

## 論文の内容の要旨

論文題目     A Study on the Spatial Elements and Users' Utilization  
of Toy Libraries in Japan  
(日本におけるおもちゃ図書館の空間的要素及び利用状  
況に関する研究)

氏     名     チョウ   プエイ   クエン

With the prerequisite to support children with special needs, toy library is a type of children welfare facility with a wide collection of toys, adapted materials and other resources that provides toy lending service, play sessions etc. for normal children and children with special needs. Play, toys and games are the center of activities, with emphasis on parents' or caretakers' roles. With the expanding roles of toys from educational and recreational purposes to therapeutic and training function, a place that is well-equipped with all these types of toys and provides free services to all groups of children is necessary. There are also increasing needs among children with special needs for children welfare facility that enable interaction with others in the society. Recently, many South-east Asia countries are putting concerted effort in establishing and developing toy libraries to help children with special needs and children from the poor families. On the other hand, as toy library is mainly a voluntary activity, there are problems of management and other challenges. The lack of proper design and planning is another issue to be tackled as it could lead to the malfunctioning of the facility or the cause of accidents. Therefore, this research is generated to carry out a thorough study of toy libraries in Japan to help to improve problems and challenges faced by the existing toy libraries like the management problems and design and planning defects, so that eventually it could benefit the end users, both the normal children and the children with special needs.

This research is consisted of six chapters.

Chapter 1 is the introductory chapter that explains the background of toy library, problem statements found that inspired this research, objectives, literature review, value and significance. The concept of toy library is started in Los Angeles in 1935 during the economy recession when the families did not have extra money to buy toys for their children. The idea is then spread to other Europe countries and is better known as "Lekoteks" there which means "play library" in Swedish to help children with special needs. Asia countries are also inspired by

the idea of toy library and it is said that the first toy library in Japan is established in 1981 at Mitaka, Tokyo. Most of the papers about toy library are written from the perspective of management which includes the history and development of toy library, methods to set up a new library and how it functions and serves people in different countries. Besides that, studies in the field of psychology and education about toy libraries are available as well. This research attempts to study toy library from architectural view which is not available in previous research.

Chapter 2 wrote about the research framework and methodology used in this study. Toy library itself is consisted of a few elements: space, objects and people. To study thoroughly about toy library, these elements will be emphasized one by one in this research as well. Space refers to the spatial elements of toy library like the layout, zoning and spatial connection. Objects in this study mainly refer to the toys and play equipments in the toy library whereas people include the staffs (toy librarians, volunteers etc.), adult users (parents or caretakers) and the children users (normal children and children with special needs). For research methods, questionnaires for all toy libraries and questionnaire for users are used to find out the problems faced and opinions from different parties. Nine toy libraries are selected as case studies for on-site survey to obtain information about users' utilization and behaviors.

Chapter 3 includes the development of toy libraries in Japan and the data obtained from the questionnaires sent to all toy libraries in Japan with the response rate of 38.46%. The objective of this chapter is to find out actual situation and to address the problems of toy libraries in Japan in order to suggest ways for improvement to the existing toy library, and for future new toy library. There are currently 429 toy libraries registered to the Japanese National Council of Toy Libraries and 165 replies are obtained from the questionnaire survey. The questionnaire survey covers questions about management, toy, space and others. It is found that most of the management problems like low frequency of opening days and short opening hours could be linked to the management system by volunteers. Other than that, Adapted materials are not utilized well in some of the toy libraries due to the lack of knowledge about them among the toy librarians. From the impression of the questionnaire answers, it may seem that many toy libraries have good spatial planning and barrier-free design considerations. However, a more detail study has revealed that their considerations are remained at a very superficial level.

Chapter 4 is about the case studies for the study of spatial elements and users' utilization. Toy libraries are divided into three categories and three samples are selected from each category. The different types of play behaviors (unoccupied play, solitary play, parallel play and collaborative play behaviors) are recorded according to the play corners of the case

study. Besides that, the occurrence of different interactions among users at different play corner is also recorded. The types of interaction are interaction among children, parent-child interaction, adult-child interaction (for adults other than own parents) and interaction among adults. Spatial elements play an important role in facilitating certain play behaviors for both normal children and children with special needs. Some play corners have special spatial elements that help to generate certain behaviours. Instead of considering the openness and closeness of a play corner, other spatial elements of the play corner play more important roles in facilitating play behaviours and interactions among users.

Chapter 5 focuses on users' utilization, needs and expectations. The questionnaire is distributed to the users with the help from the staffs of the toy libraries selected as case studies. Users' utilization covers questions about gender, age and occupations of adult users, age range and disabilities of children users if available, transportation used, frequency of visit, duration of stay, and preferred visiting time and the reasons. For the users' needs and expectations, reasons for using toy library, benefit from utilization and improvement needed are asked in the questionnaire. It might be true that having special play session could help to increase more children with special needs visitor, judging from the fact that many parents do not want others to know about their child's disabilities from the questionnaire. Parents or caretakers of children with special needs would like to have more variety of play spaces for their children to calm down and play comfortably.

Chapter 6 concludes the whole research by revising the summary of each chapter. Last but not least, improvement needed for current toy libraries are pinpointed. Besides that, spatial elements that facilitate certain desired play behaviors and interactions are highlighted and serve as reference for future new toy library design.