

Accessibility for Disabled Persons and Every Member in Society

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ABSTRACT

The objectives of this qualitative investigation were to examine the needs in providing facilities for the disabled and the public; to investigate the management of facility systems for the disabled; and to study the cost per unit for establishing or changing the facilities. The sample group was composed of two groups: (1) 107 people with five types of disabilities as specified in the 1991 Act of Rehabilitation for the Disabled, and (2) 108 people working for or related to the disabled.

The research findings reveal that the needs for personal and public accessibility of the disabled are the consequence of the need to carry on their lives happily in the society, which is an important part of the quality of life of ordinary people. Personal accessibility, particularly physically supporting equipment, is a part of the health and functioning subscale life quality, whereas educational, vocational and public accessibility is the socio-economic subscale. Public accessibility is an important factor for the disabled to enable them to interact with others and participate in social activities, which would lead to their being socially accepted. Furthermore, public accessibility is a form of equal justice distribution to every social member, paving a way for them to access to services that would develop and improve their quality of life. At present, the disabled lack information about assistance on personal accessibility from concerned agencies and they also encounter problems about assistance criteria. In addition, public accessibility is not thoroughly available in both the central and local regions. If there are, they are not made for the disabled to use.

Regarding agencies involving in managing accessibility systems, they are found to be in both the central and local regions. However, their operations are not efficient, as the needs of the disabled, the elderly and the physically weak are not taken into consideration. Moreover, these people do not have an opportunity to take part in the process of designing and building public accessibility. With respect to the cost of establishing or changing personal and public accessibility, it is found to be various, depending on their efficiency of use, durability, special qualifications and materials. To deal with these problems, the state is strongly recommended to incorporate the strategic plan for developing the life quality of the disabled into the 10th National Social and Economic Development Plan and separate it as a main strategy with its own budget allocation. Additionally, the state should launch campaigns to encourage the private sector and businesses to provide facilities for the disabled in their premises with the tax reduction measure as an incentive. For local administrative agencies, they must be made ready to take charge of developing the quality of life of the disabled by making them aware of and providing them knowledge about the needs to build public facilities in relation to local wisdom and locally available materials. In terms of design, public facilities should be universally designed so that they facilitate everyone regardless of physical conditions. Educational institutions should incorporate architecture and design of public facilities in their curricula and promote research studies on the issue.

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บทคัดย่อ

งานวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษา 1) ความจำเป็นในการจัดทำสิ่งอำนวยความสะดวกสำหรับคนพิการและเพื่อทุกคนในสังคม 2) การจัดการดูแลระบบสิ่งอำนวยความสะดวกสำหรับคนพิการ 3) ต้นทุนต่อหน่วยในการจัดทำหรือปรับเปลี่ยนสิ่งอำนวยความสะดวกสำหรับคนพิการและเพื่อทุกคนในสังคม ใช้วิธีการวิจัยเชิงคุณภาพ กลุ่มตัวอย่าง ที่ใช้ในการวิจัย ประกอบด้วย 2 กลุ่ม ได้แก่ 1) คนพิการ 5 ประเภท ตามที่กำหนดไว้ในพระราชบัญญัติฟื้นฟูสมรรถภาพคนพิการ พ.ศ. 2534 จำนวน 107 คน และ 2) บุคคลทั่วไป ที่มีบทบาทเกี่ยวข้องกับคนพิการจำนวนทั้งสิ้น 108 คน

ผลการวิจัยพบว่า ความจำเป็นและความต้องการสิ่งอำนวยความสะดวกเฉพาะบุคคลและสาธารณะของคนพิการประเภทต่าง ๆ นั้นเป็นผลมาจากความต้องการได้รับการตอบสนองเพื่อให้สามารถดำรงชีวิตอยู่ในสังคมได้อย่างมีความสุข อันเป็นส่วนสำคัญของคุณภาพชีวิตบุคคลทั่วไป โดยสิ่งอำนวยความสะดวกเฉพาะบุคคลด้านกายอุปกรณ์สนองตอบการพึ่งตนเองทางร่างกายซึ่งเป็นส่วนหนึ่งของคุณภาพชีวิตด้านสุขภาพ และหน้าที่ ส่วนสิ่งอำนวยความสะดวกเพื่อการศึกษา เพื่อการประกอบอาชีพ และสิ่งอำนวยความสะดวกสาธารณะเป็นส่วนหนึ่งของคุณภาพชีวิตด้านสังคม ซึ่งสิ่งอำนวยความสะดวกสาธารณะเป็นปัจจัยสำคัญที่ทำให้คนพิการได้เป็นส่วนหนึ่งของสังคม มีความสัมพันธ์กับผู้อื่น และมีส่วนร่วมในกิจกรรมของสังคมต่างๆ อันจะนำไปสู่การยอมรับทางสังคมเช่นเดียวกับคนทั่วไป นอกจากนี้การจัดทำสิ่งอำนวยความสะดวกสาธารณะยังเป็นการกระจายความเป็นธรรมให้กับทุกคนในสังคม ทั้งบุคคลทั่วไป คนพิการ ผู้สูงอายุ เด็ก สตรี เพื่อให้มีโอกาสในการเข้าถึงบริการต่าง ๆ ที่สามารถนำมาปรับปรุงและพัฒนาคุณภาพชีวิตของตนได้ อีกด้วย ปัจจุบันคนพิการประสบปัญหาในเรื่องการขาดข้อมูลข่าวสารเกี่ยวกับการให้ความช่วยเหลือสิ่งอำนวยความสะดวกเฉพาะบุคคลจากหน่วยงานต่าง ๆ และยังประสบปัญหาเรื่องกฎเกณฑ์ในการให้ความช่วยเหลือ ในส่วนสิ่งอำนวยความสะดวกสาธารณะนั้นพบว่ายังมีไม่ทั่วถึงทั้งส่วนกลางและส่วนท้องถิ่นและไม่เอื้ออำนวยต่อการใช้งานจริง

สำหรับหน่วยงานที่มีบทบาทด้านการจัดการดูแลระบบ สิ่งอำนวยความสะดวกสำหรับผู้พิการและเพื่อทุกคนในสังคม นั้น ปัจจุบันพบว่ามีทั้งที่อยู่ในส่วนกลางและส่วนท้องถิ่นแต่การดำเนินงานในปัจจุบันยังไม่มีประสิทธิภาพทั้งนี้เนื่องจากไม่ได้ดำเนินงานตามความต้องการของคนพิการ ผู้สูงอายุ และผู้ที่มีสุขภาพไม่แข็งแรง รวมทั้งไม่ได้เปิดโอกาสให้เขาเหล่านั้น ได้เข้ามามีส่วนร่วมในการออกแบบการจัดสร้างและปรับปรุงสิ่งอำนวยความสะดวกด้วย ในเรื่องของ ต้นทุนในการจัดทำหรือปรับเปลี่ยนสิ่งอำนวยความสะดวกเฉพาะบุคคล และสาธารณะนั้น มีความหลากหลายของราคาดัชนีทุนทั้งนี้ขึ้นอยู่กับประสิทธิภาพการใช้งาน ความคงทน และการมีคุณสมบัติพิเศษต่าง ๆ รวมทั้งขึ้นอยู่กับวัสดุที่นำมาใช้ในการจัดทำสิ่งอำนวยความสะดวกนั้นๆ ด้วย จากสถานการณ์ปัญหาการจัดทำและปรับเปลี่ยนสิ่งอำนวยความสะดวกสำหรับคนพิการและเพื่อทุกคนในสังคมปัจจุบัน รัฐจะต้อง จัดทำแผนยุทธศาสตร์พัฒนาคุณภาพชีวิตคนพิการไว้ในแผนพัฒนาเศรษฐกิจและสังคมแห่งชาติ ฉบับที่ 10 โดยแยกเป็นยุทธศาสตร์หลักและจัดทำแผนงบประมาณแผ่นดินเพื่อ รองรับแผนยุทธศาสตร์ด้วย นอกจากนี้จะต้อง รมรณรงค์ให้สถานประกอบการ หน่วยงานเอกชน ร่วมกันจัดทำและปรับเปลี่ยนสิ่งอำนวยความสะดวกภายในบริเวณ

ที่รับผิดชอบรวมทั้ง มีมาตรการ ลดหย่อนภาษี มาเป็นแรงจูงใจด้วย ในส่วนของท้องถิ่นรัฐจะต้อง สร้างความพร้อมในการถ่ายโอนภารกิจเกี่ยวกับการพัฒนาคุณภาพชีวิตคนพิการ โดยสร้างความตระหนักและให้ความรู้เกี่ยวกับความจำเป็นในการสร้างสิ่งอำนวยความสะดวกโดยเชื่อมโยงกับภูมิปัญญาท้องถิ่น รวมทั้งใช้วัสดุอุปกรณ์ที่มีอยู่ในท้องถิ่น ในเรื่องของการออกแบบสิ่งอำนวยความสะดวกสาธารณะ เพื่อให้ทุกคนในสังคมสามารถใช้งานร่วมกันได้ รัฐจะต้องส่งเสริมให้สถาบันการศึกษาที่มีการจัดการเรียนการสอนด้านสถาปัตยกรรม และมัณฑนศิลป์บรรจุเนื้อหาการออกแบบสิ่งอำนวยความสะดวกสำหรับคนพิการและทุกคนในสังคมไว้ในหลักสูตร รวมทั้ง ส่งเสริมการวิจัย ที่เกี่ยวข้องกับการจัดทำ สิ่งอำนวยความสะดวกสำหรับทุกคนในสังคมด้วย

Rational and Significance of the Problem

The research entitled “Accessibility for Disabled Persons and Every Member in Society” is a part of the research project called “Integrated Strategies for the Development of the Quality of life of the Disabled”, which is based on the 9th National Social and Economic Development Plan (2002-2006), focusing on people-oriented development under the sufficiency economy philosophy. The Thai government is well aware of the rights of all citizens, which is in accordance with the equal human rights postulated in the 1997 Constitution. The constitution regards disabled people as a valuable human resource that deserves equal development of their life quality as abled persons. As a consequence, the cabinet on April 28, 2006 authorized the Ministry of Social Development and Human Stability to carry out the 2002-2006 National Development Plan for the Life Quality of the Disabled in order that the practices are in line with the relevant laws and national blueprint plans as well as other obligations that the country has ratified with the global community, such as, the Global Operation Plan for the Disabled, the Universal Standard on Equality and Opportunity for the Disabled, Human Right Declaration, the Decade Framework for the Disabled in Asia and the Pacific (2003-2012), and the Global Pact on Protection and Promotion of the Rights and Honors of the Disabled. Thus, the ministry has drafted the plan with eight aspects of the development strategies as follows: 1) Promoting awareness and creating constructive attitude 2) Rights and responsibilities 3) Developing the potential of the disabled 4) Research and development 5) Access to information, communication, services, technology and the environment 6) Empowerment of organizations working for the disabled 7) Participation of the disabled, families and communities; and 8) Integrated administration and management

From the above-mentioned strategies, the third strategy, developing the potential of the disabled, is regarded as very important because the aim of the strategy is to enable the

disabled to become independent without being a social burden. Besides developing their well being, education and vocational training, making and changing personal and public facilities for the disabled is also crucial. From analyzing factors affecting the quality of life of the disabled according to the plan of the ministry, it is found that social environments particularly physical and architectural, have remained a hindrance for the disabled to participate socially. Therefore, making and developing facilities for the disabled would enable them to access services and participate in social activities, which would improve and develop their quality of life, ultimately resulting in sustainable self-dependency. However, research studies on facilities for the disabled have remained non-existent. This is probably because studies on the disabled in Thailand are still in the beginning stage and unholistic, resulting in the lack of significant data to incorporate in the development plan at the national level. Implementing research findings from other countries as a plan guideline is definitely unsuitable due to different socio-cultural and economic contexts. With these reasons, the ministry has carried out the research project in an attempt to incorporate the findings into the development plan suitable for the national contexts.

The goals of this investigation were to apply the findings for efficient establishing and improving facilities for the disabled and the public and to respond to the state policy on improving the life quality of the disabled so that they are able to live happily with other ordinary people.

Research Objectives

- 1) To conduct a needs analysis on establishing facilities for the disabled and the public.
- 2) To investigate the management system of the facilities for the disabled.
- 3) To study the cost per unit in establishing or changing the facilities.

Research Methodology

The research was qualitative in nature, consisting of two phases as follows.

Phase 1 Present status of accessibility for the disabled and the public

It was divided into three steps to answer the three objectives.

In this phase, fieldwork data collection was carried out from two groups of informants. The first group was composed of 107 persons with visual, hearing, physical, mental or behavioral, and intellectual disabilities. The second group was 108 ordinary people representing each geographical region of the country, which included academics, architects, engineers, individuals providing facilities to, officers involved in providing welfare to the disabled, their families and their communities.

Phase 2. Guidelines in establishing and providing accessibility in the Thai contexts

The research team presented the findings of the first phase at the constructive brainstorming forum for the disabled on August 30, 2006 at Kingpetch Hall, Asia Hotel, to obtain feedback, critiques and recommendations from 79 abled and disabled specialists, academics and individuals working/specializing in the field. After the forum, suggestions and recommendations were used to improve the guidelines that would be suitable for the national contexts.

Results of this study

The research findings can be summarized into three parts according to the objectives as follows:

Part 1 Needs in providing accessibility to the disabled and the public

From analyzing and synthesizing the data obtained from people with various types of disabilities and individuals involved, it is revealed that there is a need to provide accessibility to the disabled, which can be categorized according to personal and public accessibility and types of disabilities as follows.

- Persons with visual disability

The findings reveal that people with visual disability from all regions required personal facilities to carry out daily life activities, e.g., a white walking stick, a voice watch, a magnifying glass, a Braille calculator and a radio. As for education-related facilities, they required Braille texts and calculators, personal computers and voice books and texts. Regarding career, they required career-support facilities that differed from one occupation to another.

With respect to public facilities, what they required included Braille walking passages, slope areas, voice elevators and Braille buttons in toilets where people with various types of disabilities could use. Furthermore, they required visually impaired

people-friendly public buses and voice phones with Braille buttons. In terms of knowledge, they wanted to get general knowledge from voice libraries (with voice texts and books).

- Persons with hearing disability

It is found from the research findings that people with hearing disability from all regions required personal facilities to carry out daily life activities, such as, hearing devices and mobile phones with text messages. For education, they wanted fax machines, personal computers and texts for teaching sign language. Regarding career-support facilities, their needs differed according to their occupations

With respect to public facilities, they would like to have signboards or computerized messages in public places. For public information, they would like to have subtitles on television or a sign language translation screen in order for them to understand. In addition, public transportation should have written texts or lights indicating locations. For other public facilities, they were able to share with ordinary people, except those with additional physical disabilities who might require special facilities to accommodate their disabilities.

- Persons with physical (mobility) disability

Facilities for people with mobility disability included equipment according to their disabilities, clutches and wheelchairs. For those unable to help themselves, additional facilities were wheelchair cushions and waste absorbent materials. Educational facilities most required were personal computers suitably modified for their disabilities and tape recorders for those with hand and arm disability. Career-wise facilities required were various according to personal occupations.

Regarding public facilities, most of them would like to have standard passage ways that actually facilitate their disabilities, pedestrian flyovers for people with mobility restriction, rail in elevators and toilets, and public buses designed for wheelchair users.

- Persons with mental or behavioral disability

Since people with mental or behavioral disability are physically normal, they did not require special personal and public facilities, except those with physical disabilities who would require facilities accordingly. Career-wise, they would like different facilities according to their occupations.

- Persons with intellectual or learning disability

As people with intellectual disability are physically normal, they are under the care of their families or guardians. Thus they did not require special personal and public facilities to carry out their daily activities, except those with physical disabilities. Educational facilities they would like to have included books, texts, personal computers,

computer assisted instruction programs, equipment, media and games to develop their learning skills and attention. Career support facilities differed according to personal occupations.

The needs for personal and public facilities of the people with various types of disabilities as mentioned above were the responses to their personal needs so that their living standard could be improved and they could live in the society happily. Personal and physical facilities are a part of the health and functioning subscale, whereas public, educational and occupational facilities are a part of the socio-economic subscale. More importantly, public facilities are an important factor to enable the disabled to become a part of the society, to interact with others and to participate in social activities, which would lead to their being socially accepted. As a consequence, concerned state and private agencies must urgently develop the quality of life of the disabled by establishing and changing personal facilities to accommodate their living, educational and occupational needs, as well as public facilities so that they could lead a normal life in the society.

Moreover, establishing and changing public facilities is a form of social development based on the objective quality of life, that is, material development in accordance with physical and social needs. This type of social development focuses on man and the environment, distributing equality to everyone in the society so that they can access to services, improve and develop their quality of life. Therefore, establishing and changing public facilities must emphasize on universal utilization

From the field research, important issues were uncovered on conditions and current environment of the facilities as well as problems in accessing them and desirable environment, which can be presented according to disability types as follows.

- Persons with visual disability

Most of the people with visual impairment viewed that public facilities were not suitable for their daily lives, especially walking pathways, substandard slopes, toilets and elevators. Moreover, public transportation and telephones were not suitable for their use as there were no warning sounds and Braille buttons. Therefore, it is strongly recommended that concerned agencies improve these facilities in order that visually impaired people were able to lead their lives with other people.

- Persons with hearing disability

Most hearing-impaired people viewed that public facilities for them were not suitable, particularly the communications system. The hearing impaired receive information through sign language and symbols, which are currently not adequate. Additionally, not all television stations provide subtitles or sign language interpreters.

Public transportation does not facilitate the hearing impaired to travel. Consequently, they would like concerned agencies to improve or establish public facilities so that they can lead a normal life like ordinary people.

- Persons with physical (mobility) disability

Most people with mobility restriction viewed that personal facilities supported by concerned agencies were substandard and not really practical. For instance, some physical supporting equipment, clutches and wheelchairs are low quality, less durable and/or require high maintenance cost. Moreover, public facilities are insufficient and do not facilitate them to lead a normal life, particularly wheelchair-bound people. Public transportation also makes lives of these people more difficult. Concerned agencies should establish and improve these facilities to accommodate them and other people especially the elderly, pregnant women and physically weak people.

- Persons with mental or behavioral disability

This group of people viewed that personal and public facilities were suitable because they were physically normal and could share these facilities with ordinary people, except those with additional physical disabilities who required special facilities according to their disabilities.

- Persons with intellectual or learning disability

Most of these people viewed that they had been provided adequate personal and public facilities. The interview data showed that they were under the care of their families and guardians in every aspect of daily activity. Therefore, public facilities did not seem to be problematic to them.

From the above analysis, it is indicative that the state must improve the standard of personal facilities so that their use are truly efficient in accordance with the needs and disability aspects of the disabled. For the development guideline, the state should coordinate with agencies involved in or developing standard personal facilities, e.g., the Sirindhorn Center for National Medical Rehabilitation, the Veteran Organization, Mahidol University and Rajamangala Technology University. Furthermore, public relations must be launched so that the disabled know which agencies provide personal facilities, how to contact them and what steps should be taken.

Regarding public facilities, the problems discovered were architecture-related, including slopes, pedestrian flyovers, elevators and toilets. Other public systems, such as,

pathways, telephones, road signs and bus stops are still problematic for the disabled and the elderly to get access to efficiently.

Moreover, other public transportation, e.g., public bus, subway, skytrain and other public vehicles are inadequate and do not facilitate the disabled.

As a consequence, establishing and changing public facilities for the disabled to live normally with other people is an urgent issue. All concerned agencies should carry out concretely with a focus on universal design so that everyone can truly utilize these facilities. It is thus recommended that the disabled, the elderly, pregnant women and physically weak people participate in providing ideas and recommendations in designing, building and changing the facilities so that they could accommodate all, regardless of physical conditions.

Part 2 Managing the facility system for the disabled

• Roles of concerned agencies

From synthesizing the data on roles of agencies and individuals involving in establishing and providing facilities to the disabled and the public, it can be summarized as follows.

• Personal accessibility

There are a number of central and regional agencies in charge of personal facilities for the disabled for daily activities, education and occupation. In the central, they include the Ministry of Social Development and Human Stability, Ministry of Public Health, Ministry of Education and Ministry of Labor and Social Welfare. In the local administrative region, they are provincial offices of social development and human stability, offices of provincial and regional education, provincial and district center hospitals, district and provincial public health offices and sub-district and district municipalities. Other non-governmental organizations are the Sirindhorn Center for National Medical Rehabilitation, the Veteran Organization and societies for the disabled. Many of these agencies provide personal facilities to the disabled without any charge. Nonetheless, the research findings reveal that the majority of the disabled did not know how to contact these agencies for assistance and what steps to take due to lack of public relations, thus depriving them of necessary information and an opportunity to get help

Nevertheless, there are problems on overlapping assistance as well as regulations or criteria of each agency that do not facilitate the help. For instance, disability criteria cannot be decided by many agencies. Consequently, public health agencies are asked to evaluate

the disabilities, which may be time-consuming and often delay the needs to get on with life of the disabled.

- **Public accessibility**

Most agencies responsible for establishing and changing public facilities are in the central and local administrative regions, such as, Department of Civil Engineering or provincial bureaus of civil engineering and city planning. Their works must be based on regulations of the Ministry of Social Development and Human Stability, Volume 4 (1999), concerning specifications of facilities for the disabled; and on the 2005 regulations of the Ministry of Defense, concerning specifications of facilities inside buildings for the disabled and the elderly. These regulations are the architectural framework for building facilities in their respective administrative regions. Facilities, such as, footpaths, slopes, public parks, public toilets and roads, are under the responsibility of central, provincial and sub-district administration organizations and municipalities according to the 1999 Decentralization Act. Moreover, municipalities must follow the 2000 Municipality Act, authorizing them to build and maintain water and land systems, public toilets, public transportation, parks and traffic engineering for the benefits of local people. For effective and efficient facilities, architects and engineers providing in-depth interview data recommended that the disabled, the elderly and physically weak people participate in the designing process. In addition, designers should have public conscience so that everyone in the society could share the same facilities.

Part 3 Cost per unit in establishing and changing facilities

The following data were derived from synthesizing in-depth interview data conducted on the disabled about the cost of building or changing personal facilities, which included those for daily activities, education and occupation. The cost per unit for building or changing public facilities was derived from an appraisal of architects and engineers in charge of the work.

- **The cost for building or changing personal facilities**

From synthesizing the data on cost for personal facilities, it is revealed that the cost was various, depending on efficiency of use, durability, special qualifications and materials. The data on price and price range as well as maintenance cost were synthesized and presented in detail in the main research paper.

- **The cost for building or changing public facilities**

Public facilities most wanted by people with all types of disabilities were slopes, connections between buildings (which could be modified into pedestrian walkways),

elevators and toilets for the disabled. When the analysis results were revealed, the research team sent a letter to the Planning Division director, Mahidol University, requesting the Blueprint Unit to evaluate the cost and design standard plans of the facilities. The design and evaluation of the cost by the architects and engineers of the unit were presented in detail in the main research paper.

A guideline in establishing and providing accessibility for disabled persons and the public in the Thai context

The 1997 Constitution was the first legal code that clearly and thoroughly defined the rights and freedom of every group of people in the society, particularly the underprivileged, the disabled and the elderly. Article 30 of the constitution specifies that “individuals are legally equal and are equally protected by law. Discrimination due to differences in physical conditions or health is forbidden.” Article 55 specifies that persons with disabilities are entitled to get facilities from the state; and Article 80 states that the state is obliged to assist the underprivileged, the elderly and the disabled. Additionally, the ninth National Economic and Social Development Plan (2002-2006) focuses on people-oriented development based on the sufficiency economy principle. With respect to developing the quality of life of the disabled, the cabinet approved on April 28, 2003 that the Ministry of Social Development and Human Stability implement the National Development Plan for the Life Quality of the Disabled (2002-2006). The implementation should be in line with relevant laws and national blueprints and obligations ratified with the global community

In addition to education, providing personal and public facilities to the disabled is also crucial for developing their potential, enabling them to access to services to improve their quality of life, leading to sustainable self-dependency.

From synthesizing the data on current situation and recommendations from the forum, the findings could be incorporated into a guideline for establishing and changing facilities and environment suitable for all, as follows.

- **Developing the standard of personal accessibility**

The state must improve the standard of personal facilities so that they are efficient and truly in line with the needs of the disabled and types of disabilities. The development guideline is that the state must coordinate with other agencies, e.g., the Sirindhorn Center for National Medical Rehabilitation, the Veteran organization and universities instructing about and producing equipment and facilities for the disabled in order to develop them for better efficiency.

- **Developing public accessibility and environment suitable for everyone**

The state must establish and change public facilities architecturally so that people with all types of disabilities could live happily with normal people in the society. It is thus imperative for concerned agencies to carry out concretely with an emphasis on universal design. In order for everyone to fully access to and exploit public facilities, the disabled, the elderly, pregnant women, children and physically weak people should participate in giving ideas and recommendations in designing, establishing and changing these facilities. Furthermore, cooperation with the private sector should be sought in establishing and changing public facilities in their premises. Laws and measures may be issued to accelerate the operations. Moreover, tax reduction may be enforced as an incentive for those carrying out the operation.

- **Establishing and changing facilities for disabled persons and everyone with community participation**

Community-based rehabilitation is an important strategy in developing the quality of life of the disabled, providing equal opportunities for them. The rehabilitation is an implementation of the policy, providing the disabled, families and communities suitable health, education, occupation and social services. According to the Decentralization Act, local administrative organizations are authorized to organize appropriate education, training and vocational training according to local needs. Consequently, these organizations should play a part in helping to establish and change public facilities. However, before the implementation can be carried out, they must ask themselves whether they are ready for the task. It is thus recommended that there be an agency in charge of evaluating them and providing them necessary information about the operation.

Recommendations from this study

Policy support from the state

Current situations on establishing and changing facilities indicate that the state is not seriously paying attention to developing the quality of life of the disabled. Budget allocation for this issue is far from sufficiency to enable the disabled to become independent. Furthermore, there are problems of overlapping work and coordination among concerned agencies. Therefore, to concretely and efficiently carry out the operation, it is recommended to the state as follows.

1. The strategic plan for developing the quality of life of the disabled should be incorporated in the 10th National Social and Economic Development Plan as a major strategy separated from that for the underprivileged, e.g., the elderly and the poor. The 9th

Plan did not separate the strategy, making life quality development for the disabled practically unclear. It has become so problematic that the Ministry of Social Development and Human Stability decided to establish the national plan for developing the quality of life of the disabled 2002-2006. Nevertheless, the operations have not been so concretely practical. The future plan should have clear policies on establishing and changing facilities, with various organizations working for the disabled participating in architectural design. Consequently, academic and budgetary supports must be adequate to carry out the operation.

2. The national budget plan should be set up to carry out the improvement and building of public facilities in accordance with the strategic plan to develop the quality of life of the disabled in terms of facilities and environment, and the budget should be allocated to both central and local administrative agencies.

3. A public campaign should be launched to encourage business operators and the private sector to establish and improve facilities for the disabled in their premises. In addition, tax system should be improved for those involving in the campaign to have a tax reduction for building the facilities in their premises.

4. Local state agencies should be made ready for authority transfer concerning developing the quality of life of the disabled, as a result of the decentralization process. The local agencies are authorized to build public facilities and oversee architectural buildings suitable for local needs. Consequently, the state must empower these agencies by defining the framework, authority in developing the quality of life of the disabled, making them aware of and providing them knowledge about the needs to build these facilities in relation to local wisdom and using locally available materials. Moreover, there must be concrete evaluation on operational steps and standard criteria. The state must closely monitor the operations and provide financial supports to the agencies. A pilot project may be launched in certain communities as a model for other communities to do likewise.

5. A campaign to create the right conscience in the public to provide equal opportunities and human rights to the disabled instead of pity should be launched by organizing social activities for the abled and the disabled to participate in order for cultivating mutual understanding and cooperation in social developments.

6. Organizations for the disabled should be empowered and promoted to participate in establishing and changing facilities in both the central and local levels. The disabled at the local level should be encouraged to become leaders and a driving force in pushing local administrative organizations to create and change public facilities in their respective regions, probably in cooperation with non-governmental organizations.

7. An agency in charge of examining and evaluating public facilities should be set up in an attempt to improve the standard of public facilities suitable for local contexts.

8. Educational institutions should be promoted to organize classes in architecture and design with a content on designing facilities for the disabled and the public that emphasizes on universal design.

Research on developing personal and public accessibility

From reviewing related literature, it is found that there had been very few studies on developing public facilities for the disabled and the public in Thailand. This is a reason for the lack of important data to be used for planning and developing the quality of life of the disabled. The findings from this investigation are an important data to develop their life quality on suitable facilities and environment in accordance with current actual contexts. Further studies are recommended as follows.

1. A research on developing the standard of individual and public facilities suitable for all should be conducted so that the data could be incorporated into development plans of concerned agencies.

2. An analysis on the cost of building individual facilities for people with different types of disabilities and public facilities for all should be carried out for effective budget allocation to concerned agencies.

3. A research on universal design of public facilities should be examined, so that everyone, regardless of physical conditions, can use the same facilities.

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