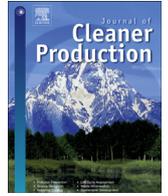




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Labour rights training 2.0: The digitalisation of knowledge for workers in global supply chains

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ABSTRACT

There are manifold social sustainability issues in global supply chains (GSC), the question is whether digital-training can address them. For a long time, auditing, compliance and monitoring have been seen as key in solving labour right violations. Yet, little improvement has happened. More participative methods of auditing and training have therefore been proposed in order to remedy this situation. The purpose of this paper is to explore how workers are trained on their labour rights with a digital-training method. We present an in-depth case study of a digitalising labour rights training through a new-to-the-world training method aimed at reaching factory workers in the GSC context. The digital-training method is custom-designed in an application. It aims at encouraging and stimulating learning-processes, as well as at retaining knowledge on relevant labour right topics, guided by the local needs of the worker. We find that this digital-training method has indeed potential to revolutionise common issues encountered by traditional corporate-self regulation tools in GSCs. However, potential barriers, such as the accessibility for the worker and willingness of the factory management remain.

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1. Introduction

It is frequently emphasised that business needs to undertake major transformations in order to become more proactive in furthering sustainable development (Lozano, 2015). The literature on social sustainability has long lagged behind that of the environmental aspects (Carter and Rogers, 2008; Seuring et al., 2008), but is now emerging as a key part of sustainable development. Social sustainability carries many definitions and problematic aspects (Blowfield and Frynas, 2005), but is frequently defined as involving identifying and managing business impacts on people, and satisfying human needs (Brundtland, 1987). In this paper, we consider the workers' training on their labour rights in global supply chains (GSCs) as a prime focus of social sustainability.¹ These efforts affect a business' social license to operate (e.g. Savitz and Weber, 2006). However, many companies have struggled with the management of social sustainability issues (Klassen and Vereecke, 2012). One of the reasons has been the difficulty into operationalising and measuring the social dimensions (Boström et al., 2012), and furthermore quantifying its business case.

The current debate surrounding promoting social sustainability in GSC contexts is centred around labour rights, and mainly its lack of enforcement therein (Egels-Zandén and Lindholm, 2015). Modern tools, such as Code of Conduct (CoC) agreements or third-party auditing schemes (Locke et al., 2013) are common methods used in the attempt to control labour rights in the GSCs. Little emphasis is placed on the efficacy of training methods, mainly due to the fact that it has been costly and resource-inefficient (Sum and Ngai, 2005). The role of digitalisation of training methods has yet to be discovered. Thus, the purpose of this paper is to explore how workers are trained on their labour rights with the method of digital-training.² We start with the global supply chain context of labour rights training, moving to an overview of the literature on worker training and digital-training of labour rights. Thereafter, follows a brief description of the case at hand and ensuing methodology choices. Subsequently, results are presented, and thereafter discussed.

² In this paper, the term *digital-training* refers to the training of factory workers through e-learning on the following four criteria: workplace policies, health and safety, fire and building safety, workplace dialogue. These criteria conform to the suggestions of International Labour Organisation and Business Social Compliance Initiative. For the purpose of readability, we summarise these criteria under the umbrella term: labour rights.

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¹ We are of course aware of the fact that there are other issues addressed in social sustainability as well, such as social equity (United Nations, 2017).

1.1. Outsourcing labour to the Global South³: China

The characteristics of the GSC from a Western perspective shows outsourcing occurring to less socially sustainable contexts, such as China. De facto in China and in several other neighbouring production countries, the actual labour laws are at times quite rigorous, yet, their implementation is not (Kolk et al., 2010). However, although countless efforts and protests against sweatshop conditions in the GSC, since the 1970s (Rivoli, 2014), workers' social sustainability issues in terms of labour rights are frequently not met (Locke et al., 2013; Egels-Zandén and Lindholm, 2015). Although meeting these is situated at the centre of the social sustainability discourse, for companies to take responsibility for these issues, workers themselves are still frequently relegated to the periphery of this discussion. They are seldom part of developing any standards or frameworks guiding the CSR work (Leafy, 2001; Merk, 2009). With strong hierarchy, low literacy levels, and lack of knowledge of their rights (Taylor, 2011; Drebes, 2014), it is perhaps not surprising that this interaction seldom occurs. Attempts at combating this and advancing the knowledge of labour rights include enacting CoC agreements and third-party auditing schemes, lately also participatory auditing (Auret et al., 2006). Nevertheless, these techniques are results-oriented, such as testing afterwards what types of trainings have been provided or what types of business procedures have been followed. On rare occasions, these governance tools, focus on providing the knowledge through effective trainings in advance.

1.2. Training of workers on their labour rights: then and now

Technology does not influence society as an external force (Fischer, 1992; Coopmans, 2011). Rather, it allows people to use it in order to make what is already being done more efficiently. ICT is not the cause of social change, but rather is shaped by the social world. Thus, we contend that as the social world is constructed, so ICT too is constructed by it. This holds equally true, when it comes to achieving changes in the realm of social sustainability in a broader sense and the field of workers' rights in a narrower sense. This means that ICT can possibly a driver for labour rights trainings, by means of providing workers with knowledge.

According to BSR report (2011) on worker training, one of the most important challenges is to deliver engaging training for workers. Sometimes workers have low literacy level, and when training, they are often tired from a long day. It is therefore important to be creative in designing an engaging method. As it is difficult to reach the entire workforce with conventional trainings, and with high turnover rates, it is often problematic to keep information available for all workers. Thus, the BSR report (2011) recommends emphasising simple key messages, and find ways to attract workers' attention in a creative way. This can be done by using multimedia tools, such as videos that can be shown at lunch. Furthermore, the digitalisation of trainings can address common barriers to the implementation thereof, namely high costs and resource-inefficiency. Additionally, a digital version of trainings can allegedly not only solve the business case issue of companies, but more importantly be custom-designed for the needs of workers in varying contexts (BSR Report, 2011).

This exploratory study seeks to investigate whether a digital-training tool potentially delivers knowledge on workers' rights. We thereby make four contributions to the field. First, we advance and develop Hult et al. (2006) model of eight knowledge elements

and highlight its relevance in digitalised matters. Second, we focus on a sorely under-researched area of social sustainability, digital-training on labour rights, in a Global South context (Dobers and Halme, 2009; Anisul Huq et al., 2014). Third, we provide insight into the possibilities of digital-training as a tool for delivering knowledge on matters of social sustainability. Last, we contribute to the CoC and participatory auditing literature by showcasing a potentially groundbreaking method of training that addresses some participation deficits of traditional training methods used.

2. Literature review

2.1. Corporate self-regulation to govern social sustainability in global supply chains

The expectations on companies for taking responsibility for working conditions and rights have grown with the internationalisation of operations. This development is often labelled as corporations' extended responsibility and resides at the crux of the discourse on Corporate Social Responsibility (CSR) (Hahn et al., 2014; Hickie, 2017).

In the textile industry, global outsourcing of labour-intensive production has led to dispersed GSCs (Lund-Thomsen and Lindgreen, 2014). Global sourcing has become a way to solve this issue, but without assuming responsibility for its social issues (Drebes, 2014). Some of the most pressing issues concerning exploitative working conditions (Soundararajan and Brown, 2016), whilst the affected group, the workers, lack voice to engage (Khan et al., 2007; De Neve, 2009). The lack of voice to engage is attributed to varying cultural contexts. For instance, Global North buyers enforce standards and rules on Global South buyers, sometimes not considering local legislation or contexts (e.g. lack of birth certificates, etc.), hence making it difficult for Global South suppliers to comply. Nevertheless, various alternatives, and levels of engagement, remain in attempting to self-regulate the plethora of social issues in GSC. To rely solely on conventional government action for enforcing labour rights has frequently been deemed fruitless, due to lack of transnational regulation and poor enforcement of existing regulations (Coslovsky and Locke, 2013; Locke et al., 2013). Accordingly, typically Western, companies have primarily developed private governance tools, such as ethical CoCs and systems of factory audits (Bartley, 2007).

Indeed, codes and standards and the training thereof have made it possible to improve the safety of workers in factories (e.g. health and safety), as well as lessen the worst forms of child labour (De Neve, 2009). However, the effective implementation of the broader spectrum of labour rights has been less successful. Themes, such as freedom of association and collective bargaining, non-discrimination, gender-equality regulation and payment for over-work persist within challenges to be solved (Barrientos and Smith, 2007; De Neve, 2009). Barriers to the effectiveness of CoC and auditing are complex, of which three dilemmas are highlighted by the authors Sum and Ngai (2005). First, factory owners face the dilemma of either furthering competitive production (e.g. just-in-time production) or furthering labour rights for their workers. Second, the "management tale" (Sum and Ngai, 2005, p. 197) forces workers into an alliance with their managers when participating in auditing processes. Thereby, censoring the contradiction between social and economic goals in the company. Third, the process of institutionalisation of labour rights results in higher level of bureaucracy, thereby cannibalising time when workers are supposed to receive training. Furthermore, these trainings are often performed poorly, because the executive management lack political will or interest in furthering social sustainability agendas. These types of barriers are seen as mostly driven by the factory

³ Global North, Global South respectively, are rather ideological concepts, than geographical concepts (Hollington et al., 2015).

managements' interests. However, a study by Brown and O'Rourke (2007) identified particular barriers for training based on workers' accounts, such as the lack of workers' participation therein. Their study on Chinese workers showed that the purpose of labour rights trainings may be misunderstood, and thereby the refusal to participate. Workers instead expressed their concern of being unable to fulfil production goals, while spending time on safety trainings (Brown and O'Rourke, 2007).

Further, a stream within the CoC and auditing literature brings participatory auditing into focus. Participatory auditing constitutes a particular effort to overcome the beforehand mentioned manager and worker biases of traditional trainings, towards effective labour rights training. As Locke et al. (2007, 2013) contend, there is a need for more long-term collaborative relationships between buyer and supplier. Thus, given the tendency for the conventional type of CoC, auditing and monitoring to lead to little impact, a need for a more participatory stakeholder approach (in social auditing) has been advanced. In essence, involving workers more in order to assess what their situation actually is, and emphasising their specific needs. This involves making use of participatory social auditing when addressing labour rights. This particular approach entails first, in a pre-audit setting, the use of tools such as mapping, role play, ranking and scoring exercises (Auret and Barrientos, 2004), all techniques involving dialogue with workers in order to encourage inter-worker dialogue and thereby allow them to share experiences and issues in an informal setting. Informal settings with these types of tools allow the sharing of less visible and sensitive issues, of non-compliance to labour rights (Auret et al., 2006). This also involves the spreading of CoC principles among workers, in order to create increased awareness of labour rights, and improved understanding of the role that both management and workers play in the implementation of the CoC. Such a method is frequently more costly and difficult to implement than the conventional CoC, and is as of yet a quite novel approach (Khan, 2006). The rise of multi-stakeholder initiatives is frequently associated to such a participatory approach, in that such initiatives promote the inclusion of marginalised stakeholders (Auret and Barrientos, 2004; Riisgaard, 2009) and increased local ownership of CSR standards (Lund-Thomsen and Nadvi, 2010). Nonetheless, the difficulty still lies in how to put such a more inclusive approach into practice.

We consider CoCs in its broader sense and auditing a type of self-regulation, as the traditional governance mechanism available for corporations. The perspective therein is not very inclusive, particularly in the command and control variety. The actual needs of suppliers, and predominantly their workers, are thereby not sufficiently considered. Workers' conditions are thereby not necessarily improved (Egels-Zandén and Lindholm, 2015). We contend that in order to effectively reach and educate workers on labour rights, a task hitherto deemed nearly impossible, the inclusion of these novel approaches are necessary. Studies on putting inclusive approaches into practice remain scarce; an overview is found below.

2.2. Labour rights trainings for workers

Labour rights are manifold, and of course include the right to a safe work environment. The communication of labour rights to workers can be performed through worker trainings, and is seen as the prime focus of furthering accountability and transparency in GSC practices (Ciliberti et al., 2009; Yu, 2009). We see these activities as part of assuming social responsibility and furthering social sustainability. Yet, research on workers' labour rights trainings is scarce, its highlights are presented below.

Three main methods of training workers exist (Burke et al., 2006). The first is the rather passive style of training workers,

and also the most common. It is carried out through information-based techniques, such as lectures or video trainings, the least engaging training method. This type of training typically engages 20–100 workers and it remains difficult to keep track of knowledge retained post-session. Second, offering a small degree of participation is the learner-centred type of learning, often facilitated through computer-based approaches. Therein, the worker can usually examine their knowledge on computer-based follow-up tests. This version of training has gained popularity especially for the contexts of training workers on for example labour rights, workplace safety and health, fire and building safety. However, an even greater degree of active participation in workers' trainings methods is offered in performance-based training, wherein hands-on demonstrations are shown and practiced. The worker can apply their immediately. Also, training packages usually integrate feedback loops, as well as the opportunity for trainees to correct their mistakes. Through group dialogue reflections, trainees' knowledge is furthered (see Anderson, 1985; Huddock, 1994).

The third method of training is viewed as one of the most effective approaches, as knowledge can be transferred effectively to the trainee, not least because the trainee learns to identify causal and conditional relationships between the knowledge at hand and their actions (Burke et al., 2006). Especially in the GSC context, passive methods of trainings are used. Studies showed that workers had difficulties understanding the advantages of their labour rights trainings. Traditional, passive, methods of trainings, can be additionally biased by the fact that mainly new workers to the factory are trained, therefore not giving the chance to long-term workers to refresh their knowledge on the one hand, and by the fact that common training practices are mostly delivered to upper- and middle-management on the other hand (Sum and Ngai, 2005).

We suggest that a more participatory philosophy of training, combined with passive training methods could represent a good mix to tackle the contemporary dilemmas of labour rights trainings in GSCs. The more engaging the training technique is, the better the knowledge can be transferred onto the worker and thereby influence positively the application to regular working days (Burke et al., 2006). We argue that modern tools, such as applications, i.e. digitalisation of content and training methods, can design new labour rights training methods that have yet to be explored: How is knowledge on labour rights communicated to workers' in the digital era?

2.3. Digitalisation of labour rights trainings for workers

Our starting point in this study is that technology, including information communication technology (ICT) is socially constructed, i.e. shaped by humans. Thereby, we do not view digital worker training or ICT as the cause of social change, but rather as being shaped by the social world (see Fischer, 1992). The "Social" in the broadest view, involves the relationship between society and nature, including economic, political and institutional processes (Boström, 2012). We wish to explore the possibilities of communicating knowledge to workers afforded by new technology, yet underscore the very constructed nature of this technology.

One example of digitalised training is e-learning. It is a distance training methodology based on ICT-use, thereby allowing "interaction and asynchronous communication amongst participants, as well as the access to a broad set of teaching resources" (Batalla-Busquets and Pacheco-Bernal, 2013, p. 1). E-learning is increasingly recognized as an efficient form of learning (Nisar, 2002; Grollman and Cannon, 2003), allowing the development of workers' knowledge (Ong et al., 2004). Several benefits of e-learning have been identified for organizations (Carnoy, 2004). If well-designed, allows for efficient training, that can be less costly

than traditional face-to-face training, if used for large groups. Notably, it can allow for less trips, minimize losses in productivity (Clarke et al., 2005), more flexibility for planning work. Further, Pulley (2005) highlights the possibility of e-learning to allow workers to partake in training on and off-site. Studies show that students tend to prefer distance education to traditional learning (Allen et al., 2002; Navarro and Shoemaker, 2000), affording more flexibility. Further, there was a student preference for video, over written formats (Allen et al., 2002). Nevertheless, the benefits of digital are not seen as superior than traditional education, but rather complementary (Wild et al., 2002; Wang, 2008).

Digital training is a relatively new form of training workers (Lim and Kim, 2003; Brewer et al., 2008). There has been research on the implications of ICT technology and globalisation for workers in the Global North, while workers in the Global South have not been scrutinized thus (Crane and Matten, 2016). This may of course be a result of the limited use of such technologies. There has been a research focus on the shift of workers in OECD countries, in terms of workplace flexibility, tendencies of de-bureaucratization. Knowledge is seen as an essential asset in this increasingly globalised economy (Garsten, 2014). However, it remains uncertain whether digitalisation of labour rights training, in which we contend knowledge as the content of these labour rights, is a viable method to arrive at workers in the Global South.

Studies of digital-training in relation to social sustainability, have frequently focused on managers at headquarters training in business ethics (Crane and Matten, 2016). They receive information on how to act ethically in business transactions, usually as a response to a corporate scandal. An example of Siemens is given in Crane and Matten (2016) – “Between 2007 and 2014 the firm completed over 300,000 compliance training sessions for staff, about a third of which were classroom based over four to 8 h and the rest were online.” However, no information on whether this knowledge was retained and used is given in the case studies, with no quantification apart from the number of sessions. It can therefore be questioned whether this type of training is useful. Tying onto this, we deem it highly relevant to explore the practice of digital-training targeting directly the workers. How are workers trained on their labour rights with the method of digital-training? In order to answer this question, we believe it is important to determine whether the training delivered goes beyond a transfer of information. We find the concept of knowledge relevant in order to explore whether digital labour rights trainings serve their purpose.

2.4. The concept of knowledge in GSCs

Knowledge is a concept of higher complexity than information, as it enables stakeholders to change behaviour as it includes “a set of implicit and explicit types and processes of knowledge connected with ‘knowing what’, ‘knowing how’, and ‘knowing why’” (Börjeson et al., 2015, p. 131).

In order to identify knowledge as the content presented to the workers during labour rights trainings, we contend the eight measures of knowledge, memory, tacitness, accessibility, quality, use, intensity, responsiveness and learning capacity (Hult et al., 2006) as a suitable point of departure. In their study, Hult et al. (2006) consider knowledge from the resource-based view, thus arguing that the successful appropriation of knowledge in GSC contexts can lead to competitive advantages on the organisational level.

As highlighted earlier, one gap in literature is the broader understanding of operationalising and engaging through more active, training methods as part of labour right trainings. Thus, we believe it meaningful to explore whether the content that is communicated to workers, through the application, represents knowledge. To

identify knowledge, we consider the eight elements (Hult et al., 2006) as a suitable framework. It is important to mention that the eight elements were developed in analogue contexts between the years 1982 and 2001, as well as adjusted to the analysis of knowledge on the organisational level in supply chain contexts by Hult et al. (2006). Yet, we are also interested in the digitalisation of knowledge communicated to the worker. Hence, our approach to delineate knowledge is of explorative nature, i.e. having an open mind for potential additional elements that might be crucial.

3. Material and method

3.1. Case description: introducing the application company “Bucuo”⁴

Bucuo is a small Swedish enterprise headquartered in Stockholm, with one operating office in Hong Kong. It was founded by two Swedes in 2013, with considerable professional experience related to educational training of workers, with one co-founder having over 16 years of experience in workers’ trainings and design of educational tools in the fashion industry.

“We help factories educate their work force, from management to workers in workplace and responsibilities”. (Quote Co-founder, Bucuo)

The founders’ experience of labour rights training is that these are generally time-costly and restricted to a finite number of workers. Therefore, they developed the application in order to lower costs, increase motivation for suppliers to train their workers, but also make the knowledge and practice of training more accessible to the workers. Their experience indicated that digital-learning was predominantly exclusive to top-management levels. Thus, Bucuo’s original offering is a training for factory workers and managers, and an internet-based knowledge platform intended for transparency on worker training, between global buyers and their suppliers. The training is accessible through an application installed on a portable tablet, and allows the digitalised training of workers on their labour rights. Thereby, digitalising conventional training allows the recording of results of retained knowledge, which is assessed through a quiz that follows-up learned knowledge. Fig. 1 illustrates Bucuo’s business development.

3.1.1. The application for labour rights trainings

The content of the application bundles the content of commonly used guidelines driven by private industry initiatives (e.g. Business Social Compliance Initiative “BSCI”), conventions (e.g. International Labour Organization “ILO”), local laws and experts in the industry, concerning workers’ rights in the GSC. The aim of this bundling is to develop a baseline, adjusted to local contexts, thereby applicable to all kinds of companies facing social sustainability requests. An example of a local context adjustments in China concerns the ILO convention 87 (Freedom of association of labour unions) which has not been ratified. Therefore, adjustments to local laws are made to guide companies to interpret the extent of their responsibility for facilitating labour representatives or workplace dialogue.

To begin with, there were, four modules for workers and managers to be trained in: workplace policies, health and safety, fire and building safety, and workplace dialogue. This has now instead been

⁴ Bucuo is a fictional name that was created to protect the anonymity of the company, fulfilling the wish of the two owners (September, 2017). “Bu cuo” is a Chinese expression with the literal meaning “not bad”, carrying the habitual meaning of excellent.

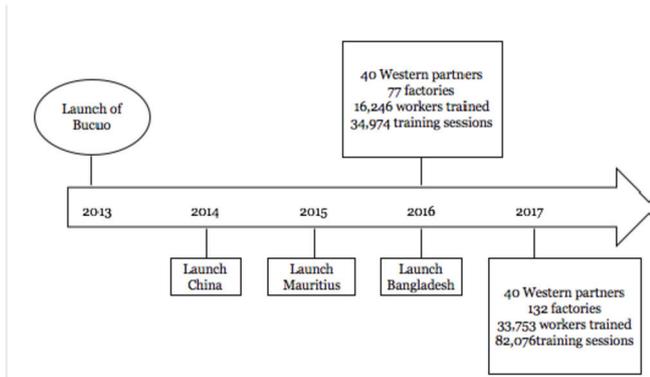


Fig. 1. Bucuo's business development.

developed into two separate tracks, “Rights and responsibilities” and “Worker engagement”, the latter which deals with issues of workplace and social dialogue (Website Bucuo, September, 2017).

The application concept has been developed on the principles of the game show “How to become a millionaire”. The player tests its knowledge by selecting multiple-choice questions and when performing well, is awarded golden stars. The design of the questions was developed through an iterative process between Bucuo, its partners and foreign production companies. In order to stimulate learning processes, the questions were adapted to national education systems (IT-Manager, Bucuo). In China, the questions and answers were considered to have too much room for interpretation. Therefore, these had to be altered to the type learning-style, familiar to Chinese workers, in the sense of how the sentence is composed, as well as the degree of complexity in the content (Coordinator, Bucuo).

“Better quality of training, training will also be more efficient and more fun. And an important aspect is also that we will get measurability in the system” (Magne, movie Bucuo)

The benefits of the digitalisation of classical workers' trainings in companies is emphasised by Bucuo. By facilitating the training on a tablet, the application can be used in all kinds of situations. While it is not uncommon for analogue in-house trainings to be time-consuming and restricted in terms of “reachability” to the whole workforce (Founder, Bucuo), the digital version of training can instead be used by all workers. For instance, the application can be played alone or in groups, during working hours, or during breaks. With regards to application development, it can be updated from afar and therefore makes it easier for Bucuo to tailor the trainings to context-specific needs. In the Chinese version, the storytelling of the digital-learning content borrows from popular Chinese soap operas in order to trigger interest and enhance engagement of the workers (Co-founder, Bucuo). The content combines essential knowledge with playful quizzes. One of the factory owners perceives the application as a possibility to make the workers' free time more pleasant, e.g. bringing the tablet to their dormitories. Indeed, this could be an added value, since many workers in China are so-called migrant workers, who are far away from home and have little budget or time for amusement (Owner, Mooncake).

The application was developed in collaboration between Bucuo, business partners, NGOs, suppliers and workers. Further, the application's purpose is to make workers aware of their basic labour rights, as well as enhance and ensure retaining of knowledge thereof. The application tests knowledge, but is not an examination gadget; it is played anonymously, so workers need not to be afraid

of any consequences of incorrect answers. Keeping anonymity is one of its key characteristics, since Bucuo strongly believes that anonymity helps workers to feel encouraged, as well as stimulated, for further learning regarding labour rights. The application stays with the factory and therefore is not subject to time constraints. Also, its content can be updated through downloads from the Internet.

3.1.2. Supplier Dragon

Dragon is a manufacturer specialised on the knitting of clothing. The factory is located southern China in the Dongguan province. The Dongguan province is an area of various production clusters, of which one of them is a cluster of knitting manufacturers. Dragon has contracted predominantly Western buyers. The factory's product portfolio targets high-end knitted clothing. During our visit, owners and management were trained on the application.

Dragon is a privately-owned enterprise and employs on average 225 workers, of which the majority of the workforce had their families living in the area. The current economic development in China pushes Dragon's owner to relocate their production to countries that can offer labour at lower costs.

3.1.3. Supplier Mooncake

The second supplier, Mooncake, is also located in the Dongguan province in the South of China. Similar to Dragon, Mooncake specializes in the knitting of clothing with the majority of Scandinavian buyers, offering a high-end product portfolio and employs an average of 850 workers. The majority of workforce are migrant workers from China's rural countryside.

During our visit, Mooncake's managers were introduced to the application. Mooncake is part of the large supplier company Li & Fung. However, akin to Dragon, Mooncake is looking into strategic long-term relocation options to countries with lower labour costs.

3.2. Qualitative case study method

The phenomenon and gaps in literature are explored through a qualitative case study research method. We contend the choice of a case study as appropriate, since the novel topic at hand has not yet been investigated (Neuman, 2006). We sampled hereinafter presented case due to the fact that it was unique in the industry in the application of non-conventional governance mechanisms for achieving social sustainability in the year 2015. We find it a revelatory example, showcasing the possibilities and limitations of digitalisation of training, to transfer knowledge to workers and potentially using a more active method of training. The design of the study was aimed at capturing the subjective perceptions of the individuals studied. In particular, we examined the case in terms of its practices and potential implications for self-regulatory approaches for accomplishing social sustainability practices in GSC. Admittedly, a single case study design may indeed restrict us to generalise from our findings. However, as we see this as a new phenomenon, we find it difficult to investigate other similar examples of self-regulatory initiatives for comparison (Flyvbjerg, 2004).

3.3. Data collection

The data collection was conducted through field studies with two manufacturers in China during September 2015. We held in-depth interviews with eleven managers and two supervised group interviews with six workers. The managers held roles in purchasing, quality environmental or top general management. A more detailed overview of managers and their roles is presented in Table 2 in Appendix A. The main topics of the interviews were social

and environmental sustainability, the factors influencing decisions on sustainability implementations, safety trainings and learning thereof, the frequency of sharing knowledge internally and externally as well as other industry-collaborations. We have also held one follow-up telephone interview with one of the top factory managers in China in October 2016.

We held continuous formal and informal dialogue with members from the application company Bucuo throughout 2015, 2016 and 2017. To be specific, we held interviews with members from the Bucuo team, the two founder-CEOs, the IT-manager and the project coordinator; one follow-up interview with the project coordinator was carried out in December 2016. Further, during the study, we have been informed of progress with relation to content development, software platforms and company expansion. The topics of the formal interviews were related to the design of learning and focus, stakeholder engagement in the Global South, social sustainability, as well as other collaborations related to their operations. Through the interviews, we could gain a retrospective account of the process of developing the application, as well as of the process of introducing the application to the suppliers.

As shown in Table 1, the study thus builds on three sources of information, collected between September 2015 and February 2017; (1) primary data as 16 semi-structured interviews, mainly with managers at suppliers in China as well as semi-structured interviews with managers of Bucuo (totalling approximately 14 interview hours), (2) primary data as observations at two factories of workers' conditions, and (3) secondary data as documentation from Bucuo, i.e. questionnaire, website, movies, performance protocols of suppliers.

All interviews were recorded and transcribed verbatim. The analysis of this primary source of data, was combined with the examination of other internal secondary sources of data such as the performance protocols, as well as the questions offered in the application in form of quizzes, and external sources of data such as available marketing material such as movies and website. This allowed us to better understand the intended outcomes of the digital knowledge streams to workers.

3.4. Data analysis

In our data analysis, we have followed what is sometimes labelled the “Gioia template” (Langley and Abdallah, 2011; Gioia et al., 2013). It is characterised by interpretive single case type research, relying primarily on “narratives to produce process accounts of organisational phenomena” (Vigneanu et al., 2015). Following this model, we conducted a three-stage data analysis process as illustrated in the Fig. 2, performed by axial coding. First, we identified the processes associated with using and developing the application (1st order concepts). Thereafter, these were

Table 1
Overview data collection.

Type of data	Description
Observations	2 factories
Interviews	In China (12): - With managers - With buyer agent - With workers In Sweden (4): - With managers of Bucuo
Internal documentation	Internal performance protocols of suppliers (February 2017) Questions asked through the applications
External documentation	Movies produced by Bucuo (publicly available on their Website) Corporate websites

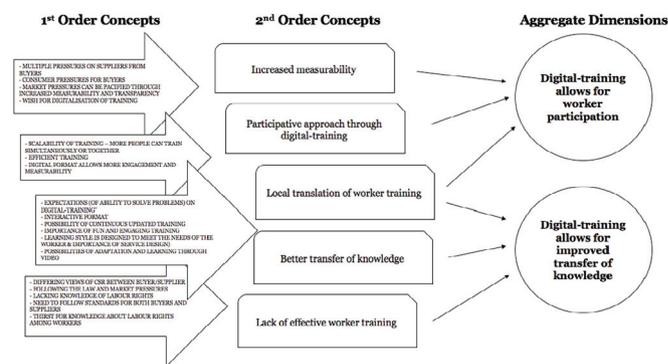


Fig. 2. Overview data analysis.

grouped into themes (2nd order themes) and subsequently constructed two main findings (aggregate dimensions). Background to the 1st order concepts is given in Appendix B. The emerging concepts helped us identify perceptions, activities and choices that form the digital-training process, and we therefore proceeded to delineate knowledge as established by Hult et al. (2006), finding an additional element.

4. Results

In this section, we present the main results that our data analyses brought into being and propose four findings: Immediate transparency, ad-hoc measurability of training sessions, active and participatory training methods as well as the composition of knowledge trained are key factors when delivering labour rights trainings to workers in the digitalised era. Furthermore, our findings reveal that certain knowledge elements appear more critical than others; especially the entertainment is important for this training to occur.

4.1. Digitalisation allows for immediate transparency on labour rights to the worker

The digitalisation of labour rights trainings was implemented through developing an application that can be installed on a tablet or portable device. The content on labour rights training is stored in the application and its usage is therefore not restricted to organised training sessions in the factory. Ideally, it can be accessed by any worker at any time. Potentially, the worker can look at the informational videos and complete trainings before regular working hours, during breaks or also bring the application to their dormitory after hours.

Moreover, the worker is not exposed to the potential risk of biasing the content through the personal beliefs of the manager or trainer. The worker is always exposed to learnings that are thoroughly conforming the suggestions by ILO and BSCI.

“I believe this will bring us more organised – more training to our factory people, to let them know much more about the manufacturing their rights, workers, human rights, the industry - it is good for both us, for the management and the workers.” (Production Manager, Dragon)

4.2. Digitalisation of labour rights training allows for ad-hoc accessibility and measurability of training activities

Another aspect that the application can provide is ad-hoc accessibility and measurability of training results on two levels,

the worker and the organisation.

First, the worker has access to the knowledge stored on the application; theoretically an infinite number of times. The measurability is ad-hoc in that workers can test the success of their training immediately after getting the results of their answers to the quizzes. This immediate measurability for the worker allows for a targeted type of training, namely by repeating the training with only the questions that were performed poorly.

Second, the data is not only accessible to the factory management, but also from Bucuo and Global North buyers. Potential training deficiencies on the different themes can be located through a standard reporting system that is provided on the Website of Bucuo. This type of ad-hoc measurability does not only seem to make external pressures on Global South suppliers tangible, but also if performed well, provides the factory management with the possibility to differentiate their business through their social sustainability scores. Thus, labour rights training can be potentially used as a marketing tool for the factory.

“So we use films to train, we use a quiz game to make sure that the knowledge is there gathered, gather everything in a tablet, making sure that the measurability is there. So that the brands [Global North buyers] can also see ok they are continuing to train?” (Founder, Bucuo)

The digital-training tool involves knowledge benefits for the workers, but also serves as a tool for factory owners to market themselves as an attractive prospective employer (Capaldi, 2005).

“Social responsibility is helping the long last development for the entire corporate [...] And some of the rights of our employees”. (HR-Manager, Mooncake)

4.3. Digital-training allows for advancing participatory labour rights training methods

An important feature when the application was developed is the strong focus on designing it towards the needs of the workers. The educational films and quizzes are not only adjusted to the local testing methods and literacy of the workers, but as emphasised by Bucuo, mirror soap-operas popular among the workers. The underlying idea is to frame labour rights training as entertaining and amusing; hence, stimulating follow-up reflections and conversations after completed training sessions. The application is not a single-user application, it can be trained in teams too. Workers are encouraged to perform group trainings and discuss questions and potential answers among each other.

“And when you set the training, you can set it as individual training or group training, so there is a choice. And then also you can choose individual with levels in factory, and here [in the application] we also have the feedback, is this something that you need to understand better?” (Co-founder, Bucuo)

“And with the digital format it is also interacting. Which is great. Because you have an answer to those questions. So you cannot sleep.” (Co-founder, Bucuo)

The analysis of the data suggested to scrutinise the content communicated to the worker in the course of digital labour rights trainings. The initial analysis of the interviews showed that the transmission of knowledge seems to be key rhetoric when discussing trainings. In order to identify whether the information presented on the application in fact is knowledge, we used the

framework of Hult et al. (2006). We located these knowledge elements, while being particularly interested in the digitalisation aspect thereof. We found that one important feature seemed to fall short in the list of elements, namely the entertainment aspect of knowledge.

4.4. Memory

In our case study, workers claimed to know about some of the vast list of labour rights. They seemed to be especially well informed about their over-time rights and holiday regulations. At Dragon, most workers were migrant workers, therefore seeing the opportunity to earn more money through over-time and perceiving the regulation as a limitation. At Mooncake, the majority of the workforce was local though and therefore over-time restrictions were seen as important. However, what was striking was the fact that other imperative knowledge, such as how to react in case of fire, workers were inconclusive. The application presents videos of slightly diverging scenarios, however communicating the same themes. The worker is therefore able to gain experience and familiarity with the topics at hand.

[...] We will definitely have more questions on the same theme and ask in several ways. To really see the deeper understanding. (Co-founder, Bucuo)

4.5. Tacitness

The application bases its content on various sources, guidelines by private industry initiatives, conventions, local laws and experts in the industry. These are usually framed in a rather abstract style and tailored to a Global North-based audience that is relatively well-educated. Most texts are in bullet-point form and published in Western [Global North] languages. The service-design of the application bundles this knowledge in a way that the workers have an easier time to comprehend the, sometimes complex formulated, content. More specifically, the knowledge presented by the application is adjusted to cultural contexts and level of education in the factory.

“And I also think we run into cultural things, [...] the way you learn in China for instance, the way you perceive a test should be. [...] In Sweden we learn in a broader sense [...]. We found out in China, [...] many start by the answers and then read the text and find out the exact right answer. [...] So for us, the films are not always strongly connected to the questions. They are teaching things but not saying the exact right answer. And the reaction from a lot of people now have been that we don't find the exact answer in the film so why should I watch the film? So they skip the films. We need to connect it much stronger, because they are extremely efficient in the way they study.” (IT-Manager, Bucuo)

4.6. Accessibility

The accessibility of knowledge seems the key feature of the application. Previously, “trainings have been conducted in one time face-to-face sessions” (Founder, Bucuo), but the application makes it accessible through a tablet and thereby enables the factory to keep the knowledge within the organisational boundaries, rather than being dependent on external trainers to come in. This finding connects to the potential of immediate transparency and its barriers that the application can offer.

“New employees are usually trained by masters. [...] These trainings are usually executed by one master to many students [new employees]. When the student gets to know the [fire and safety] skills, then they can become a trainer. But the whole industry is getting less and less workers. [Fire and safety] Skills are disappearing.” (HR-Manager, Mooncake)

4.7. Quality

Labour rights sessions are designed to teach scenarios replicating workday situations. Further, the content is based on the latest requirements and can be updated to legal changes. As the application is an attempt to bundle relevant information, it constitutes relatively standardised knowledge. Thus, the accuracy of certain scenarios that workers might face is comparatively weak. Turning to the reliability of the knowledge, interview partners stated that content is based on widely accepted agreements and adjusted to local contexts, such as language and familiarity of video styles.

“Well I think that, whatever you do, you have to start by do it together with the ones that are going to use it. That's a starting point, and you can't sit in your office and design it yourself. Then I think video is very interesting in the sense that [...] it is not your boss telling you, you have to know this, but you have to trigger insights that you want to learn.” (IT-Manager, Bucuo)

4.8. Use

The application is facilitated by the “translation” of rather abstract texts, laws, rules and regulations to close-to-reality workday scenarios experienced by workers. The in-depth interviews show that all stakeholders involved, highlight the usability of the knowledge.

“So this is why this needs to be a local tool. So wherever you enter the market, we have to adjust the tool, both for the content, but also for tonality. Because we know that a film that works in Bangladesh, will not work in another market. So it needs to be something that workers sitting in the factory can be like wow, this could be me!” (Founder, Bucuo)

4.9. Intensity

We interpret this in terms of the knowledge intensity of labour rights projected through the application. The knowledge intensity of labour rights seems to be quite low if interpreted strictly as the dependency of the workers on that knowledge to complete their daily tasks. However, we find that in relation to acquiring labour rights knowledge and its potential consequences, intensity is a strong element.

“And when we showed some of the content, because I wasn't sure at all what I mean I hadn't been in Bangladesh before and we showed the content and I saw the reactions I kind of felt like this is so so much stronger that I understand. Because just that a thing like that you are entitled to maternity leave for 4 months paid, they don't know it, and bosses doesn't know, and when they find out they get very upset, or very happy that they get the knowledge and they really expressed a lot of feelings around it, that they needed a lot of knowledge about this. That the next time they negotiate a new job, they would be more confident and so there is a lot of

knowledge lacking and they are really thirsty for it.” (IT-Manager, Bucuo)

4.10. Responsiveness

The presentation of the knowledge through the application illustrates to workers how to act on their knowledge. In order to stimulate them to put learnings into actions, the application follows-up with multiple-choice questions in which the worker is asked to answer how they would act if the presented problem occurred.

“After using the training program, they could understand directly about their self-rights. [...] That may be good.” (HR-Manager, Mooncake)

4.11. Learning capacity

The learning capacity is restricted to the knowledge provided on the application. However, as it showed, the capacity of learning within the required knowledge to achieve is infinite. Workers can train and learn at their request.

“It is awesome when the training has just happened. It is great when they are still there. But when they leave, what happens in three years' time? So if we could help them to create a simple tool that they can continue to use in the factory, that I think is that a change can really stay.” (Co-founder, Bucuo)

4.12. Entertainment feature of communicating knowledge on labour rights is key

When the workers were interviewed about their perceptions of shifting to a modern, digital labour rights training method, their answers were overall positive. As emphasised repeatedly by Bucuo, digitalising training should be enjoyable. As to date, for workers, the trainings might have been quite abstract and disconnected from their daily working tasks. In order to connect to the worker, the founders of Bucuo believe that knowledge should be perceived as entertaining while training, not tested. This should deliver an e-learning experience that keeps the worker interested.

“It is going to be more fun. It could make you learn faster”. (Workers, Mooncake)

The effectiveness of communicating knowledge on labour rights through traditional training methods has been questioned from various angles (Pulley, 2005). All stakeholders (Bucuo, Mooncake, Dragon and workers) who were interviewed mentioned the significance of creating a learning method that is more entertaining, while the digitalisation of it acts as the enabler. Therefore, we suggest adding a ninth element to the Hult et al. (2006) framework: Entertainment.⁵

5. Discussion and conclusions

Improving workers' knowledge has of course been high on the social sustainability agenda, yet difficult to organise. Especially

⁵ Illustrative quotes of knowledge elements are listed in Table 4 in Appendix C.

assessing knowledge retained post-training session has proved challenging. In this section, we discuss how this application is one way to organise labour rights trainings in the digital era; with the potential of addressing current deficits in CoC or social participatory auditing practices.

5.1. Immediate transparency on labour rights to workers

The first finding of our study is that of immediate transparency of labour rights to the worker. Immediate transparency between manager and worker on labour rights seems to be a radical possible outcome of facilitating digitalised trainings. As portrayed by other scholars, biases to transparency persistently occur (Sum and Ngai, 2005). Communicating knowledge on labour rights through an application means that the content of trainings is not bound to personal preferences or interpretations of the management team. Hence, contents can be communicated through an unbiased channel, providing the worker with the facts of the matter. Moreover, this can potentially trigger the interest of the worker to learn and engage more when completing labour rights trainings.

Furthermore, digitalising training owns the advantage that workers do not need to cut down on their production hours or -pieces when training. This constitutes a common barrier to regular labour rights trainings (Burke et al., 2006).

Admittedly, immediate transparency is rather the ideal outcome of digitalising labour rights trainings. Indeed, one should not overlook the power mechanisms in factories that cannot be solved by a digital-training method, wherein managers and line managers remain in control of the application. This means that the manager holds ownership of the application and therefore keeps the decision power of who, when and how digital-trainings shall be completed. This is an important limiting aspect of making the application only available on a restricted number of tablets. Notably, similar negative outcomes of such trainings, which have been observed in the CoC literature (Mezzadri, 2012) and participatory auditing (Auret et al., 2006) literatures, remain unsolved. One implication would be to reconsider the ownership structure of the application. If digital labour rights training could be offered in a lighter download version, workers could afford the license to download themselves. Consequently, workers could train on their labour rights anywhere, anytime. The possible impact for the worker to receive understandable and unbiased knowledge would soar.

5.2. Accessibility and measurability of training activities

The meaningfulness of digitalising training on labour rights can be criticised from many aspects. Not only that in fact it seems that the manager or line manager of the factory remains in control of the application and therefore holds the *carte blanche*, but also counting training sessions can be questioned as a suitable measure for awareness of labour rights among the workers. Albeit a good indicator for the factory owners themselves and for Global North buyers whether trainings are completed at all, the digitalisation aspect gives little validity to raising awareness or improving knowledge on labour rights. The “numbers game”, as also discussed in Crane and Matten (2016) seems to be a measure created to cover-up for obvious issues in global supply chains. Measures and techniques to assess awareness or performance in learning can be a valuable improvement to the digitalisation of labour rights trainings.

5.3. Increasing participation feature in training methods

Literature has shown that the most effective way of training is to perform participatory trainings (e.g. Evia, 2010; Lingard et al.,

2015). We found that the application offers a light version of participatory training. Due to natural restrictions, it is of course not possible to deliver the most effective version of participatory trainings, namely hands-on training (see Anderson, 1985; Huddock, 1994). Instead, workers are given the option to train alone or train in groups. As a consequence, the design of the digital-training method aims at engaging workers into group discussions about the knowledge communicated to them via videos and quiz-style questions. The participation in group conversations can reach a stage of reflection among the workers that allows knowledge to retain. This confirms Olivera and Straus (2004) findings, namely that participation in group activities when solving puzzles stimulate higher training transfer than solitary work.

Adjusting videos to local taste and worker capacities constitute ways of overcoming common problems associated with traditional or basic video trainings. Taking the latest literature on labour rights training into consideration, it would perhaps be most successful in terms of participative training, to install digital feedback loops administered through the application and thus reaching a higher degree of knowledge retention.

5.4. Entertainment is the 9th element to knowledge

In order to answer our research question: How are workers trained on their labour rights with the method of digital-training?, we found it important to investigate whether the claims made by Bucuo, namely to provide relevant knowledge to workers and to offer a concept of digitalising labour rights training that is a better choice than traditional training methods, hold true. While we obviously could not assess the “effectiveness” of the digital-training method, due to its novelty in the factory during our visit, we found that traditional elements of knowledge are not fundamentally innovated through digitalising it. However, we found all elements comprised in the knowledge on labour rights communicated to the worker. Whereof some of the elements were seemingly weighted as being more pivotal than others. We accredit the differences in significance to both the context studied and the digital nature of training. Accessibility, quality, and use appeared to be particularly important, while intensity and responsiveness performed comparatively less important. The digitalising aspect of communicating knowledge on labour rights to workers brought accessibility, quality and use upfront, especially as these elements seem to be difficult to deliver through traditional method of trainings. Knowledge in traditional trainings is communicated through a trainer to a group of trainees – perhaps not speaking the local language of the workers or being even employed by the factory management (Sum and Ngai, 2005). Also, providing the workers with service-designed movies, adjusting to local tastes and worker capacity, as well as adapting local learning systems, can hardly be achieved through traditional training methods; thereby, combating the problems arising from standardised CoC trainings or participatory auditing performances.

Furthermore, the digitalising aspect of knowledge disclosed one additional element of knowledge, namely entertainment. The application enables knowledge to be presented in a humorously, adjusted to local flavours and particularities. In this case, it was Chinese soap operas. In addition, we perceive the digitalisation aspect of it, by offering a modern application might be especially relevant for the younger and for the following generation of workforce. Not only because of their ease and potential preference thereof, but also that is the younger migrant workers in China that are less likely to be loyal to the factory. This being part of the reasoning of the possible alleviation of employee retention (Anisul Huq et al., 2014).

6. Conclusions

As discussed above, we find that digitalisation has implications for knowledge retainment and assessment of post-worker training session. Thus, we find that through this application, most elements of knowledge are used to communicate labour rights to workers; and even that an additional element of knowledge may be essential in order to do so – entertainment. We thereby contribute to the literature on participative training (see Barrientos and Smith, 2007) and what knowledge elements are essential for furthering knowledge on labour rights (see Brown and O'Rourke, 2007).

Yet, we remain critical when it comes to communicating knowledge on labour rights through an application. A success is not self-evident through the use of a single application. Shifting from face-to-face training to a fully digitalised training method is of course not a one-stop solution. Multiple issues remain and different types of actors are needed to ensure the upholding of labour rights. As elaborated in the digital literature, digital-learning is complementary to traditional learning and as such there needs to be a combination. Further, as Marra et al. (2012) points out, there is no evidence that digital in itself contributes to the better functioning of a company. Indeed, digital-training is very convenient, and may indeed allow reduced costs and flexible delivery. However, there may be a weakness to this method of instruction. The lack of social interactions runs the risk of letting a lack of understanding go unnoticed (see Wang, 2008). There may also be risk for shortcuts in terms of the depth of learning, as well as of cheating on examinations. These are issues partially addressed by Bucuo. As discussed earlier, we contend that any form of digitalisation is shaped by the social. For example, the use or intensity of knowledge (Hult et al., 2006), leads to the assertion that these elements still depend on social interaction, ie. on worker-manager relationships.

Yet, this places part of the responsibility of upholding labour rights on the worker themselves; once a worker achieves a gold star, this does still not guarantee its upholding. Especially in the Chinese context with so-called “efficient learning” (IT-Manager, Bucuo), the view of labour rights, and faith in corporate or institutional change may still not have changed. Is it then the workers' individual responsibility to ensure this, and is the Western

company's responsibility thereby truly fulfilled its responsibility towards its stakeholders in terms of promoting social sustainability? We consider digital-training and this application as one important opportunity, with multiple benefits for workers, supplier and buyers, amongst a plethora of initiatives needed to improve. Unfortunately, although many benefits are possible, digitalisation in itself is not necessarily a panacea for learning (see Earle, 2002) nor for social sustainability. In the end, the purpose of this application is to augment the level of knowledge of their existing labour rights, not necessarily changing or furthering the status quo of these rights.

Given the novelty of this topic, digital-training literature on labour rights is practically non-existent: we have therefore shed light on a promising avenue for delivering labour rights, and ultimately, social sustainability. Further, most studies of social sustainability are undertaken in the context of developed countries (Hussain et al., 2012), despite the relevance of studies in developing countries (Dobers and Halme, 2009). Often the focus has been on the buying firm's perspective, thereby ignoring the supplier's, whereas this paper has given insights on supplier firm's perceptions on labour rights trainings.

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Appendix

Appendix A

Table 2
List of Pseudonyms.

Role	Company	Source of quote
Founder/Strategy and Sales	Bucuo	Interview
Co-founder/Strategy and Sales	Bucuo	Interview together with Founder
IT-Manager	Bucuo	Interview
(Product) Coordinator	Bucuo	Interview
(Product) Coordinator	Bucuo	Interview (follow-up)
Compliance Manager	Dragon	Interview
Compliance Manager	Dragon	Interview (follow-up)
Production Manager	Dragon	Interview
Workers	Dragon	Group interview with 3 workers
HR-Manager	Dragon	Interview
Compliance Manager	Mooncake	Interview
Factory Manager	Dragon	Interview
Factory Owner	Mooncake	Interview
Workers	Mooncake	Group interview with 3 workers
Quality Control Manager	Mooncake	Interview
HR Manager	Mooncake	Interview
Buyer Agent	Freja	Interview
Fashion Buyer/Social Sustainability Coordinator	Freja	Interview
Buyer Company/Sustainability Manager	Magne	Movie
Buyer company/Sustainability Manager	Sif	Movie
NGO Partner of Bucuo	Right Way	Mentioned in interview
Fashion buyer/Sustainability Manager	Trud	Mentioned in interview
Fashion company	Mode	Mentioned in interview
Fashion buyer	Nanna	Mentioned in interview

Appendix B

Table 3
Illustrations of Processes of Knowledge Transfer with Digital-Training for Workers

1st Order Concepts	Illustrative Quote
Multiple pressures on suppliers from buyers	<p>“So, and the suppliers are very pressed about all the [requirements]. One of them, there is no standardised way of reporting. So if they have like 15 brands coming in to them, all wanting them to fill in different papers, all these questions, answering. When I look at all the pre-assessment they have to do before they get a customer. A lot of paperwork, all the salaries, everything you know. So, I can understand, it is hard to feel positive, and some suppliers say “oh great another thing from buyers”. And he said to me, I think it was in Bangladesh actually “alright so what kind of education do the brands do, what kind of education do they get, so why are they not getting an education then?” So I’m like I can’t answer that, so I think it’s complicated actually.” (IT-Manager, Bucuo)</p> <p>“Raising awareness on rights [...] is actually key to lasting improvement for workers’ rights and human rights in the workplace” (Manager Buyer Sif, movie Bucuo)</p>
Consumer pressures for buyers	<p>“And the measurability part, when I first took the new way as sort of to the brands that I have been in dialogue with, with all of through this process like brand Trud for example and Nanna, and a few other brands they have been like supporting this, because they really did want to have this tool. And they said that yes, the measurability is what we are longing for. So last summer [...] the manager at brand Trud, she said that well you know this is sort of a “hallelujah” moment.” (Co-founder, Bucuo)</p>
Market pressures can be pacified through increased measurability and transparency	<p>“[...] to let the employee trained with Bucuo, is no problem, is good for the employees. So good to do, to let them understand their rights and a responsibility is also good for the factory, yeah [...]” (HR Manager, Dragon)</p>
Collaborative aspect of developing digital training method	<p>“I mean that they feel that they are part of this and that they want this to succeed. So I think it has been a fantastic journey to see you know in very close collaborations with them. I think that is also a key factor in what they want to do. Because we always want to create those collaborations. And we want the suppliers to feel that they are part of it. So we are more really like lifting suppliers that were part of the pilot. So we are saying: wow, you have been part of the development. So creating this ownership was so important.” (Co-founder, Bucuo)</p> <p>“But if you, I think it is important when you create a tool that you understand the needs of the people that are going to use it. And that they are important value creation. I think really working closely together with buyers to understand their needs, really work closely together with suppliers to understand their needs we did so many interviews during these trips to China and Bangladesh.” (Co-founder, Bucuo)</p>
Wish for digitalisation of training	<p>“So I think there is definitely and I think that the brands when I meet them, I feel that they are frustrated with the way things work today. They might work with big organisations like BSCI, which is the big brand organisation and they don’t feel very much is happening there. This better need, from their side, they are frustrated looking for other solutions. So I think we came in good in time.” (IT-Manager, Bucuo)</p>
Scalability of training – more people can train simultaneously or together	<p>“And together with them we will create a tool that is more easily scalable today they in the workplace and also in certain trainings in factories. So we have to listen to everything we get. If you, if you have a factory of 2000 workers for example, then you do certain training, you do 20 at a time. There is a hundred meetings you have to go through. And this is not easy to get the supplier to sign off on, can I please meet 20 at a time and then have a hundred meetings? So if we can bring the general knowledge on a higher level”. (Co-founder, Bucuo)</p>
Efficient training	<p>“A lot of different organizations and companies providing different trainings. But so far and e-learning as well, but so far e-learnings are mostly geared towards managers. Top-management. Not even middle-management. So you know, there is a big gap in scalable for training for workers. And uh, floor management. You know the middle management on the floor level.” (Co-founder, Bucuo)</p>
Digital format allows more engagement and measurability	<p>“Better quality of training, training will also be more efficient and more fun. And an important aspect is also that we will get measurability in the system” (Buyer Company Magne, movie Bucuo)</p> <p>“And the suppliers hearing that they can share the results. With my buyers. Yes. And with potential customers. This is where they start to “aha”. “ok, mmm”. Oh this is where they start to feel like that this is a proactive step instead of reactive. And even maybe I can generate business over this.” (Co-founder, Bucuo)</p>
Identification of workers with movies	<p>I think the key is also that we have been able to get feedback from them. With all the brands that has local persons in China. We are a bit bouncing off your scripts. The content uh, translations and tonality in the tool. Are these films giving the right feelings for a Chinese person. So that is, that has been very good for the development as well.” (Founder, Bucuo)</p>
Importance of local tool	<p>“So this is why this needs to be a local tool. So wherever you enter the market, we have to adjust the tool, both for the content, but also for tonality. Because we know that a film that works in Bangladesh, will not work in another market. So it needs to be something that workers sitting in the factory can be like wow, this could be me!” (Co-founder, Bucuo)</p>
Knowledge of labour rights can be powerful and improve lives	<p>“One of the key ambitions is also the way this power, the informal power structures of the factory, making sure that everybody has the same knowledge. So there is not just a middle segment of and then it feels like I know everything but that there is knowledge from the ground level up that they have the same knowledge. That this is what you need to know about the workers’ responsibilities.” (Co-founder, Bucuo)</p> <p>“After using the training program, they could understand directly about their self-rights. [...] That may be good.” (HR Manager, Mooncake)</p>
Expectations (of ability to solve problems) on digital-training	<p>“But I mean if you look at it, let’s say that they show [training movies] in the canteen, how can you guarantee that how many workers actually pay attention? Are they taking a nap maybe? Or visiting a friend or chatting? Or you know. So you don’t really know. You know that they have attended. You might have an attendance list. So, ok a 100 people were there. But you don’t really know if anything, if they understood anything. And with the digital format it is also interacting. Which is great. Because you have an answer to those questions. So, you cannot sleep. It is impossible. You know. So at least some more information will get into your brain, you know. You learn more.” (Co-founder, Bucuo)</p>

(continued on next page)

Table 3 (continued)

1st Order Concepts	Illustrative Quote
Possibility of continuous updated training	<p>“Yes I think add on modules, in China deeper content, level for executives, maybe more practical content, maybe that they want more hands on content. And the process of making videos, that is not so easy to add on content. Because you need the production company, so it is not an easy worked way of doing it. And that is something that we need to work more.” (IT-Manager, Bucuo)</p> <p>“But basically what is what we are going to do in the long run is that we will also bring some IT knowledge back home into the home company. To have backup possibilities to customize things, you know for brands and suppliers and so on.” (Co-founder, Bucuo)</p> <p>“And we want to continue to develop the portal also for the suppliers to show themselves. To global brands and making sure that they have a ID card as well where they can be viewed. We want to have a top five suppliers and if you are a really good supplier then you get a, you going to be viewed on the front page. Maybe we want to create different levels, where you are. If you are totally transparent with your data then you get a little special attention on our portal.” (Founder, Bucuo)</p> <p>“There are even more questions now. We have 44 questions now. More is this really important. This is also a request from people playing the tool, they wanted it to be even more questions.” (Founder, Bucuo)</p>
Importance of fun and engaging training	<p>“It is going to be more fun [...] It could make you learn faster”. (Workers, Mooncake)</p>
Learning styles designed to meet the needs of the worker & importance of service design	<p>“But if you, I think it is important when you create a tool that you understand the needs of the people that are going to use it. And that they are important value creation. I think really working closely together with buyers to understand their needs, really work closely together with suppliers to understand their needs we did so many interviews during these trips to China and Bangladesh.” (Co-founder, Bucuo)</p>
Possibilities of adaptation and learning through video	<p>“Well I think that, whatever you do, you have to start by do it together with the ones that are going to use it. That's a starting point, and you can't sit in your office and design it yourself. Mm. Then I think video is very interesting in the sense that, especially in Bangladesh, that there are a lot of illiterate workers. Then I do believe in video but then you have practical problems with it being heavy, it is not something they can download to their own phones, and have the 3G phones like that.” (IT-Manager, Bucuo)</p>
Differing views of CSR between buyer/supplier	<p>Social responsibility is helping the long-lasting development for the entire corporate [...] And <i>some</i> of the rights of our employees”. (HR Manager, Mooncake)</p> <p>“So we used the morning to discuss what is their view on corporate responsibility? Why is this becoming such an important issue? Because a lot of suppliers are also not a hundred percent aware of why are we focused on that so much. Why is this such a big deal for you guys? Uhm, so there was a lot of brands sharing their view on this and also explaining why this is important to the customer. If it is important to the customer, it is important to the brands. And then it needs to be important to the brand, uhm, you know companies, associated with the brands.” (Co-founder, Bucuo)</p> <p>So compared with other countries, China is one of the very typically country of CSR – because the government set up regulations of the CSR, and high standards compared with others. As we know, they have 2, they are only working for five days a week, so for the industry itself it is quite difficult I mean to afford the overtime, the compensations. Because they have only have the five days. On Saturday, they have to pay the double. According to the law. So you can see that China is facing deep problems. About the economic, we cannot say crisis, but the economy is going down sharply. (Compliance Manager, Dragon)</p>
Following the law and market pressures	<p>“On Saturday, they have to pay the double. According to the law. So you can see that China is facing deep problems. About the economic, we cannot say crisis, but the economy is going down sharply. The factories, they might have to bear lots of the taxes, like social insurance, like waste water, taxation, worker leave. So this is lots of factories are going to move from China, not only south to north. Because in every country overhead is the same and they have to think and move up. Our factory we have already the plan to move from two years before. We have already moved half of the production from China to the Cambodia” (Compliance Manager, Dragon)</p>
Lacking knowledge of labour rights	<p>“And when we showed some of the content, because I wasn't sure at all what I mean I hadn't been in Bangladesh before and we showed the content and I saw the reactions I kind of felt like this is so so much stronger that I understand. Because just that a thing like that you are entitled to maternity leave for 4 months paid, they don't know it, and bosses doesn't know, and when they find out they get very upset, or very happy that they get the knowledge and they really expressed a lot of feelings around it, that they needed a lot of knowledge about this. That the next time they negotiate a new job, they would be more confident and so there is a lot of knowledge lacking and they are really thirsty for it.” (IT-Manager, Bucuo)</p>
Need to follow standards for both buyers and suppliers	<p>“I think [CSR in China] changing very fast, I remember when I had my own factory, I don't need to report anything except from production. The customers trust us, whatever we make. At that time, just payment easy time. Slowly more and more, compliance, you know like quality and compliance, you know like how you treat your workers. I think it is fair because they are human. The workers is only you know has different worlds, different job. You are management, they are workers. They are men they are women, need to treat them fair, you know so they should have the labour law, the holiday, the payment of wages so and the canteen and the leaving early. It is hard to do it more reasonable. I cannot say better than other people, but in the industry we are doing good. So compared to other factories, we are doing much better I believe. So we know it is very important for manufacturing business. You have, manpower, if you don't have manpower even if you have machines – you can't handle orders. Right. So in the business if you don't have people to work for you, if you don't have people, you have nothing need, [you need] to treat them well.” (Production Manager, Dragon)</p>
Thirst for knowledge about labour rights among workers	<p>“And when we showed some of the content, because I wasn't sure at all what I mean I hadn't been in Bangladesh before and we showed the content and I saw the reactions I kind of felt like this is so so much stronger that I understand. Because just that a thing like that you are entitled to maternity leave for 4 months paid, they don't know it, and bosses doesn't know, and when they find out they get very upset, or very happy that they get the knowledge and they really expressed a lot of feelings around it, that they needed a lot of knowledge about this. That the next time they negotiate a new job, they would be more confident and so there is a lot of knowledge lacking and they are really thirsty for it.” (IT-Manager, Bucuo)</p>

Appendix C

Table 4
Illustration quotes of knowledge elements

Knowledge Element	Illustrative Quote
Memory	"I would love it if it could solve any of [the factory owners'] problems. For instance sitting with these 15 brands and all the demands, if Bucuo somehow could take away some of his work load with presenting his company and showing what he's done, does in the pre-assessment, that would be excellent. So I think if it somehow saves him time and money, that would be fantastic." (IT-Manager, Bucuo)
Tacitness	"And I also think we run into cultural things, that is interesting but not so like the way you learn in China for instance, the way you perceive a test should be. And that they are very, very, efficient in the way they learn. In Sweden we learn in a broader sense, we can read text, you don't have to find the exact answer in the text, get more of an overview. We found out in China, if you should read a text without reason, when you start a test, many start by the answers and then read the text and find out the exact right answer. So they are very efficient in a way. So for us, the films are not always strongly connected to the questions. They are teaching things but not saying the exact right answer. And the reaction from a lot of people now have been that we don't find the exact answer in the film so why should I watch the film? So they skip the films. We need to connect it much stronger, because they are extremely efficient in the way they study." (IT-Manager, Bucuo)
Accessibility	"But what happens when they [the trainers] are not here anymore, what will happen with the general knowledge in factories... Will they [workers] maintain this? [...] create a tool that the suppliers can also use to even after the training is done. If people leave the committee, if they move to another factory, we have the tool that we at least can refresh." (Founder, Bucuo) "New employees are usually trained by masters. [...] These trainings are usually executed by one master to many students [new employees]. When the student gets to know the skills, then s/he can become a trainer. But the whole industry is getting less and less workers. Skills are disappearing." (HR-Manager, Mooncake) "The suppliers were very uneager in the beginning. Raising the knowledge of my workers, I don't know if this is a good idea." [To really coming back and saying this is great. I have a more stable workforce. I have better productivity. This is, this is fantastic for me. So I saw first-hand, that these tools that my co-founder has created really worked.] (Founder, Bucuo)
Quality	"After using the training program, they could understand directly about their self-rights. [...] That may be good." (HR Manager, Mooncake) "Well I think that, whatever you do, you have to start by do it together with the ones that are going to use it. That's a starting point, and you can't sit in your office and design it yourself. Mm. Then I think video is very interesting in the sense that, especially in Bangladesh, that there are a lot of illiterate workers. Then I do believe in video but then you have practical problems with it being heavy, it is not something they can download to their own phones, and have the 3G phones like that. That's a technical problem with it as well as the factories being very loud, very noisy even in the training rooms. So that means you have to have good loud speakers or at least might have to have it subtitled, but if you are illiterate then you can't read that. But I think that engaging video, and also that knowledge is something that you, you personally have a drive to know, you want to know of your own reason, that I think is the most important. That it is not your boss telling you, you have to know this, but you have to trigger insights that you want to learn. That is key." (IT-Manager, Bucuo) "And I think it is really important that we are not an initiative or an NGO or any kind like that. We are a for-profit company. And everyone we talked to liked it, because that means that they can there can be "sustainability" in the long-term thinking around it." (Founder, Bucuo)
Use	"Hmm... I think transparency is very important, it is not only for American customer, [...] even for the workers. So we have a very good system to control, we have the reporting system, we have the announced audit, internal audit by our department, by the HR department [...]" (Manager, Dragon)
Intensity	"I mean for us it is extremely important that all the partners are extremely important. Uhm. If it is the supplier or the buyer or, or, or, experts in different fields. That is how we work all the time. So for example, when it comes to social dialogue now. We have the best experts on social dialogues that we collaborate with. So we know that the content will be extremely good you know and good quality. And that is how we want to work with everything. I don't know if that answers your question. But also, let's say if you do an environmental module then we will look for partners that are experts in that field. And uh, try to find collaborations with them. So that we don't do the research and trying to figure out what is the most valuable learnings in this field. Because we would never be able to do something that is as good as the experts know already. So that is how we work with that." (Co-founder, Bucuo)
Responsiveness	"If we do it in these factories it's going to take X amount of months. So that is when we, when we had this common vision that if we could use the application to raise the general knowledge. We could train a small group of people. We can also help to leave behind a tool that they can use to refresh knowledge as well as include more people into that work group and they could also have longevity and I think that is one of the keys for to have training and to have the knowledge stay longer so to make sure that it is sustainable." (Co-founder, Bucuo) "It is awesome when the training has just happened. It is great when they are still there. But when they leave, what happens in three years' time? So if we could help them to create a simple tool that they can continue to use in the factory, that I think is that a change can really stay." (Co-founder, Bucuo) "And when we showed some of the content, because I wasn't sure at all what I mean I hadn't been in Bangladesh before and we showed the content and I saw the reactions I kind of felt like this is so, so, much stronger that I understand. Because just that a thing like that you are entitled to maternity leave for 4 months paid, they don't know it, and bosses doesn't know, and when they find out they get very upset, or very happy that they get the knowledge and they really expressed a lot of feelings around it, that they needed a lot of knowledge about this. That the next time they negotiate a new job, they would be more confident and so there is a lot of knowledge lacking and they are really thirsty for it." (IT-Manager, Bucuo)
Learning capacity	"And the measurability part, when I first took the new way as sort of to the brands that I have been in dialogue with, with all of through this process like brand Trud for example and Nanna, and a few other brands they have been like supporting this, because they really did want to have this tool. And they said that yes, the measurability is what we are longing for. So last summer [...] the manager at brand Trud, she said that well you know this is sort of a "hallelujah" moment." (Co-founder, Bucuo)

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