

Empowering Women with Disabilities in the University's Library in Developing Countries: Inclusive Design and Social-Economic Empowerment

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Abstract

The Persons with disabilities' right is regarded as significantly important by the United Nations' Convention on the Rights of Persons with Disabilities (UNCRPD). Therefore empowerment strategies are needed to remove the barriers faced by Persons with Disabilities (PwDs). In Indonesian context, Act No. 8 the Year 2016 actually have recognised the rights of PwDs. Unfortunately, the UNCRPD implementation was not implemented yet with many inaccessible educational facilities. Therefore, Inclusive Design (ID) framework is needed because of the University's Library role as the central service for higher degree education and community hub. The research is trying to answer the research question of: "What are the barriers and success points of the implementation of Inclusive Design in Indonesia?" The research is conducted with qualitative methods in Petra Christian University (PCU) Library in Indonesia. It will involve decision makers, architects, librarians, and students with disabilities.

An introductory project in PCU Library had been conducted in 2017-2018. The temporary findings are: PCU Library accessibility improvement was proposed following inclusive redesign methods. The barriers of ID implementation is the limited awareness of decision makers and the limited number of librarians. Besides that, the Special Assistance Corner and

Disability Service is constructed in PCU Library, causing more educational access to PwDs and reducing poverty of PwDs, especially the Women with Disabilities. Additional women empowerment will be conducted by PCU Library such as the Products' Packaging Training for Medium and Small Enterprise (MSE) in Pagesangan, Jambangan.

The Development Problem, Background and Context

Importance of Persons with Disabilities Right and Population

The Persons with disabilities right is regarded as significantly important by the United Nations' Convention on the Rights of Persons with Disabilities (PwDs). Therefore empowerment strategies are needed to remove the barriers faced by PwDs (WHO & WB, 2011). The disability is described as the condition of human impairment with difficulty functioning (Zola, 1989). In Indonesian context, Act No. 8 the Year 2016 actually have recognised the rights of Person with Disabilities. Unfortunately, the UNCRPD implementation appears not effective enough (Edwards, 2014). Many educational facilities are inaccessible for the PwDs. Therefore, Inclusive Design (ID) framework is really needed (The British Standards Institution, 2005).

Persons with Disabilities (PwDs) population in the world reached almost one billion people and of whom 200 million people diagnosed with severe functioning difficulties (WHO & WB, 2011). In Australia, the PwDs population in 2015 reached 4.3 million people (or 18.3% to total population) (Australian Bureau of Statistics, 2016). Meanwhile, in Indonesia, 9.04 million people with disabilities were recorded in 2012 (or 4.74 % to total population) (Indonesian Statistic Centre Bureau, 2012). It is considered as important because of the large population of PwDs. Meanwhile, it seems that more Indonesian PwDs population might be misreported by the statistics compared to Australian PwDs Statistics, possibly because of social discrimination of the PwDs.

It is believed that the discrimination of Indonesian PwDs was caused by poor protection of PwDs rights (Edwards, 2014). Firstly, the protection is failing because of several legislations are not in sync with UNCRPD. Secondly, it is failing because of the poor understanding about PwDs in Indonesian society. Cameron and Suarez, (2017) also argued that the discrimination of PwDs

caused limitation to educational access, economic opportunities and access to public services, poverty, and even poor health. Therefore, the discrimination are key points for improving accessibility.

Importance of University Library

The University Library is found as the central service for higher degree education by Robertson (2012). The paper actually emphasised the importance of the university's library for accommodating all students' needs. Persons with disabilities should have access to inclusive library services, such as accessing accessible document formats, reading documents with assistance of screen-reader software, borrowing with longer loan periods. On the other hand, physical access, signage, acoustics and accessibility of the library also must be planned to serve the people with mobility problems, hearing impairments and visual impairments. Other accessible library checklist (Irvall & Nielsen, (2005) was developed by the IFLA Standing Committee of Libraries Serving Disadvantaged Persons (LSDP) for accessibility to libraries. These two papers highlighted the importance of university library.

Importance of Inclusive Design

The Persons with Disabilities needs is almost certain to be answered with Inclusive design (ID). The design process focuses on the users' needs as much as possible (The British Standards Institution, 2005). On the other hand, the ID includes the concept of "reasonable" or the preference to cost-effective measures to answer the accessibility issue in Developing Countries. The process is not only defined with the fixed set of criteria, but also flexible philosophy.

Inclusive Design or Cooperative Design/ Co-Design for Developed Countries (USA) is successfully executed in The Auraria Library (Somerville & Brown-Sica, 2011). The case is interesting because incorporating inclusive planning steps for spatial reuse. The Library's design charrette also shows the PAR principles for dynamic user demands. Unfortunately, it can be argued that the process is not flexible for developing countries because taking the 18-month period (including the two-day design charrette involving campus stakeholders). Therefore, the ID process must be adjusted for the Developing

Countries, such as Indonesia.

The Possible Barriers to Inclusive Design in Indonesia

The poor access of public buildings of Indonesia (as one Developing Countries) are corroborated by several papers (Komardjaja, 2001; Komardjaja, 2005; and Ikaputra & Sholihah, 2001). Firstly, Komardjaja, (2001) found inaccessible pedestrian in Bandung City because of different elevation, potholes and uneven sidewalks, open drainage, the absence of safety features. Similarly, Ikaputra & Sholihah (2001) also found the similar condition in Yogyakarta. Some public areas are found inaccessible such as train station, bus door, train platform, etc. Thirdly, Komardjaja, (2005) highlighted the poor accessibility of educational facilities for persons with intellectual limitation. The building guidelines are not implemented during the accessibility workshop in the research. All three papers actually highlighted that the Indonesian public buildings were generally not accessible for PwDs and showed there are barriers of the inclusive design.

In contrast, Some Indonesian Higher Degree Institutions have prescribed accessible campus such as Brawijaya University (Rizky, 2015). The paper found that limited access to higher education and social discrimination practice actually hinder the PwDs to pursue educational rights. Therefore, Brawijaya University tried to initiate the inclusive campus model with supporting the advocacy works, setting up the grand design of the inclusive campus, setting up new Center for Disability Studies and Services (CDSS) to guarantee the welfare of PwDs, and making Special Selection Program to the Students with Disabilities (SSPSD). All these strategies can actually create the inclusive higher education in the Indonesian case. Unfortunately, the policy might seem not effectively implemented because currently, only limited PwDs can access the Indonesian Higher education.

In the developed and democratised countries, inclusive design practices were fully accepted in Somerville & Brown-Sica(2011); Wu & Song (2017); Clarkson, Keates, Coleman & Lebbon (2003); and Imrie & Hall (2001). Unfortunately, in developing countries, the framework may not be accepted because of five possible problems, such as:

- limited PwDs participation

- low level of education of the PwDs
- limited knowledge of Inclusive Design standards among stakeholders
- high design-and-construction cost of the accessible building
- limited design-and-construction time in the project

Importance of Persons with Disabilities Empowerment, especially Women with Disabilities

Priebe (2018) found that disability contributes to poverty in Developing Countries. Based on 13 different datasets gathered from 2000 to 2014, disability is found strongly related to the low-income, the senior residents and rural areas context. On the other hand, the poverty reduction policy, ageing mitigation policy, and rural development policy often do not consider PwDs. Therefore a policy, such as education is needed to alleviate poverty among the PwDs.

This is corroborated with Filmer's (2008) findings on relations between poverty and low education level in 14 household surveys in several developing countries. Filmer finds 2 per cent of respondents is with disabilities from 14 household surveys from 13 developing countries. PwDs are often found in poorer condition than their peer. They also mostly have lower educational. The school participation level of PwDs is only 50 per cent in 3 of the 13 countries. The low level of education and poverty has created a vicious life cycle of PwDs in developing countries.

UNESCO Institute for Statistics (UIS) (2018) also highlights that Women with Disabilities are less possible to enjoy formal education compared to men with disabilities. They are double marginalised by their disability and gender. In several countries, higher literacy rates are found higher in men than women with disabilities. The largest gap is evident for Mozambique, where 49% men with disabilities can read and write, compared to 17% Women with Disabilities to read and write.

Kusumastuti, Pradanasari & Ratnawati (2014) also argue that PwDs in Indonesia face difficulty accessing social and physical environments because of charity-based policies, inadequate medical treatment and tight social protection, even though they can live independently. Kusumastuti, et al.

(2014) recommend increasing educational level of PwDs to create inclusive employment, and increasing the public awareness for disability inclusion. In conclusion, the awareness of PwDs and the public regarding inclusive living and accessible buildings must be raised to create a more inclusive society.

Adioetomo, Mont & Irwanto (2014, pp.130-132) also prescribes several steps such as:

- to raise public awareness on the disability rights protection
- to develop the inclusive education system and facilities including the training and empowerment of the teachers.
- to create subsidised school transportation mean.

Adioetomo, et al. (2014, pp.130-132), also recommends facilitating the PwDs with educational facilities to improve their employability such as:

- to provide inclusive vocational training tailored to the market and disability spectrums
- to align labour laws with UNCRPD
- to increase awareness among employers
- to create pilot projects for employment programs for disabilities
- to increase access to microfinance for self-employed or entrepreneur with disabilities

It can be concluded that among sectors examined, there is a clear connection between disability and poverty. The correlation of disability was found to the low status of education, employment, and family and community life. Therefore, to alleviate poverty among PwDs, education programs and the improvement of accessibility of educational facilities are critical (Adioetomo, et al. 2014).

The Research Questions

There are three research questions presented in the paper.

- “What are the key success points and the barriers of the implementation of Inclusive Design in Indonesia?”
- “What new the inclusive design framework is suitable for the Indonesian case study?”
- “Is there additional empowerment needed for Women with Disabilities in

University Library?”

Consequently, several research purposes are identified:

- To investigate the key success points and barriers of implementing Inclusive Design in Universities Library from Indonesian stakeholders' perspective (including Head of Librarian, Lecturers, and PwDs).
- To suggest new possible inclusive design framework methods implemented by consultants and universities in developing countries
- To evaluate the limitation of the new framework inclusive design in Petra University as the ID process model

The Research Methodologies

The qualitative methods are selected following the Persson, Åhman, Yngling & Gulliksen, (2015); MacLachlan & Swartz (2009); Somerville & Brown-Sica (2011); and Ikaputra & Sholihah (2001). A survey has been conducted to gather the key success points as well as barriers in implementing the inclusive design in the libraries. The survey population involves decision makers (head of the library), lecturers and architects involved in the design, librarians, and PwDs. The Data Analysis will be conducted with the deduction method.

Introductory Project in Petra Christian University in 2017-2018

An introductory project was conducted in Petra Christian University Library in 2017 – 2018 to complete the data and following these steps (partially reported in Wulandari, Tanuwidjaja , Kristanto, Yessica, Tondayana & Hariyono, 2017) :

- *Mapping of all users in Petra Christian University (PCU)*
- *Documentation of PCU library accessibility*
- *Sensitivity training for librarian, lecturers and students*
- *Inclusive Design for User Assistance Corner in Petra Christian University Library*
- *Architectural Model Making*
- *Participatory Workshop for Library Design with students and PwDs*
- *Create assistance program for PwDs in disability service corner*

- *Creative campaign for User Assistance in PCU Library.*

A year later, the follow-up-creative campaign for Special Users' Assistance Corner in Library @ Petra was conducted in April – May 2018. The event was launched by PCU Library concurrently with the completion of the Assistance Corner construction. Furthermore, it was conducted in collaboration with *Lembaga Pemberdayaan Tuna Netra* (Blind Empowerment Agency) and *Sekolah Luar Biasa Siswa Budhi* (Special School for Students with Mental Disabilities and Deaf Students of Siswa Budhi) (Petra Christian University Library, 2018).



Figure 1. The person with visual disability contributed to participatory workshop design



Figure 2. The person with physical disability and parent contributed to participatory workshop design



Figure 3. The creative campaign for user Assistance Corner, with serving person with disabilities and senior persons



Figure 4. The creative campaign for user Assistance Corner, with serving person with disabilities and senior persons



Figure 5. The talking computer serving persons with visual disabilities



Figure 6. The Campaign for Special Assistance Corner



Figure 7. The Campaign for Special Assistance Corner



Figure 8. The Campaign for Special Assistance Corner



Figure 9. The Campaign for Special Assistance Corner



Figure 10. The Campaign for Special Assistance Corner

Temporary Findings and Arguments

Because the program was still ongoing as research of Gunawan's Doctor of Philosophy in QUT, we can only report partial results which are described in Wulandari, Tanuwidjaja, Kristanto, Yessica, Tondayana, & Hariyono, (2017).

The PCU Library redesign was conducted with combining inclusive design and universal design methods and principles. The redesign concept follows the User-Centered, integrating the need of persons with disabilities, and other users. The design considered social accessibility as well as physical accessibility.

The PCU Library is located in Radius Prawiro Building (In Building) 5th, 6th, 7th, and 8th floor. The library is found only accessible for wheelchair users on the 6th floor only. The Equitable Use but Reasonable Principle is implemented with providing accessible pathways / corridors and rotating space within the 6th floor.

Secondly, the Simple and Intuitive Use principle is applied with simple circulation proposed. The circulation is emphasised with accessible signage and guiding path for blind users. The assistance corner for special users is proposed. Thirdly, the Low Physical Effort is applied with accessible toilets and disabilities volunteers' assistance. Additional computers for blind users were provided to assist them reading and accessing e – book and catalogue website. The fifth Principle Prohibition of Usage Error is applied in the toilets with railing, anti-slip floor, sitting toilet and sliding doors.



Figure 11. The Initial Design of Special Assistance Corner in PCU Library



Figure 12. The Final Results of Special Assistance Corner



Figure 13. The Final Results of Special Assistance Corner



Figure 14. The Final Results of Special Assistance Corner

The benefit of the redesign is the increase of PwDs use in libraries. Currently more than 5 students with disabilities especially the visual disabilities are using the service corner to look for e-book or locate the book. Unfortunately, the limited number of special librarian to assist the PwDs are hindering the service. More student volunteers are going to be recruited in the near future.

The New Context, New Problems and the Benefits from the Innovation

The idea or innovation of inclusive design is not original, but the application of inclusive design in developing countries are in infancy state. It is

already applied in developing countries such as Campus Design (Altay & Demirkan, 2014); ICT provision (Petrie, 2016); Accessible Tourist Destination Model (Ernawati & Sugiarti, 2005). The library redesign in developing countries is not applied yet.

The benefits of the inclusive design application is very clear such as improving the education access to PwDs. The idea also will alleviate the poverty of PwDs especially the Women with Disabilities, especially combined with the following libraries program to generate, such as involvement of Women with Disabilities in the redesign of the library design interior in the other public or university libraries. The involvement of Women with Disabilities will improve the accessibility of design in other libraries as prescribed by Lamichhane (2015). Lamichhane (2015) highlights the importance of human capital of PwDs and recommend paradigm shift of all stakeholders from charity into investment approach. The research further explains how education make PwDs achieve economic independence and social inclusion with detailed analyses of returns to the investment.

The Women with Disabilities (WvDs) empowerment program is proposed such as start-up training for women with disabilities, including packaging design, accounting training, and online marketing training. The training is still being conducted by PCU Library in collaboration with the Surabaya Municipality Library and other Department of PCU such as Management Department, Accounting Department, and Visual Communication Department. This will benefit Women with Disabilities (WvDs) that are willing to start the new micro businesses.

The Women with Disabilities empowerment strategy is supported by several papers such as:

- Goodman (2015) prescribes the role of library as the community educational facilities in Australia,
- MacKellar (2015) prescribes the strategy of libraries to meet the community needs in USA
- Sen (2014) prescribes the importance of community orientation of the libraries.

Several papers discussed above corroborate the importance of the

library contribution to the PwDs especially Women with Disabilities to become inclusive with society. Some example of current Women Empowerment conducted by PCU Library is the Products' Packaging Training for Medium and Small Enterprise (MSE) in Pagesangan, Jambangan. PCU Library and the Surabaya Municipality Archives and Library Section collaborate for the preparation of *Taman Bacaan Masyarakat* (Community Reading Facility or CRF) competition. The CRF competition requires the impact of Pagesangan CRF to the empowerment of MSE in Pagesangan Village, Jambangan District. Therefore several trainings are proposed including the Products' Packaging Training. The training is supported by the PCU's Institute for Research and Community Service (LPPM) and PCU Visual Communication Design Department. Because of limited space in the Pagesangan CRF, the training was conducted in PCU Library, guided by Ms. Elisabeth Christine Yuwono, and Dr. Listia Natadjaja. The participants are expected to get ideas and skills to make packaging, such as food and beverage products, handicrafts, etc. This is a clear proposed activities that can be followed for the Women with Disabilities empowerment.

Differ with men, women have two main roles at once -reproductive and productive - in their society. Reproductive role is not limited to give a birth and nurture the children. Their reproductive role is also including to take care of the male partner and to maintain the household for their families as well. For productive role, women may play a role as a breadwinner as well. The main reason for them to do this role is to have more income for affording their households needs. Even at many cases, when there is an absence of their male partner as a breadwinner, productive role becomes unavoidable for women itself (Fitria, 2009).

On the contrary, there is still power imbalance that should be faced by many women and girls even though international agreement already affirmed their human right. This power imbalance leads them to have less access to ownership, credit, education and employment. Moreover, they are more likely to be victims of domestic and other forms of violence (The United Nations Population Fund, 2018a). In order to overcome this condition, United Nation Population Found or UNPFA has formulated four key issues for women empowerment that can be described below (The United Nations Population

Fund, 2018b) :

1. Reproductive health: It is a fundamental issue that women should have a control for their own fertility. They should be able to determine the plan in having children to ensure their health and time allocation. By promoting this issue, it is expected women can properly manage their quality time for her own, family and society.
2. Economic empowerment: In worldwide, there are still many cases that unpaid work both in families and community burden on women shoulder.
3. Educational empowerment: There is a strong relationship between the increasing women and girls to have higher education with the decreasing the infant mortality and fertility. This condition can give better outcome for their children as well.
4. Political empowerment: There are too many social and legal institution have not guarantee of women equality in basic legal and human rights. Girls and young women with disability have greatest risk to sexual and any other violence forms. Law against domestic violence are often not enforced by women either. So the participation of women in parliament in terms of law enforcement should be encouraged - since in globally, the women participation in parliament is 24 per cent only.

Lately, in Surabaya context, as one of the biggest cities in Indonesia, the reason of women to do their productive role is not limited for increasing their families' income, but more like a self-actualization. Higher education and massively exposed by information technology give them wider opportunities to get formal and informal employment. However, this opportunity still rarely obtained by the women with disability because both social system and physical environment still think that they are the one who need to be fixed, not the other way around. This condition leads to power imbalance that has described earlier is quite vulnerable to be experienced by women with disability as well. So, the empowerment for women with disability is urgently needed.

As a university library, PCU Library's function is not limited for central service for higher degree education students. The library can extent its function to become a community centre by providing empowerment program for society including people with disability. Focus on the women with disability,

the library may develop and conduct empowerment program that have relevancy with the key issues that have described previously by UNPFA about women empowerment. The recommended programs are:

Table 1. Recommendation for Empowerment of Women with Disabilities

| Key Issue | Recommended Programs |
|--|---|
| <i>Reproductive Health</i> | <ul style="list-style-type: none"> • <i>Breastfeeding for Women with Disabilities</i> • <i>Family Planning and Birth Control</i> |
| <i>Economic Empowerment</i> | <ul style="list-style-type: none"> • <i>Training for Start-Up programs (including how they can interface with information technology properly)</i> • <i>Money Management in for Household</i> |
| <i>Education and Political Empowerment</i> | <ul style="list-style-type: none"> • <i>Knowledge about Independent Living Concept for Women with Disability</i> • <i>Peer Support Program among people with disability to be more assertive to their family and society</i> • <i>Knowledge about laws and regulation related to Women, PWD and WWD issues</i> • <i>Foreign Language Training Program</i> |



Figure 15. The Start-up Training (Packaging Design) Source: PCU Library (2019).



Figure 16. The Start-up Training (Packaging Design) Source: PCU Library (2019).



Figure 17. The Start-up Training (Packaging Design) Source: PCU Library (2019).



Figure 18. The Start-up Training (Packaging Design) Source: PCU Library (2019).

Conclusions

Persons with Disabilities need to be given access to inclusive design to ensure their educational rights. The process will consider the marginalized condition of PwDs in developing countries, limited knowledge of Inclusive Design as well as the limited social and economic condition of Universities of Developing Countries. Therefore, the adjustment must be made to the existing inclusive design frameworks such as culturally-based empowerment of the Persons with Disabilities, the educational seminars of Inclusive Design standards for decision makers, and the participatory workshop involving Persons with Disabilities in the major stakeholders' level. The inclusive design was presented clearly in PCU Library Redesign cases.

Besides that the social-economic empowerment of Women with Disabilities must be conducted to alleviate the disabilities related poverty. It can be conducted with collaboration of public and university libraries and

higher education as presented in PCU Library case.