

PUBLIC HOUSING SELF-SELECTION THROUGH
USER SATISFACTION IN THE CITY OF QOM, IRAN

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Dedicated to
My beloved mother and lovely wife

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ABSTRACT

This research is focusing on the concept of self-selection, a decision-making process grounded in self-concept, which currently receives less attention in housing provision in Iran. This is an effort to explore new suggestions for improving the level of user satisfaction for future living environments that are designed based on current architectural ideas. Achievement of self-selection is indicated by satisfaction in decision-making process. Therefore, the aim of this research is to enhance general housing satisfaction in Qom, Iran by improving the level of residential satisfaction of public housings through the decision making process for future designs. The objectives of this research are to investigate the attributes of the residential environment, related to user self-selection of public housings in Qom, and to measure the residential satisfaction level of public housings through various aspects of self-selection. Sequential mixed methods were employed based on post-occupancy evaluation questionnaire, which clarify the level of user satisfaction. The survey questionnaire was administered to a sample (N=109) of Iranian residents who live in the public housing of Mehr Projects in the Pardisan area of Qom. The collected data were processed with IBM SPSS, ANOVA, and Smart-PLS for frequency, t-tests and model testing. The results indicate that the mean score for user residential satisfaction, self-selection and overall quality of future design are above neutral. The findings suggest that the respondents were satisfied with their current experience of living in the apartments. The quality of current state of the building has improved, and the quality of future design needs less improvement. The results can be useful in assisting architects to predict residential satisfaction and subsequently consider the desired level of self-selection in their design process. In conclusion, the significant determinants of user satisfaction by different attributes of self-selection have been highlighted, and the findings show the central position of self-selection in architectural design.

ABSTRAK

Penyelidikan ini tertumpu kepada konsep pemilihan-kendiri (self-selection), yang merupakan proses membuat keputusan berdasarkan konsep-kendiri (self-concept), yang kurang mendapat perhatian di dalam penyediaan perumahan di Iran. Ini merupakan satu usaha untuk meneroka cadangan baru bagi memperbaiki tahap kepuasan pengguna terhadap persekitaran tempat tinggal dimasa akan datang, yang direkabentuk berdasarkan idea senibina semasa. Pencapaian pemilihan-kendiri dilahirkan melalui kepuasan di dalam proses membuat keputusan. Oleh yang demikian, tujuan penyelidikan ini adalah untuk meningkatkan kepuasan umum perumahan di Qom, Iran melalui penambahbaikan tahap kepuasan kediaman di perumahan awam melalui proses membuat keputusan bagi rekabentuk masa hadapan. Objektif penyelidikan ini adalah untuk menyiasat atribut persekitaran kediaman yang berkaitan dengan pemilihan-kendiri pengguna perumahan awam di Qom, dan untuk menilai tahap kepuasan kediaman perumahan awam melalui pelbagai aspek pemilihan sendiri. Kaedah bercampur secara berurutan digunakan berdasarkan soal selidik penilaian pasca penghunian (POE), yang akan menjelaskan tahap kepuasan pengguna. Soal selidik tersebut dikendalikan keatas sampel (N-109) penduduk Iran yang tinggal di projek perumahan awam Mehr di dalam kawasan Pardisan, Qom. Data yang telah dikumpulkan diproses menggunakan IBM SPSS, ANOVA, dan Smart-PLS bagi ujian frekuensi, ujian-t dan ujian model. Keputusan menunjukkan skor-min bagi kepuasan kediaman pengguna, pemilihan-kendiri dan kualiti keseluruhan rekabentuk masa hadapan adalah melebihi tahap neutral. Dapatan tersebut mencadangkan bahawa responden merasa puas hati dengan pengalaman semasa tinggal di pangsa puri tersebut. Kualiti keadaan semasa bangunan tersebut didapati bertambah baik, dan kualiti keperluan rekabentuk masa hadapan didapati kurang keperluan penambahbaikan. Keputusan tersebut adalah berguna dalam membantu arkitek untuk meramalkan kepuasan kediaman dan seterusnya mempertimbangkan tahap pemilihan sendiri yang diperlukan didalam proses rekabentuk. Sebagai kesimpulan, penentu penting bagi kepuasan pengguna melalui pelbagai atribut pemilihan sendiri telah diserlahkan, dan jumpaan kajian ini membuktikan kedudukan utama pemilihan sendiri didalam rekabentuk senibina.

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LIST OF ABBREVIATIONS

AVE	-	Average Variance Extracted
BPE	-	Building Performance Evaluation
BQA	-	Building Quality Assessment
CR	-	Composite Reliability
CV Red	-	Cross-Validated Redundancy or Q^2
EFA	-	Exploratory Factor Analyses
ES	-	Effect Size
FL	-	Factor Loadings
FPE	-	Facilities Performance Evaluation
IL	-	Item Loading
ISO	-	International Standardization Organization
KMO	-	Kaiser-Meyer-Olkin
LOCs	-	Lower-Order Components
LV	-	Latent Variable
OLS	-	Ordinary Least Squares
PLS-SEM	-	Partial Least Squares Structural Equation Modelling
POE	-	Post-Occupancy Evaluation
QoL	-	Quality of Life
SEM	-	Structural Equation Modelling
SPSS	-	Statistical Package for The Social Sciences

LIST OF SYMBOLS

α	-	Alpha Value
β	-	Beta Coefficient
ε	-	Standard Error of Estimates
$\sum x$	-	Sum of the Score
N	-	The Number of Scores
N	-	Population Size
S	-	Sample Size
E	-	Estimate
Σ	-	Standard Deviation
χ^2	-	Chi-square Mean
P	-	Population Proportion (Assumed to be 0.50)
d	-	Degree of Accuracy Expressed as Proportion (0.05)
P	-	P-value
e^2	-	Level of Precision
$a*b$	-	Normal Distribution of the Indirect Path
Q^2	-	Predominant Measure of Predictive Relevance
R^2	-	Minimum Coefficient of Determination
d_{th}	-	Data Point

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CHAPTER 1

INTRODUCTION

1.1 Overview

People have the right to live their life the way they want, to make their own decisions and to set their own goals. This means, at least, that everyone can do what he/she wants in his/her private life, to contact and develop relations with other persons and to contribute in important activities. Furthermore, they should be satisfied with their belongings, especially living spaces without unnecessary influences.

Architectural design plays a significant part in satisfaction level of a residential place. Every living environment has a characteristic magnetism for users. Therefore, during the architectural design process, architects should open a communication with users to access their values and needs to improve the quality of final products. In addition, while users choose their place of residence according to the architectural parameters that surround them inside their living environment, subjective and objective attributes of the residential environment effect on residential satisfaction. Accordingly, it is important that everyone gets his/her chance to participate in a design process. Obviously, user participation will bring place more satisfaction to help them find their own tastes and desires in final products.

Iran as one of the developing countries in Asia has a newly industrialized market economy, which supports the idea of having good potential of built modern structures in different kind of design buildings. In this era of fast construction development, Iranian architects have mostly focused on architectural parameters of

residential places such as green, intelligent, low energy also profitable buildings seems there is a lack of consideration of user self-selection in their design (Council, 2008; Jensen, et al., 2013; Yu, et al., 2015; Wong, et al., 2005; Menezes, et al., 2012; Meir, et al., 2009; Kim, et al., 2011; Janda, et al., 1994; Brager & De Dear, 1998 and Abel, 1994).

Moreover, the level of satisfaction also depends on consideration of human values, which refer to desirable goals that motivate action (Schwartz, 1992, 1996, Bond, 1988, Bond, et al., 1992). Consequently, the effects of human values as part of users' characteristics on residential satisfaction needs to be examined (Amerigo, 1990, 1992; Amerigo & Aragonés, 1997; Hawkins & Mothersbaugh, 2010). Understanding how architecture influences user self-selection as an important part of every personal characteristic can produce more desirable places to live.

Ultimately, this study has focused on defining the concept of self-selection as a vital part of each personal characteristic and evaluating/measuring residential satisfaction of public housing through different elements/dimensions of self-selection in one of the developed cities in Iran, Qom.

1.2 Research Background

The diversity of human requirements in an individual's living environment is obvious. Ideally, architecture should respond to these various requirements. Architecture, which has been defined for this basic purpose aims, at fulfilling not only physical and functional but also human psychological needs and desires. Principles of architecture have been used to organize or arrange structures to create a successful building or an environment (Suh, 1990; Seider, et al., 1999; Lawson, 2006). Institutions teach different sets of principles regarding architecture, but all of them have the same goals in mind: to create structures that are (a) visually attractive, (b) user-friendly, and (c) environment-friendly (Page, et al., 2010). Considering the scope of this study, even though these goals are important for earning prominent level

of satisfaction in place of residence, because of fast industrial development in building design, end-user characteristics specifically self-selection's effects have been missed. In this regard, self-selection and its determinants of residential satisfaction need to be clarified.

However, based on the conception of self-concept in the model of consumer behavior which made by Hawkins & Mothersbaugh (2010), the conceptual model of self-selection has been explored. In the following, the framework of this study, by merging the existing model of residential satisfaction (Amerigo & Aragoes, 1997) with the conceptual model of self-selection, the new model of residential satisfaction has been developed.

1.2.1 Self-selection: Concept and Definition

General Perspective: Selection by oneself or self-selection, is related to decision-making or the degree to which people make their own decisions and direct their own lives; and the opportunities that are available to people from which choices and decisions can be made (Brown, et al., 1997). Self-selection is a situation in which people decide for themselves to do something rather than someone else making this choice for them. Self-selection may happen in buying choices if some people decide to buy a new product and others decide not to buy this product (Litman, 2005; Handy, et al., 2006; Wee, 2009).

Self-selection as An Indicator: Based on Litman (2005), self-selection is an indicator in choosing a house, which has been referred to the tendency of people to choose locations based on their travel abilities, needs, and preferences (Litman, 2005). On the other hand, Mokhtarian & Cao (2008) opine that self-selection relates to the tendency of people to choose locations based on their travel abilities, needs and preferences. Self-selection is defined as the tendency of people to make choices that are relevant for travel behavior, based on their abilities, needs and preferences (Mokhtarian & Cao, 2008:7). Although self-selection has been related to house

selection based on travel abilities, it can be argued as indicating choice in general housing attributes.

Self-Selection and Decision-making: Our decisions as nature of self-selection and even the process of making them will cause learning and may influence many aspects that will change or reinforce our current self-concept and lifestyle. According to Hawkins & Mothersbaugh (2010), there are two types of influences affect self-concept and lifestyle; internal and external Influences. Furthermore, since self-selection happens in a decision-making process, having the same root as self-concept, self-selection can take self-concept's place in the model of consumer behavior which made by Hawkins & Mothersbaugh (2010). Thus, the view of ourselves and the way that we try to live, are determined by internal and external aspects, which result in needs and desires that we bring to the multitude of situations we encounter daily as shown in Figure 1.1.

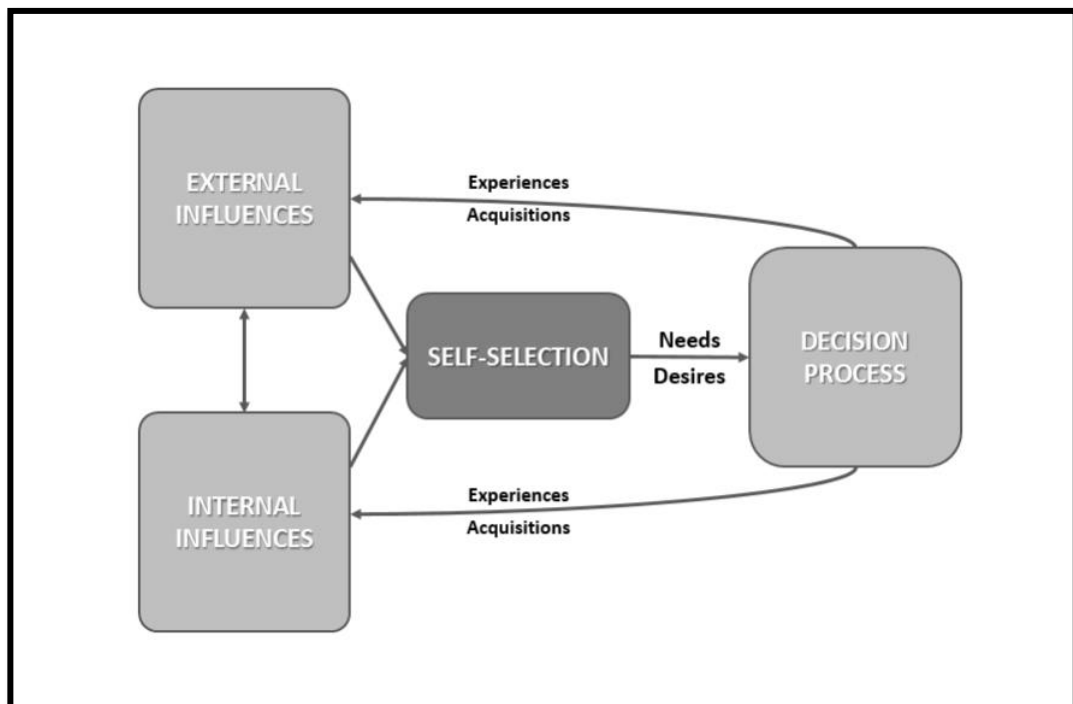


Figure 1.1 The Conceptual Model of Self-selection - Adopted from The Model of Consumer Behavior (Hawkins & Mothersbaugh, 2010)

Besides, in order to the justification of self-selection and reviewing its relationships with self-concept and lifestyle, the conceptual model of self-selection has been presented. Consequently, in the era of building design, user self-selection as part of personal characteristic shapes with these influential aspects.

Conversely, although an architect knows diverse ways of achieving the qualities, which support the responsiveness of the place itself, and even with the highest level of public participation, most people will still have to live or work in places that designed only by others. It means the self-selection issue is not considered well in the context of building designs. It is therefore especially significant to make it possible for end-users to personalize these existing environments. This is the only way that most people will achieve an environment, which stands the stamp of their own tastes and values (Bentley, et al., 1985).

1.2.2 Residential Satisfaction

McCray & Day (1977) identify residential satisfaction as the degree of satisfaction experienced by an individual or a family member regarding the present housing situation. Residential satisfaction is a factor that has a noticeable effect on social and private life which is defined by Galster (1987) as an apparent gap between a respondent's requirements and goal and the reality of the current residential context. In addition, residential satisfaction includes satisfaction with the housing elements and satisfaction with the part (Onibokun, 1974). Ogu (2002) maintained residential satisfaction is employed to evaluate residents' insights and feelings for their housing units and the environment. Besides, a systemic model of residential satisfaction signifies the active position of the personal characteristic on satisfaction with life in general. For instance, Amerigo & Aragonés (1997), have presented a systemic model of residential satisfaction as shown in Figure 1.2.

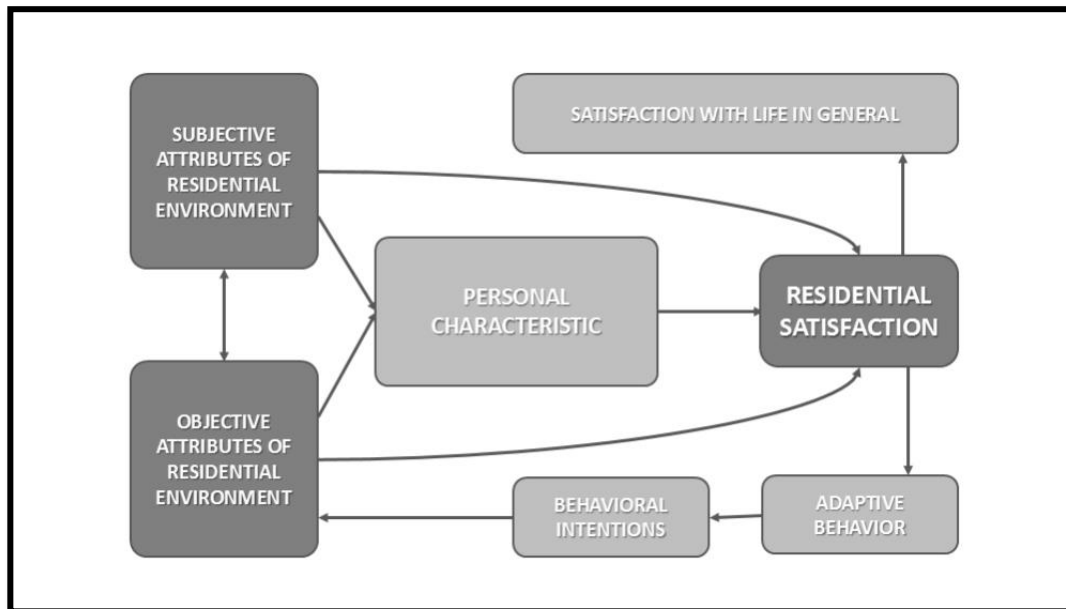


Figure 1.2 A Systemic Model of Residential Satisfaction (Amerigo & Aragonés, 1997)

As shown in Figure 1.2, to achieve the prominent level of residential satisfaction, personal characteristic of end-user and subjective/objective attributes of the residential environment in comparison with internal/external influences on a place of the resident should be well thought-out.

1.2.3 Assessment Tool

There are several assessment tools to evaluate/measure different variables in architecture including post-occupancy evaluation (POE), building performance evaluation (BPE), building quality assessment (BQA), and facilities performance evaluation (FPE). Therefore, based on the preliminary study, the assessment models are mainly based on the POE (Zimring & Reizenstein, 1980; Preiser, et al., 1988; Ornstein, 1999; Wagenberg, 2001; Heerwagen & Zagreus, 2005; Rasli, 2006; Turpin-Brooks & Viccars, 2006; Preiser & Nasar, 2008; Meir, et al., 2009; Izran, et al., 2010; Izran, 2011; Menezes, et al., 2012; Preiser, (ed.), 2013; Chiu, et al., 2014; Yu, et al., 2015; Wener, et al., 2015). Accordingly, by choosing POE as the suitable assessment

tool for this study, the criteria, which are required to be estimated include: health, safety, security, functionality, efficiency, social, environmental psychology, aesthetics, operations, comfort, durability, economics, flexibility, accessibility, building environment, and culture (Preiser, 1989; Preiser, et al., 1988; Preiser & Vischer, 2005; Preiser & Nasar, 2008; Issacs, et al., 1994; Ho, 1997, 1999).

1.3 Problem Statement

As a reasonable explanation of the early human behaviors, since the first person decided to build an accommodation, the main reasons were; the best response to his/her needs and desires. Obviously, even in primary space design and construct, each decision has been made to bring more satisfaction and comfort. However, the criterion of an excellent product was; answering to self-selection which has been defined as a choice that each person makes by himself/herself. Then again, self-selection may be a key to better understanding of people's choices (Handy, et al., 2006).

Since the 1980's, fancy features and technological capabilities for the future generation of buildings based on business goals have been introduced: intelligent building, green building, low energy building, zero energy building, and high-performance buildings. Moreover, architects of these kinds of buildings have been forced to design them based on modern ideas of architecture, which means answering the technological issue with profitable solutions in fastest methods. Although these approaches are important, the gap what has been paid less attention here is the respect to the personal characteristic of users during designing and construction process of these buildings. On the other hand, considering the users' ideas, beliefs, attitudes, and desires would be an appropriate technique for deriving final users' satisfaction with products. Now, it is very clear to establish that if designers who wish to reach out the prominent level of people satisfaction, they should be considered self-selection in their decision-making design.

Subsequently, user satisfaction relies on different criteria in architecture design, the scope of this study is user self-selection as a vital part of each personal characteristic, which could help architects to design and construct more suitable places to live. However, this study has concentrated on self-selection by measuring residential satisfaction on identified self-selection aspects in residential places of public housings.

1.4 Research Questions

Enhancing the level of people satisfaction as one of the biggest gold of every decision around the world is most wanted. In the field of architecture, designers of residential buildings would play a substantial part in increasing user satisfaction level of residential places. Firstly, they should consider a communication with users' candidate during the design process to involve ideas, beliefs, attitudes, and desires of users, finding out the best design decisions. Secondly, using the assessment tool to evaluate/measure the level of design quality of the product by verifying users' living experiences, would help them to learn and improve their designs in similar upcoming projects.

In this regard, many research questions related to the personal characteristic, self-concept, self-selection, user satisfaction, residential satisfaction, housing typologies, public housings, and assessment tool have been reviewed. Based on these keys, which are about investigating residential satisfaction level of public housings in Qom, the research questions are as follows:

Research Question One: What is the conceptual framework based on the relationship between residential satisfaction and self-selection?

Identifying the concept, meaning, and definition of self-selection, residential satisfaction, and their relationship are achieved via answering the following sub research questions:

- (a) What is the perception of self-concept?
- (b) What is the idea of self-selection and its relevance with personal characteristic?
- (c) What is the conception of user satisfaction?
- (d) What is the concept of residential satisfaction?

Research Question Two: What are the attributes of the residential environment, related to user self-selection of public housings in Qom?

Investigating the attributes of user self-selection of public housings through finding the answers for the following sub research questions:

- (a) What are the public housings typologies in Qom?
- (b) What are the residential environment's attributes of public housings in Qom?

Research Question Three: What is residential satisfaction level of public housings in Qom?

1.5 Research Aim and Objectives

The aim and desired outcome of this study are to enhance the level of people satisfaction in general as the result of the improved level of residential satisfaction of public housings of Qom in comparable future designs. To achieve the aim, this study set out to examine these objectives:

- (a) To investigate the attributes of the residential environment, related to user self-selection of public housings in Qom.
- (b) To evaluate/measure residential satisfaction level of public housings in Qom through various aspects of self-selection.

1.6 Scope and Limitations of the Study

Justification of the scope needs to narrow down from three ways which are: user characteristic, architecture design, and study area as shown in Figure 1.3. Furthermore, there are six limitations from three points of view; including the place of residence, the user characteristics, and the stage of the process.

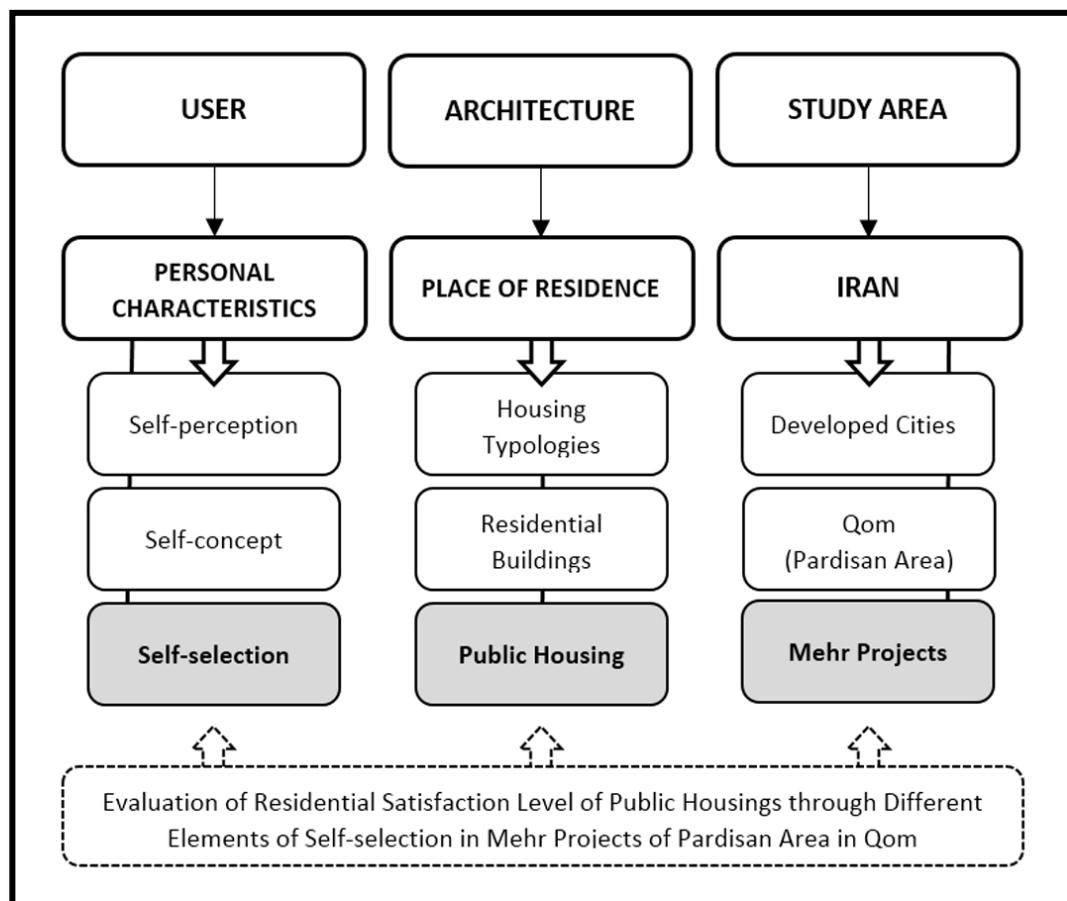


Figure 1.3 The Scope of the Study

By considering Iran/Qom as the study area, the scope is structured by the following subsections:

1.6.1 The Place of Residence

One: The focus of the study is in public housings of developed cities in Iran. In this regard, Pardisan area of Qom have been chosen.

Two: The developed questionnaire grounded on adapted questions was administered to a sample of public housings, living in residential buildings of Mehr housing projects in Pardisan area of Qom.

1.6.2 The User Characteristics

Three: Regarding self-selection's concept, personal characteristic for the root of self-perception, self-concept, and self-selection have been justified.

Four: Based on the concept of public housings, the respondents of the questionnaire who live in these residential buildings have a median income as rated by country, state (province), region or municipality.

Five: Since users all are Iranians, the original questionnaire has been translated into Persian by the author for local users in Qom who may not read or understand English text properly.

1.6.3 The Stage of the Process

Six: Considering evaluation of residential satisfaction level, POE has been chosen to measure the level of satisfaction with public housings of Mehr housing projects in Qom.

1.7 Research Methodology

The important part of each research methodology goes into a research approach which is the exact methods of data collection and analysis. The choice of methods is connected to specify the type of information to be collected in advance of the study. However, the type of data may be numeric information gathered on scales of instruments or more text information of the participants (Creswell, 2003). In the form of data collection in this study, both quantitative and qualitative data are targeted. Thus, by focusing on collecting data from users who have experience of living in residential buildings of public housings in Qom, mix methods of both open- and closed-ended questions, multiple forms of data drawing on all possibilities statistical and text analysis has been chosen.

Research Action Plan: According to the objectives, which have been identified for achieving the aim and answering research questions, four phases of the research action plan in five steps are shown in Figure 1.4.

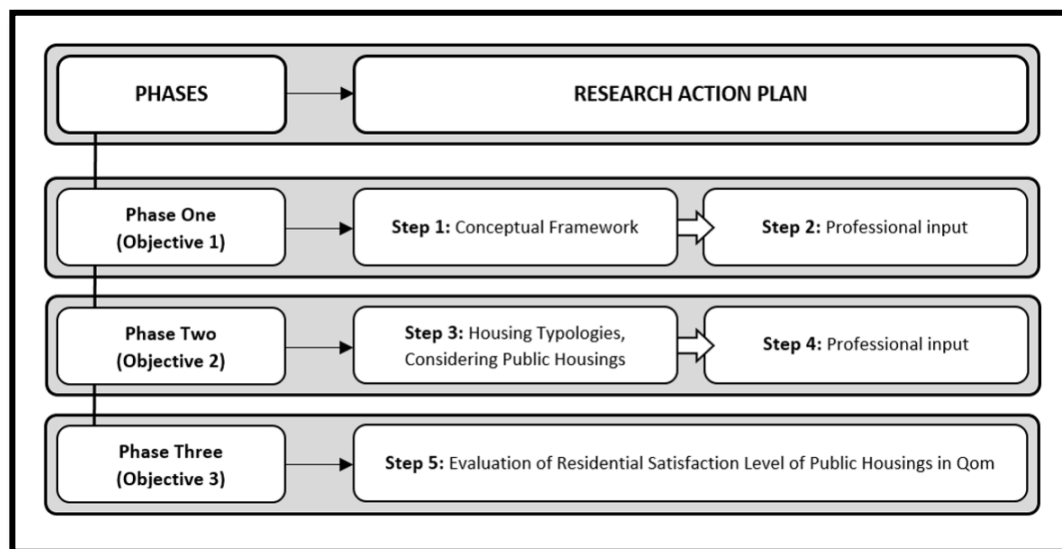


Figure 1.4 Research Action Plan

1.7.1 Phase One (Objective 1):

Step 1 - The Conceptual Framework: A content analysis of previously published reports (Code: self-concept, personal characteristic, self-selection, user satisfaction, and residential satisfaction) have been conducted.

Step 2 - Professional Input: First, an interpretive study on models of self-selection and residential satisfaction in the normal way of a close group discussion meeting have been conducted. Then, the conceptual framework has been proposed to the close group discussion meeting with academic professionals and the Brainstorming method has been used to develop the conceptual framework.

1.7.2 Phase Two (Objective 2):

Step 3 - Housing Typologies, Considering Public Housings: A content analysis of previously published reports (Code: housing typologies, and public housings) have been conducted.

Step 4 - Professional Input: First, an interpretive study on housing typologies, and specifically, public housings in the normal way of a close group discussion meeting have been performed. Then, the Delphi decision-making model in the close group discussion meeting with academic professionals.

1.7.3 Phase Three (Objective 3):

Step 5 - Evaluation of Residential Satisfaction Level of Public Housings in Qom: A content analysis of previously published reports (Code: assessment tool and POE) has been conducted. Then, the collected data from occupant survey questionnaires with emerging methods both open- and closed-ended questions have been applied to IBM SPSS, and Smart-PLS for frequency, t-tests and model testing.

Finally, the result of quantitative and qualitative data has been reported in chapter 4 and 5.

1.8 Research Significance

The significance of this study is explained in the following sections:

- a) By identifying the concept, meaning, and definition of self-selection, residential satisfaction, and their relationship from the first objective, the conceptual framework has been proposed.
- b) In objective two, housing typologies and the attributes of the residential environment, considering user self-selection of public housings in Qom have been investigated.
- c) To fulfill the objective three, the residential satisfaction level of public housings in Qom through various aspects of self-selection have been evaluated/measured.

1.9 Research Organization

This study has been divided into six sections. Each section has been described as follows:

In Chapter 1, the structure of the study has been presented. It started with an overview and research background of the study followed by problem statement. Research questions, research aim and objectives, scope and limitations of the study as well as research methodology have been adopted. Here, also, the research significance of the study has been accentuated, which ends with research organization of the study.

In Chapter 2, different theories, models, standards, and concepts have been reviewed. This chapter has presented a review of the literature pertinent to self-

concept, personal characteristic, self-selection, and user satisfaction by covering the significant theories and models which are considered fundamental to this study. Moreover, the concept of residential satisfaction has been presented.

In Chapter 3, by developing the conceptual framework for the theoretical framework of this study, the methodology has been detailed by clarifying different methods which are used to connect other studies with this study. It has set up the options and reasons for choosing the kind of methodology which is selected for this study. It also makes clear the strategy of data collection. In addition, it accepted the mixed method in data collection and analysis. A post-positivist research paradigm and consequently a mix method methodology using survey questionnaire with a few open-ended questions has been found to be suitable to answer the research questions and therefore has been applied to the current study.

At the end of every chapter, a summary of the chapter has been written. The data collection procedure, data analysis, and findings have been presented in Chapter 4. This part of the thesis has been completed with discussion and conclusive results.

In Chapter 5, the conclusion which comes from the study findings has been presented. As the concluding section of the thesis, some useful information namely Appendix and a copy of current study questionnaire and other documents have been attached.

REFERENCES

- ABEL, E. (1994). Low-energy buildings. *Energy and Buildings*, 21(3), 169-174.
- ACITO, F., & ANDERSON, R. D. (1980). A Monté Carlo comparison of factor analytic methods. *Journal of Marketing Research*, 228-236.
- AHMAD MOHAMMED, A. S. (2006). Community Participation in Architectural Design, Evaluation of Al-Maageen Housing in Nablus. Master thesis, An-Najah National University, Nablus, and Palestine.
- AIGBAVBOA, C. & THWALA, W. (2013). A Theoretical Framework of Users' Satisfaction/Dissatisfaction Theories and Models. *International Conference on Arts, Behavioral Sciences and Economics Issues (ICABSEI'2013)* Dec. 17-18, 2013 Pattaya (Thailand).
- ALAVI, M. & LEIDNER, D. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *Management Information Systems Quarterly*, 25(1), 107-136.
- ALLPORT, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rinehart & Winston.
- AMERIGO, M. (1990). The perception of residential environment and environment role. In Pamir, R., Iuramoglu, V. & Teymur, N. (Eds.), *Culture, Space and History*, Vol. V. Ankara, M.E.T.V.: Faculty of Architecture.
- AMERIGO, M. (1992). A model of residential satisfaction. In M. Aristides & K. Karaletsou (Eds.) *Socio-Environmental Metamorphoses: Builtscapes, landscape, ethnoscape. euroscape*, Vol. V. Salonica: Aristotle University of Thessaloniki.
- AMERIGO, M. & ARAGONES, J. I. (1997). A theoretical and methodological approach to the study of residential satisfaction. *Journal of Environmental Psychology*, 17, p.48.

- ANDERSSON, J. A. (2001). Reinterpreting the rural–urban connection: migration practices and socio-cultural dispositions of Buhera workers in Harare. *Africa*, 71(1), 82-112.
- ANDERSON, J. C. & GERBING, D. W. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411-423.
- ANDERSON, S. (1981). Studies towards an ecological model of the urban environment. In Anderson, S. (Ed) *On Streets*, Cambridge (Mass): MIT Press.
- ARHIPAINEN, L. (2012). User experience (UX) of 3D user interfaces (UIs). Chiru project (3D User experience for Mobile Network Virtual Environments), G2I Grenoble Institut de l'innovation.
- ARIES, E., OLVER, R. R., BLOUNT, K., CRISTALDI, K., FREDMAN, S., & LEE, T. (1998). Race and gender as components of the working self-concept. *The Journal of Social Psychology*, 138(3), 277-290. doi: 10.1080/00224549809600381. ISSN 0022-4545. PMID 9577721.
- ARIMAH, B. C. (1997). The determinants of housing tenure choice in Ibadan, Nigeria. *Urban Studies*, 34(1), 105-124.
- ASHILL, N. J. (2011). An Introduction to Structural Equation Modeling (SEM) and the Partial Least Squares (PLS) Methodology Student Satisfaction and Learning Outcomes in E-Learning. *An Introduction to Empirical Research*: IGI Global, Hershey.
- ATTEWELL, P. & RULE, J. (1991). Survey and other methodologies applied to IT impact research: experiences from a comparative study of business computing. *The Information systems research challenge: survey research methods*, 3, 299-315.
- AYDUK, Ö., GYURAK, A., & LUERSSEN, A. (2009). Rejection sensitivity moderates the impact of rejection on self-concept clarity. *Personality and social psychology bulletin*, 35(11), 1467-1478.
- BADARUDDIN, M. (2008). Cultural Tourism Promotion and policy in Malaysia. School of Housing, Building and Planning. Universiti Sains Malaysia, Penang, Malaysia. Available at: www.hbp.usm.my/tourism/Papers/paper_cultural. Accessed; 11/09/2015.

- BAILEY, J. E. & PEARSON, S. W. (1983). Development of a tool for measuring and analyzing computer user satisfaction. *Management Science*, 24:530–545.
- BAKER, R. L., & CROWELL, P. G. (1980). Graphite materials ablation performance in high thermal radiation environments. *Entry Heating and Thermal Protection*.
- BALL-ROKEACH, S., ROKEACH, M. & GRUBE, J. W. (1984). *The Great American Values Test: influencing behavior and belief through television*. New York; London, Free Press; Collier MacMillan.
- BARCLAY, D., HIGGINS, C. & THOMPSON, R. (1995). The partial least squares (PLS) approach to causal modeling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285-309.
- BARDI, A. (2000). Relations of values to behavior in everyday situations. Unpublished doctoral dissertation. The Hebrew University.
- BARDI, A. & SCHWARTZ, S. H., (2003). Values and behavior: Strength and structure of relations. *Personality and Social Psychology Bulletin*, 29, pp. 1207-1220.
- BARDWICK, J. (1995). *Danger in the Comfort Zone: From Boardroom to Mailroom, how to break the entitlement habit that is killing American Business*. New York, AMACOM.
- BARRY, P. H. (2008). The impact of office comfort on productivity. *Journal of Facilities Management*, Vol. 6 Iss: 1 pp. 37 -51
- BATTARBEE, K. (2005). *Co-Experience – Understanding user experiences in social interaction*. Academic Dissertation. Publication series of the University of Art and Design. Helsinki, A51.
- BECHTEL, R., MARANS, R.W. & MICHELSON, W. (1987). *Methods in Environmental and Behavioral Research*. Van Nostrand Reinhold, New York, NY.
- BECKER, C. (2011). Everyman his own historian. *The collective memory reader*, 122.
- BEINS, B. C., & McCARTHY, M. A. (2011). *Research methods and statistics*. Pearson Higher Ed.
- BEISI, J. (1995). Adaptable housing or adaptable people? Experience in Switzerland gives a new answer to the questions of housing adaptability. *Architecture & Comportment /Architecture & Behaviour*.

- BENNETT, J. L. (1979). The commercial impact of usability in interactive systems. InfoTech State of the Art Report: Man/Computer Communication, 2, pp. 289-297.
- BENTLEY, I., ALCOCK, A., MURRIAN, P., McGLYNN, S. & SMITH, G. (1985). Responsive environments: a manual for designers. Architectural press an imprint of Elsevier Science, Jordan Hill, Oxford OX2 8DP. London.
- BENTLEY, I. (1983). Bureaucratic patronage and local Urban form. (JCUD Research Note 15) Oxford: Joint Centre for Urban Design, Oxford Polytechnic.
- BENTLEY, I. (1984). User choice and Urban form: the impact of commercial redevelopment. (JCUD Research Note 18) Oxford: Joint Centre for Urban Design, Oxford Polytechnic.
- BERGERSEN, B. (2004). User satisfaction and influencing issues. Network and System Administration Research Surveys, 1, 5-26.
- BERNARD, H.R. (2002). Research Methods in Anthropology: Qualitative and Quantitative Methods. 3rd edition. Altamira Press, Walnut Creek, California.
- BEVAN, N. (2009a). Extending quality in use to provide a framework for usability measurement. Proceedings of HCI International 2009, San Diego, California, USA.
- BEVAN, N. (2009b). What is the difference between the purpose of usability and user experience evaluation methods? 12-King Edwards Gardens, London W3 9RG, UK.
- BEVAN, N. (2001). International Standards for HCI and Usability. Proceedings of International Journal of Human Computer Studies, 55(4), pp. 533-552. Serco Usability Services, London WC1V6JF. Based on chapter in Encyclopedia of Human Computer Interaction, Updated May 2006.
- BEVAN, N. (1999). Quality in use: meeting user needs for quality. Journal of Systems and Software, 49(1): pp 89-96.
- BEVAN, N., CLARIDGE, N., EARTHY, J. & KIRAKOWSKI, J. (1998). Proposed Usability Engineering Assurance Scheme. INUSE Deliverable D5.2.3.
- BEVAN, N. & SCHOEFFEL, R. (2001). A proposed standard for consumer product usability. Proceedings of first International Conference on Universal Access in Human Computer Interaction (UAHCI), New Orleans.

- BEVAN, N., KIRAKOWSKI, J., & MAISSEL, J. (1991). What is usability? In H. J. Bullinger (Ed.), *Human Aspects in Computing, Design and Use of Interactive Systems and Work with Terminals*, Proceedings of the Fourth International Conference on Human Computer Interaction (pp. 651-655). Stuttgart, Germany: Elsevier Science Publishers.
- BHATTI, M., & CHURCH, A. (2004). Home, the culture of nature and meanings of gardens in late modernity. *Housing Studies*, 19(1), 37-51.
- BILLIG, M. (1996). *Arguing and thinking: a rhetorical approach to social psychology*. Cambridge, Cambridge University Press.
- BIRCH, T.H. (1993). Moral Considerability and Universal Consideration. *Environmental Ethics* 15, pp. 313–332.
- BITTER, C., MULLIGAN, G. F., & DALL'ERBA, S. (2007). Incorporating spatial variation in housing attribute prices: a comparison of geographically weighted regression and the spatial expansion method. *Journal of Geographical Systems*, 9(1), 7-27.
- BLAU, J. R. (1984). *Architects and firms: a sociological perspective on architectural practice*. Cambridge, Mass., MIT Press.
- BLILI, S., RAYMOND, L. & RIVARD, S. (1998). Impact of task uncertainty, end-user involvement, and competence on the success of end-user computing. *Information & Management*, 33(3), 137-153.
- BOND, M. H. (1988). Finding universal dimensions of individual variation in multicultural studies of values: The Rokeach and Chinese value surveys. *Journal of Personality and Social Psychology*, 55, pp. 1009-1015.
- BOND, M. H., LEUNG, K., & SCHWARTZ, S. H. (1992). Explaining choices in procedural and distributive justice across cultures. *International Journal of Personality*, 27, pp. 211-225.
- BONG, M., & CLARK, R. E. (1999). Comparison between self-concept and self-efficacy in academic motivation research. *Educational psychologist*, 34(3), 139-153. doi:10.1207/s15326985ep3403_1. ISSN 0046-1520.
- BRAGER, G. S., & DE DEAR, R. J. (1998). Thermal adaptation in the built environment: a literature review. *Energy and buildings*, 27(1), 83-96.

- BROWN, I., RAPHAEL, D. & RENWICK, R. (1997). *Quality of Life: Dream or Reality? Life for People with Developmental Disabilities in Ontario*. Quality of Life Research Unit, Centre for Health Promotion, University of Toronto.
- BROWNE, M. W. (1968). A comparison of factor analytic techniques. *Psychometrika*, 33(3), 267-334.
- BRYMAN, A. & BELL, E. (2011). *Business Research Methods*. 3e: Oxford university press.
- BUCHANAN, R. (1995). Branzi's dilemma: design in contemporary culture. In VIHMA, S. & TAHKOKALLIO, P. (Eds.) *Design - pleasure or responsibility: selected and edited articles from the International Conference on Design at the University of Art and Design Helsinki UIAH 21-23 June 1994*.
- BUCHENAU, M. & FULTONSURI, J. (2000). Experience Prototyping. In *Proceedings of DIS'00*. ACM, Brooklyn, New York.
- BYRNE, B. M. (1984). The general/academic self-concept nomological network: A review of construct validation research. *Review of educational research*, 54(3), 427-456. doi:10.3102/00346543054003427. ISSN 0034-6543. JSTOR 1170455.
- BYRNE, B. M., & GAVIN, D. A. (1996). The Shavelson Model revisited: Testing for the structure of academic self-concept across pre-, early, and late adolescents. *Journal of Educational Psychology*, 88(2), 215-228. doi:10.1037/0022-0663.88.2.215. ISSN 0022-0663.
- CABE (2006). *Better Public Building*. Prime Minister's Award. Available at: www.cabe.org. Accessed; 12/10/2014.
- CAMPBELL, A., CONVERSE, E., & RODGERS, W. L. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. Russell Sage Foundation.
- CAMPBELL, D. T., & FISKE, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin*, 56(2), 81.
- CAMPBELL, I. (2006). *Building quality and sustainable capacity within the local independent sector home care market*. Department of Health Care Services Improvement Partnership Commission for Social Care Inspection, *Relentless optimism, Creative commissioning for personalized care – Seminar Report*.

- CASSEL, C., HACKL, P. & WESTLUND, A. H. (1999). Robustness of partial least-squares method for estimating latent variable quality structures. *Journal of applied statistics*, 26(4), 435-446.
- CATTELL, R. B. (1978). *The Scientific Use of Factor Analysis in the Behavioral and Life Sciences*. New York: Plenum Press.
- CENSUS OF THE ISLAMIC REPUBLIC OF IRAN (2011). Population of cities, Qom.
- CHAPPELLS, H & SHOVE, E. (2004). *Comfort: a review of philosophies and paradigms*. Department of Sociology, Lancaster University, UK.
- CHAY, K. Y., & GREENSTONE, M. (2005). Does air quality matter? Evidence from the housing market. *Journal of political Economy*, 113(2), 376-424.
- CHESHIRE, P., & SHEPPARD, S. (1998). Estimating the demand for housing, land, and neighbourhood characteristics. *Oxford Bulletin of Economics and Statistics*, 60(3), 357-382.
- CHIN, W. W. (2010). How to write up and report PLS analyses. In *Handbook of partial least squares* (pp. 655-690). Springer Berlin Heidelberg.
- CHIN, W. W. (1998). The partial least squares approach for structural equation modelling. (In George A. Marcoulides ed.): Lawrence Erlbaum Associates
- CHIN, W. W., PETERSON, R. A. & BROWN, S. P. (2008). Structural equation modeling in marketing: some practical reminders. *Journal of Marketing Theory and Practice*, 16(4), 287-298.
- CHIU, L. F., LOWE, R., RASLAN, R., ALTAMIRANO-MEDINA, H., & WINGFIELD, J. (2014). A socio-technical approach to post-occupancy evaluation: interactive adaptability in domestic retrofit. *Building Research & Information*, 42(5), 574-590.
- COCHRAN, W. G. (2007). *Sampling techniques*. John Wiley & Sons.
- COHEN, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- COLLINS, P. (1971). *Architectural judgment*. London, Faber & Faber.
- COLMAN, A. M., MORRIS, C. E. & PRESTON, C. C. (1997). Comparing rating scales of different lengths. Equivalence of scores from 5-point and 7-point scales. *Psychological Reports*, 80(2), 355-362.
- COMREY, A. L. (1973). *A first course in factor analysis*. New York: Plenum Press.

- COOPER, D. R., & SCHINDLER, P. S. (2011). *Business Research Methods*. (Eleventh Ed.). New York: McGraw-Hill/Irwin.
- COUNCIL, U. G. B. (2008). *Green Building Facts*. US Green Building Council. www.usgbc.org/ShowFile.aspx.
- CRESWELL, J.W (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Second Edition, University of Nebraska, Lincoln, Sage Publications, International Educational and Professional Publisher, Thousand Oaks, London, New Delhi.
- CRESWELL, J. W., & CLARK, V. L. P. (2007). Designing and conducting mixed methods research. *Australian And New Zealand Journal of Public Health*, 31(4).
- CRONBACH, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*. 16(3), 297-334.
- CRONBACH, L. J. & SHAVELSON, R. J. (2004). My current thoughts on coefficient alpha and successor procedures. *Educational and Psychological Measurement*, 64(3), 391-418.
- CROSS, N. (2001). *Design Cognition: Results from Protocol and Other Empirical Studies of Design Activity*. In EASTMAN, C. M., NEWSTETTER, W. C. & McCracken, W. M. (Eds.) *Design knowing and learning: cognition in design education*. Amsterdam, Elsevier.
- CROWLEY, J. (2001). *The Invention of Comfort*. Baltimore, Johns Hopkins University Press.
- CUFF, D. (1991). *Architecture: the story of practice*. Cambridge, Mass., MIT Press.
- CUPCHIK, G. C., RITTERFELD, U., & LEVIN, J. (2003). Incidental learning of features from interior living spaces. *Journal of Environmental Psychology*, 23(2), 189-197.
- CYERT, R. M. & MARCH, J. G. (1963). *A behavioural theory of the firm*. N. J. Englewood: Prentice-Hall.
- DALE-JOHNSON, D., & PHILLIPS, G. M. (1984). Housing attributes associated with capital gain. *Real Estate Economics*, 12(2), 162-175.
- DALY-JONES, O., BEVAN, N. & THOMAS, C. (1999). *Handbook of User-centered Design*. Serco Usability Services.

- DESCARTES, R. (1985). *The Philosophical Writings of Descartes*, trans. and ed. by J. Cottingham, R. Stoothoff, D. Murdoch, and A. Kenny. Cambridge, Cambridge University Press.
- DESPRÉS, C. (1992). The meaning and experience of home in shared housing. Home: Social, temporal, and spatial aspects, 53-66.
- DEVAUS, D. A., & DE VAUS, D. (2001). *Research design in social research*. Sage.
- DIAMANTOPOULOS, A. (2006). The error term in formative measurement model: Interpretation and modeling implications. *Journal of Modelling in Management* 1, 7-17.
- DIAMANTOPOULOS, A. & WINKLHOFER, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 38(2), 269-277.
- DIENER, E., & BISWAS-DIENER, R. (2002). Will money increase subjective well-being? *Social indicators research*, 57(2), 119-169.
- DILLMAN, D. (2000). *Constructing the questionnaire: Mail and internet surveys*. New York.
- DILLON, R. S. (1992). Respect and Care: Toward moral integration. *Canadian Journal of Philosophy*, 22, pp.105-131.
- DILLON, R. S. (2014). *Respect*. The Metaphysics Research Lab Center for the Study of Language and Information, Stanford University, Stanford, CA, 94305. First published: Sep 10, 2003. ISSN: 1095-5054. Available at: <http://plato.stanford.edu/entries/respect>. Accessed; 02/10/2015
- DODD, J. (2011). Usability, user centered design and persuasion. Bunny food presentation.
- DOLAN, S. (2003). Values as Attractors of Chaos. *Journal of Economics*.
- DOLL, W. J. & TORKZADEH, G. (1988). The measurement of end-user computing satisfaction. *MIS Quarterly*, 12:259–274.
- DONALDSON, B. & B. NAGENGAST. (1994). *Mastering the Heat and Cold*. ASHRAE Transactions.
- DOOSTI, H. (2018). *Measuring the Satisfaction Level of Residents from Mehr Projects (Case study in Bonab - Mehrshahr)*. Allameh University, Faculty of Humanities. Under Process, Master Thesis.

- DOWNIE, R.S. & TELFER, E. (1969). *Respect for Persons*, London: George Allen and Unwin.
- EKELAND, I., HECKMAN, J. J., & NESHEIM, L. (2004). Identification and estimation of hedonic models. *Journal of political economy*, 112(S1), S60-S109.
- FABRIGAR, L. R., WEGENER, D. T., MacCALLUM, R. C., & STRAHAN, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4, 272–299.
- FALLOWFIELD, L. (2009). What is quality of life? Second edition of *Health economics. What is...? Series*, London: Souvenir, 54-7. Supported by Sanofi-Aventis.
- FARREN, S. (1999). Denominationally Integrated Education in Northern Ireland—Panacea or Civil Right. *Paedagogica Historica*, 35(sup1), 353-368.
- FEATHER, N. T. (1975). *Values in Education and Society*. New York: Free Press.
- FEATHER, N. T. (1995). Values, valences and choice: The influence of values on the perceived attractiveness and choice of alternatives. *Journal of Personality and Social Psychology*.
- FEINBERG, J. (1975). Some Conjectures on the Concept of Respect. *Journal of Social Philosophy*, 4: 1–3.
- FERRER-I-CARBONELL, A. (2002). Subjective questions to measure welfare and well-being: A survey. Tinbergen Institute Discussion Paper 2002-020/3.
- FIERRO, K. P., FULLERTON, T. M., & DONJUAN-CALLEJO, K. E. (2009). Housing attribute preferences in a Northern Mexico metropolitan economy. *Atlantic Economic Journal*, 37(2), 159-172.
- FLEMING, J. S., & COURTNEY, B. E. (1984). The dimensionality of self-esteem: II. Hierarchical facet model for revised measurement scales. *Journal of Personality and Social psychology*, 46(2), 404-421.
- FLOOK, L., REPETTI, R. L., & ULLMAN, J. B. (2005). Classroom social experiences as predictors of academic performance. *Developmental psychology*, 41(2), 31-327. doi:10.1037/0012-1649.41.2.319. ISSN 0012-1649. PMID 15769188.

- FORNARA, F., BONNES, M., & BONAIUTO, M. (2012). Indicatori di Umanizzazione Ospedaliera Percepita: un'analisi comparativa tra reparti di Chirurgia Generale. *Psicologia della Salute*.
- FORNELL, C. & CHA, J. (1994). *Partial least squares*. Cambridge, MA: Blackwell.
- FORNELL, C. & BOOKSTEIN, F. L. (1982). A comparative analysis of two structural equation models: LISREL and PLS applied to market data. *A Second Generation of Multivariate Analysis*, 1, 289-324.
- FORNELL, C. & LARCKER, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- FRANCESCATO, G., WEIDEMANN, S., & ANDERSON, J. R. (1989). Evaluating the built environment from the users' point of view: an attitudinal model of residential satisfaction. In *Building evaluation* (pp. 181-198). Springer, Boston, MA.
- FRANKENA, W.K. (1986). The Ethics of Respect for Persons. *Philosophical Topics*, 14, pp. 149-167.
- FRAZER, L. & LAWLEY, M. (2000). *Questionnaire design & administration: A practical guide*. Wiley New York.
- GALSTER, G. C. (1987). Identifying the correlates of dwelling satisfaction: An empirical critique. *Environment and Behaviour*, 19(5), 539-568.
- GALSTER, G. C. & HESSER, G. W. (1981). Residential satisfaction: Compositional and contextual correlates. *Environment and Behavior*, 13(6), 735-758.
- GEDIGA, G., HAMBORG, K. & DÜNTSCH, I. (1999). The Isometrics usability inventory: An operationalisation of ISO 9241-10. *Behaviour and Information Technology*.
- GEISSER, S. (1974). A predictive approach to the random effect model. *Biometrika*, 61(1), 101-107.
- GHAFOURIAN, M. (2012). A correlation model on flexible building design with user satisfaction in residential unit plan. Doctoral dissertation, Universiti Teknologi Malaysia, Faculty of Built Environment.
- GIEDION, S. (1948). *Mechanization takes command*. New York: Oxford University Press.

- GIL-GARCIA, J. R. (2008). Using partial least squares in digital government research. *Handbook of research on public information technology*, 239-253.
- GOLLWITZER, P. M. (1996). The volitional benefits of planning. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The Psychology of action*. New York: Guilford.
- GORSUCH, R. L. (1974). *Factor Analysis*. Philadelphia: W. B. Saunders Company.
- GRAY, W. D., & SALZMAN, M. C. (1998). Damaged merchandise? A review of experiments that compare usability evaluation methods. *Human-Computer Interaction*, 13, pp. 203-261.
- GREENBIE, B. B. (1981). *Spaces: dimensions of the human landscape*. New Haven; Yale University Press.
- GREENE, M., & DE DIOS ORTÚZAR, J. (2002). Willingness to pay for social housing attributes: a case study from Chile. *International Planning Studies*, 7(1), 55-87.
- GREENWALD, A. G. (1988). Self-knowledge and Self-deception. *Self-deception: An adaptive mechanism*, 113-131.
- GRILLO, M., TEIXEIRA, M., & WILSON, D. (2010). Residential satisfaction and civic engagement: Understanding the causes of community participation. *Social Indicators Research*, 97(3), 451-466.
- GROVES, R.M., FOWLER, F.J.JR., COUPER, M.P., LEPKOWSKI, J.M., SINGER, E., & TOURANGEAU, R. (2004). *Survey methodology*. Hoboken, NJ: John Wiley.
- GUILFORD, J. P. (1954). *Psychometric methods* (2nd Ed.). New York: McGraw-Hill.
- GUPTA, G. K. (2006). Computer literacy: essential in today's computer-centric world. *ACM SIGCSE Bulletin*, 38(2), 115-119.
- HAER, R., & BECHER, I. (2012). A methodological note on quantitative field research in conflict zones: get your hands dirty. *International Journal of Social Research Methodology*, 15(1), 1-13.
- HAIR, J. F., BLACK, W. C., BABIN, B. J. & ANDERSON, R. E. (2009). *Multivariate Data Analysis* (7th Ed.). Englewood Cliffs, NJ: Prentice-Hall.
- HAIR, J. F., BLACK, W. C., BABIN, B. J., & ANDERSON, R. E. (2010). *Multivariate data analysis* (7th Ed.). Prentice-Hall: Upper Saddle River, NJ.

- HAIR, J. F., RINGLE, C. M. & SARSTEDT, M. (2011a). PLS-SEM: Indeed, a Silver Bullet. *Journal of Marketing Theory and Practice*, 18(2), 139-152.
- HAIR, J. F., RINGLE, C. M. & SARSTEDT, M. (2011b). The Use of Partial Least Squares (PLS) to Address Marketing Management Topics. From the Special Issue Guest Editors *Journal of Marketing Theory and Practice*, 18(2), 135-138.
- HAIR, J. F., RINGLE, C. M. & SARSTEDT, M. (2012). Partial least squares: the better approach to structural equation modeling? *Long Range Planning*, 45(5), 312-319.
- HAIR, J. F., SARSTEDT, M., R. C. M. & MENA, J. A. (2012a). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433., 40(3), 414-433.
- HAIR, J. F., SARSTEDT, M., PIEPER, T. M. & RINGLE, C. M. (2012b). Applications of partial least squares path modeling in management journals: a review of past practices and recommendations for future applications. *Long Range Planning*, 45(5-6), 320-340.
- HAIR, J. F., HULT, G., RINGLE, C. M. & SARSTEDT, M. (2013a). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (1 ed.). SAGE.
- HAIR, J. F., RINGLE, C. M. & SARSTEDT, M. (2013b). Partial least squares structural equation modeling: rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1-2), 1-12.
- HAIR, J. F., RINGLE, C. M. & SARSTEDT, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. *Long Range Planning*, 46(1-2), 1-12
- HAKIM, B. S. (2010). The Generative Nature of Islamic Rules for The Built Environment (Besim S. Hakim). *International Journal of Architectural Research: ArchNet-IJAR*, 4(1), 208-212.
- HAMILTON, R., & GINGISS, P. L. (1993). The relationship of teacher attitudes to course implementation and student responses. *Teaching and Teacher Education*, 9(2), 193-204.

- HANDY, S., CAO, X. & MOKHTARIAN, P. (2006). Self-Selection in the Relationship between the Built Environment and Walking: Empirical Evidence from Northern California. *Journal of the American Planning Association*, 72(1), pp. 55–74.
- HARRISON, A. W. & RAINER, R. K. (1996). A general measure of user computing satisfaction. *Computers in Human Behavior*, 12:79–92.
- HASSANAIN, M. A., & MUDHEI, A. A. (2006). Post-occupancy evaluation of academic and research library facilities. *Structural Survey*, 24(3), 230-239.
- HASTIE, R. & DAWES, R. M. (2001). *Rational choice in an uncertain world: the psychology of judgment and decision-making*. Thousand Oaks, CA, Sage Publications.
- HAWKINS, D. I., MOTHERSBAUGH, D. (2010). *Consumer Behavior: Building Marketing Strategy*. Dr. Spears Spring, 10/e.
- HECHTER, M. (1993). Value research in the social and behavioral sciences. In M. Hechter, L. Nadel, & R. E. Michod (Eds.). *The Origin of Values*. pp. 1-28. New York: Aldine de Gruyter.
- HEERWAGEN, J., & ZAGREUS, L. (2005). The human factors of sustainable building design: post occupancy evaluation of the Philip Merrill Environmental Center.
- HEINILÄ, J. et. al. (2005). *User Centred Design: Guidelines for Methods and Tools*. VTT Information Technology. University of Oulu, Dept. of Information processing science, Philips Research, Philips Applied Technologies, The Nomadic Media consortium, P.O. Box 1300 Tampere, Sinitaival 6, FIN33101 Tampere, Finland.
- HELLER, K., PRICE, R., REINHARZ, S., RIGER, S., & WANDERSMAN, A. (1984). *Psychology and community change* (2nd Ed.). Homewood, IL: Dorsey.
- HENSELER, J., FASSOTT, G., DIJKSTRA, T. K. & WILSON, B. (2011). Analysing quadratic effects of formative constructs by means of variance-based structural equation modelling. *European Journal of Information Systems*.
- HENSELER, J., RINGLE, C. M. & SARSTEDT, M. (2012). Using partial least squares path modeling in international advertising research: basic concepts and

- recent issues. In S. Okazaki (Ed.), *Handbook of Research in International Advertising* (pp. 252-276). Cheltenham: Edward Elgar Publishing.
- HENSELER, J., RINGLE, C. M. & SINKOVICS, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *Advances in International Marketing* (Vol. 20, pp. 277-320). Bingley: Emerald
- HO, D.C.W. (1999). Preferences on Office Quality Attributes. Department of Real Estate and Construction, the University of Hong Kong. International Real Estate Conference, 26-31 January 1999. Kuala Lumpur, Malaysia.
- HO, D.C.W. (1997). A Methodology for Assessing Quality of Buildings. The Asian Real Estate Society (ARES) Conference 1997 held on 20-22 October 1997 in Hong Kong.
- HOE, S. L. & McSHANE, S. (2010). Structural and Informal Knowledge Acquisition and Dissemination in Organizational Learning: An exploratory analysis. *The Learning Organization*, 17(4), 364-386.
- HOFFMAN, R. M. (2006). Gender Self-Definition and Gender Self-Acceptance in Women: Intersections with Feminist, Womanist, and Ethnic Identities. *Journal of Counseling & Development*, 84(3), 358-372.
- HOFFMAN, R. M., HATTIE, J. A., & BORDERS, L. D. (2005). Personal definitions of masculinity and femininity as an aspect of gender self-concept. *The Journal of Humanistic Counseling*, 44(1), 66-83. doi:10.1002/j.2164-490X.2005.tb00057. x. ISSN 2164-490X.
- HOFSTEDE, G. (1980). *Culture's Consequences: International Differences in Workrelated Values*. Beverly Hills, CA: Sage.
- HOLM, I. (2006). *Ideas and Beliefs in Architecture and Industrial design*. Doctoral thesis, Oslo School of Architecture and Design Press. ISBN 8254701741.
- HOUGHTON, F. C. & YAGLOU, C. P. (1923). *American Society of Heating and Ventilation Engineers*.
- HOULE, M. (2002). U.S. Patent No. 6,455,812. Washington, DC: U.S. Patent and Trademark Office.
- HUDSON, S. D. (1980). The Nature of Respect. *Social Theory and Practice*, 6, pp. 69-90.

- HUGHEY, J. B., & BARDO, J. W. (1987). Social psychological dimensions of community satisfaction and quality of life: Some obtained relations. *Psychological Reports*, 61(1), 239-246.
- HULLAND, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195-204.
- IBP USA. (2007a). USA International business publications (7 February 2007). Singapore Country Guide. Int'l Business Publications. pp. 95-. ISBN 978-1-4330-4456-4. Available at: <https://en.wikipedia.org/wiki/Malaysia>. Accessed; 11/09/2015.
- IBP USA. (2007b). USA International business publications (7 February 2007). Malaysia Country Study Guide. Int'l Business Publications. pp. 1-56. ISBN 978-1-4330-3159-5. Available at: <https://en.wikipedia.org/wiki/Malaysia>. Accessed; 11/09/2015.
- IBPE USA (1995). International Building Performance Evaluation (IBPE) Consortium. University of Cincinnati, OH, USA
- IMRAN, M., HASAN, S., RIZVI, M. & ALI, B. (2011). Impact of Organizational Learning on Organizational Performance. *International Journal of Academic Research*, 3(4), 424-427.
- INGLEHART, R. (1997). *Modernization and post modernization*. Princeton, NJ: Princeton University Press.
- ISO 13407 (1999). *Human Centered Design Processes for interactive systems*.
- ISO 9241-11 (1998). *Ergonomic requirements for office work with visual display terminals (VDTs) Part 11: Guidance on Usability*.
- ISO FDIS 9241-210 (2009). *Human-Centered design process for interactive systems*.
- ISRAEL, G. D. (1992). *Determining sample size*. University of Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, EDIS.
- ISSACS, N., BRUHNS, H., GRAY, J. & TIPPETT, H. (1994). *Building Quality Assessment - Research, Development and Analysis for Office and Retail Buildings*. Centre for Building Performance Research, Victoria University of Wellington, New Zealand.

- IZRAN, S. M. (2011). Post Occupancy Evaluation of Building Performance in Malaysia. Doctor of Philosophy, Facilities Management, Universiti Teknologi Malaysia.
- IZRAN, S. M., HAKIM M., BUANG, A. & SHARDY, A. (2010). Developing a Post Occupancy Evaluation Framework. Facilities Management, Universiti Teknologi Malaysia.
- JAAFAR, M., HASAN, N. L., MOHAMAD, O., & RAMAYAH, T. (2008). The determinants of housing satisfaction level: A study on residential development project by Penang development corporation (PDC). Universiti Sains Malaysia, Malaysia.
- JAMES, R., III, CARSWELL, A., & SWEANEY, A. (2009). Sources of discontent: Residential satisfaction of tenants from an internet ratings site. *Environment and Behavior*, 41(1), 43-59.
- JANDA, K. & BUSCH, J. (1994). Worldwide Status of Energy Standards for Building. *Energy*, 19(1): 27-44.
- JAUNZENS, D., GRIGG, P., WATSON, M. & PICTON, E. (2003). Building performance feedback: getting started. BRE Digest 478. BRE Bookshop. London. UK.
- JENKINS, P. & FORSYTH, L. (2010). *Architecture, Participation and Society*. Routledge Ink, Taylor & Francis Group, London and New York.
- JENSEN, J. O., NIELSEN, S. B., & HANSEN, J. R. (2013). Greening public buildings: ESCO-contracting in Danish municipalities. *Energies*, 6(5), 2407-2427.
- JICK, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative science quarterly*, 24(4), 602-611.
- JONES, M. B. (2009). *Organizational Culture and Knowledge Management: An Empirical Investigation of U.S. Manufacturing Firms*. Doctor of Business Administration, Nova Southeastern University.
- JÖRESKOG, K. G. & WOLD, H. (1982). The ML and PLS techniques for modeling with latent variables: Historical and comparative aspects. *Systems under Indirect Observation: Causality, Structure, Prediction*, 1, 263-270.

- JUSAN, M. M. (2007). Personalization as a means of achieving person-environment congruence in Malaysian housing. Unpublished PhD, Universiti Teknologi Malaysia, Skudai.
- KAHNEMAN, D., DIENER, E., & SCHWARZ, N. (Eds.). (1999). Foundations of hedonic psychology: Scientific perspectives on enjoyment and suffering. NY: Russell Sage Foundation.
- KAITILLA, S. (1993). Satisfaction with public housing in Papua New Guinea: the case of West Taraka housing scheme. *Environment and Behavior*, 25(3), 514-545.
- KAPIO, J. (2011). Usability in Healthcare: Overcoming the Mismatch between Information Systems and Clinical Work. Department of Computer Science and Engineering, School of Science, Aalto University publication series Doctoral Dissertations, 105/201.
- KALHOR, M. A., ESMAILPOUR, H., & AHMADI, F. (2013). Evaluation the Performance of the Mehr Housing Project in Iran, (Case Study Saqez City). *Middle-East Journal of Scientific Research* 15 (5): p.707-711, ISSN 1990-9233, © IDOSI Publications, 2013.
- KAMP, I. V., LEIDELMEIJER, K., MARSMAN, G. & HOLLANDER, A. DE. (2003). Urban environmental quality and human well-being towards a conceptual framework and demarcation of concepts; a literature study. *Elsevier Landscape and Urban Planning* 65 (2003) 5–18.
- KENNEDY, H. P., FARRELL, T., PADEN, R., HILL, S., JOLIVET, R. R., COOPER, B. A., & SCHINDLER RISING, S. (2011). A randomized clinical trial of group prenatal care in two military settings. *Military Medicine*, 176(10), 1169-1177.
- KIM, H., STUMPF, A., & KIM, W. (2011). Analysis of an energy efficient building design through data mining approach. *Automation in Construction*, 20(1), 37-43.
- KINCAID, D. (1994). Integrated facility management. *Facilities*, 12(8), 20-23.
- KLARNER, P., SARSTEDT, M., HOECK, M. & RINGLE, C. M. (2013). Disentangling the effects of team competences, team adaptability, and client communication on the performance of management consulting teams. *Long Range Planning*.

- KLUCKHOHN, C. (1954). Values and value orientations in the theory of action: An exploration in definition and classification. In T. Parsons & E. Shils (Eds.). *Toward a general theory of action* (pp.388-433). Cambridge, MA: Harvard University Press.
- KLUCKHOHN, F., & STRODTBECK, F. (1961). *Variations in value orientations*. Westport, CT: Greenwood Press.
- KOHN, M. L. (1969). *Class and conformity*. Homewood, I.: Dorsey Press.
- KOHN, M. L., & SCHOOLER, C. (1983). *Work and Personality: An Inquiry into the Impact of Social Stratification*. Norwood, NJ: Ablex.
- KONADU-AGYEMANG, K. (2001). A survey of housing conditions and characteristics in Accra, an African city. *Habitat International*, 25(1), 15-34.
- KOOYMAN, R. (2016). Cities of Culture and cultural networks. *Cooperate. The Creative Normal*, 143.
- KOTRLIK, J. W. & HIGGINS, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information technology, learning, and performance journal*, 19(1), 43.
- KRIPANONT, N. (2007). *Examining a technology acceptance model of internet usage by academics within Thai business schools*. Doctoral Dissertation, Victoria University.
- KUMAR DHAR, T., SK. MARUF HOSSAIN, M., & RUBAYET RAHAMAN, K. (2013). How does flexible design promote resource efficiency for housing? A study of Khulna, Bangladesh. *Smart and Sustainable Built Environment*, 2(2), 140-157.
- KUNIAVSKY, M. (2003). *Observing the User Experience: A Practitioner's Guide to User Research*. Morgan Kaufmann.
- LAKOFF, G. & JOHNSON, M. (1999). *Philosophy in the flesh: the embodied mind and its challenge to Western thought*. New York, Basic Books.
- LANE, R. E. (1996). Quality of Life and Quality of Persons: A New Role for Government. In: A. Offer. Ed. *In Pursuit of the Quality of Life*. New York: Oxford University Press, pp. 256- 293.

- LANG, N. C. (1987). Social work practice in small social forms: Identifying collectivity. *Social Work with Groups*, 9(4), 7-32.
- LANS, W., & HOFLAND, C. M. (2005). Flexibility, how to accommodate unknown future housing requirements. In *Proceedings of the 30th IAHS World Congress on Housing, Transforming Housing Environments through Design*, Pretoria, South Africa, 27–30 September 2005.
- LAW, E., ROTO, V., HASSENZAHL, M., VERMEEREN, A. & KORT, J. (2009). Understanding, Scoping and Defining User Experience: A Survey Approach. In *Proc. Human Factors in Computing Systems, CHI'09*. April 4-9, 2009, Boston, MA, USA.
- LAWSON, B. (2006). *How designers think: the design process demystified*. Routledge.
- LEE, M. W. (2006). A study of factors affecting residents' attachment to their housing community suggestion on establishment of community quotient in Hong Kong. *Social Psychology*, 12(2), 177-194.
- LEE, S.Y. & BRAND, J.L. (2005). Effects of control over office workspace on perceptions of the work environment and work outcomes. *Journal of Environmental Psychology*, Vol. 25 No. 3, pp. 323-33.
- LEFLOT, G., ONGHENA, P., & COLPIN, H. (2010). Teacher–child interactions: relations with children's self-concept in second grade. *Infant and child development*, 19(4), 385-405. doi:10.1002/icd.672. ISSN 1522-7219.
- LEI, P. W. & WU, Q. (2007). Introduction to structural equation modeling: Issues and practical considerations. *Educational Measurement: Issues and Practice*, 26(3), 33-43.
- LEIKAS, J. & STRÖMBERG, H. (2005). *Novel User Interfaces for Promoting Social Interaction in Multiplayer Games*. ENACTIVE/05, November 1718, Genoa, Italy.
- LEIKAS, J., STRÖMBERG, H., IKONEN, V., SUOMELA, R. & HEINILÄ, J. (2006). Multiuser Mobile Applications and a Public Display: Novel Ways for Social Interaction. *Pervasive Computing and Communications*, Pisa, Italy, 1317.

- LEIKAS, J., VÄÄTÄNEN, A., VIRTANEN, T. & SUIHKONEN, R. (2005). Design rationale bridging the Gap between user requirements and implementation. HCI International 2005 Conference, HCII 2005. Las Vegas, 22-27, July 2005. HCII. USA (2005).
- LEWIS, J.L. & SHEPPARD, S.R.J. (2006). Culture and communication: can landscape visualization improve forest management consultation with indigenous communities? *Landscape and Urban Planning* 77:291–313.
- LEWIS, J. R. (2006). Usability Testing. Published as a chapter in the *Handbook of Human Factors and Ergonomics* (third Edition). In G. Salvendy (Ed.), *Handbook of Human Factors and Ergonomics* (pp. 1275-1316).
- LIKERT, R. (1932). A technique for the measurement of attitudes. *Archives of psychology*, 22, 1-55.
- LIMPANITGUL, T., ROBSON, M. & SOREZE, F. (2009). Methodological Considerations in a Quantitative Study Examining the Relationship between Job attitudes and Citizenship Behaviours. 18th EDAMBA Summer Academy, Soreze, France
- LIST, H., HAAR, H. P., & MEACHAM, G. B. K. (2012). U.S. Patent No. 8,251,922. Washington, DC: U.S. Patent and Trademark Office.
- LITMAN, T.A. (2005). Land use impacts on transport: How Land Use Factors Affect Travel Behavior. Available at: <http://www.vtpi.org>, Accessed; 12/09/2014.
- LOCKE, E. A. (1976). The nature and causes of job satisfaction. M. Dunnette (Ed.): *Handbook of Industrial and Organizational Psychology*, pages 1297–1349.
- LOY, C. & MUJTABA, B. (2007A). The influence of organizational culture on the success of knowledge management practices with North American companies. *International Business and Economics Research Journal*, 6(3), 15-28.
- LU, I. R., KWAN, E., THOMAS, D. R. & CEDZYNSKI, M. (2011). Two new methods for estimating structural equation models: An illustration and a comparison with two established methods. *International Journal of Research in Marketing*, 28(3), 258-268.
- LU, M. (1999). Determinants of residential satisfaction: Ordered logit vs. Regression Models. *Growth and Change*, 30, 264–287.

- MacCALLUM, R. C. & AUSTIN, J. T. (2000). Applications of structural equation modeling in psychological research. *Annual review of psychology*, 51(1), 201-226.
- MARKUS, H., & NURIUS, P. (1986). Possible selves. *American psychologist*, 41(9), 954-969.
- McCRAY, J. W., & DAY, S. S. (1977). Housing values, aspirations, and satisfactions as indicators of housing needs. *Family and consumer sciences research Journal*, 5(4), 244-254.
- McQUARRIE, E. (2005). *The market research toolbox: a concise guide for beginners* (2nd ed.). SAGE, ISBN 9781412913195
- MEIR, I. A., GARB, Y., JIAO, D. & CICELSKY, A. (2009). Post-Occupancy Evaluation: An Inevitable Step toward Sustainability. *Advances in Building Energy Research*, Earthscan Publication. 3, pp.189–22. OISSN 1751-2549 (Print), 1756-2201 (Online).
- MEHRAD, A. & FALLAHI, B. (2015). The Effect of Income on Job Satisfaction and Residential Satisfaction: A Literature Review. *Journal of Educational, Health and Community Psychology* 2015, Vol. 4, No. 1, ISSN: 2088-3129
- MEMARIAN, GH. (1998). House typology in Iran (with special reference to Shiraz). Doctoral dissertation, The University of Manchester.
- MENEZES, A. C., CRIPPS, A., BOUCLAGHEM, D., & BUSWELL, R. (2012). Predicted vs. actual energy performance of non-domestic buildings: Using post-occupancy evaluation data to reduce the performance gap. *Applied Energy*, 97, 355-364.
- MOHIT, M. A., IBRAHIM, M., & RASHID, Y. R. (2010). Assessment of residential satisfaction in newly designed public low-cost housing in Kuala Lumpur, Malaysia. *Habitat international*, 34(1), 18-27.
- MOKHTARIAN, P. & CAO X. (2008). Examining the Impacts of Residential Self-Selection on Travel Behavior: A Focus on Methodologies. *Transportation Research Part B*, 42(3): pp. 204–228.
- MORRIS, C.W. (1956). *Varieties of human value*. Chicago: University of Chicago Press.

- MOVAHEDI, L. (2018). Satisfaction survey on executive systems of Mehr projects (Case study in Tehran - Pardis) . Chamran University in Tehran. Under Process, Master Thesis.
- MURRAY, S. (2009). Personalisation: A Shared Understanding, Commissioning for Personalisation, A Personalised Commissioning Approach to Support and Care Services. Changing Lives Service Development Group, Published by the Scottish Government, Edinburgh, ISBN 978-0-7559-5990-7. Available at the Scottish Government website: www.scotland.gov.uk. Accessed; 05/12/2011.
- MYERS, D. G. (2009). Social psychology (10th ed.). New York: McGraw-Hill Higher Education. ISBN 0073370665.
- NAKIB, F. (2010). Technological Adaptability, an Approach toward a Flexible and Sustainable Architecture [w:]. In Conference on Technology & Sustainability in the Built Environment (pp. 479-493).
- NELSON, H. G. & STOLTERMAN, E. (2003). The design way: intentional change in an unpredictable world: foundations and fundamentals of design competence. Englewood Cliffs, N.J., Educational Technology Publications.
- NIELSEN, J. (1993). Usability Engineering. Academic Press, Inc., San Diego.
- NOLL, H. H. (2002). Social Indicators and Quality of Life Research: Background, Achievements and Current Trends. Genov, Nicolai Ed. (2002) Advances in Sociological Knowledge over Half a Century. Paris: International Social Science Council.
- NUNE, N. J. (2001). Object Modeling for User-Centered Development and User Interface Design: The Wisdom Approach. Tese Submetida à Universidade da Madeira para a Obtenção do Grau de Doutor em Engenharia de Sistemas, especialidade de Informática, Funchal, Portugal.
- NUNNALLY, J. C. (1978). Psychometric Theory. (No. 152.8 N8), USA: Chicago Press, doi:10.1234/12345678.
- NUNNALLY, J. C. & BERNSTEIN, I. H. (1994). Psychometric Theory (3rd Ed.). New York: McGraw-Hill.
- OGU, V. I. (2002). Urban residential satisfaction and the planning implications in a developing world context: The example of Benin City. Nigeria, International Planning Studies, 7(1), 37-53.

- ONIBOKUN, A. G. (1974). Evaluating consumers' satisfaction with housing: an application of a systems approach. *Journal of the American Institute of Planners*, 40(3), 189-200.
- OPOKU, R. A., & ABDUL-MUHMIN, A. G. (2010). Housing preferences and attribute importance among low-income consumers in Saudi Arabia. *Habitat international*, 34(2), 219-227.
- OPPERMANN, R. & REITERER, R. (1997). Software Evaluation Using the ISO 9241 Evaluator Usability Evaluation Methods. *Behaviour and Information Technology* v.16 n.4/5 pp. 232-245.
- ORNSTEIN, S.W. (1999). A Post-occupancy evaluation of workplaces in São Paulo, Brazil. *Environment and Behavior* (Vol. 31, No. 4), pp. 435–462. Thousand Oaks, C.A., USA: Sage Publications.
- OSELAND, N. & HUMPHREYS, M. (1993). Trends in Thermal Comfort Research. Watford, Building Research Establishment.
- O'TOOLE, J. (1995). *Leading Change: Overcoming the ideology of comfort and the tyranny of custom*. San Francisco, Jossey-Bass.
- PAGE, T., THORSTEINSSON, G., & HA, J. G. (2010). Natural sections in product design. *International Journal of Contents*, 6(3), 71-82.
- PALLANT, J. (2011). *Multivariate analysis of variance. SPSS survival manual*. Crows Nest: Allen & Unwin, 20(11), 283-96.
- PASHA, H. A., & BUTT, M. S. (1996). Demand for housing attributes in developing countries: a study of Pakistan. *urban studies*, 33(7), 1141-1154.
- PATI, D. & HARVEY, T., & CASON, C. (2008). Inpatient Unit Flexibility Design Characteristics of a Successful Flexible Unit. *Environment and Behavior* 40(2), 205-232.
- PAUKEN, M. (1999). Sleeping soundly on summer nights - the first century of air-conditioning. *ASHRAE Journal*, 41(5), pp. 40-47.
- PENNELL, R. (1968). The influence of communality and on the sampling distributions of factor loadings. *Psychometrika*, 33(4), 423-439.
- PERELMAN, C. & OLBRECHTS-TYTECA, L. (1969). *The new rhetoric: a treatise on argumentation*. London, University of Notre Dame Press.

- PETER, J. P. (1979). Reliability: a review of psychometric basics and recent marketing practices. *Journal of Marketing Research*. 16, 6-17.
- PEYTON, R.M., P.S. & KAMERY, R.H. (2003). Consumer Satisfaction/Dissatisfaction (CS/D): A review of the literature prior to the 1990s, *Proceedings of the Academy of Organizational Culture, Communications and Conflicts*. 7(2). Allied Academies International Conference. Las Vegas. (pp. 41-46).
- PIR MOHAMMADI, M. (2015). The mediation role of user comfort in relationship between interior layout design and energy efficiency. Ph.D. Thesis, Faculty of Built Environment, Universiti Teknologi Malaysia.
- POLLARD, E. L. & LEE, P. D. (2003). Child Well-Being: A Systematic Review of the Literature. *Social Indicators Research*, 61(1), p. 60.
- POPE, J. C. (2008). Fear of crime and housing prices: Household reactions to sex offender registries. *Journal of Urban Economics*, 64(3), 601-614.
- PRATKANIS, A. R. & GREENWALD, A. G. (1988). A socio-cognitive model of attitude structure and function. L. Berkowitz (Ed.): *Advances in Experimental Social Psychology*, pages 61–80.
- PREISER, W. E. (Ed.). (2013). *Building evaluation*. Springer Science & Business Media. Springer, Boston, MA.
- PREISER, W. E. (1989). Towards a performance-based conceptual framework for systematic POEs. In *Building evaluation* (pp. 1-7). Springer, Boston, MA.
- PREISER, W. E. & NASAR, J. L. (2008). *Assessing Building Performance: The Evolution from Post-Occupancy Evaluation*. Archnet-IJAR, *International Journal of Architectural Research*, 2(1), pp. 84-99.
- PREISER, W. E. & VISCHER, J. C. (2005). *Assessing Building Performance*. Elsevier Butterworth-Heinemann, Linacre House, Jordan Hill, Oxford OX2 8DP, 30 Corporate Drive, Burlington, MA, 01803. ISBN 0 7506 6174 7.
- PREISER, W. E., RABINOWITZ, H.Z. & WHITE, E.T. (1988). *Post Occupancy Evaluation*. Van Nostrand Reinhold, New York.
- PUNCH, K. (2003). *Survey research: The basics*. SAGE Publications.
- PUTNAM, H. (2002). *The collapse of the fact/value dichotomy and other essays*. Cambridge, Mass., Harvard University Press.

- QOM GOVERNMENT. (2013). *Making Cities Resilient: My City is Getting Ready*. Municipality of Qom – Government of Qom Province.
- QURAN, 17:70. Trans. Saheeh International, Tanzil © 2007-2014, Available at: <http://tanzil.net/#17:70>, Accessed; 09/08/2013.
- RAGHAVAN, R. (1977). Ethno-racial marginality in West Malaysia: The case of the Peranakan Hindu Melaka or Malaccan Chitty community. *Bijdragen tot de Taal-, Land- en Volkenkunde (Royal Netherlands Institute of Southeast Asian and Caribbean Studies)* 133 (4): 438–458. doi: 10.1163/22134379-90002605. Available at: <https://en.wikipedia.org/wiki/Malaysia>. Accessed; 11/09/2015.
- RÄMÖ, H. (2004). Spatio-temporal notions and organized environmental issues. An axiology of action. *Organ*, 11(6), 849–872.
- RAMSAY, J. (2005). The real meaning of value in trading relationships. *International Journal of Operations & Production Management*, 25(6), 549-565. Available at: <http://dx.doi.org/10.1108/01443570510599719>. Accessed; 02/10/2015.
- RAPOPORT, A. (2000). Theory, Culture and Housing. *Housing, theory and society*, 17(4), 145-165.
- RAPOPORT, A. (1982). *The Meaning of the Built Environment*. Sage Publications, Beverly Hills, CA.
- RAPOPORT, A. (1977). *Human Aspects of Urban Form*. Pergamon Press, Oxford. In *Priorities for Environment Design Research*, Environmental Design Research Association Publications, Washington, D.C.
- RASLI, A. (2006). *Data Analysis and Interpretation. A Handbook for Postgraduate Social Scientists (+ CD)*: Penerbit UTM.
- RAWLS, J. (1971). *A Theory of Justice*. Cambridge, MA: Harvard University Press; excerpt reprinted in *Dignity, Character, and Self-Respect*, R.S. Dillon (ed.), New York: Routledge, 1995.
- REINARTZ, W., HAENLEIN, M. & HENSELER, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*, 26(4), 332-344.
- REST, J. R. & NARVÁEZ, D. (1994). *Moral development in the professions: psychology and applied ethics*. Hillsdale, N.J., L. Erlbaum.

- RICE, B. J., & WELLER, H. R. (1997). Determination of the asymptotic D-to S-state ratio for ^3He from the reaction $^1\text{H} (d \rightarrow, \gamma) ^3\text{He}$ at $E_{\text{d, lab}} = 80\text{--}0$ Kev. *Physical Review C*, 55(5), 2700.
- RINGLE, C. M., WENDE, S. & WILL, A. (2005). *Smart PLS Version 2.0 M3*. University of Hamburg.
- RINGLE, C. M., GÖTZ, O., WETZELS, M. & WILSON, B. (2009). On the Use of Formative Measurement Specifications in Structural Equation Modeling: A Monte Carlo Simulation Study to Compare Covariance-based and Partial Least Squares Model Estimation Methodologies METEOR Research Memoranda (RM/09/014): Maastricht University.
- RINGLE, C., SARSTEDT, M., HAIR, J. F. & PIEPER, T. (2012). The use of partial least squares structural equation modeling in strategic management research: A review of past practices and recommendations for future applications. *Journal of Long Range Planning*, 45(6), 320-340.
- ROBERTS, B. H. (1997). *The Quest for Comfort*. London, Chartered Institute of Building Services Engineers.
- ROBERTS, B. H. (2007). Changes in urban density: its implications on the sustainable development of Australian cities. Paper presented at the State of Australian Cities Conference, Adelaide. 28-30.
- ROGERS, C. (2012). *Client Centred Therapy (New Ed)*. Hachette UK.
- ROJAS, E., & GREENE, M. (1995). Reaching the poor: lessons from the Chilean housing experience. *Environment and Urbanization*, 7(2), 31-50.
- ROKEACH, M. (1979). *Understanding Human Values. Individual and Societal*. N.Y. Free Press.
- ROKEACH, M. (1973). *The Nature of Human Values*. N.Y. Free Press.
- RYBCZYNSKI, W. (1987). *Home: A short history of an idea*. Harmondsworth, Penguin Books.
- SAJAN, J. (2013). *Predictors of Overall Living Satisfaction in Medium Density Housing: Results from a Household Survey*. Urban and Regional Planning Discipline, Faculty of Architecture, Design and Planning, University of Sydney.

- SALLEH, A. G. (2008). Neighbourhood factors in private low-cost housing in Malaysia. *Habitat International*, 32(4), 485-493.
- SANOFF, H. (1990). *Participatory Design, Theory & Techniques*. United States, Bookmasters Inc.
- SAUNDERS, M. N., SAUNDERS, M., LEWIS, P. & THORNHILL, A. (2011). *Research methods for business students*. 5/e: Pearson Education India.
- SCHMIDT III, R., EGUCHI, T., AUSTIN, S., & GIBB, A. (2010). What is the meaning of adaptability in the building industry? In 16th International Conference on Open and Sustainable Building (pp. 17-19).
- SCHNEIDER, T., & TILL, J. (2005). Flexible housing: opportunities and limits. *Architectural Research Quarterly*, 9(02), 157-166.
- SCHWARTZ, S. H. (1992). Universals in the content and structure of values: Theory and empirical tests in 20 countries. pp. 1-65 New York: Academic Press.
- SCHWARTZ, S. H. (1994). Are there universal aspects in the content and structure of values? *Journal of Social Issues*, 50, pp.19-45.
- SCHWARTZ, S. H. (1996). Value priorities and behavior: Applying a theory of integrated value systems. In C. Seligman, J.M. Olson, & M.P. Zanna (Eds.), *The psychology of values: The Ontario Symposium*, 8, pp.1-24. Hillsdale, NJ: Erlbaum.
- SCHWARTZ, S. H. (2005a). Basic human values: Their content and structure across countries. In A. Tamayo & J. B. Porto (Eds.), *Valores e comportamento nas organizações [Values and behavior in organizations]* pp. 21-55. Petrópolis, Brazil: Vozes.
- SCHWARTZ, S. H. (2005b). Robustness and fruitfulness of a theory of universals in individual human values. In A. Tamayo & J. B. Porto (Eds.), *idem*, pp. 56-95.
- SCHWARTZ, S. H. (2006). Basic human values: Theory, measurement, and applications. *Revue française de sociologie*.
- SCHWARTZ, S. H. & BILSKY, W. (1987). Toward a psychological structure of human values. *Journal of Personality and Social Psychology*, 53, pp. 550-562.
- SCHWARTZ, S. H., SAGIV, L. & BOEHNKE, K. (2000). Worries and values. *Journal of Personality*, 68, pp. 309-346.

- SEIDER, W. D., SEADER, J. D., & LEWIN, D. R. (1999). *Process design principles: synthesis, analysis, and evaluation*. John Wiley & Sons.
- SEKARAN, U. (2006). *Research methods for business*. John Wiley & Sons.
- SEKARAN, U. & BOUGIE, R. (2010). *Research Methods for Business - A Skill Building Approach*. (5th Ed.). New York: John Wiley & Sons.
- SEN, A. K. (1999). The possibility of social choice. *American Economic Review*, 89, 349–378.
- SHACKEL, B. (1990). Human factors and usability. In J. Preece and L. Keller (Eds.), *Human-Computer Interaction, Selected Readings*, pp. 27-41. Hemel Hempstead, UK: Prentice Hall International.
- SHAVELSON, R. J., & BOLUS, R. (1982). Self-concept: The interplay of theory and methods. *Journal of educational Psychology*, 74(1), 3-17. doi:10.1037/0022-0663.74.1.3. ISSN 1939-2176.
- SHAVELSON, R. J., HUBNER, J. J., & STANTON, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of educational research*, 46(3), 407-441. doi:10.3102/00346543046003407. ISSN 0034-6543. JSTOR 1170010.
- SHOOK, C. L., KETCHEN, D. J., HULT, G. T. M. & KACMAR, K. M. (2004). An assessment of the use of structural equation modeling in strategic management research. *Strategic management journal*, 25(4), 397-404.
- SIEBER, S. D. (1973). The integration of fieldwork and survey methods. *American journal of sociology*, 78(6), 1335-1359.
- SIM, D. (1993). *British Housing Design*. Coventry: Institute of Housing.
- SIRGY, M., & CORNWELL, T. (2002). How neighborhood features affect quality of life. *Social Indicators Research*, 59(1), 79-114.
- SMITH, K. M. (2011). *The relationship between residential satisfaction, sense of community, sense of belonging and sense of place in a Western Australian urban planned community*. PhD Thesis, Faculty of Computing, Health & Science, Edith Cowan University, September 2011.
- SOUZA, F. & BEVAN, N. (1990). The Use of Guidelines in Menu Interface Design: Evaluation of a Draft Standard. *Proceedings of IFIP INTERACT'90: Human-Computer Interaction*. pp. 435-440.

- SPECTOR, T. (2001). *The ethical architect: the dilemma of contemporary practice*. New York, Princeton Architectural Press.
- STEVENS, G. C. (1992). The elevational gradient in altitudinal range: an extension of Rapoport's latitudinal rule to altitude. *The American Naturalist*, 140(6), 893-911.
- STONE, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society. Series B (Methodological)*, 111-147.
- STUDER, R. G. (1993). Meaning and use: A basis of understanding. *The meaning and use of housing: International perspectives, approaches and their applications*, 29-33.
- SUH, N. P. (1990). *The principles of design* (Vol. 990). New York: Oxford University Press.
- SYMES, M., ELEY, J. & SEIDEL, A. D. (1995). *Architects and their practices: a changing profession*. Oxford, Butterworth Architecture.
- SZIGETI, F., DAVIS, G., DEMPSEY, J., HAMMOND, D., DAVIS, D., COLOMBARD-PROUT, M., & CATARINA, O. (2003). Case studies: assessing quality – the successful response to user requirements. In *Proceedings. Toronto, Canada: World Work Place 2003, Houston, Texas: IFMA (International Facility Management Association)*.
- TABACHNICK, B. G., & FIDELL, L. S. (2007). *Using multivariate statistics*. Allyn & Bacon/Pearson Education.
- TASHAKKORI, A., & TEDDLIE, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. (Vol. 46). Sage Publications.
- THEODORI, G. L. (2001). Examining the effects of community satisfaction and attachment on individual well-being. *Rural sociology*, 66(4), 618-628.
- TICEHURST, G., & VEAL, A. (2000). *Business research methods: a managerial approach*. Australia: Pearson Education.
- TORABI, M., JUSAN, M. & DANESHPOUR, A. (2012a). Self-selection and Personalization in Architectural Design Process (ADP). 6th SEATUC Symposium, King Mongkut's University of Technology Thonburi (KMUTT), Thailand.

- TORABI, M., JUSAN, M. & DANESHPOUR. A. (2012b). The Definition of Self-selection in Architectural Design Process (ADP); Based on User Centred Design (UCD) Method. (ADIC 2012), Malaysia.
- TORABI, M., JUSAN, M. & DANESHPOUR. A. (2012c). The Concept of Self-selection in Architectural Design Process. (ICWSAUD2012). The School of Housing, Building & Planning, Universiti Sains Malaysia (USM).
- TORABI, M., JUSAN, M. & DANESHPOUR. A. (2012d). Effects of Self-selection in Architectural Design Process (ADP); Considering End User's Personalization (EUP). (ICITSBE 2012), Perak, Malaysia.
- TORABI, M., JUSAN, M. & DANESHPOUR. A. (2012e). Effects of Self-selection in Architectural Design Process (ADP); Considering User Centred Design (UCD). (ICITSBE 2012), Perak, Malaysia.
- TORABI, M., PIR MOHAMMADI, M., ROSHAN, M. & JUSAN, M. (2014). Considering User Participation in Light of level and Stages of Self-selection in Architectural Design Process (ADP). *International Journal of Modern Engineering Research (IJMER)*. 4 (4), pp. 24-28, Impact Factor: 1.227, ISSN-2249-6645.
- TOWERS, G. (1995). *Building Democracy, Community architecture in the inner city*. London: UCL Press.
- TUCKER, L. R., KOOPMAN, R. F., & LINN, R. L. (1969). Evaluation of factor analytic research procedures by means of simulated correlation matrices. *Psychometrika*, 34(4), 421-459.
- TURPIN-BROOKS, S., & VICCARS, G. (2006). The development of robust methods of post occupancy evaluation. *Facilities*, 24(5/6), 177-196.
- UKOHA, O. M., & BEAMISH, J. O. (1997). Assessment of residents' satisfaction with public housing in Abuja, Nigeria. *Habitat international*, 21(4), 445-460.
- VAGIAS, W. M. (2006). *Likert-type scale response anchors*. Clemson International Institute for Tourism & Research Development, Department of Parks, Recreation and Tourism Management. Clemson University.
- VAN DER HEIDE, W. (2002). *Malaysian cinema, Asian film: border crossings and national cultures*. Amsterdam University Press. pp. 98-99. ISBN 90-5356-580-9. Available at: <https://en.wikipedia.org/wiki/Malaysia>. Accessed; 21/10/2015.

- VARADY, D. P., & CARROZZA, M. A. (2000). Toward a better way to measure customer satisfaction levels in public housing: A report from Cincinnati. *Housing Studies*, 15(6), 797.
- VARADY, D. P., & PREISER, W. F. (1998). Scattered-site public housing and housing satisfaction: Implications for the new public housing program. *Journal of the American Planning Association*, 64(2), 189-207.
- VERA-TOSCANO, E., & ATECA-AMESTOY, V. (2008). The relevance of social interactions on housing satisfaction. *Social Indicators Research*, 86(2), 257-274.
- VERPLANKEN, B., & HOLLAND, R. W. (2002). Motivated decision-making: Effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology*, 82, pp. 434-447.
- WADE, J. C. (1998). Male reference group identity dependence: A theory of male identity. *The Counseling Psychologist* 26: 349–383. doi:10.1177/0011000098263001. ISSN 0011-0000.
- WAGENBERG, A. V. (2001). Evaluatie onderzoek Hoogheemraadschap van Rijnland Leiden. Internal report: van Wagenberg Associates, Eindhoven. The Netherlands. (POE of the Waterboard of Rijnland, Leiden.)
- WALKER, N. (2006). Involving people who use services in the commissioning process. Department of Health Care Services Improvement Partnership.
- WEE, B. V. (2009). Self-selection: a key to a better understanding of location choices, travel behavior, and transport externalities? Delft University of Technology presented at the BIVÉC-GIBET research day, May 27, 2009, Brussels, Vrije Universiteit.
- WELLS, N. & YANG, Y. (2008). Neighborhood Design and Walking - A Quasi-Experimental Longitudinal Study. *American Journal of Preventive Medicine*, 34(4), pp. 313–319.
- WENER, R. E., McCUNN, L. J., & SENICK, J. (2015). Did that Plan Work? Post-occupancy Evaluation. *Research Methods for Environmental Psychology*, 249.
- WILLIAMS, L. J., VANDENBERG, R. J. & EDWARDS, J. R. (2009). 12 structural equation modeling in management research: a guide for improved analysis. *The Academy of Management Annals*, 3(1), 543-604.

- WILLIAMS, R. M. JR. (1979). Change and stability in values and value systems: A sociological perspective. In Rokeach, M. (Eds.) *Understanding Human Values*, pp. 15-46. N.Y. Free Press.
- WILSON, S. & SIVASUBRAMANIAN, S. K. (2015). A study of self-concept among high school students. *International Multidisciplinary Research Journal, Golden Research Thoughts*, 4(8), ISSN No :2231-5063.
- WOOD, A.W. (1999). *Kant's Ethical Thought*. Cambridge, Cambridge University Press.
- WOLD, H. (1985). Systems analysis by partial least squares. *Measuring the Unmeasurable*, 221-252.
- WOLD, H. (1979). *Model Construction and Evaluation When Theoretical Knowledge Is Scarce: An Example of the Use of Partial Least Squares*.
- WONG, J. K., LI, H., & WANG, S. W. (2005). Intelligent building research: a review. *Automation in construction*, 14(1), 143-159.
- WORLD HEALTH ORGANISATION (1946). *Preamble to the Constitution of the World Health Organisation as adopted by the International Health Conference*. New York, 19-22 June.
- WULZ, F. (1990). The concept of participation. *Participatory Design, Theory & Techniques*. By Sanoff, Henry. United States: Bookmasters Inc, pp. 39-48.
- YOUNG, R. D. (2009). *Quality of Life Indicator Systems—Definitions, Methodologies, Uses, and Public Policy Decision Making*.
- YU, L., SUN, Z., DING, R., WANG, S., & FENG, G. (2015). Research on the Post Occupancy Evaluation of Green Public Building Environmental Performance Combined with Carbon Emissions Accounting. *Procedia Engineering*, 121, 1454-1460.
- YUSUF, A. A., & RESOSUDARMO, B. P. (2009). Does clean air matter in developing countries' megacities? A hedonic price analysis of the Jakarta housing market, Indonesia. *Ecological Economics*, 68(5), 1398-1407.
- ZABEL, J. E., & KIEL, K. A. (2000). Estimating the demand for air quality in four US cities. *Land Economics*, 174-194.

- ZAPF, W. (1984). Individuelle Wohlfahrt: Lebensbedingungen und wahrgenommene Lebensqualität. In: W. Glatzer, W. Zapf. (Eds). Lebensqualität in der Bundesrepublik. Frankfurt a.M./ New York: Campus, pp. 13-26.
- ZIKMUND, W. G. (2003). Business Research Methods. (7th Ed.). Mason, Ohio: Thomson South-Western.
- ZIKMUND, W. G., CARR, J. C. & GRIFFIN, M. (2012). Business research methods (9th Ed.). CengageBrain.com.
- ZIKMUND, W. G., BABIN, B. J., CARR, J. C. & GRIFFIN, M. (2010). Business Research Methods (8th ed.). South-Western Pub.
- ZILIAK, S.T. & McCLOSKEY, D.N. (2008). The Cult of Statistical Significance: How the Standard Error Costs Us Jobs, Justice, and Lives. University of Michigan Press. ISBN 0472050079
- ZIMRING C. M. & REIZENSTEIN J. (1980). Post-occupancy Evaluation: An Overview. Journal of Environment and Behavior, Vol. 12, Iss. 4, pp. 429-450.