



An eclectic methodological approach to develop and diffuse a building innovation model in Korea for symbiotic community

Yeun Sook Lee, So Mi An*, Chang Houn Ahn, Hyun Soo Lee

Department of Housing and Interior Design, Yonsei University, 134 Shinchon-Dong, Seodaemun-Gu, Seoul 120-749, Republic of Korea

ARTICLE INFO

Keywords:

Eclectic methodological approach
Building innovation model
Symbiotic community
Energy
Green infra

ABSTRACT

For the past fifty years, apartments have become the inevitable standard of housing types while over 9 million apartments have been produced through industrialization and urbanization of Korea. The society is now challenged to change its paradigm in housing provision to actualize symbiotic community among people and with eco system, adaptable as both a welfare and green infra space. In this context, currently, an innovative building model with shared spare space as a strategic idea to cope with various social problems and future ecological risks was suggested. The purpose of this research is to develop a building innovation model powerful enough to efficiently and effectively promote symbiotic community. An eclectic methodological approach was employed, using interview, questionnaire survey, web survey, professional group workshops, and multidisciplinary open discussion meetings. As results, the suggested model with shared community space as its critical concept was well accepted by all stakeholders. The feasibility and value of the building innovation model was confirmed as an intervention to promote symbiotic community of Korea in an efficient way. The results have great implication for building improvement of other industrial countries with fast mass housing to cope with world energy issues and social exclusion issues.

© 2011 Elsevier B.V. All rights reserved.

1. Background and purpose

Many countries have developed their cities rapidly in accordance with their rapid industrialization and massive collective housings, which have been built in short period of time, to meet relevant needs of residential buildings. Korea is one of those countries representing this trend, and has built more than 7.8 million households of apartments in last 50 years, and the recent housing supply ratio continued to exceed 80% [1]. These apartments were built efficiently without seriously considering about the matters of social insulation or eco-friendliness, thus raising social conflicts and problems of building energy these days and the necessity of building innovation have been proposed as a matter of concern.

On the other hand, among the global problems in the 21st century, demographical and ecological crises have become a serious matter of concern not only in Korea, but also in global communities as well, and every country is seeking proper solutions to solve such problems. In case of Korea, the phenomena of problematic low birth rate and rapid aging trend have brought forth aging society and social welfare burdens. In addition, the number of socially disadvantaged people, such as women, disabled people, and

single parent or broken family has increased to a large number that cannot be ignored any longer as a minor problem, and the problem of social imbalance is expected to get worse. Therefore, to enable them to lead a more healthy and active life is a national task for social integration in order to solve social crisis by securing social health and sustainability. What is still more important, the import reliability of energy in Korea is 97%, and 83% of energy consumed in Korea are fossil fuels, making the volume of the greenhouse gas emissions to rise continuously since 1990 and continuously urbanizing the cities without constraining the consumption of energy [2]. Among the whole energy consumption in Korea, 23% was consumed for building sector, and 53% of it was consumed for housing, 37% for commercial, and 10% for public buildings [3].

Therefore, it has become an inevitable mission of this era to seek for a new paradigm and strategy in planning and constructing the houses as a container where human life is maintained and also as a piece of global ecosystem. Particularly in Korea, as the apartment buildings have been constructed across the nation so far, the innovation of residential environment of apartments means an innovation of the national residential areas as an efficient strategy to solve the demographical and ecological crises.

As the portion of socially disadvantaged people, aged people and multi-culture family increased noticeably, and the matter of social consensus and integration has become an important issue, the Korean government has set up a special committee for social integration under the president, and adopted a national strategy to

* Corresponding author. Tel.: +82 2 2123 4662; fax: +82 2 313 3139.

E-mail addresses: yeunsooklee@yonsei.ac.kr (Y.S. Lee), somian@yonsei.ac.kr (S.M. An), ahnch@yonsei.ac.kr (C.H. Ahn), hyunsl@yonsei.ac.kr (H.S. Lee).

implement “low carbon green growth” to solve the ecological crisis and to develop as an eco-friendly country. In line with this strategy, national welfare and nation-wide greening project will be realized sooner than expected if apartments are developed as an efficient means to solve social problems and to diffuse green environment.

The purpose of this study is to suggest that the community-shared space in all apartment buildings should be built as a central hub for sustainable symbiotic community life, and to develop a socially innovative building model through the process that the new concept of apartment buildings is accepted by various stakeholders and its efficiency and utility are recognized by them. Symbiotic community here means a community where people live together in harmony with ecosystem. Major viewpoints of this paper are not about developing any technique to save energy or to decrease CO₂ emission, but to build up an environmental space infrastructure to enable the technical development opportunities, and also to draw social consensus and support as well as establishing a model. This can be a momentum to develop a vertical community where several hundreds or thousands of residents are living together in one apartment building. As changes in apartment buildings may be applied to all the other such buildings across the nation in Korea, it is very meaningful that such application of the changes and innovations can lead to a nationwide innovation.

2. Needs of developing green innovation model for symbiotic community

This part has reviewed Korea-specific building culture and the Building Innovation Model concept to help understand the process of this research. It is expected to be generally accepted as a norm for residential building type, where core concept of innovation is community shared space that can be used as the green infrastructure base to change the concrete apartment buildings to eco-friendly environment.

2.1. Development of shared spaces in Korean apartments

The English word ‘community’ originated from the Latin word ‘*communitas*’ [4], and people in a community usually share the common environment and common concerns. The concept of shared space that reflects such community spirits comprises the shared space of residents in apartments in Korea, which satisfies such various functions as daily welfare of the residents in the apartments and the enhancement of community culture. This shared space also includes the material space that solves demographical problems and ecological crisis.

However, collective housings in Korea have not successfully formed a collective residential culture, though more than 7.8 million units of apartments have been built since 1960, and the shared space of collective housings has been made only as a simple common stairway or an aisle [5]. Though some hundreds or thousands of residents may live in an apartment building, conventional apartment building designs have put an emphasis on the anonymity of the residents [6]. However, as the restrictions on the maximum prices of apartments by government were lifted and increased the number of residents pursued the quality of life, residents’ shared spaces and community centers began to be constructed here and there. And among the shared spaces in apartment buildings built in the middle of 2000, more than 100 kinds of shared spaces, including community conference room, children’s care and play room, fitness space, and others were built, which revealed that apartment buildings were established to stimulate community activities [7,8]. In addition, Lee [9] emphasized that the community-shared space should form a green infrastructure where residents can experience and realize the green life, though any functional spaces may be

installed in line, and suggested that the community-shared spaces should be converted into “green + α ”. Furthermore, she predicted that such community spaces would develop as “customized shared space” era in the future.

Apartment buildings in Korea were first constructed without shared spaces, then passed the era when basic space for children’s activity and care and space for the aged residents were built, and have reached the present era when diverse shared spaces are built. They develop toward more flexible consumer-oriented design era from the supplier initiated stereotype design era, and the new apartment spaces will promote the symbiotic living environment to relieve many social problems in Korean society.

2.2. Concept of building innovation model

Korean people confront to solve urgent social problems caused by changing demographical structure and aging society, and have found out energy efficient ways for the existing concrete buildings to restore the ecosystems, overcoming diverse relevant problems and issues at hand. The preliminary model of residential area that introduced shared space to convert the stereotype apartment style in Korea is the result of research outputs, such as “Culture Specific Housing for the Korean Elderly” [10] as a cultural policy project, “Future Housing and Residents’ Shared Space” [11] as a joint project between industrial and academic circle, and “Millennium Community Center” [12] of national policy project for the future vision of Korea. The results of these preliminary research projects have become as the test model to bring forth this new innovative model, and showed a distinctive feature by asserting that shared space is required to be provided at each building unit to facilitate approaches of the socially disadvantaged people, while focusing on the importance of vertical community in an apartment buildings where hundreds people live together.

In connection with these studies, Lee [13] suggested to establish an “Apartment Community Space Project” as a national project or system for apartment innovation. She pinpointed out to solve the social exclusion or isolation problems, due to the changes in demography, by vitalizing the community activities and proposed to renovate apartments by supplying community shared spaces to expand the green life experiences. The key points of this proposal are to utilize the shared spaces of apartments for necessary functions according to the social changes. For instance, 5–10% of the apartment building is secured as the minimum community-shared space, and the spaces are recommended to be utilized with the consensus of the residents. These are new ideas for the shared spaces that will activate the community life, not only at the level of apartment complex, but also as at the level of unit buildings where hundreds or more residents live together, realizing the vertical community vitalization. This proposal was made as a means of “social mix” that would decrease social exclusion of the public rental houses where socially disadvantaged people live by providing mutually favorable functional spaces in a health promoting eco friendly way. This idea started at the public rental housing complex, but it was expected to be a model for overall integration of society in private sectors, from the beginning.

2.3. Benefits of green infra and its relevance to community shared space

Ecosystem crisis due to the climate change, urbanization, and exhaustion of natural resources has become a global issue, and in order to solve this problem, various efforts and researches for greening by constructing green environment with plants, such as a green roof which is a roof that contains a soil and vegetation layer [14], and developing eco-friendly new techniques have been made. Introducing community gardens or farming gardens in buildings

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات