Value Creation for Audio Learning Service of Working Age Population in Bangkok

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This research is a part of doctoral dissertation of Business Administration Faculty, Eastern Asia University under the advice of Dr. Boonchob Phumpaijit, Dr. Sudaporn Sawmoung, Dr. Sanpachai Huvannadana and Assoc.Prof. Dr. Chow Rojanasang

ABSTRACT

The purposes of this research were as follows:

1) To study personal data on audio learning service, beneficial perception, cost-advantage perception, perception of other factors and value perception towards working age population in Bangkok.
2) To study and develop the causal model, value perception and value creation of service users of audio learning service in the working age population in Bangkok.
3) To study about the problems, obstacles and suggestions for the improvement and development of an audio learning service.
4) Examine the correlations between latent variables as well as developing a Parsimonious Model.

The major findings were as follows:

1. Most of the respondents have perceived a value from the use of an audio learning service at a high level, especially for product value and personal value; this perception is considered to be at a high level in benefits especially for personal benefit and experience benefit; the perception is considered at a high level in cost advantage especially for time saving and energy saving and is also considered to be at a high level with regard to other factors, especially for quality of content and time constraint.

2. Most of the respondents advised this researcher that the problems and obstacles were related to personal problems due to their knowledge background and concentration abilities. Suggestions to enhance the audio learning service comprised the suggestions that a listening period should be offered of 11-15 minutes, the content should be related to personal development and the narration should be simplified for ease of understanding.

3. The results from the testing of six hypothesises were: examination and acceptance of the correlation between characteristics of the audio learning service and perception of functional benefits; the correlation between perceptions of cost-advantage; the correlation between percep-

tion of other factors; the correlation between perceptions of functional benefit and value perception; correlation between perceptions of other factors and value perception; and finally, that there was no correlation between perception of cost-advantage and value perception because the hypothesis test showed rejection.

4. The causal model of value perception for audio learning service, resulting from factors and paths analysis, was valid and fitted the empirical data. All variables of the model accounted for 65.9% of the variance. Whilst there were hypotheses under the cost-benefit model, there was no correlation between perception of cost-advantage and value perception.

Keywords: Value creation, Audio Learning, Podcast, Causal Model, Structural Equations Model: SEM

INTRODUCTION

For 2001-2010, the Thai government has announced the promotion of self-learning through ICT technology for developing careers and improvement of the quality of life. Through a common interest offered by learning media nowadays, the development of communication technology has created new ways of self-learning. A lot of modern learning media have been developed in the use of computer technology as a means of improving the quality of learning and teaching (Milliken and Barnes, 2002); additionally there is the requirement of institutes to become more efficient through teaching to be provided for large numbers of students while at the same time driving down unit cost (Sneddon & Kremer,1994).

Audio learning is a form of mobile learning in which a device is used to listen to audio media. Through portable devices such as iPod, MP3 player, CD player, PC/Laptop and portable radio, audio media files can be conveniently transferred to learners or device holders. Audio Learning means using audio books, courses and podcasts so that learners can become more knowledgeable and fulfilled. Digital media with audio recording can be produced easily at a low cost (Ractham and Zhang, 2006). Especially in the context of educational purposes, audio learning seems to be one of the good instruments to improve self-learning capability (Evans, 2007). Audio learning or podcasting (from iPod and broadcasting) have become popular as learning aids for campus-based students, especially in leading US universities such as Berkeley, Stanford, Harvard, Penn State and Michigan State University (Copley, 2007).

The working-age population (15-65 years) is equal to 67 percent, which was greater than the child and aged populations in the total population structure of Thailand (National Statistical Office, 2003). For people in this group self-learning has become more popular, since people wish to learn more for their own capability and future careers. Therefore, to develop the human capability of this group will in consequence have a direct and beneficial impact on the country. As this group of the working-age population generates most productivity from both a qualitative and a quantitative point of view, audio learning is one of the self-learning services which is regaining popularity. This is

because of technology development in many aspects such as digital media, the internet and performing device. Access to audio learning service is easy, convenient and is considered cost-advantageous. With relation to value creation concepts, value can be created by differentiation along every step of the value chain; this is through activities resulting in products and services that lower the buyer/user's cost or raise the buyer/user benefit and performance. With respect to marketing concepts of value creation under cost-benefit schemes, the research question is: How valuable can an audio learning service be created to be beneficial to the working-age population in Bangkok?

Extending the performance of an audio learning service to enhance the self-learning capability of the working-age population is the subject of study in this research. The purpose is to develop and offer as an alternative self-learning channel by creating value under the marketing concept (Kotler, 2003) and a value perception model (Day, 1999). From the usage of audio learning services, a description of perceived benefits such as functional benefit (Chan & Lee, 2005) and personal benefit (Gribbins, 2007), perceived cost-advantages such as time-saving (Evans, 2008) and psychical cost (Chan & Lee, 2005) and other related factors such as quality of content and physical surroundings (Sukhothai Thammathirat Open University, 1998) were formulated in the from of a value perception model of audio learning services. Apart from a description in percentages, Mean and SD of all latent variables, there were inferential statistics of a Structural Equations Model: SEM, in order to hypothesize correlations between latent variables and examine the model validity by testing the goodness-of-fit with variance of its empirical data.

This was a descriptive and semi-qualitative research. From June to July 2008, the samples of the study consisted of 400 persons of the working-age population in Bangkok. The instrument used for the study was a questionnaire which consisted of a check list, a five-point Likert scale and an open-ended questionnaire. The statistics used for data analysis were descriptive statistics: frequency distribution, percentage, arithmetic mean, standard deviation and inferential statistics, for example, Structural Equation Model Analysis.

The purposes of this research were as follows:

1) To study personal data on audio learning services, beneficial perception, cost-advantage perception, perception of other factors and value perception towards the working-age population in Bangkok.

2) To study and develop the causal model, value perception and value creation of service users of the audio learning service of the working-age population in Bangkok.

3) To study problems, obstacles and to make suggestion for improvement and development of audio learning services.

4) To examine the correlation between latent variables as well as to develop a Parsimonious Model, whilst six hypotheses were formulated as follows:

H1: There was correlation between audio learning services and the perception of benefits

H2: There was correlation between audio learning services and the perception of cost-advantage

H3: There was correlation between audio learning services and the perception of other factors

H4: There was correlation between the perception of benefit and value perception
H5: There was correlation between perception of cost-advantage and value perception
H6: There was correlation between perception of other factors and value perception

Description of statistical data and results from a correlation test and the examination of the model validity would support understanding of user perception as well as prioritizing and enhancing the service performance in the form of value creation model.

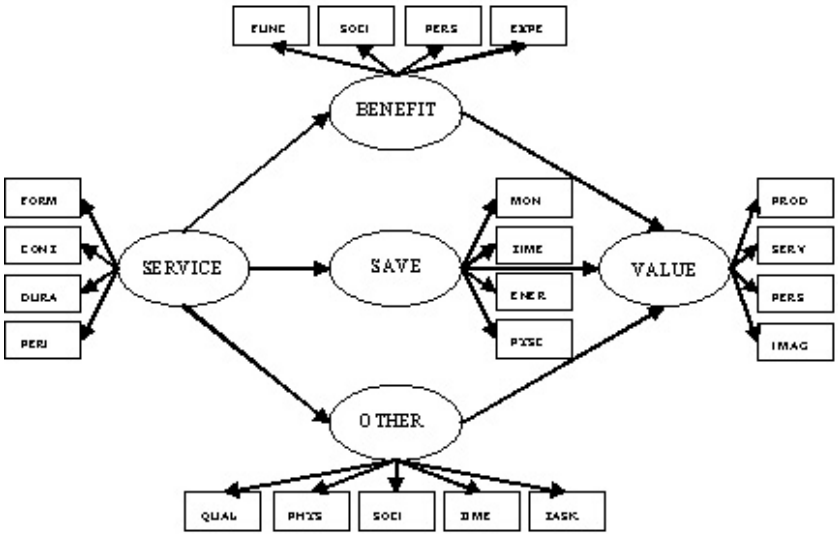

Fig. 1 *Conceptual framework: Value perception for audio learning services*

METHOD

2.1 Scope of the study

This research was a descriptive and semi-qualitative research. Empirical data from reviewing the literature and articles under the Structural Equations Model (SEM) had been formulated into the questionnaire which examined validity and reliability of the data. As stratified sampling, municipal weight was applied into 50 areas of BMA. The samples of the study consisted of 400 persons who represented the working-age population in Bangkok (Yamanae, 1973). Then the group of samples had been approached with the purpose of obtaining their opinion through the valid closed-end and open-end questionnaires offering multiple choices and the Likert scale in the form of casual relationship, hypothesis tests, factor analysis and path analysis.

2.2 Procedures

Statistical analysis in a package program was performed parametrically and non-parametrically,to describe demographical data, characteristic usage,perceived benefit, perceived cost-advantage,perception of other factors and value perception of using audio learning services services as well as a description of obstacles and suggestions with regards to audio learning

service enhancement and using the Causal Model: Structural Equation Modeling (SEM), in order to examine correlations between latent variables, factor analysis and path analysis with regard to development of the parsimonious model.

RESULT

1. The results of the research showed that, demographically, 55% of all respondents have been using the audio learning service. The majority of all respondents were categorized as female (52.3%), aged below 30 (37.5%), single (57%), at undergraduate level (62%), working in the field of government/ state enterprise (31.3%), at the operative level (68.5%), with 1-5 years experience (30%), with an average income of 10,000-20,000 baht/month (35.8%), usage of personal computers (66.8%) and the use of Thai as the communication language (99%). The description of audio learning service usage was: use via radio (Mean = 4.30); news that was the most received content (Mean = 4.61); < 30 minutes that was an average period (35.3%) and at between 6-12 a.m. of working days (23.2%). For rating of perception, most of the respondent rate was high and prioritized as follows: perception of functional benefit (Mean = 3.84), perception of cost-advantage (Mean = 3.78), perception of other factors (Mean = 3.63) and value perception (Mean = 3.57) respectively.

2. The descriptive statistics also indicated that problems and obstacles were related with personnel due to knowledge background and concentration (Mean = 3.18). Suggestions for audio learning service enhancement were: standard offering period 11-15 minutes (Mean = 3.42), content related with personal development (Mean = 3.74) and simplifying the narration for ease of understanding (20.3%).

Table 1 *Correlation coefficient between variables*

Variables	Service	Value perception	R^2
Perceived benefit	.922*	.346*	0.850
Perceived cost-advantage	.892*	.092	0.795
Other factors	.796*	.443*	0.634

3. From Table 1, at a significant level of 0.05, hypothesis tests of correlation between audio learning services and perception of functional benefit (P<0.05), perception of cost-advantage (P<0.05), and perception of other factors (P<0.05) were examined and accepted. Correlation between perception of functional benefit and value perception (P<0.05), correlation between perception of other factors and value perception (P<0.05) were examined and accepted. In contrast, the correlation between perception of cost-advantage and value perception since hypothesis test showed rejection (P>0.05).

4. Analysis in Structural Equations Model: SEM, value perception for audio learning service model was valid and fitted the empirical data due to the indicators comprised; χ^2 = 183.566, df = 166, *P-VALUE* = 0.166, CMIN/DF = 1.106, GFI = 0.958, RMSEA = 0.016 and R^2 for Structure Equations = 0.659.

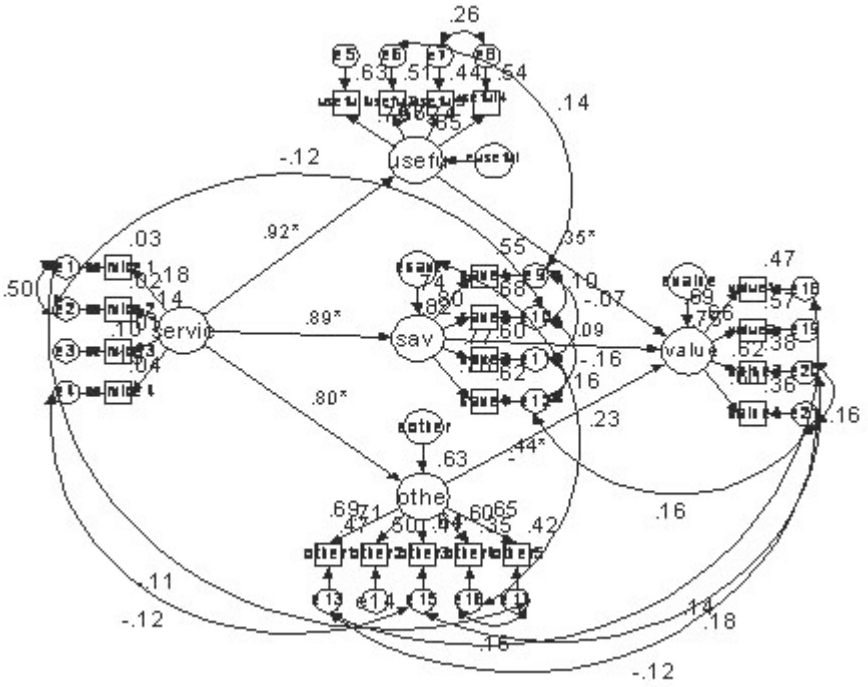

Fig. 2 *A Structural Equations Model of Value Perception for Audio Learning Service*

CONCLUSION

1. Value creation should be focused on the perception of other factors (Path coefficient = 0.443) and perception of benefit (Path coefficient = 0.346) respectively. As suggested by analysis under a cost-benefit model, the result showed no correlation between value perception and cost-advantage. Corresponding to the study of Cronin, Brady and Hult (2000), there is no relationship found between cost and service value.

2. Managing the prerequisites as audio learning service provider as per Fig. 3, value perception towards audio learning users could be created through an increment of perception of other factors (Path coefficient 0.443), prioritized from physical surroundings (Factor loading 0.707) and quality of content (Factor loading 0.688). Then, value perception can be created by increasing the perceived benefit (Path coefficient 0.346), prioritized from the functional benefit (Factor loading 0.791) and benefited in creating new learning experiences (Factor loading 0.735) respectively.

3. Results of factor analysis also suggested ways to increase perception of benefit and perception of other factors. Designing and improvement of the service usage were prioritized from customization of the service forms and scheduling of the service program which fitted the learning styles and segments of users.

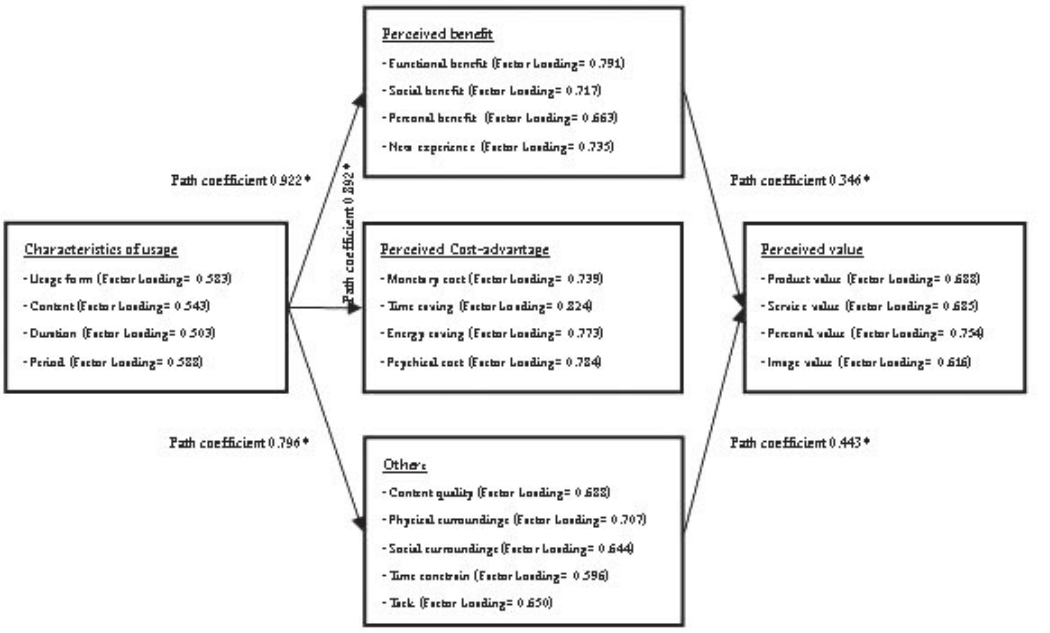

Fig. 3 *A Parsimonious Model of value perception of audio learning service*

4. A Parsimonious Model of value creation for audio learning services which has been founded and presented can be extended in other sales and service industries in the form of a value creation model. Consistent to the cost and benefit models, independent variables under sales/service characteristics and a group of other factors could be adopted and transformed corresponding to each particular sales and service industry.

Audio learning services appeared to have significant potential for enhancing the value creation process. Leverage perception of service users of other factors included: improving the physical surroundings such as easing the access of telephony and internet system and developing the quality of the learning content to be appropriate to each user group (segmentation). In addition, leverage perception of user's benefit included: improving the functional benefit such as developing the learning content in order to serve particular needs technically as well as in career know-how. Creation of new learning experiences by using audio learning as a supporting tool or as an alternative channel of learning is recommended. As one of the available distance learning methods, it's an opportunity for people to obtain higher education for their career advancement and self enhancement.

Future investigations of more independent variables were planned in order to promote and offer to particular groups of working-age population effectively. At the same time an experimental study for comparison between cost and cognition with different learning services (i.e. E-Learning and reviewing from books) was advised to reinforce the influence of perceived cost-advantage.

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REFERENCE

Chan, Anthony & Lee,Mark J. W. (2005). An MP3 a day keeps the worries away: Exploring the use of podcasting to address preconceptions and alleviate pre-class anxiety amongst undergraduate information technology students. **Good practice in Practice. Proceedings of the student experience conference,** Charles Sturt University p.59-71.

Evans ,Chris. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education, **Journal of Computer & Education.**

Day, George S. (1999). **The Market Driven Organization: Understanding, Attracting, and keeping Valuable Customers.**

Milliken, John & Barnes L.Philip. (2002). Teaching and technology in higher education: student perceptions and personal reflections, **Computers & Education.**

Cronin, J. Joseph jr., Brady, Michael K. & M. Hult, G. Tomas (2000). Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments, **Journal of Retailing** V.76 (2) p. 193-218.

Copley, Jonathan. (2007). Audio and video podcasts of lectures for campus-based student: production and evaluation of student use. **Innovations in education and teaching international Vol. 44.**

Gribbins, Michele. (2007). The Perceived Usefulness of Podcasting in Higher Education: A Survey of Students' Attitudes and Intention to Use, **Podcasting in Higher Education,** May 18-19, 2007.

Wiratchai Nonglak. (2002). LISREL Model: Inferential statistics for research, Bangkok: Chulalongkorn University.

Kotler,Philip. (2000). **Marketing Management.** New Jersey : Prentice-Hall International Inc.

Ractham, P. and Zhang, X. (2006). Podcasting in academy-a new knowledge management paradigm within academic setting, **SIGMIS-CPR'06**, April 13-15.

Sneddon, I., Kremer, J. (Eds.). (1994), **An enterprising curriculum; teaching innovations in higher education**, Belfast: HMSO.

Sukhothai Thammathirat Open University (1998), Technology and educational communication toward development of human resource.

Taro, Yamanae. (1973). **Statistic: An Introductory Analysis.** (3rd ed.). New York: Harper & Row.