new media and growing chance to experience these new and exciting platforms make people to wonder more about social media. As a result, individuals feel the need of using social media as a form of communication and start to get knowledge about these online platforms. Within the knowledge stage, in accordance with these prior conditions people met with various social media platforms. At the second step called persuasion, individual becomes more psychologically involved with the social media platforms. Individuals make an evaluation about the advantages and disadvantages of the social media and prepare themselves to make a decision about using or not using such platforms. In this step, characteristics like compatibility, complexity, trialability, observability and the relative benefit are important for persuasion. It is possible to handle these characteristics in terms of social media platforms.

When characteristics that affect the persuasion process are considered within the social media, it can be said that these characteristics refers the features of social media that separate it from the previous Internet based applications and traditional media. For example, user generated

and user-friendly structure of social media; also ease of use and open access to these platforms can be considered as factors affecting the process of persuasion. In the context of compatibility, having an Internet experience and being familiar with the Internet based applications before the existence of social media, provide the necessary conditions for the acceptance and widespread use of these platforms.

Complexity is another effective feature that affects the acceptability of social media. Rogers (1995) stated that an innovation, which doesn't require specific and complicated skills and understandings, will have the tendency to get a higher rate of adoption. Because of the simple and easy structure of social media, people don't need any complex technological skills. So this feature decreases the complexity level of this innovation and encourages people to try social media. In social media case, complexity and triability features have close relationship to each other. Namely, having low complexity level make people more enthusiastic to try these new platforms. Also anyone who has a desire about social media can easily access these platforms without any prerequisites and this open access nature of social media is also important for the triability.

Observability, that means "the degree to which the results of an innovation are visible to others" (Rogers, 1995, p.244) is another perceived characteristic of innovation. Today people face with social media in every part of their daily life even if they don't use. Users of social media are increasing day by day; so social media become more visible in individuals' social environments. On the other hand, the other feature of social media that makes it more visible is the tendency of social media's integration with the traditional media. The widespread use of social media can be associated with the difficulty to ignore its existence.

Finally, relative advantage as economic profitability, social prestige, or other benefits is also very determinative for the persuasion process. Open and free access to social media platforms provides an economical advantage in terms of communication and interaction among people. Also these platforms facilitate easy, quick and free access to information which can be considered as another economic profitability. On the other hand, social media give people a chance to express themselves in various ways and it can be said that as a consequence of this expression they found a new way to satisfy their self-actualization needs. Also people become connected with each other more than ever before by using social media. It can be said that existing in social media, being followed and liked by others can make people feel more self-confident. All of these feelings can be considered as social prestige advantages of social media.

In summary, compatibility, complexity, trialability, observability and the relative benefit have important impacts on persuasion process as explained above. In diffusion of innovation approach, decision step follows the persuasion process. Within the decision process, individuals can provide adaptation or rejection decision after a pre-application meeting period. Muntinga et. al. (2011, p.19) mentioned that social interaction is one of the important motivation for the use of social media and in this context, the authors stated that people can use social media for conversation, interaction, and to feel part of a group. In this sense, individuals can prefer to use social media for its communication, socialization and self-expression benefits. Also entertainment can be considered as another feature that motivates individuals to use social media. Economic profitability and open access to information as explained within the relative advantage also can be a reason for individuals to use social media. Additionally, following the new trends can also be the main reason in itself. If individuals make their decision as adaptation based on those or other reasons, they become the users of the social media platforms. This is considered as

implementation step. If individuals cannot exactly meet their expectations during the implementation process, they can change their minds and can quit using social media platforms. This reversal of opinion is called discontinuance. The reason for discontinuance can be related with the negative experiences like abuse of private life, safety problems and information overload that individuals faced during the implementation process. In parallel, Mavnacıoğlu (2009, p.71) stated that social media is mainly based on conversation and gossip due to its nature and this can cause unethical behaviors between individuals even if they don't realized. Also, Babacan et. al. (2011, p.88) mentioned that social media is a platform that people share their thoughts, feelings and sometimes their private lives; and the authors focus on the privacy risks related to these issues. Otherwise, if individuals feel satisfied about the innovation they continue to use the social media platforms and this is called as continued adoption.

On the other hand, individuals can refuse to use social media platforms at the decision step and provide rejection at first. People can consider social media usage as waste of time or a kind of addiction, and so they may reject to use these platforms. Also lack of technological abilities or prejudices can affect the rejection decision of individuals. In addition, individuals may not feel a need for using social media. If this rejection continues this is called as continued rejection. But because of social media's popularity and widespread use, people may feel lack of it and as a result they may demonstrate adaptation behavior which is called as later adoption.

5. Conclusion

Social media which is one of the most striking innovations of today has extremely fast and efficient diffusion power with its various platforms and millions of users all around the world. According to diffusion of innovation approach, the factors as compability, complexity, trability, observability and relative advantage have impacts on the decision and as a result the diffusion process of the innovation. In this sense, it is obvious that social media facilitates this diffusion with its dynamic, interactive, user-centered, user-friendly nature and with its opportunities that provides individuals more control over the contents and that enables users to become producers as well.

Social media -perhaps for the first time in media history- gave users a chance to choose their relation type with the media. In other words, in today's media, users can just be the audiences of contents if they want, or they can be the participants too, or even they can be the content creators personally. It is clear that social media empowered the user and the user found a chance to have different roles in his/her relation with the media, even he/she can play all these roles at the same time. In this respect, this important emphasis on the individual can be considered as another crucial side for this rapid diffusion. Social media provides important opportunities to people by offering a chance to express themselves in a democratic and free environment. Being also a publisher of their own contents, every user of social media become an actor and has their own followers. Quick access to information and the social interaction chance offered by social media can be seen as other key elements for its successful diffusion.

On the other hand, Rogers (1995, p.252) stated that, in a social system, it is not possible for everyone to adopt an innovation at the same time. He mentioned that it is possible to categorize the people according to their acceptance rank as from the ones who implement the innovation first and to the ones who accept the innovation over the time. According to Rogers, at this point, the thing that gains importance is the innovativeness and the individual's adaptation degree to the new ideas when comparing to the other members of a system. Wissema (2009, p.232) stated that,

new applications or technologies provide the leadership position to the individuals who firstly adopt and implement the innovations while the others follow the leader and try to develop their technological and organizational superiorities. In this manner, in adaptation and diffusion process of an innovation, the characteristics of adopters or rejecters are also important as well as the characteristics of the innovation itself.

In this study, a theoretical framework that explains social media from the perspective of diffusion of innovation approach is tried to reveal. For future research, to determine the factors that affect the adoption or rejection decision for social media and identify the characteristics of early/late adopters or rejecters will be more illuminative to get a more comprehensive viewpoint. Hence, this kind of a research will provide important clues about social media's positive and negative perceptions that affect the adoption process and also will be helpful to understand the individual side that faces with the innovation as well.

At the same time, how the diffusion curve of social media will continue over the time is another topic of interest. Will it continue its rapid diffusion with its different platforms and obtains a permanent place to itself? Will this common usage enforce the late adopters or rejecters to learn how to use social media and how to integrate it to their lives more or less? Will it be an inevitable part of everyday life and a victory of such a diffusion of innovation? As long as the enormous developments of new communication technologies continues, such questions can be handled as new subjects for future researches.

References

Babacan, M. E., Haşlak, İ. And Hira, İ., 2011. *Sosyal medya ve arap baharı. Akademik İncelemeler Dergisi*, 6(2), p.63-92

Constantinides, E., 2009. Social media / Web 2.0 as marketing parameter: an introduction. *8th International congres marketing trends.* Paris, France. [online] Available at: <http://www.marketing-trends-congress.com/content/social-media-web-20-marketing-parameter-introduction> [Accessed 12 April 2012].

Çakmak, E. K. and Ocak, M. A., 2008. Yayılma ve adaptasyon. In: H. İ. Yalın, ed. 2008. *Internet temelli eğitim*. Ankara: Nobel Yayınları.

Folorunso, O., Vincent, R. O., Adekoya, A. F. and Ogunde, A. O., 2009. Diffusion of Innovation on social networking sites among university students. *International Journal of Computer Science and Security*, 4(3), p.362-372.

Koren, N. E., 2010. User-generated platforms. In: R. Dreyfus, D. L. Zimmerman and H. First, ed. 2010. *Working within the boundaries of intellectual property*. Oxford: Oxford University Press.

Lai, L. S. L. and Turban, E., 2008. Groups formation an operation in the Web 2.0 enviroment and social networks. *Group Decision and Negotiation*, 17(5), p.387-402.

Mavnacıoğlu, K., 2009. İnternette kullanıcıların oluşturduğu ve dağıttıkları içeriklerin etik açıdan incelenmesi: sosyal medya örnekleri. Medya ve Etik Sempozyumu [7-9 Ekim 2009]. Elazığ, Fırat Üniversitesi

Muntinga, D. G., Moorman, M. and Smit, E. G., 2011. Exploring motivations for brand-related social media use. *International Journal of Advertising*, 30(1), p.13-46

Richardson, W., 2009. *Blogs, wikis, podcasts and other powerful web tools for classrooms*. USA: Corwin Press, A Sage Company.

Rogers, E. M., 1995. *Diffusion of innovations*. USA: New York, The Free Press

Şahin, I., 2006. Detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology – TOJET,* [e-journal] 5(2), Available through: <http://www.iccsit.org/contact.htm> [Accessed 12 October 2012].