
Article:
Poveda Villalba, S.C. orcid.org/0000-0003-4112-0271 (2018) A psychosocial analysis of development outcomes: a digital literacy case study in Myanmar. International Development Planning Review, 40 (3). pp. 273-297. ISSN 1474-6743

https://doi.org/10.3828/idpr.2018.12

A psychosocial analysis of development outcomes: a digital literacy case study in Myanmar

Information and Communication Technologies for development (ICT4D) research shows inconclusive impacts on human development. Some authors argue impact could only be studied having a clear definition of development. This paper draws on the Capabilities Approach, Critical Pedagogy and Critical Psychosocial Wellbeing to propose a way of defining and operationalising development, to study a digital literacy initiative in Myanmar. Results show that while participants do indeed improve their digital skills, internalised constrains, such as self-censorship and fear of authority, limit teachers and students behaviours during the training sessions, impacting how all related to information. The paper argues ICT4D will benefit from an understanding of development that acknowledges the social and psychological wellbeing of individuals, and how these affect each other, enhancing or constraining individuals' development. This acknowledgment may also bright some light to why many initiatives have failed to have the expected impacts, in particular, in a long-term perspective.

Keywords: Capability Approach, Critical Pedagogy, Critical Psychosocial Wellbeing, digital literacy, ICT4D

Introduction

The use of Information and Communication Technologies (ICTs) is been accompanied by discourses of modernization, implying their use brings greater efficiency and efficacy, along with financial gain. Trying to harness these positive impacts, the use of ICTs for development (ICT4D) initiatives has been growing rapidly, encouraged by increasing ICT penetration and a reduction of costs of hardware, software and related services, such as, mobile and Internet services. This tendency has been accompanied by research, with studies showing how using these technologies bring positive impacts, while others present a more nuanced picture, stating ICTs can bring both negative and positive

impacts. Part of the critique focuses on how ICTs have added another layer of inequality, known as the digital divide (Norris, 2001; Warschauer, 2003; van Dijk, 2006). Reasons for the divide are varied and complex. They vary from lack of attention to characteristics such as age, gender, race and education level from the design of the project (Gunkel, 2003; van Dijk and Hacker, 2003; Basu and Chakraborty, 2011; Kleine, 2011; van Deursen and van Dijk, 2011); infrastructure, hardware, software and/or connectivity issues (Thomas and Wyatt, 2000; Sciadas, 2003); power over design, creation and production of technologies and/or software (Hafkin and Huyer, 2008; Da Silveira, 2010; Hilbert, 2011); to differences in ICT skills (Walton *et al.*, 2009; Gripenberg, 2011; van Deursen and van Dijk, 2011); among many others.

However, the issue remains the same: do ICTs help promote human development? Kleine (2010) refers to this as the paradox in ICT4D: "ICTs and particularly the internet are widely regarded as ground-breaking inventions that have changed the way millions of people live their lives, and yet researchers and practitioners in the field of ICT and development often struggle to prove specific impacts of the technology to funders" (p.108). Authors have argued the problem lies in how development is defined (Kleine, 2010, 2013; Zheng and Stahl, 2011; Poveda, 2015; Roberts, 2016a). The objective of this paper is to propose a way to define development drawing on the Capabilities Approach, Critical Pedagogy and Critical Psychosocial Wellbeing, to study ICT4D. The paper argues ICT4D will benefit from an understanding of development that acknowledges the social and psychological wellbeing of individuals, and how these affect each other, enhancing or constraining individuals' development. To do so, this paper first introduces the theoretical framework and how it can be operationalised, followed by the study of a digital literacy

initiative in Myanmar. Finally, this paper reflects on the benefits of using this theoretical framework and its contributions to the literature.

ICT development outcomes from a psychosocial perspective

While traditionally development continues to be seen as economic growth, shaping policy-makers decisions, there are growing alternatives, which conceptualise development in more holistic ways. One such concept is "development as freedom", proposed by 1998 Economic Nobel Prize Winner, Prof Amartya Sen. According to Sen, development is a process "that concentrates on the capabilities of people to do things - and the freedom to lead lives - that they have reason to value" (Sen, 1999, p.85). This freedom to choose is both an end and means to development, and considers in a "comprehensive and integrated manner ...the links between material, mental, spiritual and social well-being, or to the economic, social, political and cultural dimensions of life" (Robeyns, 2003, p.8). Individuals, considered agents, have the "freedom to choose and bring about the things that he/she values" (Frediani, 2010, p.176). This perspective, known as the Capabilities Approach (CA), was adopted by UNDP and inspired the Human Development Index (HDI) and its annual reports, and it is used for this research.

This approach is increasingly being used to study the use of ICT for development (ICT4D), as it focuses the attention on the individuals rather than on the technology (Zheng and Walsham, 2008; Oosterlaken and Hoven, 2012; Kleine, 2013; Poveda, 2016a). Using the CA has allowed for more nuanced analysis in the study of projects that incorporate digital technologies. The CA has also led to the argument that there is not a direct and causal relation between ICT and development (Gigler, 2011), demystifying overly positive discourses about the use of ICT for development.

Nonetheless, the CA has also been widely criticised, in particular for being difficult to operationalise (Robeyns, 2000; Devereux, 2001; Corbridge, 2002), for lacking attention to power relations and social structures (Robeyns, 2000; Corbridge, 2002; Stewart and Deneulin, 2002) and for not proposing ways of how individuals' can overcome self-inflicted constraints on their own development (Evans, 2002; Chan, 2010; Frediani, 2010). The latter is known in the CA as adaptive preferences, and refer to the adjustment and mental conditioning that individuals may suffer due to continued exposure to constraining social structures. These are "preferences persons did not choose to have, – that is, preferences that are procedurally non-autonomous, [where] autonomy is the capacity to be the source of one's actions" (Khader, 2009, p.171). Individuals may unconsciously limit their desires and hopes, and even accept their unsuitable conditions if they have adapted their preferences to their constrained life. In other words, individuals have internalised constraining social structures, which impact their behaviours and desires. While the CA defines this phenomenon and acknowledges its damaging impact on people's development, it fails to propose how to overcome it. The aim is to understand how people internalise oppressive structures, and how to challenge and change these in our society and within each individual.

To strengthen the theoretical framework used for this research, addressing the aforementioned shortcomings, Paulo Freire's Critical Pedagogy is introduced. Freire, a Brazilian educator, worked widely in the field of adult literacy, and is known as one of the fathers of Participatory Action Research (Chambers, 1994; Cleaver, 2001; Parkinson, 2009). Based on his fieldwork, he argued that an adequate methodology is required to encourage individuals to become active agents of their own development and social change. His methodology, Problem-Posing-Education (PPE), encourages students to engage with real-life problems, while doing so, learning to acknowledge their

place in the social fabric, take responsibility for their own actions and their own development. The methodology inspires what Freire calls *conscientisation*, which "represents the development of the awakening of critical awareness" (Freire, 1974, p.15). Similarly to the CA, Freire also considers individuals as agents. However, Roberts (Roberts, 2016b) argues, conscientisation enables individuals to acquire critical-agency, which provides individuals with the ability to critically assess, and where necessary reject, existing constraining norms and values, guiding their actions accordingly towards changing the root causes of their disadvantage. This research draws on CA (Sen, 1999; Robeyns, 2003; Deneulin and Shahani, 2009) and Critical Pedagogy (Freire, 1970, 1974, 1976; Shor, 1993) to understand development practice and social change. This perspective of development considers the need for development interventions not only to focus on the individuals and their relation to the social structures, but on the possibility that individuals could have internalized constraining social structures, requiring special attention (Poveda, 2016b; Poveda and Roberts, 2017). Critical-agency, as a result of conscientisation, is presented as an alternative to overcome the internalised constraining structures and their unconstructive effects. Human development is then studied in intimate relation with social structures, looking at both the external and the internal effects on individuals.

To clarify what might be perceived as a duality, a critical psychosocial wellbeing perspective is introduced. Widely used in humanitarian work, social psychology studies and increasingly in development studies (Taylor, 2011), critical psychosocial wellbeing is a perspective that focuses both on the bodily (social wellbeing) and emotional (psychological wellbeing) experience, and its relation with the social structures that enable and constrain them (Stenner and Taylor, 2008; Taylor, 2011). Subsequently, the development analysis here proposed, aims to consider how different social structures

(i.e.: social norms, policies, project interventions) interact and affect the individuals' psychological (i.e.: internalised constraining structures, critical-agency) and social wellbeing (i.e.: income, education). In the case of specific interventions (i.e.: ICT4D interventions), development analysis would also explore how these social arrangements impact the individuals' critical agency, as this ability will encourage individuals to choose to use ICT to identify and challenge the root causes of their own disadvantage, both at the social and psychological level.

Understanding the individual as both social and psychological enables the study of ICT4D interventions from an innovative perspective. A literature review revealed a scarcity of research studying development from a psychosocial perspective, and even less on ICT4D interventions (Best *et al.*, 2011). The work of Pick and Sirkin (2010) provides one of the few examples of how to design, implement and evaluate development interventions using a psychosocial approach, to tackle poverty both from a social and psychological perspective. Yet this example lacks the ICT component. In general, psychological wellbeing has been widely ignored in development work, even though research has shown a strong relation between poverty and mental health disorders (Lund *et al.*, 2010, 2011; WHO, 2010). Only recently, mental health has been introduced into the Sustainable Development Goals (UN, 2016): Target 3.4: "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being". This paper proposes a definition of development which takes into account: i) the physical and psychological nature of individuals; ii) the interplay of the individuals' agency and the enabling and constraining social structures surrounding them; iii) and the role of social arrangements as mechanisms to encourage individual's critical agency. This definition of development puts power structures at the forefront of the analysis, acknowledging

the need for challenging and changing such structures to address the root causes of disadvantage to promote development, offering conscientisation (process) and critical agency (acquired ability of individuals) as alternatives for individuals to achieve social change. This definition embraces Maeve Cooke's (2006) argument, that critical theory must offer both critical diagnoses and "motivate their addresses to engage in thought and action aimed at overcoming the social obstacles to human flourishing that they identify" (p.38).

Having a clear definition of development will facilitate the study of ICT4D initiatives, as it will enable the researcher to identify how, if any, development outcomes where indeed promoted. Then, the remaining of this paper will, first, propose a way to operationalise the theoretical framework. Second, apply the theoretical framework to a case study in Myanmar. Finally, discuss the usefulness of the theoretical framework. This research aims to contribute to the literature on ICT4D, and the growing research which approaches development from a psychosocial perspective.

Operationalisation of the theoretical framework

To limit the scope of this research, a focus on agency was preferred over capabilities, which also helps addressing operationalisation challenges mentioned above. Agency was defined using the Choice Framework portfolio of resources (Kleine, 2013). This framework operationalised the CA and has been previously used for the analysis of ICT4D interventions (Ojo, Janowski and Awotwi, 2013; Khadilkar, 2014; Coelho, Segatto and Frega, 2015). According to Kleine (2013), agency allows individuals to navigate the social structure, which "in turn is linked to their resource portfolio" (p.49). The advantage of this operationalisation resides in the openness of its definition. On the one hand, based on her fieldwork, eleven resources were identified and defined, covering both the social and psychological wellbeing of individuals. On the other hand,

the author has left the portfolio of resources open, which allows for the inclusion or exclusion of resources as deemed necessary. For this research, a participatory workshop was conducted with the research partner, to prioritise and define each resource, as will be detailed in the methodology section. The resources and their operationalisation are detailed below:

- Material resources: Mobile and desktop ownership and usage, and reasons for non-usage.
- Financial Resources: Income level.
- Education Resources: Level of formal educational attainment and digital literacy as defined by the Internet Skills Scale (van Deursen, van Dijk and Peters, 2012; Van Deursen, Helsper and Eynon, 2015).
- Psychological Resources: Autonomy, personal growth, purpose in life, self-acceptance and positive relations with others, as defined by the Ryff Scales of Psychological Well-being (Ryff, 1989; Ryff and Singer, 1996).
- Cultural Resources: Gender, Ethnicity and Religion

These resources were the bases for the qualitative and quantitative methods used in the research as will be explained below.

Why conducting ICT4D research in Myanmar

To understand the case study, and embracing the CA, which advocates for a wider informational basis (Robeyns, 2003), Myanmar present political and social context will be first introduced. Myanmar, previously known as Burma, is one of the most recently formed democracies, currently on its second year of independent and freely elected government. During the military regime, a domestic policy called 'Burmanization' was put in place to promote national unity (Mang, 2011) and to

resurrect the country's lost culture (Than, 2012). In practice, for Hre (2011) this process entailed "to make the Burmese language, Buddhism and Burman culture as the single identity of the country"(p.179). Mang (2011) argues this policy actively allowed the military government to commit "political oppression, religious persecution, massive human rights violation, and ethnic cleansing – in the name of national security" (p.42). This policy belittled and excluded other languages, cultures and religions, causing the rejection of all minority ethnicities aggravating the already tense relationships these minorities had with the central government. According to various authors this tension led to the militarisation ethnic groups, forming various Non-State Armed Groups (NSAGs) which have been in open confrontation with Myanmar armed forces since (Fink, 2008; Lorch and Roepstorff, 2013). After seven decades of armed conflict, the consequences are reflected in several human rights violations: forced labour by the Myanmar military, land confiscation, forced relocation, arbitrary taxation, religious discrimination, human trafficking, recruitment of child soldiers, restrictions on freedom of movement, among others (Burma News International, 2017, p.15).

In 2010, dramatic democratic reforms brought significant advances to the peace-making process, and the economic and social development of Myanmar. For instance, in the political front, in October 2015, a Nationwide Ceasefire was signed marking the end of Myanmar's civil war. In economic front, in 2014 the market opened and welcomed two new telecom companies, Ooredo and Telenor, producing unprecedented growth of the telecommunication sector. Furthermore, in November 2015, the National League for Democracy (NLD) party wins an outstanding 80% of parliament seats, giving this party the power to elect the new president of Myanmar in March 2016.

The aforementioned reforms, accompanied by other rapid and varied changes, are the foundation of Myanmar's current complex social, political and economic transformations (Lorch and Roepstorff, 2013; Bank, 2014; Asia, 2015; Khine, 2016). Socially, attaining a sustainable peace between more than 135 recognised ethnic groups, with 34 main spoken languages, from 6 different language families (LSDO and MIMU, 2016); politically, consolidating a democratic government and modernising its apparatus; and economically, opening up the market after years of isolation in a transparent and equitable manner. Additionally, the unprecedented digital growth in Myanmar is driving further change. In the last decade, mobile phone penetration has gone from less than 0.5% in 2006 to over 89% in 2016 (ITU, 2016a); the number of internet users grew from 0.18% in 2006 to over 25% in 2016 (ITU, 2016b); and the cost of SIM cards dropped from over $2,000 before 2011 to $250 in 2013 to $1.50 in 2015. From a heavily censored environment, Myanmar people are finding themselves flooded by information, thanks to their access to the Internet.

While this scenario looks promising, digital inclusion is far from becoming a reality for every Myanmar citizen. According to the Myanmar ICT for Development Organization (MIDO), statistics do not capture the actual usage of technology. There are great challenges with geographical coverage, a large gap between rural and urban areas, insufficient local content in Burmese (official language) and even worse in other ethnic languages, a gender gap in access and usage, and insufficient digital and media literacy skills (Einzenberger, 2016). As McAuliffe and Rothschild (2017) indicate, "unfortunately, user awareness and the necessary critical thinking skills to ethically exchange information and determine the credibility of sources did not develop commensurate to the spread of mobile technology" (p.10).

The openness of the government has also increased development activity, some of which are ICT4D initiatives. To study such initiatives, the challenge is then to look beyond what the positive statistics stipulate in terms of unprecedented growth, also being called a digital revolution, and explore in detail what, if any, impacts the use of new technologies are promoting in each initiative and beyond.

The case study and research methodology

The Myanmar Book Aid and Preservation Foundation (MBAPF) is a civil society organisation with headquarters in Yangon, which has been working since the 1990s with issues related to books' and manuscripts' preservation. In 2015, in partnership, with the Technology and Social Change Group of the University of Washington (TASCHA), they created the Mobile Information Literacy Curriculum (MIL), a six-module course for mobile-first users, becoming one of the firsts organisation in Myanmar to offer digital literacy courses (Clark, 2015). The aim of this curriculum is to adjust traditional digital literacy training to mobile-specific environments, considering the fundamental changes between accessing the Internet from a mobile and a desktop/laptop. This is of particular importance in Myanmar, as most individuals are experiencing the Internet for the first time through smartphones. The MBAPF provides these trainings to government institutions, private companies and other third sector organisations, as well as their libraries partners across the country.

In 2016, the author visited Myanmar to explore what ICT4D initiatives where being implemented, and became a partner of the MBAPF, to conduct research regarding their MIL courses. Using action research and participatory methodologies, partners agreed on research objectives, project design, data collection and analysis, assenting that all activities and results would benefit both partners equally. On the one hand, the organization would allow the researcher access to collect a variety of data for

the research. On the other hand, the organisation would benefit by having access to the insights from the researcher's analysis, and the researcher would design data collection tools that could be reapplied by the MBAPF as a way to incorporate more robust monitoring and evaluation (M&E) processes.

Accordingly, partners decided to study the impact the MIL courses were having on their librarian partners. The MBPAF had already scheduled two MIL training courses to be offered exclusively to their libraries' partners. The MIL course was designed to be adapted to each group of trainees, adjusting examples and exercises to those being trained. Then having the opportunity to study two trainings focused on the same type of trainees (librarians), would allow the researcher to observe twice the implementation of the course, and have twice as many participants to collect data from to explore the impacts the course was having on their lives. To study this impact, partners agreed to use a longitudinal methodology (collecting data pre and post two librarians' centred MIL courses), to track changes in skills and behaviours of the participants over time. Qualitative and quantitative data was collected, in order to support a nuanced understanding of the impact of the courses. The research occurred in various phases: (1) research design; (2) data collection; (3) data analysis; (4) sharing of results through a critical pedagogy participatory workshop and implementation.

With the support of an interpreter, the researcher attended two MIL courses, of three and a half days each, in Yangon and Mandalay. The MBAPF had chosen these locations for their centrality in different regions of the country, allowing participants from different cities/villages each of these two regions to attend the courses. In total, 39 pre and 39 post surveys were collected, 4 pre and 4 post focus groups were directed, 20 pre and 20 post interviews were conducted (between 15 and 30 minutes long), and extensive field notes from the participatory observation and photographs were taken.

To complement this data, interviews with the MBAPF Director (1) and staff (4) were also conducted.

Data analysis was conducted using triangulation, comparing data from different sources to achieve more detailed understandings of the reality seen (Flick, 2009). The qualitative data collected was coded using nVivo software. The quantitative data, which was collected digitally using KoboToolBox (online open source survey tool, developed to aid development work), and was downloaded and analysed using Excel and R. The quantitative data was collected to complement the qualitative data, to enrich the informational bases. The themes that arose through the analysis of this data are presented in the following sections.

About the participants

From the two locations, Yangon and Mandalay, 39 complete set of surveys (pre and post) and 20 sets of interviews (pre and post), were collected. Participants in Yangon were 67% female, while in Mandalay where 52%, with an overall 59% female. In terms of age, 31% were aged between 24 and 29 years old, 26% were 30 to 35 years old, 18% were 18 to 24 years old, 15% were 36 to 41 years old, 8% were 42 to 47 years old and one participant was 69 years old (3%), In terms of ethnicity, in Yangon 67% of the participants were Burmese, 22% were mixed Burmese with other ethnicity, and the remaining 11% where from other ethnicities. In Mandalay, Burmese were also the majority, 76% of the participants. Only 5% were mixed Burmese and the remaining 19% were from other ethnicities. In terms of religion, the majority in both locations were Buddhist, 94% in Yangon and 95% in Mandalay (one person in each group was non-Buddhist). In terms of education, all participants had finished high school, 12.5% had also a university degree and 17.5% had a post-graduation degree.

One participant in each group reported never having used the internet before. The remaining participants reported using the Internet every day (87%) or three to five days a week (8%). While most participants reported using the Internet every day, still financial constrains (46%), lack of perceived value (15%), lack of time (13%) and fear of making mistakes due to limited digital skills (13%), where mentioned as factors that constrain their Internet usage.

Psychological impacts: the challenge of adaptive preferences

In terms of psychological characteristics, five traits were studied: positive relations with others; autonomy; personal growth; purpose in life; and self-acceptance. After interviewing the MBAPF and staff members, it was clear that while they wanted the training to impact the psychological wellbeing of the participants, for example their self-acceptance, the training did not incorporated specific activities to promote such impact, it was only designed to enhance technical skills. To explore if there was any impact, in-depth interviews and focus groups were conducted and participant observation notes were taken. Using content analysis, this data was examined through the lens of the proposed theoretical framework. This exploration identified behaviours that were limiting the students' growth in the five psychological traits mentioned above, and consequently affecting their development. Constraining gender roles were limiting women's autonomy and personal growth; limited critical thinking skills were distorting participants' relations with others; and self-censorship and fear of authority were constraining participants' autonomy, personal growth and purpose of life.

In terms of gender, during the focus group, different questions were posed to the participants to explore their social norms. It was clear they had very strict expectations to both male and female roles, where men were providers and women were responsible for the household and child and elderly care. However, financial

pressures had forced both genders to work outside of the home for an income without changing the previous roles, causing what is known in the gender literature, as the double or triple burden women face (Laurie *et al.*, 1997; Platt, 2011). Plus, participants mention specific moral values each role should uphold. During the focus group, participants mentioned that men were to: avoid alcohol, drugs, gambling and be dutiful and faithful to their wives; while women should (on top of everything demanded of men): be good mothers, compassionate, kind, respectful and dress and behave modestly. This concurs with gender studies conducted in other countries, where "women's primary role is to be reproducers of citizenry and transmitters of culture" (Sánchez Korrol, 1999, p.78) and in this case, also moral values.

In two of the four focus groups conducted, a woman (in each), complained about the extra pressure demanded of women. For instance, one of the exercises conducted in the focus group was to reflect on who was to blame if a woman was harassed in the street while wearing a skirt above the knee. Both men and women agreed the woman was to blame because she was wearing inappropriate cloths. To this, one of the female participants in one group tried to argue men were to blame, saying that women should be able to wear whatever they wanted. While expressing her views, other women disagreed and showed their disapproval arguing against her, insisting tradition and culture where important and had to be preserved. Here it is important to remember that during the military government, the domestic policy known as Burmanization was in place. As detailed above, this policy aimed to unify the country by imposing a single way of living, accepting only one religion (Buddhism), one language (Burmese) and one culture (Burman). Then, women defending tradition and culture raises suspicion about their motivations to do so, as they might have been doing so as a result of decades of oppressive military ruling. What might confirm this impression is their arguments

against the female participant who defended the right of women to wear any type of clothing. Their reasoning was that tradition and culture were important, but they could not say why. Also, they were instantly blaming the woman, without giving any responsibility to the harassing men in the scenario. While the female participant tried to reason with them, the opposing group was strong in numbers and the time for discussion short. This shows most women in these groups had in some way or another internalised constraining social structures, accepting tradition and culture and their effects on gender norms as normal. This internationalisation of constraining structures was also apparent in how families shared ICT. Myat said:

> Most men can use ICT well but not women. If there are two siblings, parents let the boy to go to trainings, and not the girls. I want to share my experiences of how to use a computer, Internet and e-mail mainly to girls in my community (Myat, female, 37 years old).

What Myat states is supported by gender and ICT studies recently conducted in Myanmar. According to a GSMA/LIRNE Asia study, "women in Myanmar are 29% less likely to own a mobile phone than men [and this gap] is higher among lower income households" (Women and Asia, 2015). Myat shared this in her first in-depth interview, before participating in the training. She was one of the participants in the focus group who were vocal against the cultural demands made of women. She started the course with a clear idea about uneven gender relations and how she wanted to contribute, and the skills she gained were certainly going to support her goals, increasing her agency and overall development. However, there were no discussions during the training to provoke reflection about gender inequalities, other kinds of inequalities, or any reflection on the causes of people's disadvantage, which may inspire change in other participants.

Critical discussions, like the ones proposed by Freire (1970) to encourage dialogue and praxis, were not conducted during the MIL course, and the content analysis revealed participants had very limited critical thinking skills. For instance, this was noticeable when participants were asked to evaluate the course. During a final training day, participants were asked to express their feedback and reflections about the course. Reflections of this kind can be used to "gain insights and assess [peoples'] thoughts and behaviours" (Smith, 2011, p.214). This training gave the participants the opportunity to travel to a big city in Myanmar, get a free 3-day training and network with other librarians. Until 2010, travel was controlled in Myanmar and very few could afford the expenses of taking a trip. Also, free association was banned during the dictatorship, so for many this experience was still very new. Accordingly, they felt grateful for being able to participate for free on such training. They also reported verbally that they felt more confident using ICT, which is supported by the skills evaluation shown in the following section. This greater confidence, if continued to be experienced, may also improve their overall self-confidence, which could impact on their capacity to resolve issues independently (autonomy), and the way they see themselves (self-acceptance). However, most of their comments remain descriptive of what they had done, rather than showing any critical reflection of how the course may impact their lives or work in the future. Also, the presence of the researcher impacted on their perceptions about the quality of the course. One of the participants commented:

> I feel satisfied with this course; it also had foreign trainers (Saw, male, 35 years old).

During the introduction to the training, the MBAPF Director explained to the students that the MIL was the result of collaborative work with the University of Washington. This was done to add credibility to the content. Meanwhile, the researcher remained a

quiet observer in the back of the room during the 3-day training. Yet, many of students' reflections in the feedback session resembled Saw's statement. They were attaching the quality and their satisfaction of the course to the foreigner component. Nonetheless, feeling satisfied at the course just because it was a collaboration with a foreign university or/and because a foreigner was present, may indicate students were taking for granted the quality of the course. The presence of foreigners in Myanmar is increasing and they represent the modern more developed world, which may have caused Saw and others to overestimate the importance of the foreigner's presence. A critical reflection, according to Smith (2011), makes explicit power relations, considering ethical, political and social issues, which people were or were not involved, as well as reflecting on who was privileged and why. Students lacked any of these elements in their final reflections. Internalisation of constraining structures is reflected not only in individuals' preferences, but also in their values, their ideas of what a good life is, their desires, aspirations and goals (Clark, 2003). Immediately equating foreign support as quality without scrutiny may also be a sign of a lack of critical thinking skills.

The internalisation of constraining social structures was also evident in how people related to information and authority. During the dictatorship, all information was censored and reviewed by the government prior to being shared. The change from censorship to freedom of speech was mentioned during the introduction to the MIL course, as one of the reasons why digital literacy was so important. However, during the course, no other mention was made. According to Wiles (2015), self-censorship remains ingrained in Myanmar citizens, as a consequence of the repressive laws experienced during the dictatorship. This culture of silence is acerbated by their very hierarchical society (Munger, 2017). Parents, teachers, Buddhist monks, government officials, among others, are considered figures of authority that must be respected and

obeyed, which also can be related to behaviours promoted during the dictatorship under the umbrella called 'Burman' culture. Chan (2010) argues that "barriers to freedom can be deeply internalised, and become part of the psyche of an entire community or culture" (p.32). Promoting open dialogue and critical thinking is extremely hard when people do not feel they can or are entitled to express their own opinions.

This kind of behaviour was observable during the MIL courses. Participants silently followed the trainers' instructions, and rarely made questions, not even when asked by the teacher. Conversely, teachers did neither press for answers nor stimulated dialogue. In-depth interviews with the teachers revealed that they also censored themselves. Their additional training and experiences had allowed them to see the world in a different way, but they still stopped themselves from engaging with various topics. For instance, when questioned why the course was not addressing directly Myanmar issues, such as hate-speech, they acknowledge they were yet not prepared to tackle those issues at the course. In particular, hate-speech was considered a very delicate subject. At the time of the course there was a well-known case of hate speech occurring in popular media, involving a prominent Buddhist monk from a prestigious Monastery. In this case, fear of challenging a religious authority may have stopped teachers openly discussing hate-speech during the MIL training.

Individuals' understanding of the world and how they reflect this understanding in preferences about the present moment or aspirations about their future is then the result of a socially constructed process (Appadurai, 2013; Conradie and Robeyns, 2013). These aspirations and preferences are consequently not static, but dynamic, adjusting themselves to the contextual elements and the experiences individuals have (Conradie and Robeyns, 2013). While addressing self-censorship and hate-speech is a

pressing issue, teachers might have to address their own internalised constrains before being able to discuss these topics during the training. Currently self-censorship is limiting both students' and teachers' autonomy. Their internalised beliefs stopped them from engaging with a wider variety of topics, which may (or may not) promote their personal growth or change their purpose in life, regardless having or not an external force, such as the government, controlling one's choices.

Social impacts: work skills and networking

Addressing the low levels of digital literacy was not a straightforward issue for the MBAPF, especially because people themselves were not aware of their skill deficiencies. A participant commented:

> When we ask anyone "can you use computer?" they said "yes, we can". But most of them don't know about computers in detail […] they are content in using only phones and Facebook (Myat, female, 37 years old).

The increasing number of people that acquire Internet-enabled mobile phones each day is one of the main characteristics of the Myanmar's digital revolution. Thanks to the reduction of costs of SIM cards and cheap smartphones from China, most of Myanmar citizens have leapfrogged feature phones and desktop computers, accessing the Internet for the first time on a smartphone. Airtime and data providers are offering attractive packages that allow users unlimited use of Facebook, and Viber, among others. It is not unusual to find people who are not aware how to create an account or what an email is, but are active users on a variety of social media, which sounds like a contradiction. As indicated by officials from the Myanmar ICT for Development Organisation (MIDO) in a recent interview (Einzenberger, 2016), people pay small fees when acquiring their smartphones, for the shop keepers to also 'enable' the applications.

Namely, shopkeepers will create generic email accounts and logins for each application, allowing their clients only to click on the application icon on their smartphones and start using them. Users will intuitively learn how to use these applications, sometimes being guided by shopkeepers, family and friends, most of whom have learned themselves in similar ways. People interviewed for this research confirmed what MIDO officials' recount, and explained further that it is a normal procedure in Myanmar. Only after the course, participants recognised the dangers of this common practice:

> The subject I liked best was awareness in using Facebook. The user needs rational thinking towards information. The teacher taught us the rules and culture of using Facebook. There are good and bad things to keep into consideration. We have learned well enough so we can tell or teach others: posting status, sharing awareness, and keeping our own profile safe. We need to pay attention to all while we are using Facebook (Cho, female, 37 years).

Digital literacy relates to how to navigate a mobile device and use applications, as much as to understand about security and privacy. Myanmar people are learning how to use mobiles looking to be as proficient as their peers, which unfortunately, have low levels skills. By doing so, they are limiting the benefits they can get from the Internet. As such, one of the benefits from the MIL training was the increase in participants' digital literacy, which also had positive impacts on their work skills (Figure 1).

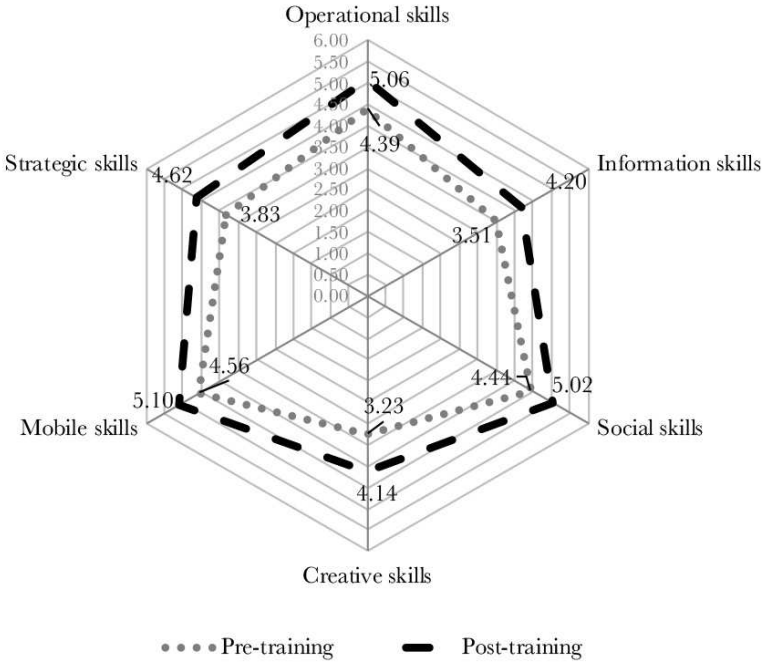

Figure 1: Evaluation of digital literacy, group average – pre- versus post-training.

Source: The Author

Figure 1 shows the pre and post training survey responses, with each of the six skill types represented as an axis in the spider diagram: operational (e.g. how to navigate the Internet), informational (e.g. locating and evaluating information), social (e.g. how to behave online), creative (e.g. create online content), mobile (e.g. use mobile phones), and strategic (e.g. use the Internet to make decisions). Following the Internet Skills Scale (van Deursen and van Dijk, 2010), the scores reflect the students' self-evaluation of their own skills. On average, students perceived that their skills increased by 0.5 points, with creative skills showing the most improvement (0.91 points). After running a non-parametric paired Wilcoxon test (data did not present a normal distribution), the results showed a significant improvement. Yet, as discussed in the previous sections, participants have low levels of critical thinking skills, which may have caused for students to overestimated their skills, but this does not lessen the validity on how they experienced their skills' improvement.

It is important to emphasise that all six skills improved across all participants. According to van Deursen and van Dijk (2009, 2010; 2014), the design of the Internet Skills Scale reflects more than just operational skills, as users need more than a mechanical understanding of the technology, they also need to understand how to use, create and evaluate information and how to transform this into knowledge that will inform their decision making. The improvement in skills also influenced what software participants used more frequently (Figure 2).

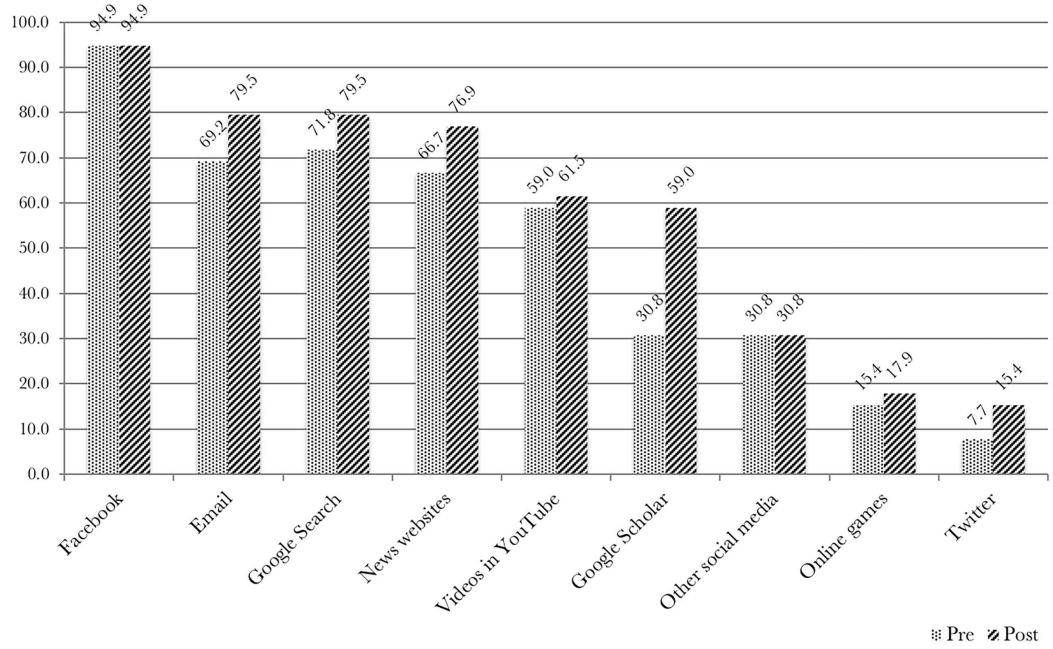

Figure 2 Applications most frequently used pre- and post-training. Source: The Author

Facebook was chosen as their favourite application when using the Internet. This agrees with MIDO's statement that Facebook is the most popular application in Myanmar (Einzenberger, 2016). The MIL training showed participants how to use different software and where to find different sources of information in the Internet. In terms of software, participants' responses show that they started to use each source more often

(apart from Facebook), with Google Scholar having the greatest change (59% post training vs. 30.8% pre-training).

However, their dependence on Facebook did not change. The reasons are varied: it is easy to use; it is free in many data packages; it is where people are sharing content that is context relevant and in Burmese language; it supports both Zawgyi and Unicode fonts (different fonts used to write Burmese); and; it is the medium chosen by many information brokers to share content (including the government), as it is widely recognized as the preferred platform. Even though the MIL does inform participants the limits of Facebook as a source of information, there are structural constrains that still encourage people to depend on this social media as a source. For this reason, the MIL training includes an extensive review of security and privacy issues on Facebook, and reflection about how to evaluate the information that is shared on this platform. This way, participants are at least equipped to use this social media in a more critical manner. The new ability to use other software besides Facebook was confirmed by Students on their interviews:

> I learn a lot attending this training. I used to use my mobile phone in a simple way, such as Facebook, before the training. Now I realize how to use Google docs in editing documents, save photos and videos, send e-mail for my work and search learning videos from Wikipedia (Saw, male, 35 years old).

It was common for participants to note that they were using a limited subset of mobile phone facilities, such as calling and the social media that was promoted with unlimited usage in their data plans. For some, like Saw, the skills gained were going to directly help improve aspects of their work, like being able to email. For others, like Mai, this course was showing them how to teach others how to use mobile phones and computers. Mai, as many others, was already teaching IT in her library; passing on whatever

knowledge she had herself to her students. Mai also indicated another way in which this training was going to benefit her work at the library:

> I can teach others more topics than before. Also, this training can help me to retain users in library because the rural children are wondering about the Internet. Children are very interested. I can train them on how to find information in the Internet (Mai, female 33 years old).

As mentioned above, the MIL course was designed to be fitted to each group of trainees. In the case of courses given to librarian partners, the MBAPF expected the participants to become digital literacy teachers on their own libraries, reproducing the MIL course or sections of it. The MBPAF showed participants what examples or exercises they could change depending on the audience they may have on their own libraries, which sparked Mai's intention to adjust the course to children. Many libraries in Myanmar are also community centres, where children go to spend time after school. For Mai, learning how to teach digital literacy, gave her the idea to teach children, and by doing so, retaining them in the community centre, where they could also benefit from other services. Accordingly, the MIL training helped participants to improve their work skills (within libraries) in many ways: new communication skills, different editing software, improving their security and privacy in social media, and ability to teach others.

Another social impact from the MIL training comes from its methodology rather than the content:

> I liked having the opportunity to do collective work as group study. We need to discuss and emerge as one mind-set. We had to share with each other our experiences of this course (Nang, female, 28 years old).

Participants came from different regions in Myanmar. Libraries usually have small teams and are far from each other. Trainings, such as the ones described in this study,

give participants a unique opportunity to meet and exchange experiences with fellow librarians, establishing a network that they can use to continue to support each other. The final exercise of the MIL, the group work, aims to strengthen the connections that students have started to build during the 3-day training. Contacts are collected and shared among all the participants, so they can still reach each other after the training finishes. To keep the network alive, the MBAPF has a Facebook group where trainees can join. This online space is used to share relevant information about libraries, courses and other relevant information for this group.

Overall, the MIL training supported the increase in participants' educational resources, which in turn expanded the choices available to them while using the Internet. The Internet has been called the "medium of choice par excellence" (Norris, 2001, p.24) because it enables the user to access a vast amount of information. Thus, expanding the way people use the Internet, also expands what the individual may obtain from it. Yet, this should be analysed with caution. While the improvement of educational resources (i.e. better digital and work skills) can be considered a human development improvement, it is not a guarantee of the outcomes an individual might get from Internet usage. Users still need to make choices, and these are the result of internal decision-making processes, which may be influenced by internalised constraining structures, as was shown in the previous section.

Combining perspectives: skills and behaviours

During the design phase of this research, the MBAPF staff mentioned their course aimed to improve mobile information literacy of the participants as a way to help them increase their education by knowing how to identify, evaluate and use information (education resources), improve their income and professional careers (financial resources), and support them solving local problems (social resources). They also

mentioned they wanted their participants to become more open and community minded, more self-confident, autonomous and happy (psychological resources). The MBAPF saw digital literacy as a means to an end, rather than an end in itself. In a country that still has over 26% of the population living in extreme poverty, these aims sound compelling and very valuable. Performing a psychosocial analysis of the impacts of the MIL aimed to see how participants were impacted in their social (educational, financial, social resources) and psychological (psychological resources) wellbeing.

In terms of social impacts, the MIL course was successful in increasing people's digital literacy, and by doing so, it increased their educational resources. In practice, participants improved their work skills, and they became part of a network. In terms of psychological impacts, the MIL course did not encourage reflection towards identifying any internalised constrains or unveiling the roots of their disadvantage. It became clear that the teachers' internalised constrains were part of the problem, as they needed to address them as much as their students did their own. To this respect, Freire (1974) argues teachers "must be converted to dialogue in order to carry out education rather than domestication" (p.45). Conscientisation is a never-ending process and teachers as much as students need to embark on it, for it to be successful.

If these findings are then analysed in conjunction, it is possible to argue that the outcomes of the course were affected by not acknowledging the psychological constraints of both students and teachers from the design of the course. As indicated above, constraining gender roles, limited critical thinking skills, self-censorship and fear of authority, were limiting how teachers and students were relating to information and how they were choosing to use ICTs. Important issues, such as hate speech, were not addressed, despite it being an issue which was happening while the course was taking place. It could be argued that the course discussed how to search, evaluate and use

information from a theoretical perspective, but missed the opportunity to use a real-life case study to conduct such evaluation. Yet, there is also evidence pointing to the possibility of change at a medium or long-term scale. Students' new digital literacy skills and new acquaintances increased the chance for them to be exposed to new content, new discourses, new ideas, which may challenge (or not) their current understanding of their own lives. While the MIL training lacked activities which explicitly encouraged reflection, nor challenged internalised constraining structures and corresponding behaviours and desires, the ability to access a wide variety of information, might be a seed for future change.

This issue was openly discussed with the MBAPF. The MBAPF appreciated having external eyes at the trainings to identify where they could improve themselves, for them to be able to pass these changes on to their students. A participatory workshop was conducted to discuss and reflect on these findings. The researcher shared information about various pedagogies and classroom methods. Acting as a moderator, the researcher then guided the revision of the MIL curriculum by the MBAPF staff. While the content remained the same, various new methods were included to support the MBAPF team to facilitate open dialogue and greater participation from the students. Reflections on this process will be discussed in further publications.

Conclusion

The realisation that behaviour changes occur at a slower pace than the acquisition of technical skills is not a surprise, but it is a calling to those working with digital literacy to acknowledge both social and psychological wellbeing, and their interplay may affect or enhance the impact of any training. The design of digital literacy courses should start from a clear definition of human development, an understanding of both the social and psychological needs of individuals and the structural and internalised constrains they

experience, and how this may affect each other. So far, digital literacy practices have successfully acknowledged the social needs of participants, with teachers/trainers designing courses with particular skills and technologies in mind, to specific contexts and software and hardware needs. In the case of the MIL, the content was specifically designed for Myanmar's ICT needs, and the examples and exercises were adapted to each training group. Also, acknowledging the lack of reliable Internet connection at libraries (structural issues), the MBAPF provided a laptop and Internet access during the courses. However, the psychological needs or internalised constrains individuals may experience have not been acknowledged. A way to incorporate them would be to use Freire's (1970) "conscientisation" methodology. Through dialogue, participants themselves become aware of their own internalised constrains, which could be further discussed during the training, having the teachers act as moderators. In the case of the MIL, this research identified constraining gender roles, limited critical thinking skills, self-censorship and fear of authority as issues that constrained both teachers and students, and if specifically addressed during the training course, the outcomes would have been greater than those here presented.

A psychosocial perspective also enabled the present research to look beyond technical skills and the initial reactions people may express about the training. A closer look at the digital skills showed *how* people wanted to use them, rather than generally stating *why* having more skills is an improvement. Similarly, a closer study of peoples' emotions and behaviours helped reveal their internalised constrains, which were limiting their own development. It also situated the initial happiness and satisfaction felt by the participants. While it is valuable that participants felt happiness the reasons for their happiness should always be inquired.

In conclusion, a psychosocial perspective of development enabled this research to reflect on both the social and the psychological impacts that digital literacy brought to the participants. It also allowed reflecting how social and psychological gains interact with each other, which can constrain impact (i.e.: teachers and students being affected by self-censorship which stopped them from discussing pressing issues, such as hate speech), or bring further development gains (i.e.: students having greater skills and a greater network of support that could continue to encourage their growth). This research was a first attempt to look at ICT4D from a psychosocial perspective, testing various scales and methods. Further research is necessary to explore tools to measure and study psychological wellbeing within development initiatives. Yet, it is here argued that development practice would benefit by having holistic view of the human being, and proposes a psychosocial perspective of development as an alternative.

References

Appadurai, A. (2013) *The future as cultural fact, London-New York, First Published by Verso*. London: Verso.

Asia, C. G. (2015) *The Myanmar Elections: Results and Implications*. Yangon/Brussels,: International Crisis Group.

Bank, A. D. (2014) *Myanmar: Building the foundations for growth*. Manila: Asian Development Bank.

Basu, P. and Chakraborty, J. (2011) 'New technologies, old divides: linking internet access to social and locational characteristics of US farms', *GeoJournal*, 76(5), pp. 469–481. doi: 10.1007/s10708-010-9370-x.

Best, M. L. *et al.* (2011) 'Rich digital media as a tool in post-conflict truth and reconciliation', *Media, War & Conflict*. SAGE Publications Sage UK: London, England, 4(3), pp. 231–249.

Burma News International (2017) *Deciphering Myanmar's Peace Process: A Reference Guide 2016*. Chiang Mai.

Chambers, R. (1994) 'The origins and practice of participatory rural appraisal', *World Development*. Elsevier Ltd, 22(7), pp. 953–969.

Chan, B. (2010) 'Conscientization and Development as Freedom', *Saeculum Undergraduate Academic Journal*, 5(1), pp. 25–51.

Clark, D. A. (2003) 'Concepts and perceptions of human well-being: Some evidence from South Africa', *Oxford Development Studies*. Taylor & Francis, 31(2), pp. 173–196.

Clark, M. (2015) *Mobile Information Literacy Curriculum now available for use & adaptation*. University of Washington. Available at: http://tascha.uw.edu/2015/12/mobile-information-literacy-curriculum-now-available-for-use-adaptation/(accessed 22 April 2018).

Cleaver, F. (2001) 'Institutions, Agency and the Limitations of Participatory Approaches to Development', in Cooke, B. and Kothari, U. (eds) *Participation: The New Tyranny?* New York: Zed Books, pp. 36–55.

Coelho, T. R., Segatto, A. P. and Frega, J. R. (2015) 'Analysing ICT and development from the perspective of the capabilities approach: A study in South Brazil', *Electronic Journal of Information Systems in Developing Countries*, 67(2), pp. 1–14.

Conradie, I. and Robeyns, I. (2013) 'Aspirations and human development interventions', *Journal of Human Development and Capabilities*. Taylor & Francis, 14(4), pp. 559–580.

Cooke, M. (2006) *Re-presenting the good society*. Cambridge: MIT Press.

Corbridge, S. (2002) 'Development as freedom: the spaces of Amartya Sen', *Progress in Development Studies*. Thousand Oaks: SAGE Publications, 2(3), pp. 183–217.

Da Silveira, A. (2010) 'Ambivalences, freedom and control of the cyberliving', in A. Da

Silveira (ed.) *Citizenship and Digital Networks*. São Paulo: Comité Gestor da Internet no Brasil, pp. 63–86.

Deneulin, S. and Shahani, L. (2009) *An introduction to the human development and capability approach: freedom and agency*. London: Earthscan; International Development Research Centre.

van Deursen, A. J. A. M. and van Dijk, J. A. G. M. (2009) 'Using the Internet: Skill related problems in users' online behavior', *Interacting with Computers*, 21(5–6), pp. 393–402. doi: 10.1016/j.intcom.2009.06.005.

van Deursen, A. J. A. M. and van Dijk, J. A. G. M. (2010) 'Measuring Internet Skills', *International Journal of Human - Computer Interaction*, 26(10), pp. 891–916.

van Deursen, A. J. A. M. and van Dijk, J. A. G. M. (2011) 'Internet skills and the digital divide', *New Media & Society*. London: SAGE Publications, 13(6), pp. 893–911.

van Deursen, A. J. A. M., van Dijk, J. A. G. M. and Peters, O. (2012) 'Proposing a survey instrument for measuring operational, formal, information and strategic Internet skills', *International Journal of Human-Computer Interaction*. Taylor & Francis, 28(12), pp. 827–837.

Van Deursen, A. J. A. M., Helsper, E. J. and Eynon, R. (2015) 'Development and validation of the Internet Skills Scale (ISS)', *Information, Communication & Society*. Taylor & Francis, 19(6), pp. 804–823.

Devereux, S. (2001) 'Sen's Entitlement Approach: Critiques and Counter-critiques', *Oxford Development Studies*. Taylor & Francis Group, 29(3), pp. 245–263. doi: 10.1080/13600810120088859.

van Dijk, J. A. G. M. (2006) 'Digital divide research, achievements and shortcomings', *Poetics*. AMSTERDAM: Elsevier B.V, 34(4), pp. 221–235.

van Dijk, J. A. G. M. and Van Deursen, A. J. A. M. (2014) *Digital skills: unlocking the*

information society. New York: Palgrave Macmillan.

van Dijk, J. and Hacker, K. (2003) 'The Digital Divide as a Complex and Dynamic Phenomenon', *The Information Society*, 19(4), pp. 315–326. doi: 10.1080/01972240309487.

Einzenberger, R. (2016) '"If It's on the Internet It Must Be Right": An Interview With Myanmar ICT for Development Organisation on the Use of the Internet and Social Media in Myanmar', *Austrian Journal of South-East Asian Studies*. Society for South-East Asian Studies, 9(2), pp. 301–309.

Evans, P. (2002) 'Collective capabilities, culture, and Amartya Sen's Development as Freedom', *Studies in Comparative International Development*. New York: Springer-Verlag, 37(2), pp. 54–60.

Fink, C. (2008) 'Militarization in Burma's ethnic states: causes and consequences', *Contemporary Politics*. Routledge, 14(4), pp. 447–462. doi: 10.1080/13569770802519367.

Flick, U. (2009) *An introduction to qualitative research*. 4th edn. London: Sage.

Frediani, A. A. (2010) 'Sen's capability approach as a framework to the practice of development', *Development in Practice*, 20(2), pp. 173–187. doi: 10.1080/09614520903564181.

Freire, P. (1970) *Pedagogy of the oppressed*. London: Penguin Books.

Freire, P. (1974) *Education for critical consciousness*. London: Continuum.

Freire, P. (1976) *Education: the practice of freedom*, *First published as Education for Critical Consciousness*. London: Writers & Readers Publishing Cooperative.

Gigler, B.-S. (2011) 'Informational Capabilities: The Missing Link for the Impact of ICT on Development'. Washington DC: The World Bank.

Gripenberg, P. (2011) 'Computer self-efficacy in the information society: Design of learning strategies, mechanisms and skill areas', *Information Technology and People*, 24(3),

pp. 303–331. doi: 10.1108/09593841111158392.

Gunkel, D. J. (2003) 'Second thoughts: toward a critique of the digital divide', *New Media & Society*. Thousand Oaks: SAGE Publications, 5(4), pp. 499–522.

Hafkin, N. J. and Huyer, S. (2008) 'Women and Gender in ICT Statistics and Indicators for Development', *Information Technologies and International Development*, 4(2), pp. 25–41. doi: 10.1162/itid.2008.00006.

Hilbert, M. (2011) 'Digital gender divide or technologically empowered women in developing countries? A typical case of lies, damned lies, and statistics', *Women's Studies International Forum*, 34(6), pp. 479–489. doi: 10.1016/j.wsif.2011.07.001.

Hre, M. (2011) 'Religion: A Tool of Dictators to Cleanse Ethnic Minority in Myanmar?', in *The Asian Conference on Ethics, Religion and Philosophy 2011 Conference Proceedings*. Osaka: The International Academic Forum, pp. 176–184.

ITU (2016a) *Mobile-cellular subscriptions (2000-2016)*. ITU. Available at: http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx (accessed 15 October 2017).

ITU (2016b) *Percentage of Individuals using the Internet (2000-2016)*. ITU. Available at: http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx (accessed 15 October 2017).

Khader, S. J. (2009) 'Adaptive preferences and procedural autonomy', *Journal of Human Development and Capabilities*. Taylor & Francis, 10(2), pp. 169–187.

Khadilkar, P. (2014) 'Design and a "Capability approach-based" evaluation of the innovative mould for rapid dissemination of "Astra ole": a firewood based cook-stove'. Bangalore: Design for Sustainable Well-being and Empowerment Indo-Dutch International Conference.

Khine, N. K. (2016) 'The Effects of Censorship: Myanmar's Limited Views on Ethnic

Diversity', *Peace & Conflict Review*, 9(1), pp. 58–70.

Kleine, D. (2010) 'ICT4WHAT? - Using the choice framework to operationalise the capability approach to development', *Journal of International Development*. Chichester: Wiley Periodicals Inc, 22(5), pp. 674–692.

Kleine, D. (2011) 'The capability approach and the "medium of choice": steps towards conceptualising information and communication technologies for development', *Ethics and Information Technology*. Dordrecht: Springer Netherlands, 13(2), pp. 119–130.

Kleine, D. (2013) *Technologies of choice?: ICTs, development, and the capabilities approach*. Cambridge: MIT Press.

Laurie, N. *et al.* (1997) 'In and out of bounds and resisting boundaries: feminist geographies of space and place', in Royal Geographical Society Women and Geography, S. G. (ed.) *Feminist geographies: explorations in diversity and difference*. Harlow: Longman, pp. 112–145.

Lorch, J. and Roepstorff, K. (2013) *Myanmar's Peace Process: The Importance of Federal Reforms and an Inclusive National Dialogue*. Berlin: German Institute for International and Security Affairs.

LSDO and MIMU (2016) 'Main Spoken Languages of Myanmar'. Yangon: Myanmar Information Management Unit & Ethnologue and the Language & Social Development Organization.

Lund, C. *et al.* (2010) 'Poverty and common mental disorders in low and middle income countries: A systematic review', *Social science & medicine*. Elsevier, 71(3), pp. 517–528.

Lund, C. *et al.* (2011) 'Poverty and mental disorders: breaking the cycle in low-income and middle-income countries', *The Lancet*. Elsevier, 378(9801), pp. 1502–1514.

Mang, P. Z. (2011) 'Separation of Church and State: A Case Study of Myanmar (Burma)', *Asia Journal of Theology*, 25(1), pp. 42–58.

McAuliffe, E. and Rothschild, C. (2017) *Tearing down the wall to Myanmar□s information ecosystem: The case of one local organization in producing and providing credible information*. Seattle: TASCHA.

Munger, F. (2017) 'Rule of law inside out in Myanmar', *Hague Journal on the Rule of Law*. Springer, 9(1), pp. 3–10.

Norris, P. (2001) *Digital divide: civic engagement, information poverty, and the Internet worldwide*. Cambridge: Cambridge University Press (Communication, society, and politics).

Ojo, A., Janowski, T. and Awotwi, J. (2013) 'Enabling development through governance and mobile technology', *Government Information Quarterly*, 30(1), pp. S32–S45. doi: 10.1016/j.giq.2012.10.004.

Oosterlaken, I. and Hoven, J. van den (2012) *The capability approach, technology and design*. Dordrecht: Springer.

Parkinson, S. (2009) 'Power and perceptions in participatory monitoring and evaluation', *Evaluation and program planning*. Elsevier B.V, 32(3), pp. 229–237.

Pick, S. and Sirkin, J. (2010) *Breaking the poverty cycle: The human basis for sustainable development*. New York: Oxford University Press.

Platt, L. (2011) *Understanding inequalities: stratification and difference*. Cambridge: Polity.

Poveda, S. (2015) *Conscientisation and Human Development: The case of digital inclusion programmes in Brazil*. University of London.

Poveda, S. (2016a) 'How can digital inclusion promote social change? Exploring two Brazilian case studies', in Subramanian, L. and Wyche, S. (eds) *Proceedings of the Eighth International Conference on Information and Communication Technologies and Development*. ACM, New York.

Poveda, S. (2016b) 'PAR and Digital Inclusion, An Analysis Using the Capabilities Approach and Critical Pedagogy', *International Journal of E-Politics (IJEP)*. IGI Global,

7(4), pp. 1–15.

Poveda, S. and Roberts, T. (2017) 'Critical agency and development: applying Freire and Sen to ICT4D in Zambia and Brazil', *Information Technology for Development*. Taylor & Francis, pp. 1–19. doi: 10.1080/02681102.2017.1328656.

Roberts, T. (2016a) *Critical-Agency in ICT4D: a case study of Zambian women's use of participatory video technology to challenge gender inequality*. Royal Holloway University of London.

Roberts, T. (2016b) 'Women's Use of Participatory Video Technology to Tackle Gender Inequality in Zambia's ICT Sector', in Subramanian, L. and Wyche, S. (eds) *Proceedings of the Eighth International Conference on Information and Communication Technologies and Development*. ACM, New York.

Robeyns, I. (2000) 'An unworkable idea or a promising alternative?: Sen's capability approach re-examined'.

Robeyns, I. (2003) 'The Capability Approach: An Interdisciplinary Introduction'. Amsterdam: Department of Political Science and Amsterdam School of Social Sciences Research Working Paper, University of Amsterdam.

Ryff, C. D. (1989) 'Happiness is everything, or is it? Explorations on the meaning of psychological well-being.', *Journal of personality and social psychology*. American Psychological Association, 57(6), pp. 1069–1081.

Ryff, C. D. and Singer, B. (1996) 'Psychological well-being: Meaning, measurement, and implications for psychotherapy research', *Psychotherapy and psychosomatics*. Karger Publishers, 65(1), pp. 14–23.

Sánchez Korrol, V. (1999) 'Women in Nineteenth- and Twentieth- Century Latin America and the Caribbean', in Navarro, M. and Sánchez Korrol, V. (eds) *Women in Latin Ameroca and the Caribbean: Restoring Women to History*. Bloomington: Indiana

University Press, pp. 59–106.

Sciadas, G. (2003) 'Monitoring the digital divide... and beyond'.

Sen, A. (1999) *Development as freedom*. Oxford: Oxford University Press.

Shor, I. (1993) 'Education is Politics: Paulo Freire's critical pedagogy', in McLaren, P. and Leonard, P. (eds) *Paulo Freire: A critical encouter*. London: Routledge, pp. 25–35.

Smith, E. (2011) 'Teaching critical reflection', *Teaching in Higher Education*. Taylor & Francis, 16(2), pp. 211–223.

Stenner, P. and Taylor, D. (2008) 'Psychosocial welfare: Reflections on an emerging field', *Critical Social Policy*. SAGE Publications, 28(4), pp. 415–437.

Stewart, F. and Deneulin, S. (2002) 'Amartya Sen's contribution to development thinking', *Studies in Comparative International Development*, 37(2), pp. 61–70.

Taylor, D. (2011) 'Wellbeing and welfare: A psychosocial analysis of being well and doing well enough', *Journal of social policy*. Cambridge Univ Press, 40(4), pp. 777–794.

Than, T. (2012) 'Commercial Burmanization: two adverts by Burmah Oil Company in postcolonial Burma | International Institute for Asian Studies', *The International Institute for Asian Studies Newsletter*, (59), p. 34.

Thomas, G. and Wyatt, S. (2000) 'Access is not the only problem: Using and controlling the Internet.' LondonRoutledge.

UN (2016) *Sustainable Development Goals*. United Nations. Available at: http://www.un.org/sustainabledevelopment/health/ (accessed 22 April 2018).

Walton, R. *et al.* (2009) 'Skills are not binary: Nuances in the relationship between ICT skills and employability', *Information technologies & international development*, 5(2), pp. 1–18.

Warschauer, M. (2003) 'Demystifying the Digital Divide', *Scientific American*, 289(2), p. 42. doi: 10.1038/scientificamerican0803-42.

WHO (2010) *Mental Health and Development: Integrating Mental Health into All Development*

Efforts including MDGs. Geneva: World Health Organization.

Wiles, E. (2015) *Saffron shadows and salvaged scripts: literary life in Myanmar under censorship and in transition*, *Saffron shadows and salvaged scripts: literary life in Myanmar under censorship and in transition, by Ellen Wiles*. New York: Columbia University Press.

Women, G. C. and Asia, L. (2015) *Mobile phones, internet, and gender in Myanmar*. London: GSM Association.

Zheng, Y. and Stahl, B. C. (2011) 'Technology, capabilities and critical perspectives: what can critical theory contribute to Sen's capability approach?', *Ethics and Information Technology*. Dordrecht: Springer Netherlands, 13(2), pp. 69–80.

Zheng, Y. and Walsham, G. (2008) 'Inequality of what? Social exclusion in the e-society as capability deprivation', *Information Technology and People*, 21(3), pp. 222–243. doi: 10.1108/09593840810896000.