

# Can ICT Enhance Workplace Inclusion? The Role of ICT-Enabled Inclusion Practices

Research in Progress Paper

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## Abstract

While workplace inclusion is of strategic importance, it is not easily achievable due to persistent classification, segregation, and stereotyping that are socially embedded in everyday organizational processes. Our research aims to develop a theoretical understanding of how ICT shapes workplace inclusion. Drawing on a qualitative study conducted in one of the most prominent companies in the recruitment sector in the UK, we present in this research-in-progress paper preliminary evidence of ICT-enabled inclusion practices that can enhance workplace inclusion. In particular, we elicit three such practices – Expanding, Orienting, and Enculturating, and explain how they mitigate classification, segregation, and stereotyping. We contribute to literature at the intersection of ICT and inclusion.

**Keywords:** workplace inclusion, ICT enabled inclusion practices.

## Introduction

Workplace inclusion (WI) is a strategic concern for firms, policy makers, and the public. Broadly defined, WI is the recognition of and respect for differences in identity, background, experiences, and knowledge of different organizational members, and the leveraging of them for strategic goals (e.g. Mor Barak, 2015; Roberson, 2006). The strategic importance of WI is predicated on a number of positive outcomes attributed to it. Practice-based reports show that inclusive organizations are 44% more likely to have above-average revenue growth (Hastwell, 2020), because they tend to be more innovative and caring. Employees are more loyal and better motivated, and hence more productive. WI also advances company reputation and positive brand awareness (WomenInTech, 2021), and it contributes overall to a fairer society. A 2017 survey by Deloitte shows that the proportion of executives who view inclusion as a top priority has grown 32% in the past 3 years (Bourke et al., 2017).

However, it is becoming increasingly clear that WI is challenging to achieve (Köllen, 2021). A lack of WI stems from actions and cultural assumptions deeply embedded in the everyday work of employees and the culture of a workplace rather than from isolated events. Despite ongoing efforts to bolster WI, typical activities such as diversity training events have limited effectiveness because they are localized in time and location, and do not enable continued workplace interactions among diverse employees that could lead to a sustained change in actions and socio-cultural assumptions to promulgate WI (Bernstein et al., 2020). A attendant development is the emerging deployment of ICT such as ‘bias’ meters (e.g.

www.textio.com) that can detect bias in language, to identify gender bias in organizational documents such as job advertisements. People analytics applications are used to identify gender-related differences in salary and compensation. Such developments point to an emerging trend of using ICT to potentially support activities that can reduce bias and increase WI. However, the role of ICT in engendering WI, as suggested by these examples has not been systematically theorized or empirically examined. The objective of our research is to investigate how ICT can shape WI.

In this research-in-progress paper, we report preliminary results based on qualitative data collected from a leading UK organization in the recruitment sector. We show how practices of ICT use, which we refer to as ICT-enabled inclusion practices, can mitigate three barriers to WI, namely, stereotyping, classification, and segregation. Our theoretical and empirical contributions lie in our conceptualization and empirical discovery of three ICT-enabled practices, which we name as Expanding, Orienting and Enculturating practices. Each practice entails the use of different types of ICT in the execution of organizational activities such as hiring and socialization. We present our findings as preliminary evidence in support of ICT-enabled WI and toward a theoretical explanation of the role of ICT in shaping WI. We contribute to the literature at the intersection of ICT and inclusion. This literature has so far focused on issues of diversity and gender-related discrimination related to the IT workforce (e.g. Quesenberry & Trauth, 2012) and on the role of ICT in contributing to societal inclusion such as in refugee settlement (Andrade & Doolin, 2016). We extend this literature in a new direction by theorizing and illustrating how ICT can enhance gender and ethnicity related inclusion in the organizational context.

## **Literature Review**

In this section, we problematize the concept of WI and consider the IS literature on inclusion.

### ***Workplace Inclusion: strategic importance and difficulties in achieving it***

An inclusive organization appreciates employees with different backgrounds and encourages them to participate in and make unique contributions to the organization's goals. Thus, it promotes employee belonging such that employees experience a sense of being a part of the organization. Diversity represents differences among members in aspects such as gender, sexuality, race, ethnicity, age, and education; in a sense, inclusion is the celebration of diversity (Nishii, 2013). The strategic importance of WI is predicated on desirable outcomes for both individual employees and the employer organization. Studies show that inclusion enhances creative problem-solving because different perspectives are brought to bear on organizational problems and decisions. Thus, it can lead to better organizational performance (Pless & Maak, 2004). Inclusive organizations can attract high-caliber talent and increase employees' work satisfaction because skills of different members are fruitfully utilized (Hunt et al., 2015; Rock & Grant, 2016). Further, inclusion is regarded as socially desirable, because it contributes towards workplace and social equality (Köllen, 2021); inclusive organizations make efforts to provide employment opportunities for often-marginalized population groups such as women, ethnic minorities, and immigrants (Mor Barak, 2015).

Given the positive influence of WI, increasing inclusion is a strategic concern for

organizations (Köllen, 2021). Traditional approaches for doing so include (a) training events for employees in order to become aware of and understand demographic and cultural differences underlying their own and colleagues' behaviors; (b) annual performance appraisal that focuses on employee performance; and (c) annual reward and compensation decisions that consider the individual's ability and performance (Bartels et al., 2013; Brickson, 2000; D'Netto & Sohal, 1999; D'Netto et al., 2014).

Research indicates that despite such actions, WI is a complex concept that is difficult to achieve in practice. Indeed, lack of WI has proved to be an insidious and persistent workplace characteristic. This is primarily because factors that perpetuate it stem from multiple types of intersecting dynamics, socially embedded in day-to-day organizational processes and broader social structure (Bernstein et al., 2020). In particular, three aspects have been known to be remarkably persistent – classification, stereotyping, and segregation.

Classification is the labeling and categorizing of employees based on differences based on factors such as race, gender, and ethnicity (Bartels et al., 2013). Stereotyping is the reification of identities and identity groups by inferring that an individual has a range of characteristics and abilities that all members of that group allegedly have (Bartels et al., 2013; Huang, 2021). It results in bias, for example, in the form of poor opinions of work-related competence and capability of minority groups and other assumptions in favor of one group to the detriment of others. Such opinions may lead to unsubstantiated low performance evaluation of minority employees (van Laar et al., 2019). Thus, even if performance and merit are formally designated criteria for evaluation, individuals may unconsciously or consciously be poorly evaluated based on traits such as gender, race, and nationality, and become discriminated against and excluded from career advancement in the organization.

Stereotyping and classification often work together; employees use stereotypical beliefs regarding members of particular groups as a determinant of what they are like (e.g. 'they have of high or low work-related abilities') or how they should act (e.g. 'mothers should [not] work'), which then influences expectations and evaluations of performance and rewards, rather than actual performance or merit (Rivera, 2012).

Segregation refers to the inequitable distribution of resources across classified groups. Demographic majorities and minorities may be assigned roles that differ in compensation (Köllen, 2021). For example, people belonging to a specific demographic group are often relegated to racialized roles, such as marketing to that group, instead of to roles that have no racial implications; such racialized roles have weaker prospects for skill development and advancement (Köllen, 2021). Lucrative tasks with high potential for advancement are seen as suitable for employees of certain characteristics (Tilly, 1998). Further, social similarity produces liking and people rate whom they like as being more competent (Rivera, 2012); in this way advantages are (re) produced for dominant groups. Socialization along lines of demographic similarity also means that powerful networks influential in mentoring and promotion are available primarily to the majority demographic (e.g. exclusively male workplace networks organized around male-oriented activities) and are outside the reach of the minority, further entrenching barriers to inclusion (Amis et al., 2020). Indeed, despite legislation and efforts to ensure pay equity, discrimination in employment compensation and career progression continues to be a pertinent issue (Graham et al., 2000).

The brief review above shows that lack of WI is socially created through widely

accepted organizational practices. It is a result of institutional and structural issues rather than the isolated actions of a few (Gray & Kish-Gephart, 2013). Thus, attempts at WI may be met with dissent (Bartels et al., 2013) because they may result in potential discomfort of the majority toward the non-majority (Brief & Barsky, 2000). However, efforts to achieve it, rather than being embedded in day-to-day organizational actions, are largely confined to events such as diversity training or auditing exercises such as annual reviews, Athena SWAN applications, and Racial Equality Charter pledges (Bartels et al., 2013). In sum, although inclusion is a strategic issue for organizations, there are persistent barriers to achieving it. The distinct barriers of classification, stereotyping, and segregation also require different, embedded and targeted mitigation measures rather one-size-fits-all strategies.

### ***Potential role of ICT in achieving workplace inclusion***

Attempts to achieve WI must be socially embedded and multi-pronged. It is here that ICT can play an important role. The use of ICT is ubiquitously embedded in today's workplace organizations. An increasing number of news stories and blogs report on the potential of ICT to alleviate barriers to inclusion in the workplace, from removing gendered language in job advertisements to making employees feel more connected through ongoing engagement driven by enterprise social media (Garr & Green, 2019; World Economic Forum, 2020). A few recent studies have started to look into how the use of ICT intersects with user demographics such as gender and ethnicity and it can contribute to the flourishing of non-majority groups and individuals in organizations. For example, Robert et al. (2018) found that communicating via text messaging rather than face-to-face can help a racially diverse workforce "de-racialize" knowledge sharing, because they can leverage the more impersonal nature of text messages to better communicate technical information and insights. Another study shows that workers with disabilities who use enabling ICT have greater functional independence. Managers perceive an ICT-enabled workforce as being more likely to be able to perform organizational tasks satisfactorily without supervision and are more likely to consider them for professional opportunities (Heath & Babu, 2017). Against this backdrop, we next turn to the IS literature to examine related research that is specifically focused on inclusion.

### ***Inclusion in the IS literature***

The IS literature's focus on inclusion has been two-fold. The first is about barriers faced by female IT professionals in getting jobs, professional advancement, and remaining in the IT workforce (e.g. Ahuja, 2002; Riemenschneider et al., 2019). Social barriers include gendered societal expectations from and biases against women and female ICT professionals' experiences of work-family conflict. Structural factors include a "male-oriented" IT occupational culture that includes long work hours and extensive travel, and a lack of female role models, informal networks and senior colleagues/mentors for women. Women can be marginalized and discriminated against in performance appraisals, promotion, and salary (Igbaria & Chidambaram, 1997). Research also looks at the occupational stereotyping of IT professionals, with high levels of technical skills and poor communication and social skills (Quesenberry & Trauth, 2012). This, combined with the social and structural barriers have been shown to discourage the entry of women into the IT workforce (Annabi & Lebovitz,

2018). The majority of technical, more valued and higher playing IT positions (e.g. systems architect) are held by men, and the majority of non-technical positions, less valued and lower playing IT positions (e.g. project management) are held by women (Crump et al., 2007). The second and much less well studied focus has been on the use of ICT in fostering the societal inclusion of marginal groups such as refugees. Specifically, refugees are found to use ICT to communicate effectively, understand social aspects, be socially connected, participate and express cultural identity in their host societies (Andrade & Doolin, 2016). The above studies focus on gender inequality faced by female ICT professionals and on how ICT enables societal inclusion. They do not examine how ICT can enable and drive WI.

## Methods

Given our research question, which seeks to understand how ICT shapes WI. To address the relative lack of research in this domain, we employed a qualitative research design. Our empirical site is one of the largest recruitment firms in the UK. Recruitment is a bellwether sector for investigating WI because (1) this sector is at the forefront of initiatives relating to inclusion, with a recent survey of over 1,000 hiring leaders finding 100% stating inclusion and diversity initiatives as very important and 33% stating them as a top and immediate priority (HireVue, 2021); and (2) hiring as an organizational function has traditionally been susceptible to the influence of bias and discrimination (e.g. Amis et al., 2020; Rivera, 2012; Sensoy & DiAngelo, 2017). Our empirical site is, thus, an exemplar (Bronk, 2012). Semi-structured interviews with organizational members served as the primary means of data collection. Our initial point of contact was a senior manager, whereupon we used the snowball approach to identify further participants. We interviewed a total of 27 individuals ( $n = 18$  females,  $n = 9$  males) from across multiple departments (HR, Talent Acquisition, Learning & Development, Account Management, Data Analytics, Senior Leadership), and from different managerial levels – low, middle, and senior. Their roles included senior management, recruitment and HR, learning and development, and customer facing functions. Two participants combined their day jobs with volunteering as ‘diversity champions’ in the company and were interviewed as part of both roles. The diverse range of functions, roles and levels of seniority helped to encompass different perspectives.

Most interviews were conducted conjointly by the first two authors. We stopped interviewing when data saturation was reached (i.e. when key themes started to repeat themselves). In light of the limited research on the topic, we followed a practical iterative framework (Srivastava & Hopwood, 2009) in interview protocol development. Data collection, ongoing analysis of the emerging themes in the data, and regular de-brief sessions between authors took place concurrently, such that the interview protocol was refined over successive (five) iterations to progressively focus on salient emerging categories within the data (Wimpenny & Gass, 2000). The final interview protocol contained questions focusing on how the company sensitizes its processes to potential biases in hiring, addresses challenges in achieving inclusion in the day-to-day behaviour of employees, and the role of ICT in these activities. On average, the interviews lasted around 60 minutes. They were conducted and recorded over video and subsequently transcribed, with an average transcript length of 9,332 words per interview.

In addition to the interviews, we collected data from other sources that included (a) the company’s hiring reports, which informed our conceptualisation of Expanding practices and provided insights into the company’s recruitment analytics; (b) posts on Yammer (the company’s internal communication platform), which informed Enculturating and Orienting practices and provided insights into the nature of the conversations about inclusion that take place on Yammer; (c) WI policy documents, which informed our conceptualisation of Orienting practices and provided insights into the design, functionality, and availability of the company’s strategic documents on WI; and (d) corporate social media WI campaigns, which informed Expanding practices and provided insights into the content, number of views and shares of WI campaigns on internal and external social media (e.g. ‘myth busters’ on LinkedIn). The different sources helped achieve triangulation and provide a fuller context of ICT-enabled inclusion practices. The interview transcripts are being analysed in NVivo11, using thematic analysis (Boyatzis, 1998). See Table 1 above for an example of the analysis from our codebook.

## Findings

Our ongoing analysis has revealed that employees engaged in a number of practices of ICT use directed at WI. We refer to them as ICT-enabled inclusion practices. These practices played a particularly prominent role in shaping organizational members’ inclusion related interactions. In particular, they supported continual interactions such that inclusion related activities were not limited to fixed events at fixed times (e.g. bi-monthly diversity training events), but were continually weaved into members’ tasks and interactions with one another, through their use of ICT. Through repetition and reinforcement, they helped (re) produce inclusion. Our preliminary findings revealed three ICT enabled inclusion practices, which we analyse below. We refer to these practices as, respectively, ‘Expanding’, ‘Orienting’ and ‘Enculturating’. Expanding practices were ICT enabled practices focused on hiring candidates from different backgrounds. Orienting practices were ICT enabled practices that

**Table 1.** An example of the coding developed in this study.

Theme	Sub-themes	Interpretation	Example quote
Expanding practices	Reaching out and attracting a wider pool of applicants; Candidate engagement; Standardization of interview procedures; Storing and analyzing recruitment historic data.	A set of practices that facilitate inclusive and fair recruitment, both for external clients and internally for the company.	“What we have noticed is that some of the language used in the advertising for roles isn’t, perhaps, enticing to some candidates from some types of background. A client we are working with at the moment, they’re so bought into this, to make sure the language in the adverts is right, and it shows that roles are open to all members of the community” (Emily, Account Director, talking about the steps they take to attract a wider pool of applicants).

put inclusion, in the words of an internal recruitment manager, ‘on the agenda’ of the company and established its strategic importance. Enculturating practices represented the use of ICT to highlight and normalize inclusion through everyday language and behaviour of the rank-and-file in the organization. In Table 1 above, we present an example of one theme

corresponding to one of the practices (Expanding), its sub-themes, and their illustrative quotes.

### ***Expanding practices***

Expanding practices included two types of actions. The first was to widen the pool of applicants that applied for the jobs they listed. Hiring managers used gender checker applications (e.g. Totaljobs Gender Bias Decoder), which detected explicit and implicit bias in the job advertisements by analyzing the language for gender inclusiveness, so that the advertisements were not enticing only to candidates from a particular gender. The hiring managers ran the advertisements through these tools to check if they had more female or male-dominated words. They also cross-checked them among team members. As the head of talent delivery explained, they did not ‘always go with the job titles given by clients, as sometimes those titles can look gender specific’. Moreover, the company posted the advertisements on multiple online job boards, social media, as well as online minority group boards (e.g. Stonewall – a LGBTQ+ network) to advertise their positions in order to reach applicants of different backgrounds. This process was supported by account managers performing ongoing analysis of the demographics of applicants. To find applicants for jobs which did not attract a sufficiently diverse pool (such as construction or nursing), talent acquisition managers designed campaigns on the company’s social media platforms (e.g. LinkedIn), aiming to dispel stereotypical views about the sector and the advertised jobs. The head of internal talent acquisition said: ‘At the moment, we’re recruiting for our technology recruitment sector. We put a whole campaign together, what we’re calling ‘myth busters’. That’s all about trying to get away from the perception that only men can do IT, or that you need to be a specialist in IT to be an IT recruiter. This campaign has impacted on our sourcing’.

The second type of action aimed to prevent applicant drop-out due to factors such as, for example, poor broadband connectivity (which might be the case for applicants from disadvantaged socio-economic backgrounds) that might leave applicants stranded with incomplete applications. Hiring managers digitally engaged with applicants through video conference applications, outside the workflow of structured application submission, to provide additional information about the advertised job (e.g. what to expect, video scenarios of key responsibilities). Hiring managers also used the application tracking system (ATS) to provide greater transparency about the hiring process to applicants. They stored their feedback in the ATS on why a candidate was unsuccessful, which was conveyed to candidates if asked for. They also used the ATS to solicit feedback from candidates about how they experienced the application process. Hiring managers analyzed this feedback retrospectively to reflect on what happened and identify factors that may be non-inclusive.

### ***Orienting practices***

Orienting practices were top management driven. Two entities played a key role, namely, inclusion sponsors (members of the company’s top management team), and the Inclusion and Belonging Steering Committee consisting of ‘diversity champions’ affiliated with the HR department.

Inclusion sponsors and diversity champions used enterprise social media applications

based on Yammer to post the company's inclusion policy documents developed by top management. Posting on Yammer made the policies transparent, visible, and easy to locate, as compared to the more traditional means of communication such as broadcast email, which, literature shows, is often ignored by recipients (Sumecki et al., 2011). One such policy was the Inclusive Workplace Guide, which addressed employees' questions on race and ethnicity (e.g. 'can one know someone's ethnicity by looking at them?', or 'can one offend an ethnic minority person by talking about race?'). The functionalities of hyperlinks and tabs allowed for links to additional resources on such topics, as well as information on escalation routes and support provided by the organization on such issues. By using Yammer to post such documents, top management encouraged employees to be aware of these sorts of complex and sensitive topics. Quite a few participants across different departments talked about the positive effects of seeing their top management sharing information about inclusion on Yammer.

Yammer further allowed for multi-directional and open communication between senior managers and rank and file employees. For example, inclusion managers shared their own views on topics such as 'Black Lives Matter' on Yammer, which encouraged others to also speak up and share their views. An account director described: 'So even if our managing director puts a post on there – I can comment, and I know that I won't get into trouble, even if I don't necessarily even agree with what they're saying. Whereas in the past we didn't have that. When our managing director had to communicate something to the business, it would either be on email or maybe through our managers [one way]. But this time we have, like, direct access [and can give feedback]'. The direct access to and visibility of top management on Yammer also helped break down vertical hierarchies in the communication of inclusion related information within the company. Instead of inclusion mandates being passed down a hierarchical command chain from the top to the bottom (via emails and staff meetings at different levels), social media platforms such as Yammer transformed the "doing" of inclusion into an ongoing, "flat" interactive process.

### ***Enculturating practices***

An important aspect of Enculturating practices was employees becoming aware of and appreciating differences among themselves through Yammer forums. Employees posted their personal stories on Yammer of being excluded. The functionality of Yammer allowing individuals to stay anonymous, if they chose to, enabled more people to participate, and its multivocality enabled simultaneous and interactive conversations; the gates opened, as it were, for more honest and open conversations. As illustrated by this quote from a diversity champion: 'Sometimes people just don't know [about how different everyone is]. So, for instance, we've got a colleague who celebrates Ramadan who wrote a big post on Yammer about what happens during Ramadan, how they want to be treated. Like they don't want people to say 'Oh my God, you're starving yourself!'. Such interactions were key for members to get to know and appreciate one another's differences, especially in the face of remote or hybrid work during the COVID-19 pandemic. Employees spotlighted various colleagues in turn, celebrating people with different demographics. When webinars posted on Yammer showcased people who had worked for the company for more than 35 years, many employees were surprised that people from different ethnic backgrounds had been with the

company for so long; they simply had no idea.

Another aspect of this practice was having difficult conversations on sensitive topics, using Yammer channels. White employees, particularly those who identified with the majority group, were often nervous in talking about race and were not sure about the language that should be used in such conversations. However, as more employees engaged in Yammer conversations by asking questions or breaking stereotypes about the group they identified with (e.g. employees with a South Asian heritage writing that they do not necessarily like curry), more people were able to relate to shared experiences, which to some extent helped to demystify inclusion and take away the fear that surrounded it. Such interactions, enabled through the multivocality of communication on Yammer, led to changes, as the company's HR director explained: 'We have started to have honest conversations [on Yammer]. We are starting to see the 'pull' from our members, asking us to focus on different things, instead of it being solely the 'push' and us pushing our comms out to our members. For example, our members asked us to be part of the Race at Work Charter [which came up through a Yammer conversation] – we responded by making it happen'. Enculturating practices created what several participants described as a 'subconscious' baking of inclusion into the organization's norms and culture. Therefore, it is the duality of social media platforms in creating both anonymity and visibility at the same time that played an important role in facilitating WI practices and knowledge sharing.

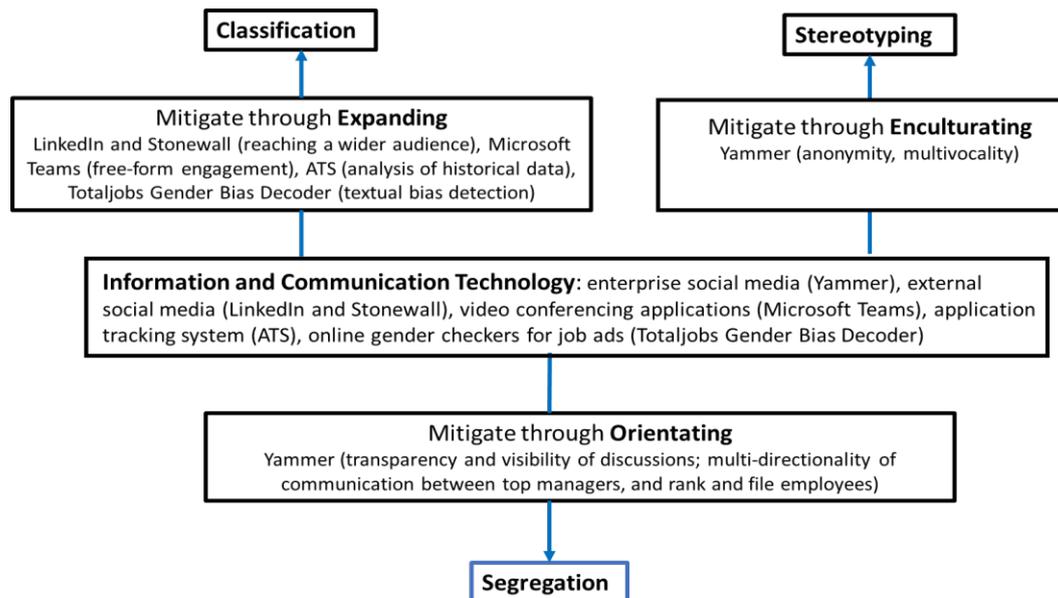
### ***Discussion***

The three practices we have identified provide an initial glimpse into how different ICT and their functions can be applied to induce WI. Through these practices, inclusion related activities were (re)produced continually, interactively, and adaptively. We find that each practice was directed toward a specific barrier to inclusion, as we show in Figure 1. The Expanding practice enabled the creation of a demographically diverse pool of candidates. It also ensured that all applicants had the opportunity to engage with hiring managers outside the structured process of checking boxes and uploading structured information that might automatically reject candidates. It thus enabled hiring managers to reach out to and engage with different people irrespective of demographic characteristics, thus mitigating the problems of classification.

The Orienting practice helped make the organization's inclusion policies transparent and visible and emphasized the strategic importance of inclusion. In so doing, it signaled the intent that organizational resources and opportunities to advance were equally available to everyone. This mitigated problems associated with segregation. The Enculturating practice was instrumental in organizational members' understanding of their differences in terms of, for example, gender and ethnicity. This helped them appreciate perspectives, outlooks, customs, personal values and cultural practices other than their own. This practice was also necessary to give voice to all organizational members, to express views about issues relating, for example, to race and gender discrimination and to bring up topics about discrimination and equality that were uncomfortable and challenging to discuss, out in the open. Research shows that visual and vocal cues that highlight racial diversity are likely to trigger stereotyping (Bhappu et al., 1997), so that insights and opinions from those who are different are not considered (Harrison & Klein, 2007). For example, racial diversity has been found to

be associated with heated interactions and emotional conflicts (Pelled et al., 1999). The use of Yammer made it possible to communicate without visual and vocal cues, wherein the differences in race became less salient, and people could focus on the content of communication. All of these served to mitigate stereotyping.

**Figure 1.** Enhancing workplace inclusion through ICT enabled inclusion practices.



## Contributions and Ongoing Analysis

WI is a contested terrain, and yet is of strategic importance for organizations. The findings described here provide preliminary but clear evidence that ICT enabled inclusion practices can tackle and reduce at least three persistent barriers to inclusion, namely classification, stereotyping and segregation. Our first theoretical contribution is to show how ICT can mitigate the effects of bias in organizational hiring and in organizational interactions. Our second theoretical contribution is to suggest a role of ICT that is weaved into everyday actions of organizational members through the three practices. Such a role is more enduring than the event-specific (e.g. diversity training sessions) and periodic (e.g. annual appraisal) approaches examined in the literature (Bartels et al., 2013). As we move forward with our ongoing analysis, we note that literature suggests that inclusiveness is predicated on organizational members' continual and persistent cognitive engagement with one another's differences (Bernstein et al., 2020). Our ongoing analysis is thus focused on two aspects – (1) conceptualizing additional ICT enabled practices that may enable inclusion through such engagement; and (2) theorizing how ICT enabled inclusion practices are linked to one another. We expect our analysis to reveal more complex and nuanced relationships among the inclusion practices.

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