Comparing the Approach, by the users categories, on Research Findings According to Utilization Models

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Abstract

In order to inquire about users' attitudes of research findings, some forms of use of findings were studied, which entitled Utilization Models, and identified four major models including; Linear Translation Model, Problem solving Model, Enlightenment Model, and Interaction Model. Then, three groups of users including teachers, experts, and administrators were compared. Data was gathered from 181 users by a researcher made questionnaire. The sample was selected from 8 districts and Education Organization of Tehran Province by

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multistage sampling. Data was analyzed by paired-sample t-test in each group. Results revealed that users had positive attitudes toward interaction, linear translation, problem solving, and enlightenment models, respectively. There was no difference of orders of models between users' groups except significance between them. That is, all of observed differences were significant in administrators' answers, but there was no significant difference between linear translation and interactive models and also between problem solving and enlightenment models in researchers and experts answers. In addition, the difference between linear translation model and interactive model was not significant. Results showed that interactive and linear translation models were more important models in users' view. Enlightenment model had the lowest attitudes, so due to its benefits, it should be introduced to users of research findings.

Keywords: Utilization, interaction model, linear translation model, problem solving model, enlightenment model

Introduction

The use of research findings is the last stage in research process, so it is one of the most influential stages in research system. There is a huge amount of discussion in research utilization because of some sensibilities of this stage. We have to ask several questions to plan research utilization, such as; how we should plan to use of findings? How we should inform users of findings? And, what is

the role of people in research process? We can recognize manner of function about research findings from the answers to these questions that is known Utilization Model. Despite many studies in utilization model, there is still no convergence between ideas, in other words, there is not still presented a comprehensive model contains all ideas and accepted by most authors in this field. One of the reasons of this problem is lack of integration between utilization models with practical conditions. According to Hanney et al. (2003) a considerable amount of this analysis is drawn upon in the paper and differs from practical considerations. Extent of utilization concept also is another reason (Landry, Amara, and Lamari, 2001). However, likely the variety of models is necessary and produced in difference of their organizing frameworks and processes in terms of their target populations, structures, processes, and specific outcomes (Beyea and Nicoll, 1997). So, the target population may be an individual caregiver, educator, or researcher, and the structure may be established within an institution or a professional organization. Thus, we have to consider a holistic view in discussion about utilization models and select some of them in regards to dimensions and overlaps of models.

In education, Havelock's Research, Development, and Diffusion model and problem solving model were major contents since 1960s to 1980s (Stokking, 1994). However, discussions about utilization models in education and social science have started from Nathan Kaplan in 1979 that entitled "Two-Communities Theory" (Neilson, 2001). Two-communities explanations assume that a difference between the culture of professionals and managers in government agencies and the culture of researchers leads to a lack of communication between them and, consequently, to low levels of

knowledge utilization. These explanations suggest that professionals and managers in government agencies are reluctant to use research because they do not share the norms and values of the researchers (Landry, Lamari, and Amara, 2003).

Linear translation model was used in industry and agriculture. The model considers a linear sequence that produced knowledge arrives at users through institutes or individuals, and at least it is used by users. The utilization follows linear sequence; from the research source until the utilization. The researchers are the source of ideas for directing research, and the users are simple receptables for the results of research. So, it is tried to reintroduce roles between researchers, documentators, and policy-makers (Faghihi, 1999). The assumption under this model is that the good findings and ideas are used by people who need them (Fathi Vajargah, 2003), the researches which have adequate results can find adequate audiences.

Problem solving Model also follows a special sequence. This model considers user as an active role. A situation is started with identifying a problem. Then, the researcher is seeking to solve it or to provide probabilistic answers. In fact, researcher identifies and examines alternatives options, and ultimately, user selects one solution among generated solutions. The role of user is as an active person on problem, seeker and examiner of external advices. Based on provided information, policy makers more often use empirical data for smaller, routine, incremental decisions (Neilson, 2001). The model focuses on the actions that could be taken to appropriate to encourage permeability at the interfaces between policy-makers and researchers.

Based on enlightenment model and empirical observation of nature of dissemination of findings research undermines the assumption of use of research in governmental decision-making. In this case, we do not attend to an active and urgent use but, it is assumed that information influences without necessarily being actively used, in other words, information can be used without necessarily having an effect. In fact, one-to-one relationship between utilization and its impact need not exist (Oh, 1997).

In this case, enlightenment model influences and changes thinking of policy-makers, managers, teachers, and other educational practitioners. In other words the model attends to a long-term and unclear use of research results as well as urgent and clear use. In this model attends to the accumulation of research that is done through educating policy makers and in long period of time. The model illustrates the idea that knowledge gained through research can enlighten or broaden the existing knowledge base of policy makers and therefore can create a gradual shift of conceptual thinking. Based on Sabatier and Jenkins-Smith's notes, the enlightenment function of research is one of the four major findings in the field of utilization (cited by Neilson, 2001).

It suggests that knowledge utilization depends on disorderly interaction between researchers and users, rather than on linear sequences beginning with the needs of researchers or the needs of users (Landry, Lamari, and Amara, 2003; 2001). The supporters of these explanations predict that the more sustained and intense the interaction between researchers and users, the more likely utilization will occur and giving greater attention to the relationships between them at different stages of knowledge

production. The supporters of this model can be divided in two camps: first, the supporters of the communication related theories emphasize on the two communities theory who assume that a difference between the culture of science and the culture of users leads to a lake of communication between them and, consequently, to low levels of knowledge utilization. Second, the supporters of interaction model predicate that the more sustained and intense the interaction between researchers and users (Landry, Amara, and Lamari, 2001). Therefore, interaction can exist both in research stages and policy making. Based on this model, research can go beyond one-way processes, close to two-way exchange processes and can produce cultural shifts. Such cultural shifts can facilitate the ongoing use of research knowledge in decision making, not just one-off uses (Lavis et al., 2003). In addition, the results of the regression models show that the determinants of utilization do not constitute good predictors of utilization, but the determinants associated to the interaction model provide the best predictors of knowledge utilization (Landry, Amara, and Lamari, 2001).

The attitudes to a process likely present how people conduct if they encounter a model. It can be predicted if users have a more positive attitude to a model, they would use this manner encountering with research findings. The purpose of this study is to explain and to compare the attitudes of several groups of users towards utilization models. It can be predicted behaviors of various groups of users about research findings. So, four groups of users including: teachers, experts, administrators, and researchers were selected and their answers were compared.

Method

Participants

The participants in this study were three groups including teachers, experts and administrations, all of whom were employees of educational organization of Tehran province. Regarding research purpose about a comparison between various users a number of 104, 42, and 32, computed to teachers, experts, and administrations, respectively. Multi stages sampling was used to select these samples.

Instrument

A researcher-made questionnaire was used to measure attitudes of users. To develop the instrument, first, four models were considered as utilization models. Then, some items were written based on main ideas of utilization models about several phases of utilization of research findings, including: utilization process, time of use findings, researcher and user's tasks in utilization, and enhancing factors in utilization. Factor loads present validity of factors to identify utilization models and also, alpha coefficients show consistency of items in measuring of factors.

Results

We are interested to know differences between various groups of users in utilization models. Asking to this question requires explaining the answers of various users, separately. To do this, first we computed mean related to each model due to compare between

models, then mean of whole samples computed by averaging of all people.

Discussion

The main purpose of this study was to identify attitudes of each group of users towards utilization models. To do this, first several utilization models and classifications were studied and consequently four models were selected: linear translation, problem solving, enlightenment, and interaction models. Then, in order to measure attitudes of users groups, a questionnaire includes ideas of various models was designed and then was surveyed on 181 participations. The users groups were teachers, administrators, experts, and researchers.

Results revealed that interaction model was the most important model in research users and then linear translation, problem solving, and enlightenment models were more preferred models, respectively. This sequence had been presented in all users groups but a litter differences were observed in significantly distinctions between models.

Answers of teachers indicated that both interaction and linear translation models had the same values. Although, these models had difference's they were not significantly different. Interaction model may have some aspects to distinguish between others, such as adequate definition of users' role and to consider them as inactive people. These aspects likely lead to attend by teachers along with linear translation model. This finding was same as results of Landry, Amara, and Lamari (2001) which were

recognized the determinants associated to the interaction model as the best predictors of utilization. Therefore interaction and relation between researchers and users can be a key to plan for research utilization.

There is a same sequence in experts' answers, but a bit difference was observed in their significance. There is no significant difference was observed between interaction and linear translation models, and also between problem solving and enlightenment models. Therefore, in expert's point of view, we can divide utilization models in two portions: a more preferred portion includes interaction and linear translation models, and a less preferred portion includes problem solving and enlightenment models. There is significant difference between these portions but not within these portions. Linear translation model had a high degree of importance in experts' vision. It can be said that the most of contents in utilization are regards to this model the processes related to it. Therefore, it is acceptable to import it by users especially by experts. In this model, much attention has been paid for accurate definition of role of each people in an adequate sequence. So, the importance of model is predictable by experts.

There is more obvious difference in administrators' answers. So, the significant differences are in each of models. Along them, interaction model significantly differed from linear translation model only in administrators' sample. This result reveals that interaction model could show its characteristics in administrators and they have attended more to it. Perhaps the reason of this may arise from the importance of interaction between researcher and user in before, during and after research that are highlighted in this

model. Problem solving model posed in third order of administrators' tendencies. Despite being underlying of this model in many utilization activities but surprisingly did not spend much importance by users. As a tradition in many research institutes, some subjects present based on needs and problems and direct researchers to choose between them. Researchers are trying to solve and ask it and then present their findings to apply by users. Despite of many similarities between this process and problem solving model, but little attentions have been paid by users. Some reasons may be exist. Among them, users may not attend to it due to observation of model performance or may attract by other models because of more attractive aspects of them. So, the reasons of fewer tendencies to problem solving model should be examine in next researches.

Researchers' answers is very similar to experts' ask. There are also two portions of models. Interactive and linear translation models are in a portion which had more positive attitudes and problem solving and enlightenment models are in the next portion which had less preferred tendencies. Non-significant differences were found in within portions and significant ones were found in between portions. There is the same sequence in rating of models and enlightenment model posed in the last order. This result partly due to lack of appropriate understanding of the model in users' minds so it can not be expected to express high tendency toward it. In addition, urgent and faster uses of research may be more important than to spend a long time. Thereby waiting to long-term plans is not expected in education and they should be based on fast and urgent applications. In regards to little cognition about

enlightenment model, some planned activities should be conducted to present a new function of utilization.

In general, results showed that interaction and linear translation models are more preferred in whole participates, especially in interaction model. According to high tendency toward interaction model, it seems that some reforms need to pay about interaction and connection between people.

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