# Vaccinating Users against the Hypodermic Needle Theory of Social Media: Libraries and Improving Media Literacy

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## Abstract

The hypodermic needle theory is a prominent theory in social media that affects the understanding, attitudes, and behavior of individuals. In this viewpoint, media is a powerful and dangerous source because the user or audience is vulnerable against the effect of a certain message. In this study, we assess the relationship between this theory in the field of information technology with two person-centered approaches of constructionist or discourse analytic approach and the critical theory approach. Moreover, the libraries' role in vaccinating users against this theory by increasing their knowledge is shown.

**Keywords:** Hypodermic Needle Theory, Social media, Media Literacy, Library.

## Introduction

Considering the multidisciplinary nature of communications, this field has various applications, especially in humanities and social sciences. In other words, all humanities and social science disciplines are somehow mutually related to communications theory (Mehrad & Tajer, 2016). In this study, one of the well-known theories in the field of communications called the hypodermic needle theory has been assessed and its applications in information science are discussed.

This theory is based on the principle that media has a direct effect on the audience and users are disarmed against it. Therefore, they accept it willingly or not. The user is considered as a receiver in the communication process not an active influencer in the communication process (Hasani, 2006). The magic bullet theory states that a message is similar to a bullet that shoots from the gun (a form of media) to a person's brain (user or receiver). Therefore, it can be stated that media messages are needles that are directly injected in the bodies of passive users and immediately and deeply influence them.

Considering the power and influence of social media on users' minds and their increasing use in the age of information and communication, equipping people with media literacy can help them cope with the side effects of social media. Libraries have a key role in enhancing

social culture. Introducing public libraries as universities for the common public can be a first step towards scientific and cultural growth. Moreover, introducing school libraries can facilitate educational goals. Therefore, these organs have a pivotal role and responsibility. Librarians also act as delegates of knowledge and awareness for increasing social media literacy in the public. In this study, social media literacy and the librarians' role in enhancing it among users was discussed.
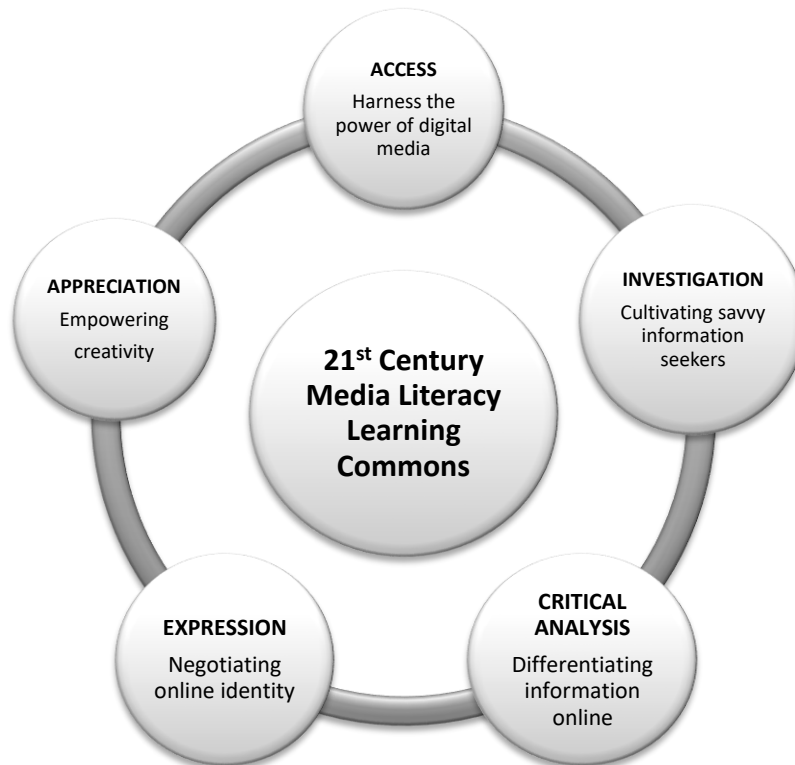
## Social media literacy

Social media literacy is a skill that should be learnt alongside using interactive media. Using media without media literacy can be harmful (Taghizadeh, 2012). People should continuously increase their awareness to avoid superficial interpretations of messages. The ultimate aim was to increase understanding and knowledge for better interpretation, because there is an inverse relationship between media literacy and new forms of social harm. Martin and Grudzecki (2006) believe that social media messages can have a negative effect on the user. Therefore, media literacy can protect users against such negative effects since it can critically evaluate them. In general, a person with acceptable media literacy can critically assess and think about whatever he/she sees, hears, and reads (Filiz & Fisun 2012).

In line with UNESCO's educational program, media and information knowledge enables effective interaction between media and other information providers and can expand critical thinking and lifelong skill training for becoming an active citizen (Wilson, 2012). Considering the important role of media and their content in personal and social life and since media does not consistently present complete, correct, and unbiased information, it is necessary to educate people, especially adolescents, in order to protect them from possible harm (Bowers, 2016).

Since media literacy skills are not innate and must be leant, teaching these skills systematically and collectively in a classroom, library or a research center is crucial. Librarians can play this role effectively. Libraries must redefine their role and library experts must strive to enhance the users' media literacy (Singh, 2012). Bridges (2012) suggests that libraries be used as places for teaching media literacy and librarians can be used as trainers to teach adolescents about the harms of social media. Currently, libraries are more than just book deposits. They are used as active learning environments in which users can obtain information from (Diggs, 2009).

The following framework is a set of five instructions for integrative media literacy training in the digital library education model in the 21st century. This model focuses on active information search as well as creative participation.

The Twenty-First-Century Media Literacy Learning Commons (Diggs, 2009)

1-Access: Since libraries are considered as tradition access points of information at schools, most classes have technology limitations and act serve as practical media centers. In such environments, digital education libraries have plans for helping students control the continuous flow of online content.

2-Investigation: Since the Internet has provided the basis for media interaction, searching for information through media is now easier. However, the validity of information should be considered. This easy access should be monitored and the validity of online information should be checked.

3- Critical thinking: With respect to critical thinking, people should answer the following questions: who has prepared the message and why was it submitted? What methods have been used for attracting attention? What life style and viewpoints do these messages convey? How do different people receive these messages differently? What has been deleted from the message?

4- General perception and understanding: digital education libraries can be an environment in which students can receive media education through learning how information is redefined and disseminated.

5- Understanding the power of creativity and satisfaction: digital education libraries should provide a space for creativity and satisfaction. This would help students understand the benefits of curiosity and being inquisitive.

The aim of media training in school and digital education libraries is primarily to help improve the spirit of inquiry and curiosity in students as well as enhance expression and critical thinking skills in order to nurture proactive citizens.

### Application of Hypodermic Needle Theory in Libraries

Libraries can be considered as a media and the power of this theory can be positively used.

-With respect to collection policy, the policy of not buying books from a certain author or topic, limited expense

-Planning workshops and sessions in order to familiarize people with libraries and introduce their different sections and services

- Using media such as newspapers, television, and the libraries' assembly halls to propagate the culture of reading and facilitating suitable information feeding.

- Advertising the bestsellers, the annual book of the year, etc., at the front door of libraries.

-The policy of buying books with a specific topic and author and their mandatory recording in the library and introducing them as the main source for exams or organizing related book competitions

-Keywords related to article citations

- Digital Object Identifier number

-Retrieving similar sources by the librarian for the public

### Discussion and Conclusion

The relationship between the hypodermic needle theory with the field of information science and technology can be shown using the constructionist or discourse analytic approach and the critical theory approach. The discourse analytic approach which is rooted in both social and human sciences and supposes that the existing discourse in a society forms people's conditions and responses as well as social understanding of information (Fisher, Erdelez & McKechnie 1999). With this assumption and considering the application of the hypodermic needle theory in the field information science and technology, it can be stated that librarians can influence people with their discourse. Considering the enthusiasm they can convey in their voice they can transfer it to the public. With respect to the issue of willingness to return, as a new user-based index about the success of the resource section of the library, enthusiasm to and interest to return to a librarian can be a powerful index of success (Durrance, 1989, 1995) and can evidently show the application of the hypodermic needle theory in the field of information knowledge and technology.

Analyzing the interpretive approach used by information searchers helps us understand the methods of information seeking in local settings. Assessing the epistemological orientation of discourse regarding the techniques authors and speakers use for evaluating information sources of their information seeking strategies would provide great insight. It would show how information seekers justify their information seeking behavior in certain contexts.

Similar to other constructivist approaches, using interpretive can shift the focus of research from understanding the needs, conditions and contexts of each user to knowledge production in the field of discourse (Tuominen, Taija & Savolainen, 2002). Since understanding the users' discourse-related needs is the center of the hypodermic needle theory, we can clearly see its relationship with information science and technology.

The interpretive approach assumes that language and people separate entities and that

language is a neutral media between the social action and the surrounding environment. Therefore, narratives are considered as clear reflections of events and mental states. The analysis of this paradigm is related to reality, validity or narration, or it benefits from narrations as evidence for underlying processes. This analysis investigates similarities within these narrations instead of differences in order to compile them is sets such as "attitudes and reduce social status (ibid).

The hypodermic needle theory affects people's minds and links them to new understanding. This new understanding can sometimes be the use of information resources in libraries. When the librarian sees that the desired resource is not available in the library, he/she can introduce new resources similar to the requested one and change the mind and mentality of the user. It seems that this process occurs when the librarian intends to justify shortages in information resources and change his/her needs in line with existing resources in the library, besides meeting the users' needs. This change in needs is another type of change in needs that Marcia J. Bates defines in her berrypicking theory. She states that each information bit is a new idea that can lead to new directions and the sum of these changes creates a new concept of inquiry (Bates, 1989). This change seems to be positive and its aim is to create conditions in which the user has the most gain. However, the change created by the librarian in the library based on the hypodermic needle theory, can sometimes be perceived by the user to be negative and for the benefit of the library.

We will now discuss the relationship between the hypodermic needle theory in the field of information science and technology and the critical theory approach. The critical theory approach shows the hidden power of communication and its dominant patterns in the society (Fisher, et al., 1999, p.26). Specifically, the speaker (either the librarian in the library or computer in social media) has to first guarantee the presented offer which includes truth, reality, friendship, and normative law, except is cases that the speaker tries to control the output intentionally to influence the interpreter (ibid, p. 127). With this assumption and considering the application of the hypodermic needle theory in the field of information science and technology, it can be stated that the librarian can present the dominant patterns within the society and support creative masterpieces. Raymond Irwin shows this process in the relationship between librarianship and literature (Mukherjee,1996, p.29). He believes that the relationship between these two is difficult to identify, despite the fact that librarianship is responsible for maintaining the public's interest in literature. Books become famous through libraries and sales. The use of evaluation standards of a book is done before buying it. In such cases the librarians reject low quality books although they are popular. This indirectly affects literature to maintain its standards. In the long term, such policies support and encourage creative literary masterpieces. Besides using the hypodermic needle theory for attaining goals, libraries and information centers can enhance the users' media knowledge and vaccinate them against the negative effects of social media.

Information, knowledge and technology has greatly affected the society and people's lives. Faith in technology is currently forming the future. Increasing knowledge and investment on technology leads to better and more benefits from opportunities they create. The infrastructure of today's societies is described as informational societies and are based on information technology, computers, and electronic communication systems. Therefore, accessibility to

information and communication technology and learning to use them is necessary for the whole society because if can guarantee their success. Therefore, to defeat the negative effects of social media people should enhance their mental skills. So, if such skill-building programs are incorporated in the society, it would facilitate having a knowledgeable society (Roozbahani, 2015).

People should consistently use their media skills and knowledge. Each person is positioned in a certain place along this line. There is no point in this continuous flow that would indicate zero media knowledge and there is no point where a person would attain 100% of this knowledge (Rizan & Esfandiari Moghadam, 2015).

In conclusion, it can be stated that the results and effects of the hypodermic needle theory is relative, considering the relativity of people's use of social media and their mental resistance to it. However, it can be stated that libraries and other information centers can indirectly affect people and familiarize them with skills that can help increase their mental resistance to the effects of social media.
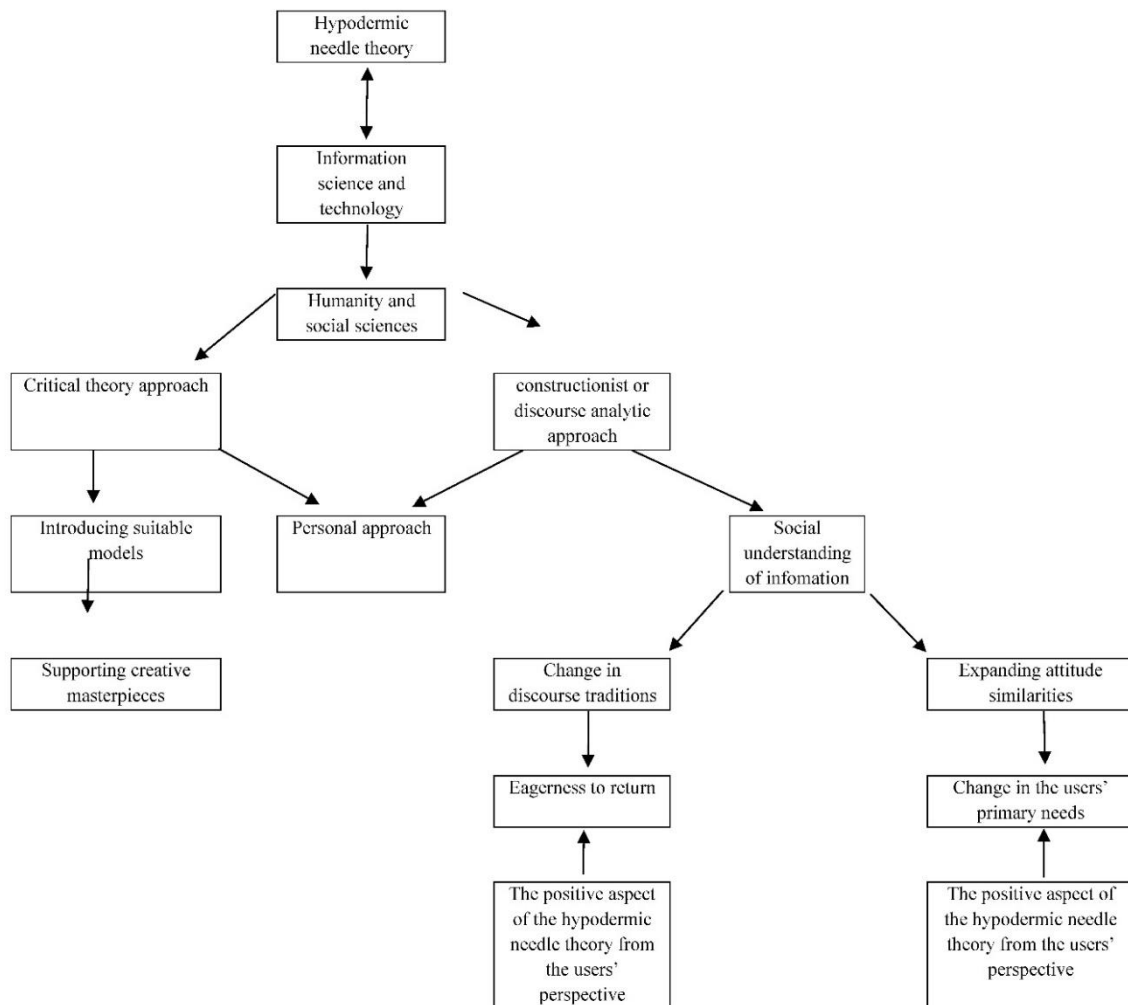


The hypodermic needle theory system in information science and technology

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