

USING THEORY OF REASONED ACTION (TRA) IN RESEARCHING INFORMATION BEHAVIOR OF LECTURERS

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Introduction

Nowadays, information overload has becoming an issue and it is increasingly difficult for an information user to identify and locate useful information resources to satisfy his/ her need. Information users in general and lecturers particularly could choose many sources such as Internet, colleagues, database, or personal collection. Among of those information resources is academic library. It could be seen that, behavior of lecturers is influenced by some factors related to internal and external variables.

Information behavior is a field of information science as well as a research field of many various disciplinary that concerned the responses of users when contacting sources and channel of information. Understanding information behavior as well as information behavior of lecturers requires many different approaches and theories. The Theory of Reasoned Actions (TRA) is one prominent theory to help academic libraries understand the lecturers' information behavior.

The study used TRA as a theoretical framework to investigate why lecturers select and use one type of information resource instead of others and how resource characteristics, library environment, individual differences, and social influences affect the resource selection and use. Few studies in library and information science have used TRA to examine users' information behavior thus far (**Walster, 1994**). This study aims to make a unique contribution of understanding lecturers' information using behavior based on the TRA.

Information behavior: perspectives of approach

There are many studies conducted related to information behavior and theories applied in information behavior research. Before the 1980s, these studies were interested in examining the information seeking patterns themselves from a system's perspective rather than from the individual user's perspective. The research focused more on what systems possessed and what it is in the system that is lacking, and not on what was missing for users. Many studies were carried out in locations where users looked for information, such as libraries. What do users do at libraries, or how many times an individual information resource was used in the libraries were the major questions posed (**Dervin&Nilan, 1986**).

In 1986, **Dervin and Nilan (1986)** reviewed a user-centered perspective to study human information seeking and use. The focus was on how users select and use information and what happens during the information seeking process in terms of cognitive, psychological, and behavioral changes of users. The goal of these studies aimed to determine the common cognitions of most users from the individual differences of cognitively based characteristics (i.e., learning style, motivation, personality type, etc.) in order to design dynamic and adaptive systems and services (**Hewins, 1990**).

Since the 1990s, more and more user-centered studies have been exploring various user groups' information seeking behavior from cognitive, psychological, and sociological approaches in everyday life, work and study settings, business environment, health care settings, and many other settings.

Ingwersen (1996) also focuses on information retrieval aspects of human information behavior. Stressing the cognitive perspective, Ingwersen proposes a poly representation approach. That is, the individual user's cognitive space, including work task or interest, current cognitive state, problem or goal, uncertainty, information need and information behavior, and the social or organizational environment, including domains, strategies or goals, and tasks and preferences, should be represented in IR systems. This approach highlights the importance of cognitive and situational components in human information behavior.

Knowing how users perceive use an information resource and factors affect the formation of their perceptions of contacting information will help academic library understand why users choose this information resource, ways of seeking, organizing or using information instead of others. In other words, knowing users' beliefs on using an information resource will help academic libraries to determine the attitude of information users (such as lecturers) on using that information resource, which accordingly affects their intention to use or not to use that resource. This type of belief-attitude-behavior intention-actual behavior approach was applied in the TRA, which aims to explain and predict human behaviors.

Information behavior is impacted by some key variables on arising their information behavior, determining information sources and channels, seeking, organizing, processing and using information with the aim of fulfill their task and role. Several internal and external variables include the context of an individual's physical, social, physiological, cognitive, or affective state. These variables interact with each other to determine a person's information behavior within any given context which listed some of the variables within five major groups: cognitive and affective variables, personal variables, professional variables, psychological variables, social and demographic variables.

Based on the TRA and the reviewed literature, five categories of influential factors have been classified. They are beliefs on advantages and disadvantages of using information resources (behavior beliefs), normative beliefs on a specific referent's influence on using information resources, resource characteristics, individual differences and, library environment with several

variables in each factor category. In addition, some variables can be classified into more than one factor category, such as the variable “time” (**Donghua Tao, 2008**).

Nahl (2001) lists many of the cognitive-affective variables under what are termed as psychodynamic variables and elucidates some of them. The process of personality involvement in information seeking entails certain feelings and thoughts that are universal to all information behaviors. They include feelings of uncertainty or hesitance and doubt (affective behavior), confused thoughts (cognitive behavior), resistance to new information (affective behavior), frustration and anxiety (affective behavior), not reading instructions and procrastinating using the library, or not manipulating the physical elements of the information environment (sensorimotor behavior). Along with negative affect, there are positive affective behaviors in information seeking, such as experiencing feelings of victory and elation, strengthening one’s feelings of self-efficacy and self-esteem, confirming one’s feelings of acceptance of and valuing the information world, feeling the reward of joy after satisfying an information need, and so on (**Nahl, 2001**).

The cognitive-affective viewpoint has become increasingly used in information behavior research and considers both cognitive and affective aspects of information needs, seeking, evaluation, and usage. In this approach, information behaviors are understood as a function both of mental processes and of psychological or emotional factors. The range of affective factors examined in the book include the role of user-confidence in library anxiety and information literacy and user-frustration and its relationship to user interaction and its implications for information-systems design.

Application The Theory of Reasoned Action (TRA) on information behavior research

The Theory of Reasoned Action (TRA) was developed in 1967. During the early 1970s the theory was revised and expanded by **Ajzen and Fishbein**. By 1980 the theory was used to study human behavior and develop appropriate interventions. In 1988, the Theory of Planned Behavior (TPB) was added to the existing model of reasoned action to address the inadequacies that Ajzen and Fishbein had identified through their research using the TRA.

The Theory of Reasoned Action (TRA) proposed that an individual’s behavior (e.g., use of one information resource over others) is determined by his/her intention to perform the behavior, and this intention is influenced jointly by his/her attitude toward performing the behavior as well as the perceived social influence of people who are important to him/her (i.e. subjective norm), which, in turn, are determined by his/her behavior beliefs about the consequences of performing that behavior and normative beliefs that specific referents think he/she should or should not perform that behavior. External variables encompass all variables not explicitly represented in the model, which include demographic or personality characteristics, the characteristics of the behavioral target, and other variables that can influence the formation of the beliefs. The Fishbein model asserts that external variables influence behavior intention only indirectly by influencing the individual’s beliefs (**Ajzen&Fishbein, 1980**).

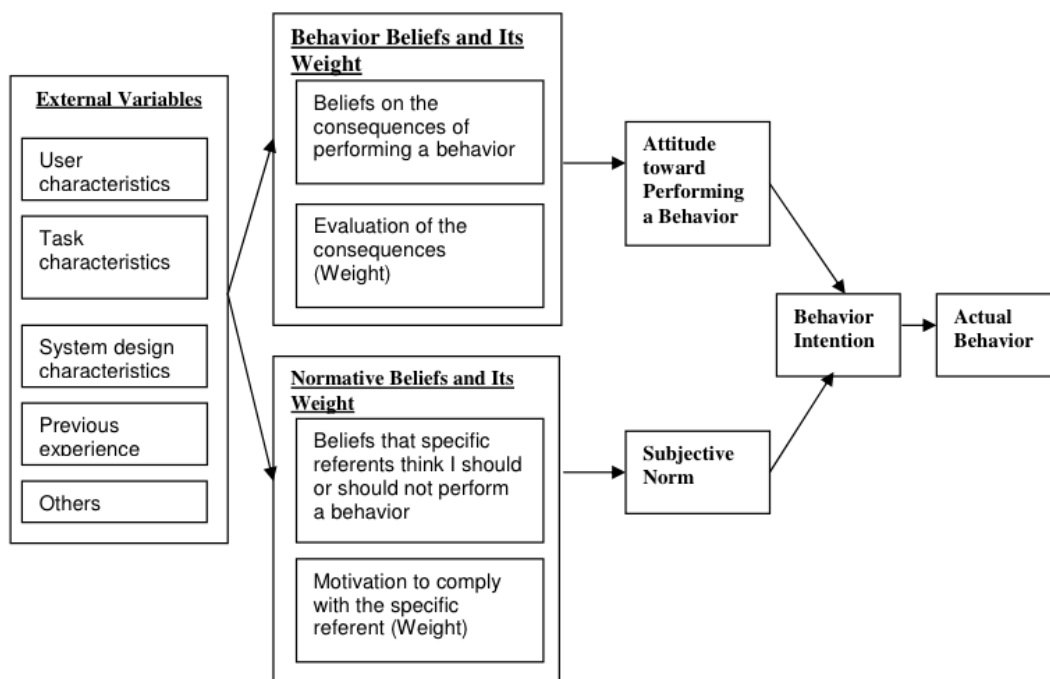


Figure 1. Theory of Reasoned Action (TRA) (Cited from Ajzen and Fishbein, 1980)

The TRA can be applied to many fields such as financial behavioral prediction to understanding and predicting the determinants of financial-behavior, or health behavior to understanding the human behavior related to their health. Similarly, TRA can be applied to information behavior research. The TRA includes concept of perceived control over the opportunities, resources, and skills necessary to perform an information behavior.

The concept of perceived behavioral control is similar to the concept of self efficacy-person’s perception of his or her ability to perform the information behavior. Also normative beliefs and behavioral beliefs in TRA can be used to help develop information messages that persuade people to satisfy their needs of information. Normative beliefs influence subjective norms while beliefs about the information behavior influence attitudes.

Norms are a person's perception of other people's opinions regarding the defined information behavior. An individual's attitudes toward an information behavior are determined by his/her expectations about the outcome of performing the behavior, and the extent to which s/he values the outcome. On the other hand, behavioral beliefs are a combination of a person's beliefs regarding the outcomes of a defined information behavior and the person's evaluation of potential outcomes. Therefore behavioral beliefs can be used to help human information behavior change.

It could be clearly seen that, behavior does not refer only to a usual physical activity, but rather represents a complex intermingling of affective and cognitive processes that guide decisions in the short- and long-term. The TRA is a widely used behavioral prediction theory that represents a

social-psychological approach to understand and predict the determinants of human behavior related to various disciplinary, including information behavior. The TRA states that the intention to perform a particular behavior is strongly related to the actual performance of that behavior. Two basic assumptions that underlie the TRA are: (i) behavior is under volitional control, and (ii) people are rational beings. From the perspective of TRA, we behave in a certain way because we choose to do so and we use a rational decision-making process in choosing and planning our actions. The TRA was designed to predict behavior from intention, and proposes quasi-mathematical relationships between beliefs, attitudes, intentions, and behavior. A modified version of TRA includes the addition of perceived control over the behavior and is referred to as the Theory of Planned Behavior (TPB) (**Redding et al. 2000**).

Predicting behavior is the ultimate goal of the TRA. According to the TRA, behavior is influenced by the intention to perform the behavior. Intention is influenced by three major variables: (i) subjective norms, (ii) attitudes, (iii) self-efficacy. Subjective norms involve an individual's perception of what significant others believe about his or her ability to perform the behavior. Attitudes can be conceptualized in terms of values. That is, an individual develops particular values about behaviors. Two of the variables that influence intention, subjective norms, and attitudes are in turn influenced by beliefs. Two general types of beliefs are considered in TRA: *normative* and *behavioral* beliefs. Normative beliefs are situational based social expectations that are considered the rule. Normative beliefs influence subjective norms while beliefs about the behavior influence attitudes. An individual's attitudes toward a behavior are determined by his/her expectations about the outcome of performing the behavior, and the extent to which s/he values the outcome. Thus, from a TRA perspective, the likelihood that an individual will engage in health risk reduction depends upon how much s/he is convinced that healthy behaviors will prevent risk, and the degree to which s/he perceives the benefits will outweigh the costs. The majority of TRA research has focused on the prediction of behavioral intention rather than on the behavior itself (**Redding et al, 2000; Family Health International, 2008**).

The TRA also stated that any behavior should contain four elements: “the action, the target at which the action is directed, the context in which it occurs, and the time at which it is performed.” (**Ajzen&Fishbein, 1980, p. 39**). Four elements could be equivalent to the elements of information behavior in some models. For example,

For academic libraries, application the TRA in understanding lecturers' information behavior helps librarians some activities. One of benefits is predicting information behavior of lecturers, such as determining the resources of information, **Walster (1994)** stated that TRA could be used in many areas in library and information science. Among them, “to create profiles of library users' beliefs and attitude toward library services and materials” and “to provide information for the development of instruction” (p.170) explicate the theoretical and practical significance of the current study. So far, few studies in library and information Science have used this theory to study user information seeking behavior and information resource selection and use. Thus, the proposed model in this study could be a touchstone to develop a theory about information resource selection and use.

CONCLUSION

To sum up, the TRA could make contribution to forming the base of many information studies about information behavior adoption. The adaptive ability of the model to reflect any changes in context, environment and content proves both useful to the validity, while also cumbersome to the general applicability of the model (Danter 2005). The limitation of this study is that, there is no any survey or statistic related to evaluating the ability of application the TRA in understanding information behavior of users. Therefore, this future research should be focused on the specific impacts of variables on information behavior of different information users.

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