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Good Intentions in Universal Design: A Global Challenge for Higher Education

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Abstract. It is not often that a high-level edict requires higher education centres to promote universal design through their programmes; however the recent United Nations Beijing Declaration and Action Plan (UNESCAP 2017) expressly states that, "academic institutions should provide training programmes on universal design for policymakers, building inspectors and contractors, as well as integrating universal design and accessibility into curricula related to architecture, urban planning, transport, civil engineering and other relevant academic branches". This is particularly timely in the Asia-Pacific region, where economies continue to show massive expansion of their built environments. This imperative to future-proof any development therefore is vital, especially considering the growing percentile of older people with their needs for safe and accessible living. Achieving these ends clearly implies a need both to educate professionals and to enact appropriate codes and standards, which in turn require the training of personnel to carry them out. Anticipating this need, Goal 3 of the United Nations Incheon Strategy (UNESCAP 2012) optimistically calls for "civil society involvement in conducting accessibility audits, creating guidelines and advocacy work to promote universal design" and "to enhance mechanisms for tracking its progress". While such good intentions are admirable, they will require radical steps to be achieved. The paper describes examples, including those from the writers' own experiences, outlining a range of practical methods which academics and teachers involved in inculcating universal design principles in both European and Asian centres, through their teaching, training and technology transfer, can positively support continued cooperation towards a more inclusive World for everyone.

Keywords. United Nations, UNESCAP, Universal Design, Physical Accessibility, Education.

1. Introduction

As one of the main agents in the move towards better living conditions, the United Nations continues to play an important role in ensuring human rights, including the rights of people with disability. UNESCAP, the United Nations Economic and Social Commission for Asia and the Pacific, based in Bangkok, is responsible for an area stretching from Pakistan, to Mongolia and Korea in the North and West, and to The Pacific Islands in the East. As such, it embraces an enormously diverse range of economies, from some of the poorest countries, such as Bangladesh, to the industrial

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giants of Japan and Korea as well as India, with its more recently expanding economy. Through its Social Development Division, UNESCAP has over the last three decades implemented a number of significant initiatives towards improving the lives of populations of all countries in its area, including accessibility for people with disabilities, not only in the built environment but in education, employment, communications and services.

In Asia this is manifested in a drive to increase standards in line with the demands of Article 9 of the Convention on the Rights of Persons with Disabilities [1]. Whereas in the USA and most European countries, accessibility and the rights of people with disability is assumed to be achieved through building control codes and standards for elements such as stairs, wheelchair spaces or signage, a rights-based approach may be more effective in countries where such standards either do not exist, or are not enforceable through a lack of skilled professionals to carry out inspections.

The CRPD Convention focuses on accessibility, and requests *"States Parties to develop and implement legal measures to ensure 'universally designed accessibility' for persons with diverse disabilities"*. Development in Asia in the last three decades has been phenomenal in industry and commerce, and also in the rise in living standards. The rate of construction of buildings and infrastructures has been matched by the development of attendant services. Attitudes to civil society have also emerged, with attention being paid to the needs and rights of less-able citizens, not only for people with disability but also for the rapidly-increasing cohort of older members, as people live longer and have higher expectations from their daily lives.

2. Early UNESCAP initiatives

As far back as 1993-2002 UNESCAP instigated the first "Decade of the Disabled", which included projects and initiatives to encourage participating countries to improve the lot of their disabled populations with regard to accessibility. These included a series of "Training the Trainers" workshops wherein invited participants from member states exchanged experiences and underwent exercises to increase skills levels. Each country sent three members, generally with one professional designer, one policy maker representing a governmental agency, and one member of a local disability group, whose first-hand experiences of disability would prove instructive to the others. These workshops included sustained simulation exercises, expert technical presentations and field visits.

During the First Decade UNESCAP published the 'Promotion of Non-Handicapping Physical Environments for Disabled Persons: Guidelines. 1995 [2], serving as a template to encourage countries in the region to evolve their own access codes. Many states did adopt their own codes but, in their enthusiasm to improve standards, these were sometimes unrealistically demanding for less-developed economies, and unlikely to be enforceable, since professional knowledge in that area had yet to catch up. In the main, however, this initiative did have some very positive results, as government projects were obliged to work towards them, both in new buildings and in retrofit or maintenance of streets and footways. During the Decade three major cities in the region, Beijing, New Delhi and Bangkok, were selected to undertake a Pilot Project to upgrade accessibility in an area of the city 1 km square. Government buildings, private developments and streetscapes were included in this exercise, which was recorded in a publication [3]. Some participants were teachers in architecture schools and they were

encouraged to keep up with such accessibility standards in their design teaching, although there appears to have been little contact with other schools.

3. United Nations' role in promoting universal design

Coming from the work achieved during the First and Second Decades, the 'Biwako Millennium Framework for Action Towards an Inclusive, Barrier-Free and Rights-Based Society for Persons with Disabilities in Asia and the Pacific' was agreed [4]. This included clear directives on the need to include principles of accessibility into the education of professional designers. It was also the first time that the concept of Universal/Inclusive Design was introduced, outlining its advantages over basic accessibility or barrier-free design for a much wider spectrum of the population, particularly its older members. The Framework includes a series of targets for adopting and enforcing accessibility standards and for promoting Universal Design for built environments and transportation. Target 3 of the Framework makes the important requirement to "*Ensure that professional education and academic courses in architecture, planning and landscape and building and engineering contain inclusive design principles; 'teaching the teachers' courses in effective teaching of practical accessible design are established for all design schools in the region, including travelling workshops which involve the active participation of persons with disabilities; and support continuing education professional development courses on best practices in inclusive design techniques for experienced practitioners, including those professionals who work closely with the end-users, such as community-based rehabilitation personnel.*" [5]

This is a huge requirement, with only a little practical advice given on how this might be achieved, to *"Encourage innovative techniques, such as through design competitions, architectural and other awards and various other forms of support, to identify particular applications that enhance accessibility and apply local knowledge and materials"*

United Nations moves in particular ways, but has no power to enforce such good intentions that are, in practice, hard to apply. Although most governments in the ESCAP region have signed up to the Agreement, little or no action is possible without experienced professionals to train those who have an influence on design education. But in November 2012, *"Governments of the ESCAP region gathered in Incheon to chart the course of the new Asian and Pacific Decade of Persons with Disabilities for the period 2013 to 2022. The Meeting marked the conclusion of the Second Asian and Pacific Decade of Disabled Persons, 2003–2012, and the new Decade was then launched".* At this meeting representatives of governments adopted the Ministerial Declaration on the Asian and Pacific Decade of Persons with Disabilities, 2013–2022, and the 'Incheon Strategy' to 'Make the Right Real' for Persons with Disabilities in Asia and the Pacific [6]. The Incheon Strategy builds on the Convention on the Rights of Persons with Disabilities and the Biwako Millennium Framework for Action and Biwako Plus Five towards an Inclusive, Barrier-free and Rights-based Society for Persons with Disabilities in Asia and the Pacific. The ESCAP Secretariat is required to report every three years on progress in the implementation of the Incheon Strategy, until the end of the Decade.

Goal 3 of the Incheon Strategy optimistically calls for, *"civil society involvement in conducting accessibility audits, creating guidelines and advocacy work to promote universal design"* and *"to enhance mechanisms for tracking its progress"*. While such good intentions are admirable, they will require radical steps to be achieved.

Goal 3, which seeks to *"enhance access to the physical environment, public transportation, knowledge information and communication*" is "*the World's first set of regionally-agreed disability-inclusive development goals that are time-bound & measurement orientated".* This last imperative, to measure and audit existing environments for accessibility, is a prevailing target and, although UNESCAP proves adept at data-gathering, practical conclusions that are drawn from such statistics are less evident. It advocates *"devising and implementing a system to conduct regular accessibility audits of key public buildings and transportation hubs, key government offices, schools, hospitals and emergency shelters, business centres, houses/places of worship and any other public places before construction and periodically once in use*"[7]. Such access strategy statements are valuable in ensuring that parity is achieved between public buildings and those in the private sector, since private developers cannot be asked to make their buildings accessible if this is not carried out to the same degree in the public domain. Too often one experiences the mismatch between a well-designed facility, such as a purpose-designed toilet, but with an approach path that is inaccessible to a wheelchair.

4. Accessibility and universal design

Goal 3 of the Incheon Strategy states a requirement of members *"In collaboration with academic institutions, providing training programmes on universal design for policymakers, building inspectors and contractors, and integrating universal design and accessibility into higher education curricula related to architecture, urban planning, transport, civil engineering and other relevant academic branches"* [6]

Many of the UNESCAP publications make statements that are ambiguous about the difference between Accessibility and 'Universal or Inclusive' Design. Professional awareness and knowledge may yet be lacking in this regard, not just amongst designers but also professionals such as facilities managers and planners who involved in the briefing and commissioning of built environments. In the author's experience, policy-makers and allied professionals involved in the procurement or shaping of built environments may not grasp the difference, nor the added value of UD over the basic compliance with access codes, even where these are enforced.

Questions such as 'how much extra will it cost for the building to be include universal design standards?' continue to be asked, as though this was an optional extra, where it should actually be regarded as a fundamental design principle. For example the Incheon Strategy includes the phrase 'Auditing the built environment' and this is variously described both as an access audit and also an 'Inclusive audit', the latter of which would involve identifying connective aspects such as way finding and designing for sensory and disabilities other than physical or mobility impairment.

5. Education and technical exchange

Best practice in Universal Design can be both elusive to define and equally difficult to enforce as a legal requirement. Examples are needed of incentives and initiatives towards these ends, describing practical ways in which designers and academics have applied universal design principles. Many developing economies look to established centres for best practice, not only in codes and standards but also in developing appropriate curricula for design education. More needs to be done in this direction through technical exchange. Professionals communicate globally and some

avenues for discussion are open and well-used. The "Design for All" monthly web publication from the Design for All Institute of India is an organ for such exchange [7]. Like many such initiatives, as is often the case, it is supported by the enthusiasm of just one individual, and this raises the question of how to sustain the progress that has been achieved in the last two decades, and to educate the next generation of teachers. How can the progress that has been achieved by UNESCAP in the last two decades be sustained? Exemplars to demonstrate the holistic nature of the overall and seamlessly integrated access elements in any built environment would be a useful database for others to follow.

Through imparting an understanding of the way in which universal design can improve standards, and the benefits that this will bring, Evidence-based design is a valuable, though often undervalued, lever in making environments and services more usable for a wider number of people. In this, more peripheral courses in higher education should be apprised of the benefits of inclusion, in courses such as hospitality and tourism, ICT and computing, graphic design, not to mention healthcare courses of different kinds.

6. Recent UNESCAP initiatives

In December 2014 UNESCAP ran a workshop, based on previous 'training the trainers' principles, as part of the 'South-South Cooperation Programme on Accessibility for Persons with Disabilities', in Guangzhou, Macao and Hong Kong, China. This was directed at ESCAP member States with an interest in implementing Goal 3 of the Incheon Strategy, "*specifically for technical personnel in a position to contribute to access improvement in the participating countries and cities*". The programme provided an *"experiential learning opportunity, with field exposure and interactive question-and-answer sessions, pertaining to the policy and practice of access improvement concerning public transportation and the physical environment"* [8]. Participants prepared a preliminary action plan to take home, using a common template. By the conclusion of the programme participants had an enhanced understanding about universal design principles, guidelines and legislative and policy provisions for accessibility, from which they were then asked to strengthen their respective action plans for implementing Goal 3.

At the most recent UNESCAP event, the 'High-level Intergovernmental Meeting on the Midpoint Review of the Asian and Pacific Decade of Persons with Disabilities, 2013-2022', Beijing 2017, participating nations presented their achievements as a mid-point review in the preceding years of the Decade Asian and Pacific Decade of Persons with Disabilities, 2013-2022, in response to the Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific [8]. What was apparent was that much emphasis was placed on developments providing for people with intellectual and learning disabilities and less on the needs of people with mobility needs. One may assume that this might be explained by the fact that these needs are quicker and more direct to address, through revised education programmes and the added use of ICT, rather than those in the built environment, which are like to be costlier. Of the field visit to sites, there were none that were particularly physically accessible, although great strides have been made in attitudes to learning difficulties, there was little evidence that action plans from the 2014 Guangzhou workshop had been implemented in regard to mobility.

The United Nations Beijing Declaration and Action Plan expressly states that, *"academic institutions should provide programmes on universal design for*

policymakers, building inspectors and contractors, as well as integrating universal design and accessibility (into) curricula related to architecture, urban planning, transport, civil engineering and other relevant academic branches" [9]. Through imparting an understanding of the way in which universal design can improve standards, and bring benefits, evidence-based design is a valuable (though often undervalued) lever in achieving environments that are usable for a wider number of people. In this, more peripheral courses in higher education should be apprised of the benefits that Universal Design can give. The scope of 'education', particularly in contexts such as those in rapidly-developing economies in Asia, should not be confined to the role of schools of architecture, but any course that impacts on future users of these buildings. This could also include courses such as hospitality and tourism, ICT and computing, graphic design and healthcare courses. Surveyors, who are likely to be involved in audits, should also be involved.

As well individual elements, such as the design of steps and ramps, exemplars of best practice in Universal Design, rather than simple elements that are accessible, should be gathered, explained in such as way as to demonstrate the holistic nature of how access elements may be integrated seamlessly into the overall environment. For example, although having a set of steps plus an accessible ramp at a building entrance can be regarded as accessible, it would be more beneficial to arrange the entrance at the same level as the approach path, thus obviating the need for either ramp or steps. One of the more difficult aspects of teaching inclusive design is that relevant examples, if properly done, are difficult to recognise and will take a trained eye to appreciate. Simple box-ticking of access elements may not recognize the value of the whole. In a recent assessment of the UNESCAP campus in Bangkok, consultants found that the older premises did not comply even with outdated local standards. Such an audit could well have been undertaken by someone from a number of technical backgrounds, but it would take a more creative design-trained eye to see where improvements could be effected to integrate the whole network of accessible elements to universal design standards, rather than Band-aid improvements.

Although many countries have building codes and regulations that address the individual elements of basic accessibility, such as ramps, door openings or braille signage, the more elusive aspects of holistic and inclusive integration that are the spirit of Universal Design are more difficult to define and to codify as a legal requirement. In any country the legislation on accessibility will generally be based on the codes and standards in other countries that are considered to employ best practice, but taking legislation beyond mere compliance towards inclusion is less straightforward. How then is the teaching of this principle to be achieved? Is there the skill as well as the will to embrace Universal design, rather than merely designing for disability?

7. The next steps

From the Incheon Strategy the immediate need for education is evident and this edict quite is unambiguous on this [5]. The efficacy of 'teaching the teachers' courses in practical accessible design is highlighted, *"including travelling workshops, continuing education professional development courses on best practices in inclusive design techniques for experienced practitioners*"..

Rather than conducting another survey to find out what is NOT being done, there is a need for a comprehensive survey to find out what IS being done, where and by whom, and then consolidate this by networking, comparing and sharing information on

the diverse initiatives already in place, not only in the region but globally. What is required is a strategy to identify where initiatives are already in place followed by tactical moves to connect these to give a new legitimacy to UD thinking as a basic design tool. Competitions, alliances between schools and other moves that will help to demystify the notion that Universal Design is an worthy or arcane topic, or just a technical add-on. UNESCAP, as the prime mover, could be the central agency to identify current initiatives in teaching or Continuing Professional Development courses throughout the ESCAP region. Other possible areas to consider would be to:

- Identify and network with individuals (as access champions) in schools, departments of government or civil society disability groups who are already working inclusive design,

- collect information on devising design projects and related techniques, and broadcast this information to teachers in design schools; for example, sharing information on success or failure of elements such as tactile strip (ground surface indicators) in different countries.

- collect and disseminate illustrated examples of good practice in inclusive design in each area. Then analyse and provide information and feedback on the success of all 'outreach' projects, such as the design project by Year 2 students the Cork Centre for Architectural Education to envisage Lifetime Housing in the Irish town of Bantry.

- provide incentives to promote healthy rivalry between members, such as the Universal Design Grand Challenge Student Awards, run annually by the Irish Centre for Excellence in Universal Design. In this, the work of one CCAE student was awarded the First Prize in the Built Environment category [10].

From its extensive database of active contacts, UNESCAP could put user groups in touch with schools of design, encouraging to suggest' topics for outreach' projects in which they could work with together design students to make realistic proposals for 'live' projects. In this way, students would work at with the real beneficiaries and gain first hand experience.

8. Conclusion

United Nations declarations require that *"academic institutions should provide training programmes on universal design for policymakers, building inspectors and contractors, as well as integrating universal design and accessibility into curricula related to architecture, urban planning, transport, civil engineering and other relevant academic branches*". Clearly, there are implications for professional courses in higher education to integrate universal design into teaching, not least to inculcate the distinction between accessibility and universal /inclusive design.

Whilst optimism to make the right real is an essential quality in any project, over-enthusiasm may lead to disenchantment. Universal Design is rather a Utopian ideal, an aspiration that will never quite be achieved, but is worth striving for nevertheless. The

Biwako Milennium Agreement does go so far as to state positively what should be done in the region, to include *"professional education and academic courses in architecture, planning and landscape and building and engineering contain inclusive design principles".* But what will bring about this leap forward? The efforts of a few champions need to be reinforced by support from a more internationally-based network of educators, exchanging experiences in teaching and research. Although the focus is on Asian countries, the combined expertise of educators and practitioners throughout the developed world can assist greatly in improving standards in expanding societies. Universal Design is not 'rocket science', and this can make it seem less challenging as a educational tool, but its integration requires creative skills, rather than merely complying with codes and standards. The responsibility for disseminating such skills lies with higher education, but needs further initiatives to achieve the good intentions of successive United Nations edicts.

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