Design for All

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Other Regular features

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Editor's note:

It is my honour and pleasure to be the Guest Editor of September 2019 edition and I would like to thank to Dr. Sunil Bhatia for this opportunity and to express my appreciation to all the contributors from Serbia, Croatia and UK.

Design for all requires a quantum leap in thinking from the barrier-free concept. It is a positive approach to design, to achieve an inclusive integral design that is not only accessible to the largest number of users, based on their capabilities, but also on solutions that should be suitable for all users. Unlike barrier-free accessibility design, design for all does not make the design of special accessibility solutions, but a practical approach to achieving good and sustainable solutions for an accessible environment. I believe that those articles about Design for All issues will be helpful to all readers, because my approach is to transfer the tools how to make the Design for all to become a reality in education, workplace, culture, health, technology etc.. In this edition you will find cases and examples how to start and to make the preconditions for design for all as inclusion support.

Please Dr Bhatia, I am available for all suggestions, changes or additional information - I have also to apologize to you for little contribution - but my country is quite small and experts on this field are very rare, also august is the worst time to look for collaborates (summer holidays). Today, my good friend working on the field of employment of people with disabilities obtained visa and him and his wife left Serbia to UK. 10% of our population left Serbia in past 7 years - mostly well educated.

all the best

Aleksandar

***Victoria Greene**, program director of Language Circle Enterprises and author of the Project Read® curriculum, has over three decades of experience in educational development. Mrs. Greene has specialized in staff trainings for public and private schools throughout the nation, and served eight years as the director of an alternative high school for severely learning-disabled / behavior-disordered adolescents. Mrs. Greene also taught in the classroom for many years, and was awarded the L.D.A. National Teacher of the Year Award in 1992. She has served on several different educational boards, including the International Dyslexia Association. Today, Mrs. Greene shares her knowledge and passion for literacy by leading staff development opportunities and updating the curriculum to match current educational standards.*

What is necessary to make e-content on the web suitable to all?

Victoria Greene,

Great web design is an art, and in the increasingly accessible digital world, it has become ever more important to ensure that your design decisions are focused on an accessible user experience. This not only facilitates more positive engagements with a business' audience, but is also an important step in establishing a brand's reputation, visibility, and authority.

The principles of universal design arose from a recognition of the need to overcome obstacles to accessibility, particularly in the case of individuals with physical or cognitive difficulties. However, as the name suggests, [universal design extends beyond these challenges](#) to encompass the barriers faced by individuals in all walks of life, for myriad different reasons.

Accounting for all users' needs is no minor feat, yet there are a few fundamental tenets to use to make your work better and transform the customer journey into an experience that is accessible and enjoyable for all.

1. Provide Choice

Customizability enables users to experience your content in the manner that suits them best. As such, providing users with options for how they would prefer the website, app, or service to function for them is a strong first step towards a universal design strategy.

The ability to control certain elements of their interactions with your brand **gives customers a sense of agency**, which helps them to feel more secure and familiar with your brand.

This, in turn, can increase the chances that they will share content, sign up for services, or purchase products. For e-commerce businesses, this is a particularly important part of the business' conversion strategy and the long-term success of the brand.

2. Automate Key Features

A **great UX** is one that predicts the user's needs and proactively adapts to provide the best possible experience. To accomplish this, it is helpful to include automated functions within your app and website that streamline consumer interaction and intuitively customize their experience of your brand.

Automating allows for tailoring the finer points of a given piece of content according to individual needs. Automation also is helpful for simplifying the sales process, including autocompleting sections of forms and remembering relevant details about a customer. These details help facilitate better recommendations and allow for the generation of more accurate autocomplete predictions.

3. Embrace Responsive Design

A user could be accessing content from any of a wide range of devices. It is essential for content to display correctly across all formats and devices; however, it can be time-consuming and difficult to test and adapt a design for every potential variation.

Responsive design uses a combination of style sheets, fluid grids, and flexible images to make adjustments according to the detected screen size without having to realign UI and UX for each platform.

4. Implement Color Theory

Choose text and background colors carefully, considering not only the visual appeal of those colors but how well they contrast. Colors significantly impact the readability of text on your web pages. If in doubt, you can use this **contrast ratio analyzer** to determine whether your choices are viable.

This is especially important for users that have a form of color blindness. Others may prefer to use dimmed screens, which may make it more difficult to distinguish between certain colors and shades.

A poorly chosen color scheme can make navigation difficult, and may quickly deter potential customers, so it is vital to make the right choices when considering this aspect of design.

5. Support Keyboard Accessibility

Not all users will have the ability to use a mouse to navigate your website. Some may have poor grip strength or struggle to move a mouse accurately. Others may not have access to a working mouse, or perhaps wish to browse your content while in a hurry, breakfast in hand.

This feature enables users to navigate and interact with a website using only their keyboard. **A well-integrated keyboard interface is**

even operable on mobile devices, catering to users on a wide variety of platforms.

The two most important elements of keyboard accessibility are that all links must be accessible by the tab key and show a clear visual indicator of the link currently selected. With this feature implemented, you should test its functionality and explore how easily users can reach key areas of your website using this method. If clickable elements are poorly ordered or too numerous, it can be frustrating and confusing for users to navigate a site and may cause them to lose interest.

6. Multi-media must be accessible

Video, audio, and images are one of the most often overlooked elements for accessibility. The use of captioning and proper alt text is not only a **legal requirement** but also needed to provide a full experience for visually- and hearing-impaired users, among others.

While some users may have hearing difficulties, making video content challenging to interpret, others may simply be consuming content at a time when they do not wish to or cannot use an audible volume. Free tools like **Amara** make captioning easy to implement, as does YouTube.

As with video content, images and other visuals must be accessible to every user. These visuals often form an important part of the overarching design cohesion. As such, it is vital to ensure that users can still be made aware of visual elements, even if they have visual impairments, or are unable to load those features when viewing your content.

Some members of your audience may use screen readers, which convey all text on a given page, or screen by reading it aloud. **Alt text** should provide description, meaning, and context to visual elements.

However, it also is possible to overdo the use of alt text. While it can be helpful for users to be able to hover over an image or other visual element, to gain an understanding of what it is and what it does, it is important to avoid repeating text that is already on the page in a format that can be read by an assistive device.

As always, consider whether your alt text adds value or utility that is not otherwise achievable. This could include boosting SEO efforts, as relevant alt text will show up in searches, and can even make it easier for crawlers to index the site.

7. Test Everything

Usability lies at the heart of UX best practices. Knowing the site's users and their specific needs will provide the knowledge needed to make design decisions that minimize or eliminate barriers to engagement with site content.

Research and testing is the key to knowing and understanding these user needs. Methods such as split-testing allow for the comparison of two design iterations, while usability testing can highlight problem areas of the design.

Refer to the **Web Accessibility Initiative's guidelines** for a handy checklist of features to consider when designing for universal usability.

8. Acknowledge Errors

The best intentions and most careful designs can still go wrong sometimes, but, often it is not so much the error that effects business, but the response.

Users are inclined to blame themselves when they encounter a technical error, particularly if they are accustomed to having accessibility issues. This can be frustrating, upsetting, and even enough to deter an individual from engaging with a business in the future. Businesses should acknowledge the error, explain it as plainly as possible, and take immediate steps to amend the issue.

Providing users with the ability to get back to their task before the error helps to maintain the continuity of the user experience, and, in turn, is a powerful means of increasing retention and reinforcing user confidence in the website or app.

As with every aspect of UX design and digital marketing, understanding your audience is essential.

Planning for an experience that is accessible to every customer can benefit a business without compromising on the style, tone, or message of the brand.

Victoria Greene & and thanks to all my adolescents for advices

Ruth Elise Sims, Doctor of Philosophy of Loughborough University

Experience :University of Derby, Senior Lecturer

Module leader on Applied Psychology and Ergonomics (optional undergraduate), Introduction to Social and Biological Psychology (core undergraduate), MSc Ergonomics Independent Studies, Ergonomics and Design (postgraduate). First year tutor, online Induction module discussion board leader (ergonomics) and Departmental Exceptional Extenuating Circumstances advisor. Development of existing and new module ideas. Supporting marking and discussion forum activity as required across the ergonomics and psychology programmes, and continuing my research interests.

Loughborough University, Research Associate.

Working primarily in the field of 'design for all'/inclusive design, including conducting research with older and physically impaired people, including investigation into accessibility and usability of activities of daily life, public transport, and kitchens. Also supporting co-design activities to investigate generation of ideas to reduce single-occupancy car travel; road safety management.

`Design for all': methods and data to support designers

Ruth Elise Sims,

Abstract

If designers are to meet the needs of the growing population of older and disabled people then data on size, shape, posture and capabilities will be increasingly important. This thesis details a methodology for the collection of anthropometry, joint constraints, reach range, postural capability and task specific information, to create a unique database of `individuals'. These data were then used in the development of a computer-based design tool (HADRIAN), to allow design professionals to estimate the percentage of people who could be accommodated by a design. Having complete data sets for individuals is vital to enable multivariate analysis, as opposed to traditional univariate percentile data.

Following a review of the literature two interview surveys were conducted with 32 design professionals and 50 older and disabled people. The majority of designers were aware of the philosophy of `design for all', but rarely considered the approach due to perceived time and financial costs. With respect to older and disabled people it was found that nearly all experienced problems completing basic activities of daily life, and that improvements to existing designs could improve quality of life. Activities such as being able to cook a meal, and use the bath were reported as being particularly important.

Firstly, a pilot study was conducted with 8 participants to assess the different data collection options. Data were then collected on 100 people, with the majority being older and/or disabled, and encompassing a wide range of capabilities. From these data it was possible to see that the anthropometric data showed a range beyond 15` and 99`h percentile for each dimension when compared to existing anthropometry data, and a breadth of variation in task specific behaviours. Validation trials were then conducted to compare the actual task performance of 10 of the 100 `individuals' with that predicted by HADRIAN, with postures and task capabilities being correctly predicted for open-access reach-and-lift tasks. This gives some confidence that it is possible to predict postures and capabilities from the data collected.

All respondents seemed open and honest when discussing the issues, such as the impact of clients and the lack of time and other resources for considering older and disabled users. Due to the anonymous nature of the survey and the results, which was made clear to all participants, it is not expected that many would have felt the need to make false claims.

1. Time within the design process

Lack of time featured frequently in reasons for not considering or involving end-users, as did the role of the client in providing time, money and scope to allow (and insist upon) consideration. The fact that some designers actually do raise such issues with clients suggests that maybe design professionals have their own role to play in influencing clients and manufacturers. Kahmann (2000) also found that it was acknowledged that the design process is bound by time constraints.

Time was also a major factor in gaining access to designers in the first place to ask their views on these issues. Without talking to designers and understanding their needs and concerns, it is impossible for ergonomists to assist fully with providing data and help to designers. 38 of the 70 designers contacted declined to participate, with nine specifically citing lack of time as the reason for non-participation. It is worth noting that there is the possibility that those who agreed to take part were more interested in the topic of study and therefore willing to make the time to participate. It is always an issue with surveys and questionnaires, that non-participation, either through choice or being unavailable, results in some degree of bias to the results (Sinclair, 1998). It is hoped, however, that by questioning as wide a variety of designers as was possible within the time available that any bias would be minimised. It is also felt that the fact that clear trends emerged within certain areas of the results and opinions, that a representative view of the design profession was obtained.

 A curious finding is that 63 % (19 out of 30) of the designers specifically mentioned that they would be able to make the time to learn to use a new piece of software if it was thought that it would be helpful to them and their business. Despite this, the same designers did not always see that making the time to involve end-users directly would also be helpful and improve designs. This suggests that designers are either not fully aware of the benefits of end-user consideration and involvement, or else prefer to explore technical aids more readily, for whatever reason. Staff training on universal design was seen as being needed by the designers, but they felt it should be brief and economical, and would be best fitted into design education. The need for training, and the lack of time for

it, was also found by Vanderheiden and Tobias (2000). Of their 29 respondents, 50 % felt that training was essential but not available at the current time, and 52 % mentioned lack of time to learn about `design for all' being a considerable problem.

2 Design for all' improves design for all

was encouraging that 72 % (23 out of 32) of design professionals had heard of `design for all' or were able to deduce the meaning easily. This suggests that the philosophy is known about, but begs the question as to why the ideas are not being implemented more often. Failure to design in this way cannot be blamed on ignorance.

Three designers expressed the view anecdotally that `good designs' would be usable `by everyone anyway'. Such an attitude removes the need for separate consideration only if it is true, and if all designs are "good". Many people do sometimes experience difficulties with the products we interact with regularly (Keates & Clarkson, 2000; Soares & Kirk, 2000), which suggests that, therefore, many designs are not `good designs'. It has also previously been stated that designers do not always notice `poor' (unsuitable) designs, due to lack of end-user testing (Savage et al, 1998). This brings the discussion full-circle to the original starting point for suggesting the need to consider all users more carefully, to make designs more usable. The products where consideration did occur were some of the every day items involved in activities of daily life, such as kettles, showers, toilet seats, and telephones, suggesting that some designers and clients are beginning to realise that such products will be used by older and disabled people as well as the able-bodied.

23 % (7 out of 3 1) of the design professionals reported that market trends were changing due to changing demographics, and therefore that `design for all' will become a necessity in the future. However, 17 % (5 out of 30) cited perceived costs and lack of market value for reasons for currently not considering older and disabled people. These findings are supported by the work of Vanderheiden and Tobias (2000) who found that universal design was seen as being too specialised and resulted in increased design and manufacturing costs by between 79 % and 83 % of the 29 design professionals they studied. Keates, Lebbon and Clarkson (2000) also found similar concerns, reporting that most designers felt that they would implement universal design only `if it was easy to do' and did not increase costs.

3. Anthropometry and the Fundamental Fallacies

The idea of the use of intuitive ergonomics reflects one of Pheasant's (1996) `five fundamental fallacies', in that people believe they can consider other people's needs and dimensions without actually referencing any explicit data concerning such people. 23 % (7 out of 31) of participants did not use any sources of anthropometric data, suggesting to the author that they did not feel that they needed to. One participant did actually state that they felt able to `intuit' the ergonomics requirements of a design and the end-users.

Designers obtained most anthropometric information from books such as Dreyfuss (1953,1959, 1960,1967,1978), Selwyn Goldsmith (1984,1997), and Pheasant (1986,1996,1999) which were generally regarded as acceptable. However, it is often the case that data are not relevant to thepopulation concerned (for example, use of data from USA soldiers for the UK civilian population), are out of date

(use of 1960s data), are static data, or are only 5`h, 50`h, and 95th percentile. This suggests that the data may be being used, but in some cases is not necessarily going to result in better products being designed. It is not clear whether participants used anthropometric data correctly, for example considering the differences in age, population, static versus dynamic, and so on, as this was not explicitly asked in the questionnaire and was impossible to judge during a telephone interview. 29 % (8 out of 28) of participants stated that anthropometric data sources were `very helpful' and `easy to use'. However, 18 % (5 out of 28) of participants did mention that data could be `dry and skewed', have `gaps', be too specific, irrelevant or unrepresentative, time consuming to use, and a general `lack of confidence' in the figures. It seems that this 18 %, and possibly some of the other participants, were aware of the seventh fallacy (Section 2.3), and did not think that anthropometric data is necessarily easy to use and understand. It is interesting to note though that these five participants (who were aware of the possible inaccuracies of using such data) still used the data. It may be that there was no choice due to access to more relevant, accurate and reliable data

Information concerning the costs, technicalities, and manufacturing processes were considered to be the most important first information needed in the design process by 45 % (12 out of 31) of designers. It is therefore interesting to note the discrepancy between this and the fact that 81 % (26 out of 32) felt that it was possible to consider end-users from the beginning of the design process, with 31 % (10 out of 32) stating that it was essential. This highlights the difference between `thinking' about users, and actually having information about the users to inform this thought.

This is a similar issue to the one raised earlier concerning intuitive ergonomics: designers feel that they are considering end-users, when in fact they may not actually have any evidence as to what the users really want or who they really are.

4. End-user involvement

The number of participants (84 %, 27 of the 32) involving end-users in the design process is encouraging for the `design for all' approach. Such involvement of end-users must help to increase the usability of products, as long as the involvement is structured to produce useful information that can be incorporated into the design. However, 41 % (13 out of 32) of respondents did not get information direct from end-users themselves, getting the information instead either from the client or from other sources (experts, marketing departments). It is notknown whether this information is accurate, detailed, or relevant either to the designers' information needs or to the consumers' usability needs.

End-user involvement occurred generally late in the design process, at the prototyping or modelling stage in 62 % of cases (13 out of the 21 participants who provided details concerning this). This finding was not surprising; other researchers have found the same picture (Johnson & Johnson, 1989; Porter & Porter, 1999; Bruder, 2000). Testing at this stage allows for limited changes to be made to the design if problems arise, and if trials are only carried out using finished products the scope for change is almost negligible. The amount of end-user involvement was encouraging, although the numbers involved were generally low; the most common number of end-users involved was ten. Hasdogan (1996) corroborated this finding, reporting that where consideration of end-users occurred for

the most part designers used themselves and their colleagues as `users', rather than employing actual end-users.

Observations of users interactions with existing products accounted for 38 % (5 out of 27) of end user involvement in this study, which means that the end-users were not actively playing a role in assessing the early stages of any new products in these cases. The 16 % (5 out of 32) who did not involve end-users at all in the design process reflect the findings of Johnson and Johnson (1989); two of the designers in their study reported that very little pre-operational testing was conducted either by themselves or end-users.

Once the design was completed and in the market place, end-user involvement decreased sharply. Only 14 % (4 out of 29) of participants reported getting direct feedback from end-users, whilst 21 % (6 out of 29) received little or no feedback at all. Johnson and Johnson (1989) reported similar findings. Their designers reported getting very little feedback about the product other than faults, and then only by being told about them by the marketing department or client, not from the end-users themselves.

5. The influence of the client

A significant finding is that clients have a lot of influence on the majority of designers. 34%(10 out of 29) of the designers did try and influence the clients, suggesting that maybe all designers should try harder to encourage clients to consider the needs of older and disabled people more. However, it is important that top-level information about aims and objectives received from the commissioning client can often be vague (Smyth, 1987). Education of clients as well as designers may be the key to greater

consideration of older and disabled people. Currently few designers are willing or able to consider such issues without the support of the client commissioning the design. Vanderheiden and Tobias (2000) had similar findings, and reported that 71 % of their respondents felt that top management support for design for all was essential, but only 19 % indicated that this was fully available to them. Where successful universal designed products exist, they usually had support from top management and clients, rather than being brought about by the designers (Keates, Lebbon & Clarkson, 2000).

Changing what the clients demand in the brief may, in time, come about as a result of the changing population demographics, thereby forcing consideration of older and disabled people during mass-market design. Keates, Lebbon and Clarkson (2000) concur that persuading top management of the need and benefits of universal design may be the best way to encourage it. However, despite this being a slow process, it is still important to increase awareness of `design for all' issues in order to allow clients and designers to adapt, and have useful information available.

The challenges for ergonomists and promoters of `design for all' lie not just in making relevant and useful anthropometric and end-user data available to designers in a usable format. In addition the clients, manufacturers, and design professionals need to be convinced that they all should consider the needs of older and disabled people. Optimistically, 28 % (12 out of 21) of respondents said that they considered end-users as the first information needed on receipt of a brief for a design. However, 48 % (14 out of 29) stated that the client provides all initial information (with no guarantee that this information would include data about users).

The way to improve the situation is to highlight the fact that consideration will in fact result in increased market size, and therefore potential for greater sales. This point was also raised by Vanderheiden and Tobias (2000), who found that knowledge of market forces and changing demographics were likely to influence the number of designers considering `design for all'/universal design (as did Rogers et al, 1997; Clarkson et al, 2000; Jordan, 2000; Keates, Lebbon & Clarkson, 2000).

From a different perspective, Mossink (1990) stated that `the implementation of human factors largely depends on the personal interest of the designer'. Designers do not work as systematically as ergonomists. Important factors in the consideration, or not, of ergonomics during the design process are things such as the attitude of the designer towards ergonomics, the commitment of the client commissioning the design, and knowledge of the costs and benefits of consideration. It is interesting to note that 17 % (5 out of 29) of participants mentioned that they would always encourage a client to allow consideration of older and disabled end-users, even if it was not in the original brief. This is an example of the designers' personal interest and feeling about `design for all' influencing the design process.

6. The use of software tools and packages

The software packages containing anthropometric data available at the moment (such as People Size, 1998, and SAMMIE) had not proved to be widely used or seen as useful tools, even though 40 % (14 out of 28) said that they favoured data in such a format. This is an interesting discrepancy. Either current sources are not known about, or else they do not adequately address designers' information

needs. This finding may be supported by Hasdogan (1996), who found that those designers who did use human-modelling systems felt that it was open to misuse and required some prior ergonomics training. Erbug (1999) also found that ergonomics CAD packages were lacking in the necessary information and detail, and that current computer-based resources were too narrow, needing more data and wider application.

Designers favour an electronic source of data that can work in conjunction with their current computer aided design packages. However, the fact that 28 different CAD packages were in use within this sample of companies suggests that matching the proposed computer-based design tool to all existing systems is an impossible task. It is easier and faster to communicate via visual means: graphics and simulations rather than text or tables (Erbug, 1999). Also, CAD models can address some problems of communication, between for example designers and technicians, during the design process, although communication may still be difficult at the concept stage (Eckert, Cross & Johnson, 2000).

The findings of Erbug (1999) reflect the findings of this research, namely that the ergonomics information that designers require is dynamic, not static, data with details of good and bad existing products, details of standards and regulations, accident analysis, end-user profiles and descriptions, anthropometry, as well as details of behaviours and responses to products and situations. Vanderheiden & Tobias (2000) suggested that design tools to assist with universal design would be most useful if tailored to the industry using it, and specific examples of `best practice' and profitable designs that had incorporated universal design would help in

encouraging further consideration. Again, the findings of this study support this argument. Interestingly for the development of the proposed computer-based design tool, Vanderheiden and Tobias (2000) also found that the majority of their participants were in favour of some method of indicating how many people were accommodated by a change in design. 61 % of respondents felt that such information was essential, with another 25 % feeling that it was very important.

Conclusions

`Design for all' is widely known or understood, but it not widely practiced. Lack of time, lack of client backing, lack of money and a lack of awareness of the possible market are reasons given for this. Time is needed (and lacking) for training in ergonomics, preferably as part of design education, rather than `on the job'. Time must also be a consideration for the proposed computerbased design tool, as designers have limited time for learning new systems.

The use of computers and computer-aided design tools is widespread, and there is a preference for data sources that complement these working methods. The information provided by the proposed computer-based design tool needs to complement the work of designers. It was requested that the design tool specifically included details of the sample that the data had been obtained from, anthropometry, graphical representations of problems experienced, reach ranges, and grip strength. These data are currently available in tables and books, and are used by design professionals, but are not felt to be ideal and are open to problems with interpretation, application, relevance, and reliability. Information should be provided in a visual format, up-to-date and relevant to the work of

designers. The proposed tool also could be used as a method of communicating ideas and the need for, and/or benefits of, `design for all' to clients.

fotograf Milovan Milenković

Dejan Maslikovic | Assistant to the Minister of Culture and Media of Serbia

Mr Dejan Masliković was born in Belgrade, in 1971. He graduated from the Faculty of Fine Arts, at the University of Arts in Belgrade. At the same University he received a Master's Degree in "Interculturalism, Art Management and Mediation in the Balkans" under the auspices of UNESCO and CEI in 2010, and a PhD Degree with the thesis "The Capacity of Digital Technology for Development of an Inclusive Society" in 2016.

From 2002 to 2004 he was appointed as Coordinator for International Cooperation, Development and Promotion of Culture, as well as Coordinator for State Public Administration Reform, at the Agency for Development of Culture of the Republic of Serbia. In 2004 and 2005 he was an Adviser for Public Relations and Regional Cooperation in the Cabinet of the Minister of Culture and from 2005 to 2007 as the Chief of the Cabinet of the Minister of Culture. From 2007 to 2016 he was Assistant Manager of the The Serbian Academy of Sciences and Arts.

He participated in numerous local, regional and international conferences: "Intercultural Dialogue", Granada, 2005; Organizer and participant of the Expert Meeting for the Establishment of the Council of Ministers of Culture of the Balkans, and a member of the Working Group for the Preparation and Coordination of Signing of the Charter of the Council, Tirana, Belgrade, Copenhagen 2004-2005; Organizer and participant of the Conference "Inclusion of OSI in the work of cultural institutions", at Ethnographic Museum, 2005; "Disability context - inclusion of persons with disabilities in cultural life", Colchester, UK, study visit in 2005; "Forum Belgrade", Cultural Policy in the Context of European Integration, Belgrade, in 2007; "ASSU", International Conference "Accessibility of cultural institutions", Athens; "Cultural heritage without barriers", International Conference, Sarajevo, 2014 and 2016; "Globalization-Risks and Advantages", Belgrade, 2016; Linc-international Conference - "Use of ICT in Education" and many others.

He was the author and organizer of the tactile exhibition "In Touch with the Antique", at the National Museum, in 2005; Editor of the Manual "Culture of Equality", with the group of authors – "Disability Portfolio", two Serbian editions, 2006 and 2008. He was the President of the Cultural Center of Belgrade and Chairman of the Commission for awarding the City of Belgrade for an event of exceptional importance for the City of Belgrade, 2014–2016; The Representative of the Ministry of Culture in the Management Board of the Foundation for solving housing problems of young scientists and art workers from the University of Belgrade, 2004–2007; Member of the Provisional Working Body of the Government for the Preparation of the Action Plan for MO "Francofonia" 2005; Member of the Working Group for Cultural Cooperation and Technical

Assistance to the Ministry of Culture of the Republic of Srpska, 2005–2006. Coordinator of the Ministry of Culture in the Council of Ministers of Culture of South East Europe, 2004–2007. Member of the Inter-sectoral Working Group on European Integration 2005–2007 and the Inter-Sectoral Working Group on Digitization 2006–2007. He is a member of the Žiča Monastery Foundation "Heritage";

He attended professional skills training course organized by The United States Institute of Peace and the Agency for the Advancement of State Administration; Seminars "Public Relations" at Governmental Office for Media Cooperation, "Improvement of business in cultural institutions", organized by the United Nations Development Program and Enterprise Restructuring Unit at the Ministry of Finance and Economy; Seminar "Project Management", organized by the Agency for Improvement of Public Administration and UNDP; A two-year "Training for the Public Administration Reform Coordinator", organized by the CMPS, DFID and National Agency for the Improvement of Public Administration.

Prof. Nataša Krstic, *Ph.D. Associate Professor*

She graduated and received her master's degree from the Faculty of Economics, University of Belgrade. She defended her doctoral dissertation on the topic "Development of corporate social responsibility as part of the business strategy of Serbian companies" in 2014 at Singidunum University. In 2015, she received the diploma of Digital Marketing Specialist (Dip DigM) awarded by the renowned British Institute of Direct and Digital Marketing (IDM) on the basis of her "Professional Diploma in Digital Marketing".

In 2016, she also specialized in Search Engine Optimization (SEO) at UC Davis, and holds Google AdWords, Google Analytics, Google Digital Garage and Facebook Bluesteps certifications. She has worked in domestic and foreign financial organizations (Belgrade Bank, UniCredit Bank, Eurobank) as Marketing and Public Relations Director. She was a member of the Board of Directors of the Serbian Network of the United Nations Global Compact and Chair of the Working Group on Corporate Social Responsibility at the Banking Association of Serbia. She has been engaged as a domestic and international consultant for UNICEF and on projects supported by the European Union, GIZ, OSCE / OSCE and the Ministry of Culture

and Information of the Government of Serbia. She is the author of the Communication Strategy of the National Academy of Public Administration of the Republic of Serbia. Based on the Decision issued by the Ministry of Public Administration and Local Self-Government of the Government of Serbia, he is an accredited lecturer for training programs for employees in state administration and local self-government. Since 2015, he has been teaching at the Digital Marketing Study Program at the Faculty of Media and Communication, and since 2018 he has been managing the study program.

Research area

Digital Marketing, Search Engine Marketing, Corporate Social Responsibility, Digital Communication

DIGITAL TECHNOLOGY AND INCLUSION: Dependency and Difficulty

Dejan Maslikovic | Assistant to the Minister of Culture and Media of Serbia

Prof. Nataša Krstic, Ph.D. Associate Professor

SUMMARY:

In order to ensure equal rights for all members of the community, modern society has at its disposal digital technology that can support and advance social inclusion. The aim of the research was to examine whether digital technology can cause addiction and difficulties in using digital technology. The results showed that for people with disabilities there is no fear that they may become addicted to digital technology, but that they have difficulty using it. The future development of digital technologies should be in the function of removing barriers to the use of persons with disabilities, thereby improving their position in society. Keywords: digital technology, information and communication technology, social inclusion, internet.

1. INTRODUCTION

With the gradual exhaustion of legal opportunities for the promotion of the position of persons with disabilities (PWDs), it remains to work on changing citizens' awareness, introducing innovations in the field of new technologies and applying them in fostering and promoting inclusion. In the context of the article, inclusion is defined as the process of involving marginalized social groups (including

persons with disabilities) in the most active and equal participation in all social activities [1]. Subsequently, digital or information and communication technology (ICT) includes computers, software, peripherals and communication equipment, telecommunications devices, the Internet, cable and terrestrial (digital) television and related services [2] [3] . The main driving force of the information society is the Internet, which enables new forms of communication, business and learning. The Internet is a fertile ground for innovation, and it is open and liberal in its fundamentals because it is at its core the idea that anyone can use it and be the author of the content [4]. The use of digital technology can be seen as an opportunity as well as a source of potential barriers for people with disabilities. Disability can make it impossible to use ICT, such as Internet access. Awareness that people with disabilities are experiencing an increased digital divide in society has resulted in initiatives to increase the accessibility of resources available on the Internet [5]. Establishment of International Standardization Organization's information technology standards (ISO / IEC 40500: 2012) [6], introduction of Web Content Accessibility Guidelines, establishment of a World Wide Web Consortium, W3C) and its Web Accessibility Initiative (WAI) [7] are examples of good initiatives to access digital technology, content and services.

Globally, the start of the regulatory implementation of ICT in improving the quality of life of persons with disabilities was launched at the 61st session of the United Nations General Assembly (UN) in December 2006, when the Convention on the Rights of Persons with Disabilities was adopted. The Convention in question has also been ratified by the National Assembly of the Republic of Serbia in the form of a law [8]. In the Convention, a significant

proportion is devoted to communication and information dissemination to persons with disabilities through language, text display, Braille, tactile communication, capital letters, multimedia access, as well as written, audio, oral, reading and augmentative modes, means and formats of communication, including access to ICT. . The Convention refers to the terms "universal design" and "universal internet access", which are of great importance in representing the role of digital technology as a mechanism for establishing inclusive solutions. Article 2 of the Convention aims to improve the availability of ICT in accordance with the needs of persons with disabilities, and encourages universal design in establishing standards and guidelines for the development and application of custom technology and software [8].

However, it is also important to keep in mind the potentially negative consequences of using digital technology. In addition to a number of benefits, digital technology and related devices can further enhance exclusion and alienation and lead to addiction in people who use it [9]. Difficulties and barriers that digital users may experience when using disabilities include physical and functional factors that can cause underutilization or abandonment of ICT, such as lack of basic ICT training, financial constraints due to insufficient personal income, and lack of technology, problematic and inadequate ICT systems and technology accessibility and design issues (inaccessibility, complexity, incompatibility) [10]. Consequently, when we talk about the contribution of digital technology to the development of inclusion, we must take into account the selection, mode and application of these devices to an extent that will not cause a counter-effect on persons potentially marginalized in society.

2. METHOD

The main objective of the research was to identify differences in dependency and difficulties in using digital technology in persons with and without disabilities, in order to determine the capacity of digital technology towards PWD and to further work on greater involvement of technology in the development of inclusive society. The electronic questionnaire was sent to 285 respondents from the territory of the Republic of Serbia, to which 185 people answered correctly and fully, 95 of them with disabilities (PWD) and 90 without disabilities (Pw/D). National disability associations and enterprises for the vocational rehabilitation and employment of persons with disabilities whose members and employees had physical disabilities and 100% preserved intellectual capacity were used to recruit the primary group of respondents. The sample obtained had a partial gender balance between the two categories of subjects (males: 56.8% PWD vs. 43.3% Pw/D, p = 0.066) and age (over 35 years: 43% PWD vs. 45% Pw/D, p = 0.889) .

Major differences were observed in:

School education: 67% of Pw/Od have at least a university degree compared to 39.5% of PWD (χ^2 = 14,238, df = 1, p = 0,000). The imbalance in education between PWD and Pw/Od in the obtained sample can be explained by the results of the 2011 census, which indicated that two thirds of registered PWD in Serbia have no, incomplete or only primary education (66%), one third have a high school education (27%) and a small number of college / university degrees (3.4%) [11].

◆◆**Employment:** 93% of Pw/oDs work versus 54% of PWDs (χ^2 = 36,838, df = 1, p = 0,000). Also, in the results of the national census of the total number of PWDs in the Republic of Serbia, only 9% have employment [11]. ◆◆ **Revenues:** 18% of persons with disabilities have higher incomes than the average net income at the republican level, while 64% of OBI exceeds that average (χ^2 = 36.887, df = 1, p = 0,000).

The census explains this finding; in Serbia, two thirds of people with disabilities have a pension as the main source of income (61.7%), and about one fifth of persons with disabilities fall into the category of dependents (20.5%). while a very low percentage of PWDs earn (6.8%) as a basic source of income [11]. In addition to the general questions pertaining to the sample, the research questionnaire contained five individual questions and one general question each, which tested two hypotheses:

Hypothesis 1 (H1): PWD and Pw/D do not differ in their dependence on the use of digital technology.

To test this hypothesis, a variable was used to measure the frequency of daily use of digital technology through the following questions:

1. How much do you use the Internet on a daily basis?

2. Do you use a computer?

3. Do you use a mobile phone?

4. Do you use cable TV?

5. Do you use e-government services?

6. Do you generally use digital technology?

Respondents answered these questions on a four-point scale (no, yes - to a lesser extent, yes - mediocre, yes - to a large extent) whose values were coded 0-3, with the value of the usage variable calculated as the average of the four coded response. The reliability of the Cronbach coefficient was satisfactory (0.74).

Then, values for digital technology dependency were determined as 0 (respondent is not dependent because usage is <2.75) and 1 (respondent is dependent because usage is ≥2.75).

Hypothesis 2 (H2): Difficulties in using digital technology are the same for people with disabilities and people without disabilities. For verification purposes, the following questions were used:

1. Does your fear of misuse of personal information left on the Internet cause you difficulties and resist the use of digital technology?

2. Do you find it difficult to master your computer skills?

3. Do you have difficulty using your mobile phone?

4. Do you have difficulty using cable TV?

5. Is it easy for you to use ATMs and other public electronic devices?

6. Does digital mastery take you a long time?

Respondents also answered these questions on a four-point scale, the values of which were coded with numbers 0–3. For each subject, the value of the difficulty variable was calculated as the average of the four coded responses. As a result, the Cronbach's coefficient of

confidence was at the limit of acceptability (0.69 from a minimum of 0.70).

In order to test the hypotheses, the following statistical analyzes were used:

◆◆ comparison of average values using t-test for independent samples; ◆◆Comparison of relative frequencies using the x² test for independent samples.
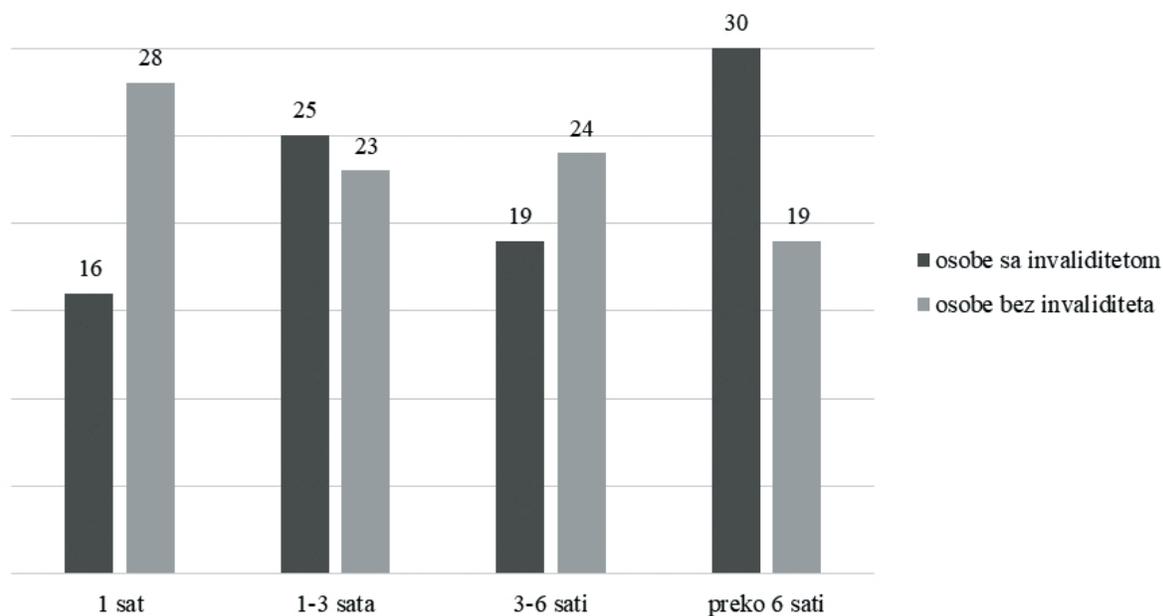
3. RESULTS

When examining differences in the dependency created by the use of digital technology in people with and without disabilities, more than half of the Pw/oD (56%) is potentially dependent on the use of digital technology versus just over one-third of the PWD (39%) (Table 1).

Variable	ƒ- PwD	ƒ - Pw/oD	χ²	df	ρ
Addiction	39%	56%	4,420	1	0.04

Table 1. Dependency variables created using digital technology

At the same time, when it comes to time spent using the Internet, the largest percentage of PWDs spend less than one hour, or 1-3 hours on the Internet, which cannot be characterized as the time required to induce addiction [12] (Chart 1) .

Graph 1. Time spent using the Internet during the day

(PWD dark grey, Pw/oD, light grey, variables for: 1 hour, 1-3 hours, 3-6 hours, over 6 hours)

Based on the results obtained, it can be concluded that persons with disabilities are more dependent on the use of digital technology, thus rejecting the first hypothesis. Given that people with disabilities do not make extensive use of digital devices and are not dependent on uncontrolled use, a sound basis can be created to properly conceptualize the use, purpose and character of applications and software. When it comes to examining the difficulty of using digital technology in people with and without disabilities, the aim of the study was to determine whether both groups of respondents encountered the same level of difficulty in using it. Table 2 indicates that people with disabilities have more difficulty using digital technology. At the same time, the most difficulties exist in the use of

the Internet (M = 1.05), and the least in mobile phones and television, which are the same in persons with and without disabilities (Chart 2).

Variable	M - PWD	M – Pw/oD	T	df	ρ
Difficulty	0.57%	0.34%	2.712	183	0.007

Table 2. Variables of difficulty in using digital technology
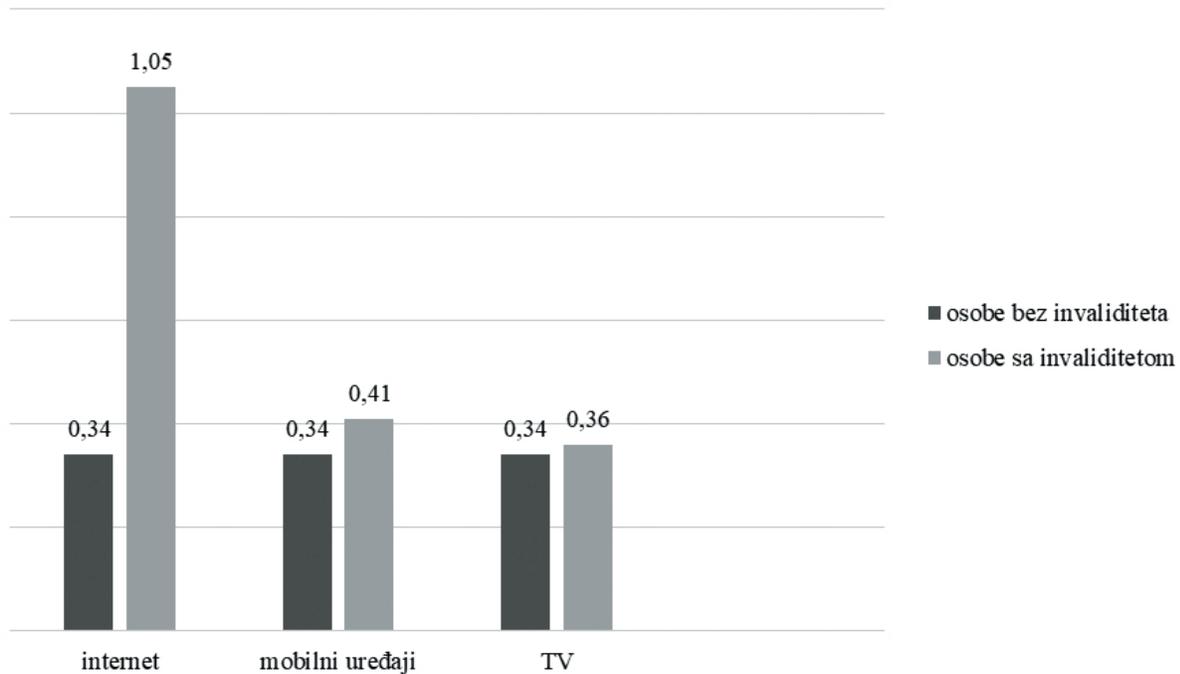
Graph 2. Difficulties in using digital technology

(PWD dark grey, Pw/oD, light grey, variables for: internet, mobile devices, TV)

4. AXIS AND DIGITAL TECHNOLOGY: MORE DIFFICULTIES WITH LESS DEPENDENCE

The topic of internet addiction became current in the scientific literature only at the beginning of the 21st century, and the standardized approach and treatment of this problem has not yet been adopted. Internet addiction disorder is a social problem that can lead to neurological complications, mental disorders and social problems [13]. Computer time is the most frequently mentioned criterion for diagnosing Internet addiction disorders. It is thought that four to six hours of free time a day spent not only consuming the internet, but also using email, news, reading, indicates a symptom of addiction [12]. However, it is sometimes difficult to determine how much time is spent on the Internet on average, and it is therefore much easier to determine addiction in relation to manifest symptoms of behavioral disorders, such as obsessive-compulsive or impulse control disorders [13]. The conducted research indicated that there is no danger of people with disabilities becoming addicted to internet use as using according to the tested hypothesis (H1) is below the level characterized as potentially dangerous. The result was due to the fact that people with disabilities use ICT devices more. Therefore, we can conclude that there is no danger of their further marginalization due to the more intensive use of digital technology.

When it comes to the findings of the second hypothesis (H2), which confirm that PWDs have more difficulty in using digital technology than Pw/oD, we can explain them with limitations resulting from disability, personal limitations and those originating from the environment. For personal restrictions, persons with certain sensory

and motor limitations have difficulty using certain devices unless they are tailored to their needs, are not accessible, or persons who use them are not sufficiently skilled or trained to handle them. For example, blind or visually impaired people need to be provided with additional software add-ons or tools (font size increase, color contrast, text readers) or mechanical options (Braille, relief and sound instructions) in order to using ICT devices. For the deaf and hard of hearing and people with physical disabilities, the difficulties are eliminated by making it more accessible, by means of subtitling, vibrations, inductive loops in the rooms, etc. Then, the difficulties caused by factors originating in the middle may include the physical inaccessibility of the rooms (barriers, stairs) which houses ICT devices. In the end, if PWDs use special software programs, applications, tools and devices, this can emphasize their diversity in the public, which can consequently lead to resistance or difficulty in use [14].

The causes that lead to difficulties in using digital technology should be sought both in the poor material situation of PWDs and in their unfavorable educational structure, as indicated by the survey sample and national statistical indicators. For PWDs to use digital technology, their educational and professional skills need to be at a level that meets the minimum technology management needs. The connection between education and the use of digital technology can be seen as a cause-and-effect relationship: education must be supported by new technologies, and in order to use them, people must be educated. Consequently, educational inclusion involves adapting the environment, and therefore technology, to the needs and capacities of the PWD. Unfortunately, such environmental preparations have been absent in the process of introducing

inclusive education in our country [15]. Consequently, less use of digital technology leads to less skills in people with disabilities and provokes resistance to technological innovation.

5. CONCLUSION

A prerequisite for the functional use of digital technology to promote an inclusive society and improve the quality of life of persons with disabilities is that ICT does not cause dependency and difficulties in use. Consequently, the implementation, procurement and design of digital technology must rest on social justice, equity, inclusion and the potential of digital technology to improve the quality of life of persons with disabilities, but there is work to be done to reduce the difficulty of using digital technology, related devices and their adaptation to persons with disabilities.

In this context, author Tusler proposes that the business sector should define the potential of the market for persons with disabilities, incorporate accessibility and the concept of universal design into their products and services, collaborate with customers with disabilities to increase the end-product's use value and enhance the inclusiveness of their organizational culture [17]. Consequently, when using digital technology to create an inclusive society, it is necessary to take into account the development of platforms and applications that will be accessible to persons with disabilities in order to improve the quality of life, enable independence and engage in as many social activities as possible. This requires the development of a national strategy and action plan that should envisage the development of ICT programs and devices that will enable people with disabilities to be involved in all aspects of social life (culture, science, education), employment opportunities (work

from home using ICT) and others. benefits provided by digital technology. Contemporary technology must in no way lead to exclusion, on the contrary, all conventional aspects of inclusion (ensuring physical accessibility, inclusive education, employment obligation, etc.) must remain in use. A limitation of the research is the implemented method of recruitment of persons with disabilities - through national associations of persons with disabilities, which limits the findings to the views of their members. Then, to discuss the results related to the second hypothesis, no academic literature devoted to the Internet addiction of PWD was found. However, the available literature concerning Pw/oD and analyzing the material position of PWDs support the results obtained by testing this hypothesis. Finally, due to differences in the type and degree of disability, and social differences in social, material, educational and professional status, it is not possible to make a unique recommendation on the way and degree of use of digital technology to improve the position of persons with disabilities and to develop social inclusion. Future research could cross types of disabilities with areas and devices of digital technology, in particular the Internet and mobile devices, which would define the needs of a particular type and degree of disability to use ICT.

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- *Condition of human rights of persons with disabilities*
- *Educational integration of children with delayed cognitive development*

- *Rehabilitation with movement and basic perceptive-motoric stimulation*

- *Evaluation of rehabilitational procedures*

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2008 - member of the state Commission for Design of Operative Programme of the State Exhibition of Works by Pupils with Development Difficulties of the Agency for Vocational Education

Member of the programme board of several professional and scientific conventions

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UNIVERSAL DESIGN PRINCIPLES FOR LEARNING AND ACADEMIC STANDARDS

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Universal design (inslucive deisgn or Desing for All) has its starting point in principle equality and implies multi disciplinarity, that is, working together experts in planning, architecture and design. In addition, it includes participation representatives of different population groups because thus increasing the level of expertise and providing to consider theirs at an early stage of planning needs, thereby increasing the opportunity to fulfil universal design and equal opportunity use of products and services. Universal design for learning helps teachers in dealing with the challenges of diversity in the system education, suggesting the use of adaptive teaching materials, techniques and strategies that they can to empower teachers to satisfy educational ones the needs of a large number of students and students so much different educational needs.

The idea is in fact, and it showed everyday practice, that there are some adjustments in the teaching process they are done because of equalizing opportunities for students with disabilities, have proven to be more than beneficial to everyone students. For example, some students with dyslexia, students with ADHD as well as students with impairments hearing that read speech from the face and lips, have

big problems in following oral lectures, especially if they are not familiar with the topic. If the teacher make the lecture handouts available to these students a few days before, students were at opportunities to prepare and much better follow up classes. However, it has been shown to use this as well to other students.

If we make it possible for all students availability of advance exposure handouts, prepared students will be much more efficient participate in classes and be much more successful at achieving learning outcomes. It is certainly one of the procedures that make up universal design for learning. So universal design for learning make adaptive teaching methods (materials, techniques, strategies) that enable effective acquisition learning outcomes for as many students as possible educational needs. Because of their peculiarity, universal design for learning does not exclude additional adjustments for some students with disabilities. These are academic standards? Academic standards are a basic criterion for determination qualities in higher education. Actually, a term quality assurance in higher education implies the processes and activities by which ensures high quality maintenance education in accordance with defined academic standards (Quality Assurance Center and internal evaluation, http://www.qa.untz.ba/web/).

Academic standards are demonstrated the ability to reach a certain level academic achievement. Usually this is measured the competence of a particular person in achieving specific (or implicit) goals of the course, Academic standards answer the question WHAT, when it comes to education, while the curriculum answers the question HOW.

(Teaching to Academic Standards,

www.thirteen.org/edonline/concept2class/standards/index.html/).
Academic standards are applicable to all students (gifted students, students with learning disabilities, students with disabilities, etc.).

Two types of academic standards are mentioned: content standards and achievement standards. Standards contents indicate what students should know and what you should be able to do while standards achievements measure how well students are meet content standards. Advocates of standards in education claim that without established standards of educational institution actually they enforce a selection system and do not guarantee the right to education for all: about 20% of students always meets high standards of achievement while the rest of the students can't really succeed participate in such a conceptualized educational system. Students with disabilities and adherence to academic standards Diversity is the rule, not the exception. Each one the community is required to recognize and respect diversity and regard them as wealth. Educational institutions they are precisely one of the places where this is especially important (Kis-Glavas, Pantic, 2002).

When our study programs are designed so that are intended for the average and thus exclude all of them who have different (different) abilities, styles learning, origins, even preferences, we miss offer fair education to all individuals and equal study opportunities (CAST, 2008). Universal design for learning helps to we tackle the challenges of diversity, pointing to flexible teaching materials, techniques and strategies that can empower teachers to meet the diverse needs of their students at the educational process. Curriculum created in accordance with universal designs are

designed on a way to meet the needs of the largest number of students

Universal design for learning is based on three basic ones principles (CAST, 2008):

• **Provide multiple different presentation tools** - students perceive and cognize in different ways information presented to them. For example, blind students, students with dyslexia, students from culturally diverse backgrounds may require different ways of accessing educational content. Some may simply be of better quality information presented visually or auditively rather than printed text. In practice, there is not one a presentation mode that would be optimal for everyone to students and therefore providing is different presentation opportunities are essential.

• **Provide more means of expression** - students are they differ in the ways they can express what know (for example, students with higher motor skills difficulties, those who have strategic difficulties and organizational skills (ADHD), those who have been taught in a language other than their mother tongue or language use another medium to write their mother tongue (e.g. braille), students who have problems written expression (eg dyslexia) demonstrates will do their achievements very differently. Some will be very successful in written work but not in oral presentations, and vice versa. In practice, there is none of a unique mode of expression that would be optimal for all students and therefore providing different options in checking acquired student competence essential.

• **Provide more ways to get involved Σ** Students are very different in their ways engagement in the teaching process or motivation for

learning. Some students are spontaneously very engaged as they gain new experiences and others are inactive, even intimidated when faced with a new one experiences, preferring a strict routine. In practice, there is no unique way of teaching teaching content that would be appropriate for all students and therefore enabling different modes and levels student engagement essential. By defining learning outcomes, the teacher actually sets academic standards within its own Course. In doing so, in relation to specifics students with disabilities, it would be useful to identify and (Teachability, 2004):

• Is the systematic presence of students in the classroom (lectures, seminars, exercises) necessary for achievement of learning outcomes, ie acquisition competence, while being compulsory

• What adjustments can be made without compromising academic standards or others prescribed standards, such as (professional) competencies prescribed by a professional bodies (chamber)

• How adjustments can be systematically implemented in creating and implementing courses without the need for ad hoc adjustments and adjustments with current needs of current students

• When necessary, how will the needs for adjusting to be communicated to the teacher Unless students with disabilities get equal valuable competencies like other students will disadvantaged in the labour market, that is, they will not be competitive enough. By discounts and "Looking through the fingers" of students with disabilities we're actually doing a disservice. But even when we do not make reasonable, that is, possible adjustments, that is, those that do not compromise academic standards of the course or study

programs, information will not fully or will not be appropriately forwarded to students with disabilities. Just the lack of adjustments will result in a situation where students with disability will not be equally competent experts, they will not be like other students again will be in a worse position in the labour market, which also adversely affect their general success in life When it comes to students with disabilities at higher education system, we should not deal with the dilemma of whether they should or should not some of them be part of that system, than can u a system designed in this way and the application of content methods, techniques and methods of verifying acquired competence to realize their full potentials. It is our job to do just that for all of us students.

In a modern conceptualized educational system it is the teacher's task to make adjustments accordingly with the individualized needs of all their own students, without questioning academic standards and enabling everyone realization of learning outcomes in an appropriate manner. In doing so, they will often find that adjustments have been made, when allowed to other students, led to a much better quality teaching process, and yes everyone his students realize outcomes better learning.

Good practice

And what adjustments can be made? Here are some examples: Take a student who has a major problems with public oral presentation, say a student who is stuttering. Does it exist possibility to hold a guided group discussion instead of oral presentation of students, at what student can decide how much, when and how will they participate? And it would be helpful for the student knows the topic of the discussion in advance and can do it in advance prepare the

concept and write down the questions. Of course, everything if we do not compromise academic standards, or if, for example, "demonstrating oral presentation" is not one of the outcomes of course learning. Or maybe a student can produce a written paper on that one as well us way, instead of oral presentation, demonstrate learning outcomes achieved? On the other on the other hand, it should be well weighed whether it will spare the student from the presentation actually be a factor that will maintain his disorder. With every presentation fear of being exposed to be smaller, but in order to do so achieved, we must first achieve in the group of students an atmosphere of acceptance of diversity. Or take the example of a student who, perhaps because of current bad course of mental illness, cannot participate in the implementation of exercises with a group of users of a program without having to analyse it their mutual relations. Can it do its job to do the analysis of the video footage? In fact, experiences say that teachers do the most the dilemma they have about adapting practical work students with disabilities (exercises, practice, volunteer work), finding it often that from their students' professional competencies come. In other words, teachers often find that if the practice is not adequately realized, students will not have desired and planned competencies. Just because of all the above it is important to ask the question whether competencies can be acquired by substitutes, alternative ways. The general opinion is that if there is an understanding of theory, spotting and analysis processes are the primary goal of practical work, rather than development of practical skills, and then educational the goal can be realized in alternative ways, for example through observation or virtual practice (Teachability, 2004). Students with dyslexia due to the nature of learning disabilities

often have marked problems in writing papers (essays, seminars). If demonstrating literacy or essay writing are not the outcome of learning within the course, can the student hold an oral presentation in exchange for your written work? Students with ADHD, students with dyslexia and it will be a great help to students with hearing impairments if they have materials (lecture handouts, for example) available before class because they will be able to advance prepare, organize, structure... Furthermore, teachers will quickly find that it greatly helps and to other students, which will be noticed immediately through their greater willingness to participate in discussion. It does not compromise academic standards! Placing courses in the form of e-learning greatly facilitates work for all students but also for the teacher; materials are available at any time and every time student can adapt to individual form, accessible and convenient to use. Students with hearing impairment often only meet form (attendance at lectures) "Listening" to lectures, if not present sign language translator. Is there a possibility that instead of participating in the teaching, independently, the code houses, analyze the documents in question in lectures and subsequently, at consultations, discuss done with the teacher in four eyes, while reading to the teacher from the lips (which is almost impossible if in the room more interlocutors)? Another possibility may be processing of the topic in the form of written work. Showing film material, a student with a disability the hearing will see the picture but will not hear or hear it well comments, which are often very important. Does it exist the possibility that such material also has subtitles?

Presenting written material to students, blind the student will be misled. Is there a possibility offer it in digital form to him could I customize and make it available? Students with dyslexia but also

those with visual impairments and some with motor impairment may not in manage to show what they know, for example, in the written exam. In that case extended time would greatly help. It sets the question of what we are trying to determine (that is, what are the expected learning outcomes): are students ready solve the task in a limited time (time reactions) or are they able to solve the task (knowledge)? Earlier announcement of written knowledge tests and possibly the available exam questions in advance are a great help to all students. If we measure their level knowledge, this is in line with the goals of the teaching processes and allows them to focus on the essential.

Duration of "extended time" for realization some task will depend on the individual student opportunities. Still, she's a general recommendation to extend the time by half longer than the time allotted for completing the task other students. Some students need extended time for written exams only. Some also need it drafting of essays, seminar papers, drafting and similar to. If it does not compromise academic standards, is it possible (and for how long) to extend that time student? Or inform him about the task and deadlines in advance? This would definitely help everyone students. It would be best if their activities what they are expected to do, as well as the deadlines, presented at the first lesson. And what about when we use a demonstration in class, a do we have a blind student, for example? The only way to and he participates in teaching is to be a demonstration performs on it. As for the theoretical part of teaching, therefore lectures, it is a big help to a blind student yes the teacher allows him to record a lecture, how would be fully accessible to him afterwards. This it can also help a lot with dyslexic students. Either we have a student with some chronic illness or motor or

sensory impairment, which is in forced to join one during the semester rehabilitation program and it is not possible to systematically participates in teaching. Is that a reason not to satisfy course requirements and even lose required ECTS Points? Can he possibly get some substitutes or some additional tasks, such as analysis literary work or additional seminar work focused on topics addressed while prevented to attend classes? A student with hearing impairment, even one who relatively reads well from the lips, no way can participate in group discussion. It is important that the participants in the discussion do not speak in the same voice, but one by one, to the established order. Pen going from side to side persons, or permission that only the person who has a pen in his hand may discuss, will help a deaf person to participate. And to others. Like this controlled discussion will be even more effective. And a little extra help will be of great benefit. For example, a blind student should be briefly told his name and indicate that he is addressing him. Also, a concise description of the space where i is located a brief introduction to all present will make it easier blind student participation in teaching activities.

Sometimes a student who has hearing impairment or for example a dyslexic student who has a problem in taking notes from a lecture, have a person with you that will help him (student assistant). It is important to have this person before class present to everyone. It is free to be encouraged. All anticipated adjustments are required discuss with students with disabilities; they know best what adjustments they make availability of instructional content and whether they were effective. However, the teacher knows best if they have one concrete adjustments made it possible to achieve outcomes learning. It's important to evaluate! It should not be

forgotten to inform the other students (especially if it is an exam adjustment) o ways and reasons (only necessary information) adjustments. They need to know that it doesn't seem like any, not even positive, student discrimination with disabilities. Make the adjusting guide thread one that allows students with disabilities maximum participation in all teaching activities. these students should be as high as possible, involved in all teaching and extracurricular activities. This is the only way to gain all the necessary experience, to build professional and personal competencies and realize learning outcomes, and truly be full members of our academic community. Keep students with disabilities to the maximum involved in all academic activities with application reasonable adjustments. Conclusion Universal design for learning, respectively by inclusive design, it is possible to secure the most standards and quality of higher education for the largest number of students, including students with disabilities. It actually means it's possible realize the availability of content and activities high education to students who have certain difficulty accessing information or realizing it some academic activities and traditional ones the education system does not fully enable participation in the educational process. However, this does not mean that it is necessary reduce the content of higher education or give up some teaching methods than that content and methods of individual courses, and therefore study programs, need to be defined after clear and achievable learning outcomes are precisely defined courses and study program. So it is necessary clearly define what the teaching process wants achieve both academic and generic competencies, which they ultimately do professional competencies of future scientists and professionals, seek to develop with students.

Just by defining the learning outcome, the teacher determines academic standards within your course, which is the criterion for determining quality in higher education. It is important to emphasize here that the outcomes mentioned learning must be in tune with the content and activities that are encouraged during teaching, at to which content is of utmost importance as well as methods the acquisition of learning outcomes and their evaluation. The should by no means go below defined academic ones standards, or competencies, that in finalists make the qualification (set of competencies typical of the same level of education and specific to individual title).

The goal can be achieved by defining as many different ones as possible ways in which the same outcomes can be achieved learning. It is therefore necessary to anticipate and use it various teaching methods and forms of teaching process, which will allow most students the opportunity to be accessible to them at an appropriate level educational content and processes. It seems therefore that if we really want to achieve high academic standards and quality, a must seriously re-examine and often correct their teaching work. But isn't that our primary professional as well homework and one of the biggest professional challenges?

***Bogdanović Aleksandar** *,Belgrade, Serbia of CRID (Inclusive Society Development Center), national organization, Belgrade, Serbia*

Design for all and cultural heritage

Step by step guide to make cultural heritage site accessible

Bogdanović Aleksandar ,Belgrade, Serbia of CRID (Inclusive Society Development Center), Belgrade, Serbia

Introduction

It is not necessary to talk about the history, civilizational and cultural heritage of India one of the most interesting countries in the world regarding its diversity of culture, languages, traditions, religions and its rich history as crib of one of the oldest civilizations made a lot of traces in today's India.

The cultural heritage is one of the biggest challenge to overcome – because the design for All is needed to be applied by while the cultural heritage's sites and values also have to be preserved.

Preserving the cultural heritage is one of the most important tasks in today's society it shows the identity of one nation and its history, country but also as other countries India has the people with various disabilities and health problems they meet obstacles like any other population in the world.

The legislation and political issues always requested to preserve the cultural heritage - in the first line we think about archaeological and architectural monuments and sites and various environments but in order to do to be compliant accordingly to universal design principles and design for all philosophy everyone including people

with disabilities have to be able to experience the heritage in their own country.

My modest intention is to by this article to inspire and make a little guide for some solutions keeping in mind the richness of the cultural heritage of India. There is no universal solutions for cultural sites because each of these places have own characteristic different from others' one and the same situation could be very different from the place to the place concerning Design for All solutions accordingly to the needs of all people, but also including the one of the most important thing in todays' modern society including the preservation of cultural heritage sites witch are under threat often connected to complex landscapes of conflicts, terrorism, fundamentalism, migration, global warming, pollution, financial crises, inequality and diverse interests of local communities (economic interests, lack of valorisation for cultural, religious or traditional reasons, and last, but not least – the invasion of tourists)[1]. All these factors including the deterioration due to the passage of time for people working in cultural sectors represents the choice between preserving the heritage and make it accessible to all people including their various characteristics.

The people without memory about their cultural heritage is the people in the risk of to disappear and lost its identity.

Despite of various prejudices, sometimes in various cultural heritage traces, artefacts, traditional events we can found the highest level of

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[1] citation: Dr. Sada Mire, Assistant Professor, Faculty of Archaeology, LDE Centre for Global Heritage and Development, University of Leiden

one civilized society – respect to the other members which have disabilities, diseases and making them also the same–valued members of society.

1. Cultural heritage preservation and Design for All

Cultural heritage in this case is 'archaeological and architectural monuments and sites and cultural environments'. They are all traces of human activity in our physical environment, including places associated with historical events, beliefs and traditions". (Section 2 of the Cultural Heritage Act, Kingdom of Norway)

People with disabilities are to have the same opportunity to participate as others members of society. The various anti-discrimination, equal-opportunities and accessibility documents as conventions, acts, programs, and strategies are proving their purpose of ensuring equal opportunities for social participation for everyone regardless of disabilities, health issues, age, etc.

For realizing this, the Design for All is the philosophy serving to all of us as guideline for solutions to realize that everyone is equal with others and have rights to enjoy and participate in culture.

Thanks to the bouncing development of technologies, awareness raising and spreading the information among the communities of culture experts, people with disabilities and their organizations, it makes is more easily to find the solutions.

It seems easy but the one of the most important tasks of every Department for culture is charged with preservation and promotion of art and culture of its country.

Its ambivalence situation because the preservation and promotion are two issues making the conflicts in realization of making the culture suitable to all because we have to be aware that mission of such institutions are:

"Preserving, promoting and developing cultural heritage in its movable, immovable, tangible and intangible forms; supporting and developing cultural practices promoting creativity and participation in cultural heritage activities; developing and enhancing institutional linkages internally and externally; develop cultural infrastructure"[2]

It shortly explains everything that everyone in culture have to do – to accomplish its mission including the participation to ALL without any exclusion concerning various social groups - people with disabilities, children/youth and elderly.

2. The legislation and tradition

The (Indian) Ancient Monuments and Archaeological Sites and Remains Act, 1958, requires special mention as it has recently been amended in 2010 with strict rules in place for building and renovation activity in the vicinity of protected monuments. Including no building activity is allowed in the 'prohibited zone' which is within 100 meters from the notified limits of the monument. Two hundred meters further from the borders of the 100 meter prohibited zone is the 'regulated area'. Here some building, repair and restoration activity is allowed with permission from the Competent Authority

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[2] *2. Citation: Department of Heritage & Arts of Fiji*

who forwards it to the National Monuments Authority for their expert opinion.

But, despite the such regulations which seems to be a great obstacle to apply design for All philosophy and Universal design principles due to the traditional statement of authorities of giving expert opinion which is undoubtedly good from the point of history of art, historical architecture and culture, but not compliant to the needs of people with disabilities.

Also the problem is the certain challenge pertaining to unprotected built heritage which are unnumbered in India due to the various reasons – political, cultural, economic and traditional. It is not surprisingly habit that some heritage suffers disrespect due to the various socio-historical reasons. But the someone's problem is another's challenge: unprotected built and other heritage are the field for entering the Design for all practice as part of cultural heritage issues.

By good planning, intelligent/innovative solutions and respect of the characteristics of cultural heritage – it could be the introduction of good practice with high potential to be adopted by authorities and other institutions in their projects.

3. Process

3.1. Cultural heritage for people, not for institutions

From the start of developing and promoting the culture – relevant authorities have to ensure that cultural heritage is accessible to the public. But, realizing such task so that everyone has access has not

been a focus issue in the cultural sectors – their primary focus is preservation and expression.

Having an equal opportunity to experience cultural heritage is everyone's fundamental right.

Cultural heritage sites are very often made in the time when Universal Design principles didn't exist, so such places have characteristics and special values making it physically inaccessible.

As mentioned above, it's a two-part challenge:

1. *to reduce various types of obstacles so that cultural heritage can be experienced and used by all; and*
2. *prevent measures improving accessibility to all from leading to the disappearance of irreplaceable cultural heritage.*

3.2. Keep in mind

Archaeological and architectural sites have variable characteristics concerning Design for All issues: It would be impossible to remove all the obstacles from all of them – physically – it is impossible task to combine preservation and Design for All. But many of them are such that it may be possible to improve their accessibility.

In some places, the design and nature of the cultural site is such that universal design principles can easily be applied, while others will require a lot of skill, creativity, innovative approach and sometime funding to achieve this goal.

Two important approaches have to be respected in awareness raising in making cultural heritage accessible to all:

1. *to improve people's knowledge about why Design for All is necessary,*
2. *to improve the expertise in the preservation of cultural heritage.*

When accessibility is restricted, alternative solutions must be developed, because it is innovative approach.

Often, better accessibility will lead to the cultural environment increasing in value and having a greater chance of its survival over time.

3.3. Goal

The challenges involved in combining good cultural heritage preservation with good accessibility can be demanding. Not only laws and regulations but also respect for equal opportunities for everyone mean that these challenges must be addressed properly. Often, good, permanent solutions need to be good and as permanent as possible. Attitudes, ways of thinking and technical solutions are developing rapidly. It is crucial to have a dialogue between the various professional areas and a willingness to compromise.

This process request to make opportunities clear and reduce the potential for conflicts between cultural heritage preservation and Design for All.

The goal is to make it easier to conduct the analysis process including consideration of cultural heritage measures. The tool may support the work of finding functional an aesthetically good solution that also keeps and strengthen the cultural heritage. Each cultural heritage artefact/site is unique and there are no universal solutions.

4. Different types of disabilities

A lot of the population have disabilities for shorter or longer periods. It doesn't mean that all people are „disabled ": everyone has been in situation as people with disabilities. Everyone accepts products and services conceived upon Design for All philosophy. So, people with various health problems or cultural problems (please, be aware that for foreign tourist who doesn't know any of languages in use in India is communicably disabled) are prevented from participating in society due to unnecessary physical and other barriers in their environment.

For this reason, it is necessary to take various user groups' needs into consideration when making cultural sites accessible.

4.1. Types of disabilities

1. **Impaired mobility** - a lot of the population may for various reasons have impaired mobility like less stamina, less energy and a reduced ability to coordinate movements and may only be able to move within a limited scope. Some may be helped by technical aids or by an assistant. So reduced number of physical obstacles and supporting tools/technologies are necessary to allow them to enjoy in culture sites. (I believe it is most recognizable obstacle and its solutions which could be used as known by readers).

2. **Impaired hearing** - most widespread sensorial disability - lot of the population has impaired hearing. Impaired hearing is often due to old age or illness or injury or congenital. In order to understand speech and avoid stress and confusion, there must be good acoustic conditions and as little background

noise as possible. Often, sight will compensate for impaired hearing. Good lighting will be an important factor to allow people with impaired hearing to lip-read, read subtitles, or printed information, so they understand what is being said/printed. There are a lot technological solutions for this – induction audio loop, on-the-site screens with subtitles, various software solutions and simplest and effective – the guide map (we have to be aware that many communities with interesting cultural heritage sites don't have big budgets for cultural issues).

3. **Impaired vision** - a lot of the population have impaired vision due to illness, ageing or injury. It can vary from total blindness to various degrees of impaired vision. Those with impaired vision needs good contrasts in order to move around in the environment as for perceiving the site in the case of lower degree of impaired vision. The acoustic environment becomes important for compensating for the loss of vision. Different acoustic conditions will help to allow those with able to tell people where they are. The tactile pathways or floorings are also important: example of this are tactile areas at the top and bottom of stairs. The use of handrails that are continuous from the top to the bottom of a set of stairs will be a good natural lead line for a person with impaired vision as to person with less stamina.

4. **Orientation** – in new environment as cultural site a lot of people have problem with ability to find their way around for various reasons. This may be due not only to the various forms of disabilities, but also of the structure and size of the cultural site.

For most people it is important to organize simple, intuitive way for visitors to find their way around the physical environment. There is a need for clear, comprehensible signs using pictograms/symbols.

5. Steps of the work on making cultural heritage site for All

No cultural heritage sites are the same – all of them are different for various reasons – architecture, design, geography, tradition, history, etc. which all have to be taken into consideration in finding the solutions for making the site accessible on all ways suitable to Design for All philosophy. It requests multidisciplinary approach and team of various experts (developers, designers, architects, cultural heritage experts for example) and collaborates which could be helpful by their experience (persons with disabilities, local guides, etc.). They have to collaborate.

Step 1 – Mapping

As name says it means mapping of complete site (building for example) and surrounding areas. It includes to make complete picture of the site, specific description for making place accessible – it helps to find the possible solutions and challenge to be identified. This is the early first step to be done perfectly because it gives the basic data for good realization and result.

The mapping includes – physical, tactile, printed, audio video and personal tools for accessibility to be taken into consideration. The other aspect of mapping the site is to find the obstacles which could be technical, economical, legal or other which have to be solved in

order to achieve the site arranged accordingly to Universal design principles.

After mapping cultural heritage values this step neds by mapping of solutions which could be used accordingly to the Universal design principles.

Step 2 – Discussions and Proposals

This step includes considering possible solutions. I have to underline not the only one proposal but instead to consider many possible solutions equally. In this step the multidisciplinary team goes in action, with several preconditions in order to ensure the success in finding the solution:

1. *common understanding the problem and concepts and*
2. *having the similar interests and*
3. *to agree about the final goal of this action*

This approach helps to evaluate various proposed and alternative solutions including the possibilities and restrictions included. This step includes also the various administrative actions - checking regulations, local communities, relevant authorities, etc. They also have to be included to finding the solutions – but not as the multidisciplinary team, due to their secondary role in finding the solution. The solution has to be in compliance with regulations, heritage preservation principles, but also to include the unique characteristics/details of the mapped site, but also as possible should at the same time and in a careful manner comply with universal design principles.

The seven universal design principles are:

1. *Equitable Use.*
2. *Flexibility in Use.*
3. *Simple and Intuitive Use.*
4. *Perceptible Information.*
5. *Tolerance for Error.*
6. *Low Physical Effort.*
7. *Size and Space for Approach and Use.*

(ref: The Center for Universal Design, North Carolina State University, USA, Mace 1985)

The solution – no matter how it looks, it includes the addition on the site which could be enriching for the site and open the new comprehensive view of the cultural site. As one of the consequences is the potential contrast between what is new added and how it looked before. It is one very sensible step, which can make easy or more difficult the next task of making the site accessible. Sometimes it includes complete new aesthetically suitable new design or product developed for this issue.

Step 3 – The Application

After evaluating all the aspects of making the site accessible and finding the best, good designed, sustainable, possible – to make detailed design and plan for realisation of all measures to change the cultural heritage site to be accessible. In this phase the good presentation and visual tools would be very helpful, because the such step as changing the cultural heritage is a big bounce in mentality – where is the borderline? It is subtle step to be realized. Mostly experienced experts suggest to include the repair (it is

always needed) of the cultural heritage site as part of making it accessible.

Step 4 – Implementation

One of the most important steps - good preparatory work and planning does not help much if mistakes are made during the implementation. This has to put in reality the complete solution and make it finished without <u>damage</u>. The cultural heritage sites are mostly not renewable and damages are irreversible. So this step has to be realized as carefully as possible. The future of other culture sites needed to be accessible depends on it. It is important to prevent unsuccessful attempts at universal design principles solutions and unnecessary demolition or removal of important historical material. This is necessary to be careful and all planned interventions have to be under rigorous control. Some changes, it is not surprise, in design or construction intervention will always appear due to the unknown or unpredictable state of the cultural heritage site (with a little exceptions), so it needed to go again to step 3 and 4. It asks more time, but the quality is necessary. Otherwise, a breach of the acts regulating the cultural heritage preservation is punishable crime.

Step 5 – Evaluation

Finally – you reached your goal!

This is a very important step – to make the evaluation of all steps in project of making the cultural heritage site accessible. The evaluation is gathering the lessons and important experience for future projects. All the members of team, including the authorities

have to give their part of evaluation report in order to help to other authorities to realize the similar/same tasks in such situation. It has to be done well as step-by-step book, systematically with all steps documented and with video and photo documentations because it will serve to all future experts to avoid the mistakes and make the making the accessible culture heritage as something completely normal, not an extravagance experience.

Aleksandar Bogdanović

Letter from the Chairman's Desk

By Sunil Bhatia PhD

The design has come to the existence for the safety of human lives and later it moved to the next level of convenient for the execution of the task with minimum effort for maximum gains. In primitive times hunter first thought of safety from the attack of wild animals and looked for killing for food. It was crucial job to keep safe from harm as well as harm the wild animals in such a manner it should not get time to attack and killed at once. They designed tools like dagger, sword or even used smoke or fire for killing others for their gains . They used smoke for making the honeybees to escape without hurting the person who is attacking for honey. Design of arrow or sling shot has capability of hitting the target keeping the person out of danger from attack of wild animals.

Discovery of fire and management ingredient was introduced and was making prominent presence in human lives but sometime accidents surfaced and harm the humans. Fire was designed for not to hurt humans but use in such a way it should harm the wild animals for killing for foods Design of placing three stones and placing the pot for heating for cooking on three pegs was the design of safety not to slip and bending of the brim of the introduction of insulated handles for lifting from the fire was the design of safety. Safety match stick is where person gets the fire striking on the

chemically coated surface of match box. Design of shoe has come to existence for safety of human feet from the harm of hitting with uneven terrain of the earth.

In modern times the entire focus of designers is that in the emergency minimum human interface should be involved in lowering the human errors. Earlier it was initiated with an idea for protection of harmful effects and next level was obvious what could harm us it could harm others and helped in designing weapons and shields. Next stage was to eliminate chances of accidental human errors from harming. They design holding pong for lifting heated vessels from fire. This concept has changed the human minds how to protect without harming anyone.

Safety valve in pressure cooker or any place where high pressure gas is used and need specific pressure or vessel is designed to bear a certain level of gas pressure design of such valve for safety is provided . Ceiling fan that has nut bolt to hold the fan hanging but constant rotation of blades or movement makes the nut lose and it may invite the accidents of falling on floor and to prevent such situation deign of safety pin was introduced that never allows nut slip out of the bolt. To hold the dress design of pin was thought but it was so close to human body and one end for piercing was so sharp there was high chance of inviting accident and to lower that probability design of safety pin was thought where sharp end was covered and works as stopper not to slip out of the dress. Design of airbag in automobile is for safety of asset. Similarly helmet and seat belt is designed for safety of driver and passengers. Safety can be achieve by deterrent but it has inbuilt character of high probability of failure.

When people use mosquito net it is not for safety but for protection from bite of mosquito that might prove fatal some time. Fencer uses shield from attack of enemy that is not for safety but for protection. But in grenade there is safety pin and as long it is intact it will not explode.

No nation is big or small it is the citizens' quality that makes the nation great. There is no matter who is leaving country for better opportunity and it is natural process of in humans to shift where struggles are low and gains are better. I am thankful to Mr. Bogdanović Aleksandar ,Belgrade, Serbia of CRID (Inclusive Society Development Center), national organization, Belgrade, Serbia for making us proud by accepting our invitation of Guest Editor and by inviting different authors for contribution of articles and what sort of the problems are prevailing in that country and made this special issue unique. It is the process that makes the people great.

LAMBERT Academic Publishing has published book "Design For All, Drivers of Design" author Dr. Sunil Bhatia of Design For All Institute of India and it is available on www.morebooks.de one of the largest online bookstores. Here's the link to it:

https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

This book is dedicated to our esteem readers, contributors and well wishers.

With Regards

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Forthcoming Issues

October 2019 Vol-14 No-10

Dr. Ravindra Singh is an Assistant Professor of Design at Delhi Technological University, Delhi. He is passionate about human-centric design; designing a product for an extensive variety of users. His major research interest is Universal Design, Innovative Product Design, Sustainability, and Frugal Design. Ravindra Singh has done BTech in Mechanical Engineering from UP Technical University. He received his Master of Design (MDes) and Doctoral degree (Ph.D.) in Design from Indian Institute of Information Technology, Design and Manufacturing, Jabalpur (IIITDM) and has authored research papers in referred journals and international conferences.

Partha Pratim Das is working as an Assistant Professor in the Department of Design, Delhi Technological University. His Research interest areas are Human Centered Design, Design for Sustainability, Grassroots Innovation, Design Thinking, Systems Design, Design for

Experience. He has a Bachelors in Civil Engineering, an M.tech in Environmental Science and Engineering and M.Des in Industrial Design. Currently, he is pursuing Ph.D. from IIT Delhi.

November 2019 Vol-14 No-11

Elisabete (Bete/Bebé) Castanheira from Brazil will be Guest Editor for this special issue. Designer, university professor, researcher and consultant in the development of design projects, Elisabete Castanheira has solid market, academic and content experience. As a lecturer she works in the courses of Design, Graphic Design and Product Design.

As a volunteer, she is a member of the board of directors of adp (Brazilian association of product designers), as an administrative director (having served as a financial director for the two previous managements) and is a member of the advisory board of objeto brasil association and the brasil criativo institut. She participated in several exhibitions in brazil and abroad, receiving awards and honorable mentions.

In 2017 participated in the group that represented Brazil at the Cannes Festival as jury in the category of Product Design and coordinated the team that prepared the application process of Brasília to the Creative Cities Network of Unesco - Category Design (application that was accepted).

December 2019 Vol-14 No-12

Dr (Ms.) Ketna L Mehta, PhD. Founder Trustee, Nina Foundation, an NGO for rehabilitating friends with Spinal Cord Injuries, an incurable permanent disability. Editor & Management Advisor, S. P. Mandali's Prin. L. N. Welingkar Institute of Management Development & Research. Author, Professor, Researcher, Thought Leader on Disability Solutions, Inspirational Speaker and Management Curator. Recipient of the prestigious NCPEDP Shell Helen Keller Award.

WOMEN DESIGNER YEAR 2020

January 2020 Vol-15 No-1(INNAGURAL ISSUE)

Onny Eikhaug is the founder of Innovation for All AS and President of EIDD Design for All Europe, a network comprising of 36 members, consisting of both design institutions, innovation centres and academia. She was for more than 13 years Programme Leader at Design and Architecture Norway, responsible for promoting the Centre's activities in the fields of people-centred, inclusive design as a strategy for innovation. She was Programme Leader for the Innovation for All programme promoting inclusive, people-centered design as a practice and an effective tool for innovation in both private and public sector.

She is committed to sustainable, people-centred design and is focused on demonstrating the potential of this approach as a powerful and profitable strategy for innovation. A key aspect of this is presenting and implementing effective methods that can easily be adopted by any organization or enterprise. She writes, publishes, lectures, facilitates workshops and curates exhibitions both in Norway and internationally, and works closely with designers, education, industry, research and government using real projects and other knowledge transfer mechanisms to achieve this. She advises and coordinates people-centred inclusive design projects within business and public sector applying and testing new tools and methods for user research and involvement. She is responsible for the books Innovating with people –The Business of Inclusive Design» and Innovating with People - Inclusive Design and Architecture as editor-in-chief and author.

She holds an MBA from the Norwegian School of Economics and Business Administration. She has a broad executive experience in international marketing, sales, innovation, product development and design management in the fields of personal products, ergonomic lighting, and contemporary furniture having worked for companies such as Unilever and Luxo across Europe and the US. She was also Managing Director of a Norwegian Graphic design company.

She was in 2015 appointed Inclusive Design Champion Award by an international jury at HHCD Royal College of Art, London at the Include conference.

February 2020 Vol-15 No-2

Sharmistha Banerjee is an industrial designer with an experience in working in collaborative innovation and sustainable product design. Currently I am working as Assistant Professor at Department of Design, Indian Institute of Technology Guwahati. My area of PhD research is Design for Sustainability in the arena of agricultural equipment design. I did my bachelor in Industrial Design from IIT Guwahati and a master in Integrated Product Design from Technical University of Delft, Netherlands.

I have co-founded the Sustainability and Social Innovation Lab at Department of Design, IIT Guwahati. The lab focusses on creating systems for sustainable human consumption and production through a complete revamp of the consumption structure with our design interventions. We are part of the global network on sustainability, the Learning and Education Network in Sustainability (LeNS) consisting of 150+ global universities. Currently a large part of our

sustainable product-service development projects are in the domain of agriculture.

At IIT Guwahati I teach courses like System Design for Sustainability, Usability Engineering, User Research Techniques, Product Detailing, Interaction Design, Product Design, Design Management, Plastics and composites and Design Semantics. I have also developed a MooC course on System Design for Sustainability which had more than 600 subscribers in the academic year 2018 - 19. In the past few years, I have worked in India, Bangladesh and Netherlands with companies like Philips, Infosys, MIDCO, VU Medical University Amsterdam, Conpax Verpakking, Beat Belly, Botanische Tuin Delft, ACC Ltd, educational institutes like IIT Guwahati, MIT Institute of Design Pune, IDC, IIT Bombay and L'Ecole de Design (Indian Operations), Nantes-Atlantique, France and NGOs like International Development Enterprise Bangladesh.

April 2020 Vol-15 No-4

A Doctorate qualification in the fields of: interior architecture, architecture and urban design Dr Dolly Daou has 18 years experience in: teaching, research, quality assurance, and leadership, specialised in multi-disciplinary design projects. Currently the Director of Design Lab: New Eating Habits at L'École de design Nantes Atlantique, France. Previously, the Director of the Association of Interior Designers in the MENA region, an external reviewer to many international educational quality assurance agencies and the Program Director of Interior Architecture and Master of Interior Design at Swinburne University of Technology,

(Australia and Hong Kong). Also, was the Treasurer of the Board to the Interior Design Educator Association (IDEA) for Australia and New Zealand. Author of co-edited book Unbounded on the Interior and Interiority.

May 2020 Vol-15 No-5

Having been a wheelchair model from an early age, Samanta has always felt frustrated by the lack of luxurious clothing available for disabled people. Working as an advocate for inclusion within the fashion industry, Samanta has decided to join forces with some of the most innovative emerging designers to develop her brand, 'SB' – a unique line of clothing based on the principle that "its not about being disabled, but about feeling beautiful and comfortable whilst in the siting position".

Born in Brazil, Samanta moved to London 10 years ago and has since dedicated her life to improving the lives of people living with disabilities. She hopes that her collection will open people's minds and hearts. Samanta is a former Brazilian no. 1 wheelchair tennis player winning a doubles silver medal at the ParaPanAm Games in Rio de Janeiro in 2007 & representing Brazil in three World Team Cups.

"We must be seen to exist" – Samanta Bullock

June 2020 Vol-15 No-6

Debra Ruh is a Global Disability Inclusion Strategist, Market Influencer, internationally recognized keynote speaker, published author, branding expert, successful entrepreneur, and an exceptional mother. Debra is host of popular program: Human Potential at Work (Audience in 84 countries).

Debra Ruh received her call to action when she was told by so-called "experts" that her daughter, Sara, who was born with Down Syndrome (Trisomy 21), would never walk or talk. She refused to accept the prognosis and perception of this condition. Driven by her unshakeable faith in the power of human potential and the love for her daughter, Debra was determined to dedicate her life to create a path to empowerment and the success for all those with disabilities.

Debra had built a multi-million-dollar firm focused on ICT accessibility. Debra was convinced that "the real disability is being unable to see human potential" formed Ruh Global Communications. This new firm focuses on Global Disability Inclusion Strategies, Digital Marketing, and Branding among many other services.

Debra consults with Multi-National and National Corporations and the United Nations. Debra is now internationally renowned global keynote speakers and travel the world inspiring and advocating for governments and corporations to include people with disabilities.

Debra Ruh is an active public figure she was invited to address the United Nations General Assembly at the Conference of State Parties 9th session (COSP9) by the President's office of the UN on May 13,

2016. More recently Debra was selected as the North American representative for the United Nations (UN), International Labor Organization´s (ILO), Global Business and Disability Network (GBDN). Additionally, in 2018 the U.S. State Department selected Debra Ruh as a global speaker and ambassador for the United States when visiting foreign nations and speaking on inclusion and disability. Selected as a Global Goodwill Ambassador in 2018.

Debra is a recognized global influencer, frequently interviewed by various media outlets and she has gathered a significant presence on many social media platforms, with over 300,000+ followers across all mediums. Co-founder of the award winning #AXSChat the second biggest tweet chat in the world with a reach in the billions. Debra was also named in the "Top 5% of Social Media Influencers" and "Top 0.1% of people talking about Disability Inclusion and Accessibility" by KLOUT. Named #15 in Digital Scouts Top #100 Global Digital Influencers in Sept 2018.

July 2020 Vol-15 No-7

Jani Nayar , Executive director of the SATH (Society for Accessible Travel & Hospitality), a tireless advocate and effective educator on travel & disability.

New Books

You may **BUY** this book on:

More Books!
www.morebooks.de

Sunil Bhatia

Design for All

Drivers of Design

Expression of gratitude to unknown, unsung, unacknowledged, unnoticed and selfless millions of heroes who have contributed immensely in making our society worth living, their design of comb, kite, fireworks, glass, mirror even thread concept have revolutionized the thought process of human minds and prepared blueprint of future. Modern people may take for granted but its beyond imagination the hardships and how these innovative ideas could strike their minds. Discovery of fire was possible because of its presence in nature but management of fire through manmade designs was a significant attempt of thinking beyond survival and no doubt this contributed in establishing our supremacy over other living beings. Somewhere in journey of progress we lost the legacy of ancestors in shaping minds of future generations and completely ignored their philosophy and established a society that was beyond their imagination. I picked up such drivers that have contributed in our progress and continue guiding but we failed to recognize its role and functions. Even tears, confusion in designing products was marvelous attempt and design of ladder and many more helped in sustainable, inclusive growth.

www.lap-publishing.com

it is available on **www.morebooks.de** one of the largest online bookstores. Here's the link to it:

https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

The Ultimate Resource for Aging in Place With Dignity and Grace!

Are you looking for housing options that are safer and more accommodating for independently aging in place? Do you want to enjoy comfort, accessibility, safety and peace of mind – despite your disabilities, limitations and health challenges? The help you need is available in the Universal Design Toolkit: Time-saving ideas, resources, solutions, and guidance for making homes accessible.

This is the ultimate resource for individuals and professionals who want to save time, money and energy when designing, building, remodeling or downsizing a home. The Universal Design Toolkit will help you take the steps to design homes for your clients or yourself while eliminating the costly trial and error challenges you'd inevitably encounter if faced with this learning curve on your own.

Rosemarie Rossetti, Ph.D., teamed with her husband Mark Leder in creating this unique Toolkit. They bring ten years of research, design and building expertise by serving as the general contractors for their home, the Universal Design Living Laboratory– which is the highest rated universal design home in North America.

Within the Toolkit's 200 richly illustrated pages, you'll find: Insights that distinguish *essential* products, services and resources from the *unnecessary*.

Proven, realistic tips for finding the right home.

Home features you need to look for. Nothing is assumed or left out.

Handy home checklists and assessments.

Interview questions to help you hire industry professionals with knowledge and experience.

Photographs that provide a frame of reference to inspire, clarify and illuminate features andbenefits.

Valuable resources to save you time, money and energy.

Helpful sources of funding.

Space planning dimensions for access using assistive devices such as wheelchairs andwalkers.

And so much more!

If you want useful, dependable advice and easy to implement ideas from respected experts who know the ropes, you'll love Rossetti and Leder's perspective. As a speaker, author and consultant who uses a wheelchair, Rossetti has helped hundreds of people design their ideal homes. Now her comprehensive Toolkit is available to help and support you!

Get the Universal Design Toolkit now to start your project!

Disability, Rights Monitoring and Social Change:
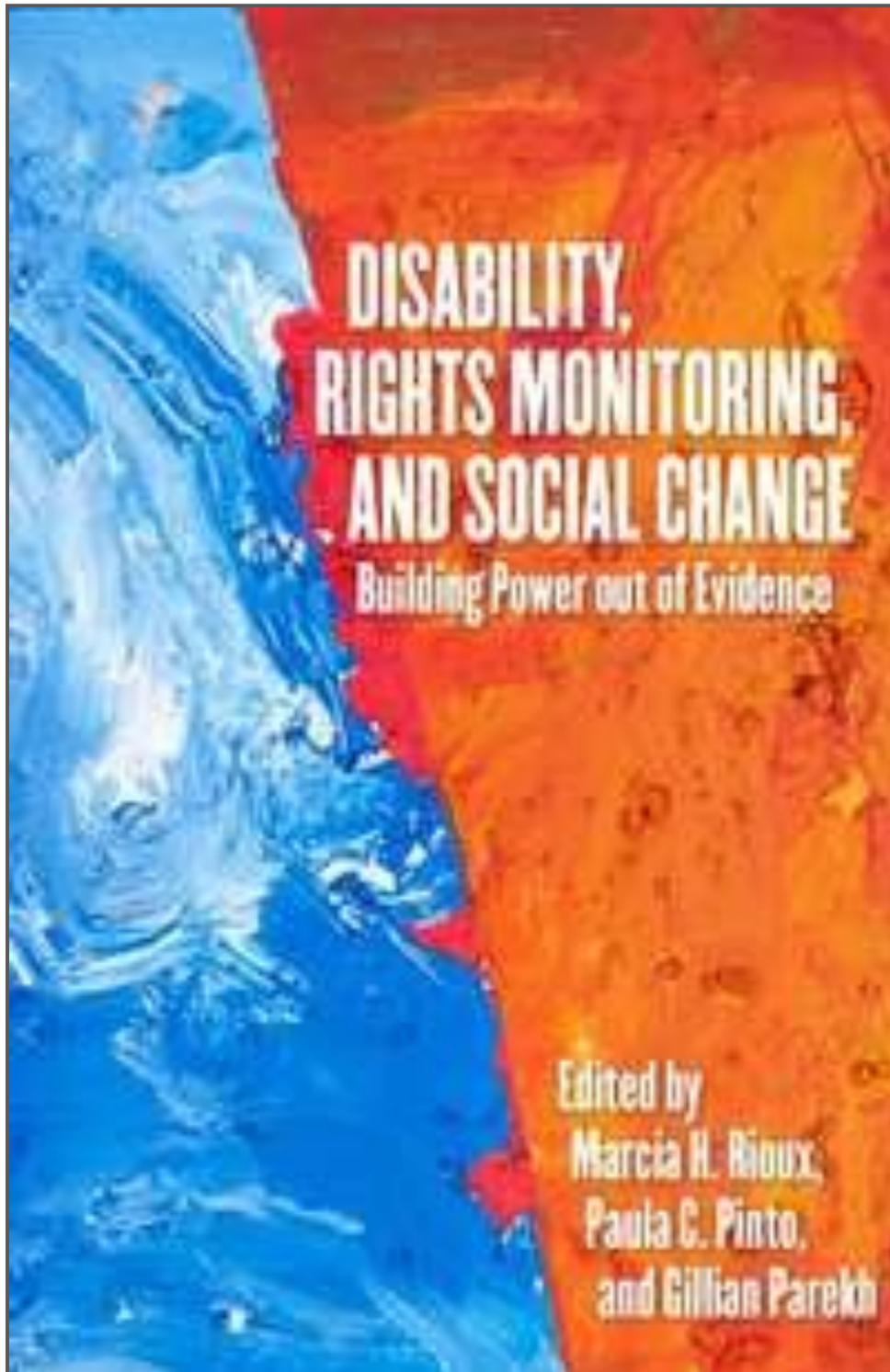
New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES
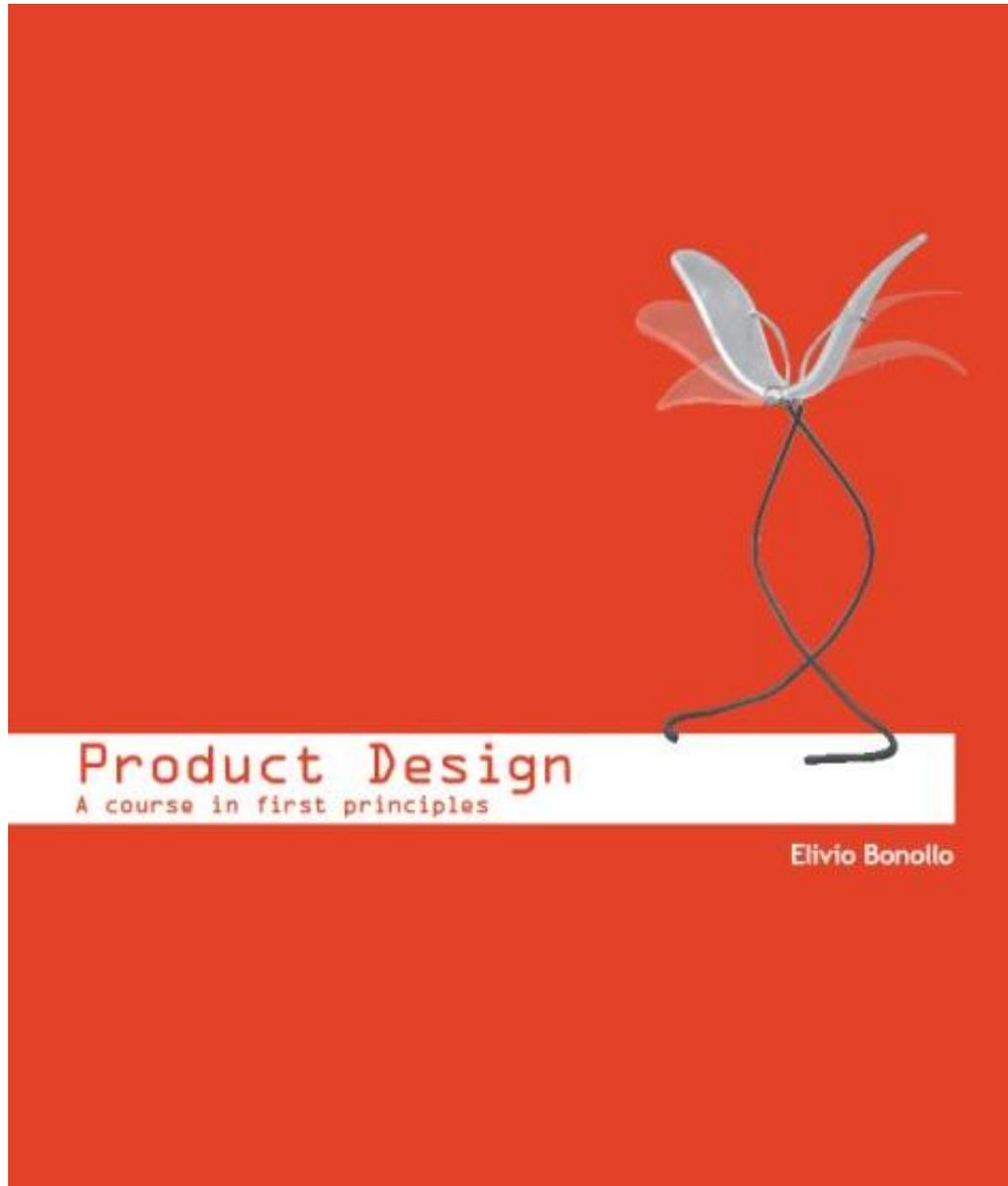
Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).

The 2018, eBook edition is available in mobi (Kindle) and ePub (iBook) file versions on the amazonand other worldwide networks; includingon the following websites:

ePub version:www.booktopia.com.au

https://www.booktopia.com.au/ebooks/product-design-elivio-bonollo/prod9781784562946.html

mobi (Kindle versions):www.amazon.in

https://www.amazon.in/Product-Design-Course-First-Principles-ebook/dp/B07FNV2F4L/ref=sr_1_1?ie=UTF8&qid=1532999395&sr=8-1&keywords=Product+Design%3A+A+course+in+first+principles

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READING HINTS: ePub files can be read with the iBook app on Apple MacBook/iPad devices; ePub files can also be read on Desktops PCs, Laptops and Surface devices using readers such as the Microsoft *freda*ePub reader. The Kindle (mobi file) reader isflexible and suitable for reading the eBook on PCs; Kobo readers can also be used to read ePub files on MacBook and iPad. All formats are very interactive with very good navigation.
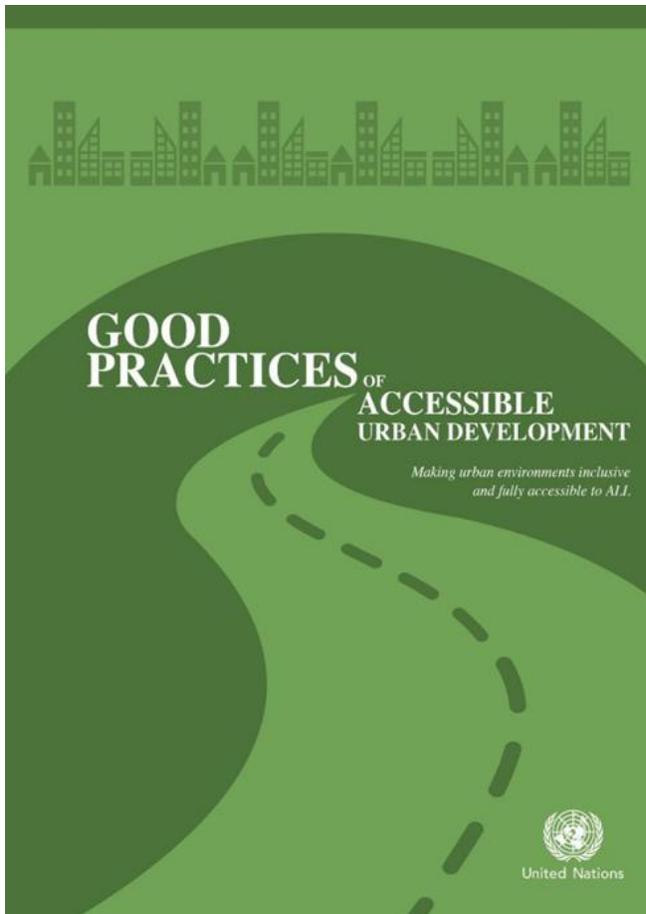
In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".

The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services.
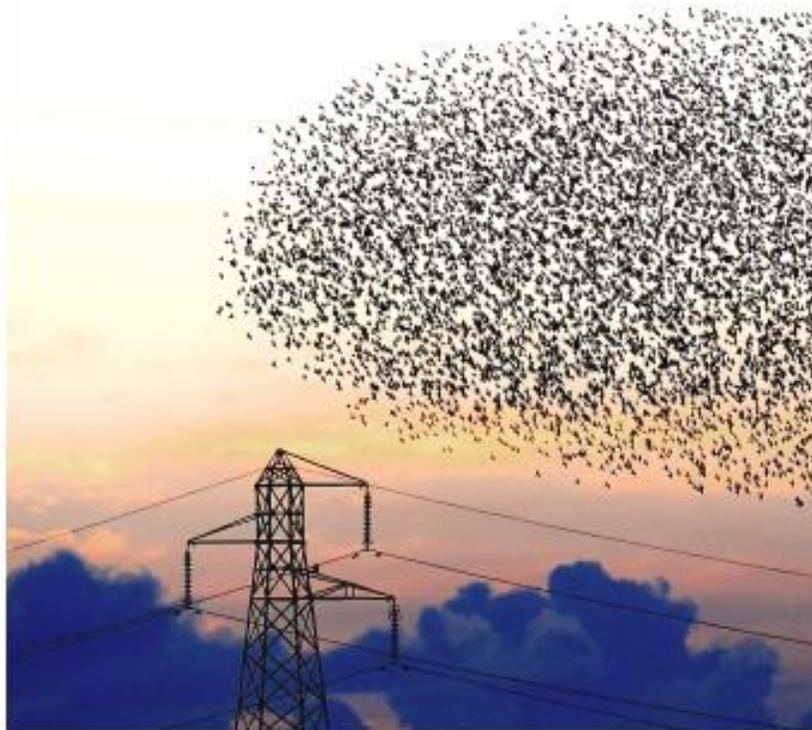
The publication concludes with strategies and innovations for promoting accessible urban development.

The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices _urban_dev.pdf

FROM MODULARITY TO EMERGENCE

A PRIMER ON THE DESIGN AND SCIENCE OF COMPLEX SYSTEMS

Chih-Chun Chen and Nathan Crilly

CUED/C-EDC/TR.168
Engineering Design Centre
Department of Engineering

UNIVERSITY OF CAMBRIDGE

Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.
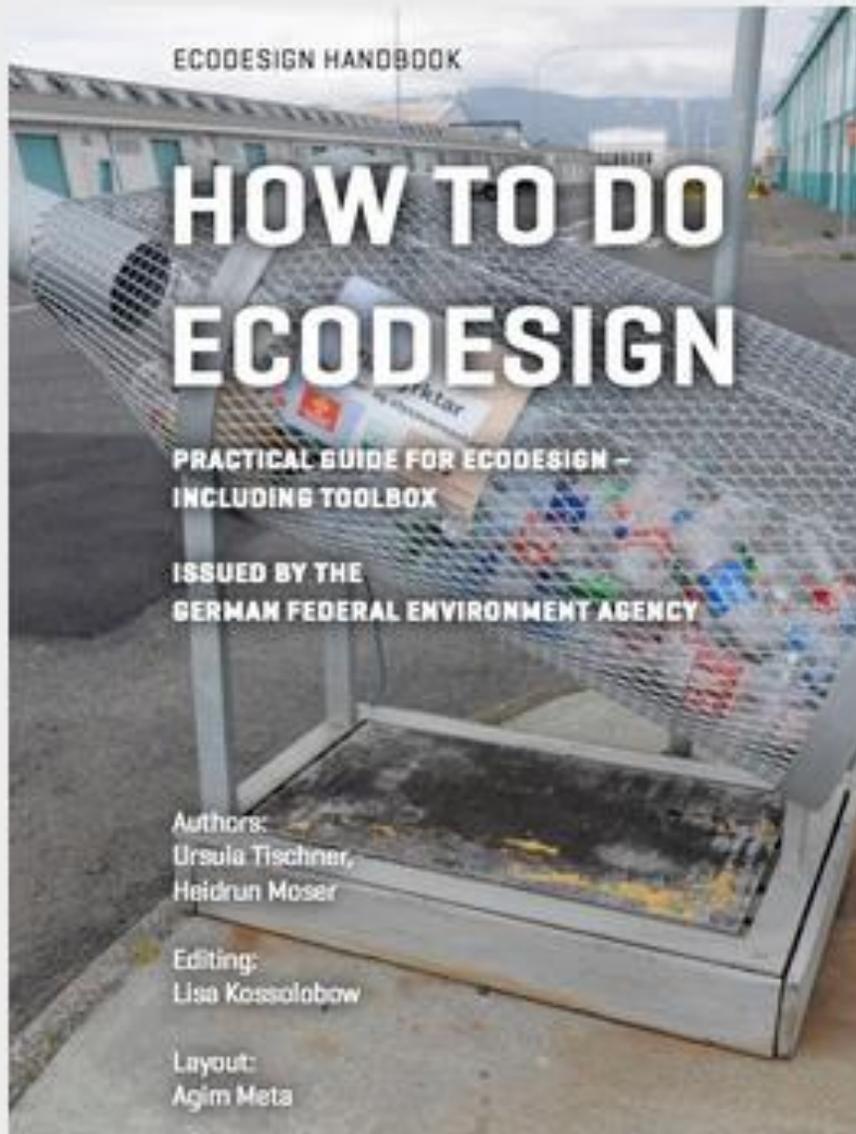**This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).**
The book is available at URL: http://complexityprimer.eng.cam.ac.uk

Changing Paradigms:
Designing for a Sustainable Future

Editors:
Peter Stebbing
Ursula Tischner

CUMULUS THINK TANK
Publication No 1 of the Think
Tank Series from the Cumulus
International Association of
Universities and Colleges of
Art, Design and Media

cumulus

CLA

Changing Paradigms: Designing for a Sustainable Future

New iBook / ebook:
HOW TO DO ECODESIGN

ECODESIGN HANDBOOK

HOW TO DO ECODESIGN

PRACTICAL GUIDE FOR ECODESIGN – INCLUDING TOOLBOX

ISSUED BY THE GERMAN FEDERAL ENVIRONMENT AGENCY

Authors:
Ursula Tischner,
Heidrun Moser

Editing:
Lisa Kossolobow

Layout:
Agim Meta

Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner

TRANSFORMATIONS
7 Roles to Drive Change by Design
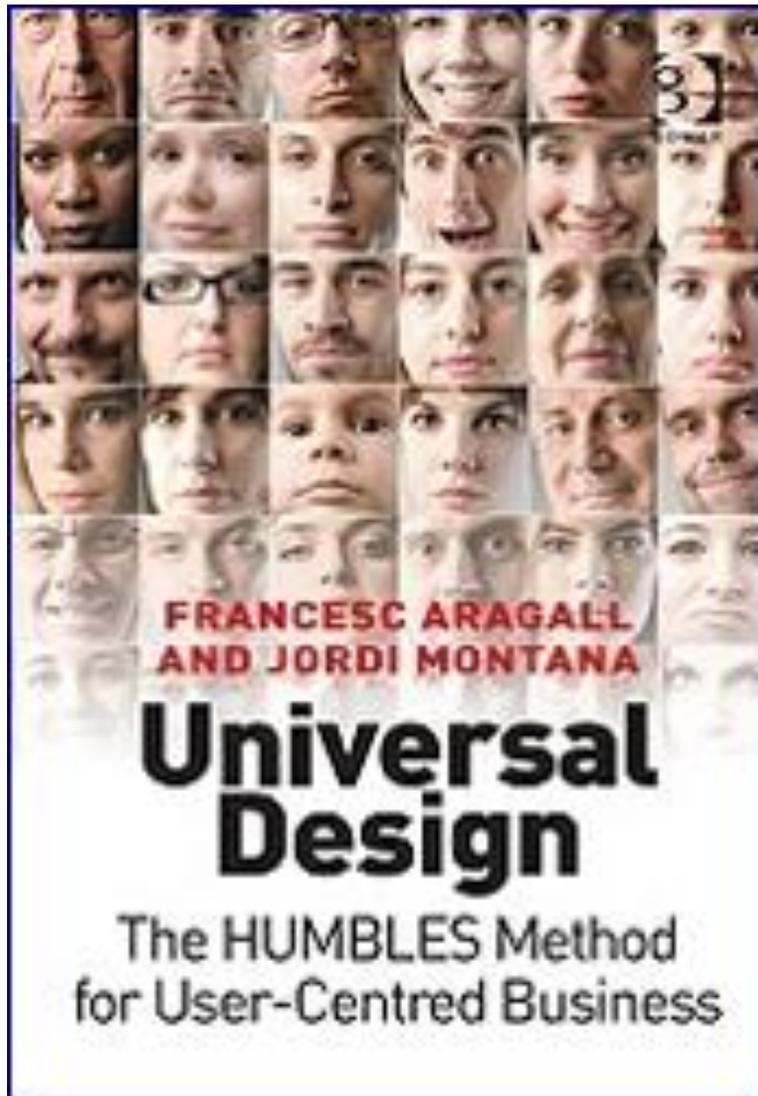
Joyce Yee / Emma Jefferies / Kamil Michlewski
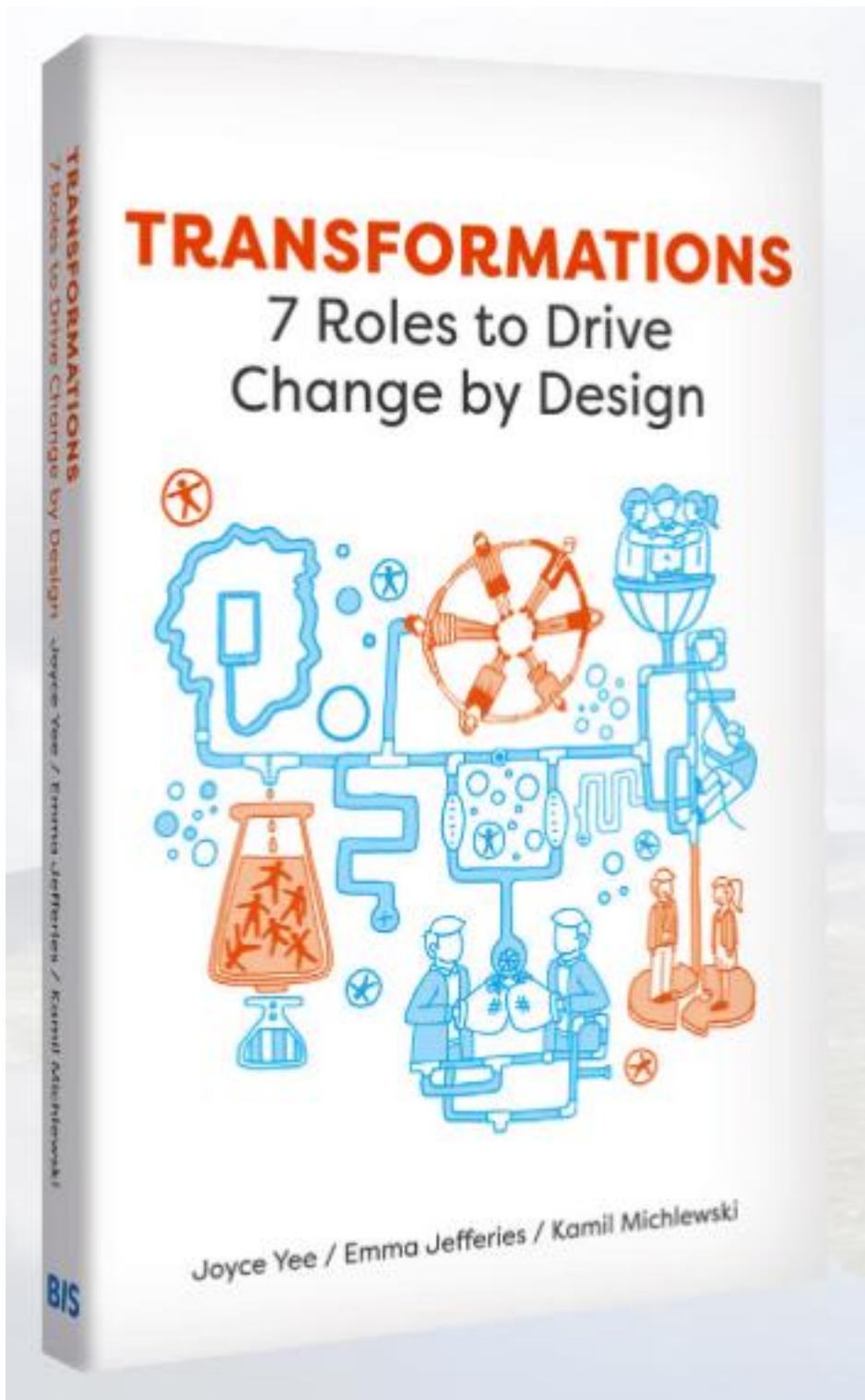
Arnar Árnason and Sigurjón Baldur Hafsteinsson

DEATH AND GOVERNMENTALITY

Neo-liberalism, grief and the nation form

Universal Design: The HUMBLES Method for User-Centred Business

“Universal Design: The HUMBLES Method for User-Centred Business”, writtenbyFrancescAragall and JordiMontañaandpublishedbyGower, providesaninnovativemethod to supportbusinesseswishing to increase the number of satisfiedusersand clients andenhancetheirreputationbyadaptingtheirproductsandservices to the diversity of their actual andpotentialcustomers, takingintoaccounttheirneeds, wishesandexpectations.
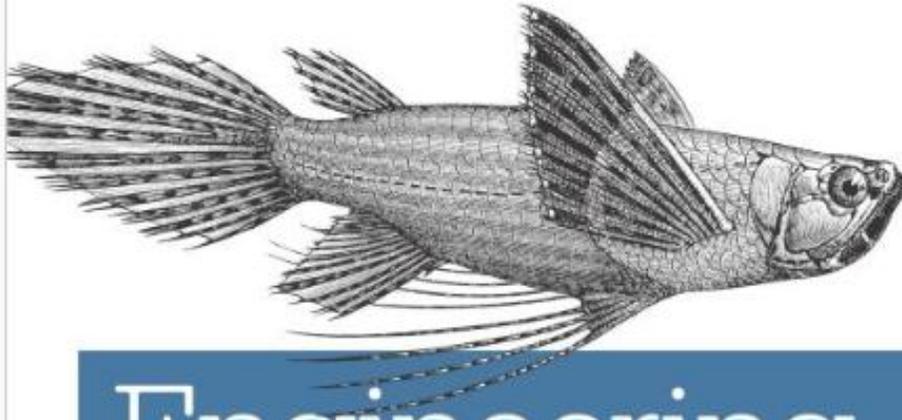
The HUMBLES method (© Aragall) consists of a progressive, seven-phaseapproach for implementing Design for All within a business. Byincorporating the user'spoint of view, itenablescompanies to evaluatetheirbusinessstrategies in order to improveprovideanimproved, morecustomer-orientedexperience, andtherebygain a competitiveadvantage in the marketplace. As well as a comprehensiveguide to the method, the bookprovidescasestudies of multinationalbusinesswhichhavesuccessfullyincorporated Design for All intotheirworkingpractices.

According to SandroRossell, President of FC Barcelona, who in company withotherleadingbusiness professionals endorsed the publication, it is “requiredreading for thosewhowish to understandhow universal design is the onlyway to connect a brand to the widest possible public, increasing client loyaltyandenhancing company prestige”. To purchase the book, visiteither the **Design for All Foundation website**

I have a new book that presents fundamental engineering concepts to industrial designers that might be of interest to you. This is the link:

https://www.amazon.com/Engineering-Industrial-Designers-Inventors-Fundamentals/dp/1491932619/ref=sr_1_1?ie=UTF8&qid=1506958137&sr=8-1&keywords=engineering+for+industrial+designers+and+inventrs

Appeal:

Greetings Dr. Sunil Bhatia,

I hope this greeting and collaborative outreach communiqué finds you well.

I am seeking International Academic Collaborative Partners to explore the possibility of engaging this year (Fall Semester 2019) with 2020 Stanford Center on Longevity Design Challenge that will address "Reducing the Inequity Gap: Designing for Affordability!"

I will be leading a Graduate Seminar this Fall Semester, "Design for Living, & Social Innovation" that will participate in the intellectual & innovative exploration of the Stanford Design Challenge theme. As a result, I am reaching out to my design scholars, leaders, & advocates, like yourself to gather insight, interests & case studies on this inclusive subject matter that impacts the society & constituencies that we may represent, or consider. In this regard, I am also seeking to establish a network of international academic partners and colleagues to share in an open-source shared discourse on this subject matter, and competition.

If you have not seen the following video from The Stanford Design Challenge, please do: Check out this short video for more information and advice from previous winners and industry leaders. (Further details can be found on our website.)

https://youtu.be/lChsiBmMFwo

I am also seeking to establish a network of international academic partners and colleagues to share in an open-source shared discourse on this subject matter, and competition.
(Possible Outreach with Prof. Mugendi M'Rithaa, University of Machakos, Kenya; University of Science & Technology, Kumasi Ghana; the School of Art & Design, University of Nairobi; Prof. Ephias Ruhode, Cape Peninsula University of Technology, Cape Town, South Africa; Dr Eddie Appiah <eddappiah@gmail.com Kwame Nkrumah University of Science and Technology (KNUST); *Dr. Cecilia Loschiavo Dos Santos, University of São Paulo, Brazil; Dr. Qiu Yue, Beijing Institute of Technology; Dr. Paola Trapani, Tongji University, Shanghai, China)*

Your thoughts and comments are welcome on the consideration of the following books, for my Graduate Seminar's references:

Required Reading

https://learning.oreilly.com/library/view/the-business-solution/9781609940775/xhtml/ch01.html
from The Business Solution to Poverty
 Optional Recommended Reads:

"Diversity and Design," Beth Tauke, Korydon Smith, Charles Davis, Routledge,
Diversity and Design explores how design - whether of products, buildings, landscapes, cities, media, or systems - affects diverse members of society. Fifteen case studies in television, marketing, product design, architecture, film, video games, and more, illustrate the profound, though often hidden, consequences design decisions and processes have on the total human experience.

The book not only investigates how gender, race, class, age, disability, and other factors influence the ways designers think, but also emphasizes the importance of understanding increasingly diverse cultures and, thus, averting design that leads to discrimination, isolation, and segregation.

"Architecture & Design versus Consumerism: How Design Activism Confronts Growth," Ann Thorpe, Routledge

The mentality that consumerism and economic growth are cure-alls is one of the biggest obstacles to real sustainability, but any change seems impossible, unthinkable. Our contemporary paradox finds us relying for our well-being on consumer-driven economic growth that we actually can't afford — not in environmental, economic or social terms. Although architecture and design have long been seen as engines for consumerism and growth, increasing numbers of designers are concerned about the problems resulting from growth. But designers face a paradox of their own; in scenarios of sustainable consumption, where people consume or build significantly less, what will be left for designers to do?

The Ten Faces of Innovation: IDEO's Strategies for Beating the Devil's Advocate and Driving Creativity Throughout Your Organization

Over the years, IDEO has developed ten roles people can play in an organization to foster innovation and new ideas while offering an effective counter to naysayers. Among these approaches are the A*nthropologist*—the person who goes into the field to see how customers use and respond to products, to come up with new innovations; the *Cross-pollinator* who mixes and matches ideas, people, and technology to create new ideas that can drive growth; and the *Hurdler*, who instantly looks for ways to overcome the limits and challenges to any situation.

Filled with engaging stories of how Kraft, Procter and Gamble, Safeway and the Mayo Clinic have incorporated IDEO's thinking to transform the customer experience, *The Ten Faces of Innovation* is an extraordinary guide to nurturing and sustaining a culture of continuous innovation and renewal.

Design for Good: A New Era of Architecture for Everyone

In *Design for Good*, John Cary offers character-driven, real-world stories about projects around the globe that offer more—buildings that are designed and created with and for the people who will use them. The book reveals a new understanding of the ways that design shapes our lives and gives professionals and interested citizens the tools to seek out and demand designs that dignify.

TED Talk: How architecture can create dignity for all | John Cary

https://www.ted.com/talks/john_cary_how_architecture_can_create_dignity_for_all?language=en

If architect and writer John Cary has his way, women will never need to stand in pointlessly long bathroom lines again. Lines like these are representative of a more serious issue, Cary says: the lack of diversity in design that leads to thoughtless, compassionless spaces. Design has a unique ability to dignify and make people feel valued, respected, honored and seen -- but the flip side is also true. Cary calls for architects and designers to expand their ranks and commit to serving the public good, not just the privileged few. "Well-designed spaces are not just a matter of taste or a questions of aesthetics," he says. "They literally shape our ideas about who we are in the world and what we deserve." And we all deserve better.

 Hope to hear from you soon
Ricardo Gomes, IDSA
Professor/Coordinator

Design Center for Global Needs/Shapira Design Archive
School of Design
San Francisco State University
ricgomes@sfsu.edu
415-338-2229
https://faculty.sfsu.edu/~ricgomes/

News

1.

Disability trust grills candidates

Western Bay of PLenty Disability Support Trust chair Wendy Neilson is says the forum is crucial to giving the disabled community a voice.

A local trust is calling on the disabled community in Tauranga to make their voices heard at an upcoming mayoral candidate forum.

Western Bay of Plenty Disability Support Trust is hosting the forum on Wednesday, September 18.

WBoP Disability Support Trust chair Wendy Neilson says this event will provide people with the opportunity to address their accessibility needs and pose questions to potential candidates.

"Often we are not encouraged to be vocal and many members of the community find it hard to get to public meetings. This event gives us a collective voice when we invite potential mayoral candidates."

Gill Garden WBoP Disability Support Trust coordinator agrees, saying this event ensures the sector is heard.

"People with disabilities must be taken into account, and we want to know whichever mayor is selected – what are they going to do for the disability sector."

Candidates will be asked about what they will do to value and enhance the lives of people with a disability in the Tauranga area. Attendees will then be able to ask questions of their own.

Wendy says this event will challenge candidates to not only think about the disabled community but more importantly help make the necessary change.

"The council are doing a good job in Tauranga at the moment, but there could be new leadership and we need to ensure we get a commitment from them."

She would like to see a commitment to universal design across public spaces, but particularly in council-owned housing.

Universal design considers various life scenarios such as disability, old age, childhood, injury and pregnancy in all design.

"Council-owned homes should be fully compliant. There are homes owned by TCC where people only have towel rails to pull on to get up from the toilet.

"It's about making sure their own housing stock is fully accessible. We need easier access in all spaces so we don't have to feel special, but instead, we are just part of the community."

The event will be running from 10.30am to 12.30pm on Wednesday September 18 at the Tauranga Citizens Club on Thirteenth Ave.

(Source: Sunmedia)

Programme and Events

THE ANNUAL INTERNATIONAL BERKELEY UNDERGRADUATE PRIZE FOR ARCHITECTURAL DESIGN EXCELLENCE 2019

2019
berkeley prize

Architecture and Climate Resilience

ABOUT THE PRIZE

ESSAY PRIZE COMPETITION

TRAVEL FELLOWSHIP

PREVIOUS FELLOWSHIPS

Click on photograph for details.

THROUGH DIFFERENT EYES

10-11 OCT 2019 AMSTERDAM

NEW FOR 2019 - THE WOMEN IN DESIGN AWARD!

Good Design Australia is extremely proud to announce the new **Women in Design Award**, that will be presented as part of the 61st annual Good Design Awards.

The inaugural Women in Design Award seeks to recognise and celebrate women who have made significant contributions to the industry and hopes to encourage a more diverse and equal representation within the industry and leadership roles in particular within the design and creative industries.

The Selection Committee for this Award will comprise of Australian and international leaders in the design and creative industries. Confirmed Selection Committee Members include:

Liza Chong, CEO INDEX:Design to Improve Life (Denmark)
Margaret Petty, Executive Director of Innovation and Entrepreneurship UTS (NSW, Aus)
Sarah Weir, CEO Design Council (UK)
Claire Beale, Executive Director of Design Tasmania (TAS, Aus)
Eunjoo Maing, Director / Head of D-TEC at Korean Institute of Design Promotion (Korea)
Trish Hansen, Founding Principal Urban Mind (SA, Aus)
More to come...

Biennale Internationale Design Saint-Étienne
11th edition
03.21 — 04.22 2019
biennale-design.com

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SAVE THE DATE
Designing common ground

Design for all FOUNDATION

Good Practices 2019 candidatures

Decembre 30

Now you can submit your project, product or service as
Design for All Good Practice opting to
the International Awards Design for All Foundation 2020

Design for all FOUNDATION
Good for everybody, easy for yo

IAUD Award 2019: Call for entries

IAUD INTERNATIONAL DESIGN AWARD 2019

International conference

Global Challenges in Assistive Technology
Research, Policy & Practice

August 27-30 2019 Bologna Italy

www.aaate2019.eu

Call for Papers

Basic research & Applied research
Special thematic sessions

Deadline for submission:
28 February 2019

Call for other contributions

Educational sessions
Policy sessions
Product and Prototype presentations
See website for deadlines

Conference topics

- Assistive technology (AT) for cognitive, sensory and motor disabilities
- AT service delivery systems, practices, quality and outcomes
- AT education, training and professional development
- AT in low- and middle-income countries
- Emerging and innovative AT Alternative and Augmentative Communication
- AT and social assistive robotics

- AAL, smart environments and IoT
- eAccessibility
- Universal Design
- Mobility and seating solutions
- Ageing and technology
- AT for rehabilitation
- AT, virtual and augmented reality
- AT, digital health and innovation in care
- AT in education
- Policy and social aspects related to AT

Don't work in isolation!
Join AAATE! Join the Bologna conference

www.aaate2019.eu.   #AAATE2019   @ aaate2019@aiasbo.it

International conference on 'Designing for children' with focus on 'Play and Learn'

Saturday 7th to Sunday 8th of December 2019

Venue: VMCC, IIT Bombay

Spring Edition 2019 – Dateline New York

2019 Spark Design Awards
Call For Entries: 2.05.19
One For All–All Design–All Designers
WWW.SPARKAWARDS.COM

2019 Spark Design Awards Are All Underway

The Spark Awards are welcoming entries now. They include 10 general categories, with 2 student competitions and our brand new award for CleanTech Design. All of these awards have many sub-categories, so be sure to check them out at Spark:

2019 Awards

Student Design (Spring & Winter)
Product Design
Graphic Design
Health, Medical & Universal Design
Spaces & Architecture Design
Digital Design (includes UI, UX, IXO & HCII)
Mobility & Transport Design
Experience & Service Design
CleanTech Design

Note To Students & Educators

The 2019 Spring Student Awards are open and already receiving some cool designs. Standard deadline is coming up May 20th and the Late and Final Deadline is June 12. Join Us and tell your pals!

TIEMS 2019 Annual Conference
November 12 - 15, 2019
GOYANG, KOREA

Conference Host:
TIEMS Korea Chapter jointly with the
Korean Society of Disaster & Security

I have the Pleasure to Announce and Call for Papers and Posters for TIEMS 2019 Annual Conference in Goyang, Korea!

The Conference dates are 12 - 15 November 2019

CONTEST PER
2 BORSE DI STUDIO
50% E 25%
PER IL MASTER
IN VISUAL DESIGN
2019 // RAFFLES MILANO

The Fifth International Conference on Universal Accessibility in the Internet of Things and Smart Environments

SMART ACCESSIBILITY 2020

March 22, 2020 to March 26, 2020 - Barcelona, Spain

Job Openings

Job Opening

1.

UX DESIGNER

Location: Mumbai Experience: 1-2 years

VISUAL DESIGNER

Location: Mumbai Experience: 1-2 years

Endurance International Group is a technology company that powers the online presence of small and medium businesses (SMBs). Through our proprietary cloud platform, we provide solutions like web and email hosting, cloud, eCommerce and eMarketing solutions, mobile business tools etc.

We cater to approx. 4.2 million individuals and businesses across the globe to help establish and expand their online footprint.

2.

Job Details:

-0 to 3 years of industry experience as a UI Designer

-Must have strong communication skills.

-Must be proficient in creating UI in SketchApp and Prototyping them.

-Must be proficient in working with Grid, Symbols, Plugins, Responsive Design, Shortcuts, and -more to stay efficient.

-Must be well versed with Typography, Color Theory, Web Accessibilities.

-Must know the Design Principles of Interface, Interaction, and Visual Design.

-Should be able to work on challenging domains.

-Should know how to manage his/her own time and stay productive.

-Passion in sports or art will an added advantage :)

What's in it for you?

-Get to work with the industry experts.

-Industry-standard salary

-Flexible working hours

-Best coffee in the town :)

-If you have got a good taste in music then we have a surprise for you :)

-Flexible holidays and leaves.

Apply today at hello@nextux.in with your resume and portfolio.

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Regarding new products or events or seminars/conferences/

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News@designforall.in

Feedback: Readers are requested to express their views about our newsletter to the Editor

Feedback@designforall.in

Dear Friends,
We need your feedback on our publication and your support for popularizing the concept of our social movement of Design For All/ Universal/ Barrier free/ Inclusive Design. It is our further request kindly submit your latest articles, research findings , news and events with us for publication in our newsletter.
With regards
Dr. Sunil Bhatia
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