Abstract

Purpose – This research aims to study the coping experience of visually impaired (VI) bankers in India after they have received reasonable accommodation from their employers, that is, the work process or environment has been suitably modified to ensure a barrier-free environment for them.

Design/methodology/approach – Data were collected through semi-structured interviews with 12 VI bankers working with public sector banks in India. A phenomenological approach was adopted during data analysis.

Findings – Despite the provision of reasonable accommodations, VI employees often find it difficult to fulfill their job responsibilities. This is on account of extensive paperwork required for completion of their jobs and the partially accessible information systems available to them. As a result, these VI employees are found resorting to workarounds to carry out their jobs, with the nature of workarounds adopted varying with the type and extent of visual impairment. Furthermore, it is observed that VI employees require social support not only from their superiors and peers but also from their subordinates and customers to carry out their tasks.

Research limitations/implications – Data collection was done through snowball sampling which could have resulted in sampling bias. Due to confidentiality issues, observation of workarounds in practice by VI employees could not be carried out as part of the study.

Originality/value – The study contributes to the literature on integration of persons with disabilities (PwDs) by examining their coping experience after provision of reasonable accommodations. It emphasizes the role of workarounds, an under-studied area in PwD integration, as well as support of other stakeholders in the experience.

Keywords Social support, Workarounds, Persons with disabilities, Reasonable accommodations, Visual impairment

Paper type Research paper
PwDs (EEOC, 1992). Such accommodations include the provision of assistive technologies, environmental accessibility, personal assistance or even job restructuring (Colella and Bruyère, 2011).

Extant research on reasonable accommodations has reported that many PwDs do not seek reasonable accommodations from their employers/managers due to varied reasons, such as individual attributes (Baldridge and Swift, 2013) and normative appropriateness (Baldridge and Veiga, 2006). However, it has also been demonstrated that granting reasonable accommodations leads to significant job satisfaction among PwDs (Balser and Harris, 2008) and impacts perceptions of fairness among coworkers of PwDs. (Carpenter and Paetzold, 2013; Colella, 2001). Studies have primarily focused on the role and experience of PwDs before requesting for reasonable accommodations (Paetzold et al., 2008; Schartz et al., 2006) and the role of coworkers after the reasonable accommodations requested have been granted (Colella, 2001). However, scholars have not examined the experience of PwDs, respect to their task and their work environment, after they received the desired accommodations. This study is an attempt to address this crucial gap.

Because the accommodation needs of PwDs are specific to the type of disability, the present research examines the experiences of visually impaired persons. Banks were found to be a particularly relevant organizational context for this study because of several factors: first, the amount of paperwork required, second, the unavoidable use of information systems and also the financial responsibility associated with most job roles. The present study therefore uses a phenomenological approach to study the experiences (Sanders, 1982) of VI persons employed in banks in India.

In summary, the research shows that the mere provision of assistive technologies to ensure reasonable accommodations for VI employees in banks is not sufficient for VI employees to effectively and efficiently perform their tasks. This is on account of two main reasons. First, most banks still require employees to undertake extensive paperwork even in routine tasks. Second, the routine work performed by bank employees requires the use of information systems which may not be entirely accessible to persons with visual impairment, such as blindness or low vision. Specifically, through our study, we empirically illustrate that VI bank employees often need to resort to different types of workarounds (Zainuddin and Staples, 2016) to perform their day-to-day roles even if reasonable accommodations are provided. Second, we demonstrate that the nature of workarounds used by VI employees varies with the type and extent of their visual impairment. Third, we elaborate the importance of social support for VI employees not only from their superiors and peers (Frese, 1999) but also from their subordinates and customers.

This paper is organized according to the following scheme. We first discuss the theoretical background with a focus on workarounds and social support in an organizational context. Next, we present the research context and details of the research methodology used in the study. This is followed by a presentation of the results and a detailed discussion of the findings of our research. We conclude with the contributions and limitations of this research and scope for future studies.

**Theoretical background**
With the advent of information technology (IT), commercial banks in India adopted the core banking system (CBS) (Hu, 2006), which required their employees to use networked computer and information systems. With the shift of work from manual and paper-based tasks to computer and information systems driven tasks, one of the major accommodations requested by VI employees, especially in banks, was the provision of assistive technologies on their computer systems (Lazar et al., 2007). Assistive technologies refer to equipment,
devices and systems which a person with disabilities uses to overcome social, infrastructural or other barriers to his/her full participation in various aspects of work (Hersh and Johnson, 2008). Assistive technologies are typically used by VI persons with print disability. Print disability differs from non-print disability in that the former implies that a person cannot visually acquire information from printed material (Beatty and Davis, 2007) even after magnification, whereas in the latter case, magnification allows acquiring printed information. Depending on the extent of visual impairment, VI employees in banks use various assistive technologies such as screen readers, text to speech output software and magnifying software. Such technologies ensure that VI employees can navigate various information systems including the World Wide Web, with ease. Studies have shown that accessibility of information systems ensures availability of information and easier communication, which in turn would facilitate a reduction in stress and also increase the well-being of employees (Day et al., 2010). However, information systems and websites are often not designed and developed in a manner such that they are accessible (D’Aubin, 2007), meaning that they are not amenable to the use of assistive technologies. This lack of accessibility leads to frustration among VI people, thereby impacting valuable work time (Lazar et al., 2007). Inaccessibility may also result in marginalization of VI people and even hamper their aspirations (Pal et al., 2013).

When faced with the challenge of inaccessibility, a VI employee may either try to find workarounds to maneuver through the system (Vigo and Harper, 2013) or seek social support (Thoits, 1986) from coworkers.

**Workarounds**

Challenges in IT implementation have been extensively studied (Ferneley and Sobreperez, 2006). Research has identified that deviance from the specified process by a user creates problems in IT implementation (Azad and King, 2012; Marakas and Hornik, 1996). However, some researchers consider these deviations, often in the form of workarounds, as being beneficial because they help in understanding the system and overcoming its shortcomings (Ferneley and Sobreperez, 2006). Kobayashi et al. (2005) define “workarounds” as temporary practices for handling exceptions in normal workflow. Alter’s (2014) theory of workarounds described them as goal-driven adaptations or other changes in the work system to avoid any perceived hindrances/obstacles restraining the system from accomplishing intended personal or organizational objectives. Research has shown that people with visual impairment use many workarounds in their day-to-day interactions with technology (Shinohara and Tenenberg, 2009). Such technology may be specifically designed for people with visual impairment (Vashistha et al., 2015) or designed for all individuals in general (Pal et al., 2017).

Zainuddin and Staples (2016) developed a taxonomy of workarounds in information systems, consisting of IT-related and process-related workarounds. Process-related workarounds included sequential (adding or deleting a sequence), temporal (inconsistency in real-time events and updates of the system) and data adjustment (data manipulation) workarounds. IT-related workarounds used were functional adjustment (using the functional capability of the system in ways other than defined), shadow system (using other systems like a manual, along with the primary system) and partial bypass (wherein other users interact with the system on behalf of the user). Workarounds can also occur in the form of a complete bypass (substituting another system for the main system, including resorting to manual work).

Research has shown that while VI people use workarounds such as shadow system and complete bypass, however, the key workaround used them is support from sighted individuals (Voykinska et al., 2016). Kobayashi et al. (2005) have also pointed out that
workarounds draw on the tacit knowledge of other people's knowledge and willingness. Thus, the role of social support within an organization, especially that of supervisors and coworkers becomes critical.

Social support

Social support within an organization plays a significant role for an employee not only during his/her initial socialization into the role (Nelson and Quick, 1991) but also on a regular basis (Tang et al., 2014). Cobb (1976) defines social support as information which makes an individual believe that he/she is loved, cared for and valued in her/his social network. It can be in the form of mental or material support (Bennett and Beehr, 2013). Within an organization, this would include support from supervisors and co-workers (Frese, 1999). Thoits (1985) classified support into instrumental support (including information aid) and socio-emotional support. The former referred to providing resources, including information or a helping hand by supervisors and coworkers toward fulfilling a task or responsibility. The love, care and empathy showed by supervisors and coworkers is referred to as emotional support. Semmer et al. (2008) have emphasized that emotional support is more important than instrumental support because the latter has emotional underpinnings.

As stated earlier, social support plays a major role in the organization. Studies have shown that it helps in promoting the well-being of employees by reducing workplace strains (such as depression, anxiety), both directly and by moderating the impact of stressful events (Cohen and Wills, 1985; Viswesvaran et al., 1999). However, it was reported that the source of support (supervisors and/or coworkers) and its congruence with the type of stress/strain is an important factor in facilitating employee well-being (Cohen and Wills, 1985).

Social support from the supervisor was reported to have a positive impact on job performance and satisfaction (Baruch-Feldman et al., 2002). Harris et al. (2007) found that task support and career mentoring (both related to supervisor support) were predictive of job satisfaction, whereas coworker support did not predict job satisfaction. Contrarily, Ducharme and Martin (2000) reported a positive relation between coworker support and job satisfaction, wherein instrumental support played a more significant role as compared to affective/emotional support. A meta-analysis by Ng and Sorensen (2008) found that while both supervisor and coworker support are positively related to job satisfaction and organizational commitment, and negatively related to turnover, the impact of supervisor support is higher than that of co-worker support. The study also illustrated that social support plays a role in jobs requiring customer contact. Chiaburu and Harrison (2008) also emphasized that the influence of co-worker support is significant even when supervisor support is accounted for.

From the perspective of PwDs, a study by Papakonstantinou and Papadopoulos (2009) found that people with visual impairment felt that they received more positive than negative support at the workplace. Their recall of emotional support was higher compared to instrumental support. An interesting aspect of the study was the participants feeling that the support was higher from colleagues who also suffered from visual impairment in comparison to the sighted ones. Greater social support was also found to have a positive impact on the happiness of persons with visual impairment (Papadopoulos et al., 2015).

From the above discussion, it can be inferred that reasonable accommodations like availability of assistive technology (screen readers) alone may not be enough when there is partial inaccessibility owing to paperwork and information systems. Figure 1 illustrates the current state of the literature on reasonable accommodations in the context of partial inaccessibility. This research extends this literature by investigating the use of workarounds and social support by people with visual impairment in carrying out their work.
Research context
The banking industry was chosen as the context for the present research. The reasons for this were manifold. First, banking involves a lot of paperwork, making it especially challenging for VI persons. Second, it usually requires accessing information systems which are often themselves inaccessible. Third, banking deals with financial transaction and handling of money matters, such that the employee is liable to severe penalties in instances of any mistakes or impropriety, making the profession particularly risky for individuals suffering from visual impairment.

This study is set in India, which has 21 public sector banks and 21 private sector banks, with the public sector banks enjoying a market share of approximately 70 per cent. The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (henceforth referred to as PwD Act, 1995)[2] of the Government of India mandates public sector banks to provide 3 per cent reservation in employment to PwDs. The act defines “disability” as blindness, low vision, leprosy, hearing impairment and loco motor disability. Furthermore, one-third of all reserved seats in organizations governed by the PwD Act, 1995 (1 per cent overall) are reserved for persons suffering from blindness or low vision. In 2016, the Supreme Court of India has ruled in favor of the reservation rules also applying to promotions in public sector organizations (Rashid, 2016).

The PwD Act requires the organizations under its ambit to make all necessary provisions and arrangements to allow the recruited PwDs to carry out their roles and responsibilities in the organization. In the case of persons with visual impairment employed in banks, this involves the provision of assistive technologies and software like screen readers, Optical Character Recognition (OCR) software and magnifiers. However, the PwD Act does not make it mandatory for organizations to ensure accessibility of information and communication technology for VI employees[3]. As a result, most organizations resort to piecemeal provisions concerning accessibility for VI employees, making it a challenge for them to fulfill their organizational duties.

In 2007, the Ministry for Social Justice and Empowerment, Government of India, delineated specific roles in public sector organizations that could be performed by persons with low vision only and either by persons with blindness or low vision. This list of roles was revised in 2013 after taking feedback from various stakeholders (Office of The Chief Commissioner for Persons with Disabilities, 2013), and in 2015, the All India Confederation for the Blind identified 17 job profiles for persons with blindness or low vision in banks (AICB, 2015). However, according to a report of the Visually Impaired Bank Employees

Figure 1.
Current state of literature on experience of PwDs after receiving reasonable accommodations
Welfare Association (VIBEWA), in 2016 (based on a survey of VI bank employees and queries to public sector banks under the Right to Information Act, 2005), VI persons constituted a meager 0.40 per cent of the total officers, 0.63 per cent of the total clerical staff and 0.16 per cent of the total sub-staff in public sector banks. Also, approximately 63 per cent of the surveyed VI employees reported that the information systems and software used in their respective banks were partially or entirely inaccessible to them (VIBEWA, 2016). It is, therefore, expected that these VI persons employed in banks would not only require support and assistance from their superiors, peers and subordinates at some time or the other but also need to indulge in workarounds to carry out their jobs. Hence, the context of VI bankers in India became an appropriate site for our study.

Research methodology

This work is part of a larger project on the inclusion of VI persons in organizations. The project intends to enquire into the situated and contextual experience of VI persons in their job roles concerning various aspects of inclusion and socialization.

Because the focus of the study was to analyze and study the experience of VI persons in their professional capacity within organizations (Gibson and Hanes, 2003), phenomenology was found to be an appropriate approach. Phenomenology has often been cited as a robust technique for research in management and human resource as it seeks to “make explicit the implicit structure and meaning of human experiences” (Sanders, 1982). Further, it enables studying the phenomenon of interest, not from the perspective of the researcher but from that of the actors (Lester, 1999) by resorting to methods such as interviews and participant observation. Because this study deals with the sensitive topic of inclusion of VI persons in organizations, which has legal underpinnings in the Indian scenario, it was unlikely that banks would permit the authors to become participant observers. Hence, interviews with VI bankers was used as the method for data collection (Sadler et al., 2010). It was ensured that the research follows the ethical guidelines prescribed by The RESPECT Code of Practice for Socio-Economic Research (RESPECT Project, 2004).

To initially identify potential respondents for the study, purposeful sampling was used (Patton, 1990; Suri, 2011). The first author, who is also VI, utilized his contacts to identify the first few interviewees. After that, snowball sampling (Biernacki and Waldorf, 1981) was used to expand the set of respondents. The snowball method was particularly appropriate as it is adept at obtaining representative outreach despite a dispersed populations and has also been recommended for research relating to sensitive issues (Biernacki and Waldorf, 1981). The search for more interviewees continued until the information gathered was found to be sufficient for this research.

A total of 12 VI bankers from 8 banks spread across India were interviewed in this research. Eight of the interviewees were print disabled (PD) and used assistive technology to acquire information from printed material (Beatty and Davis, 2007). The remaining four interviewees were not PD, meaning that they could use magnification to read printed material. The PD participants mostly requested for screen readers like JAWS or ABBYY FineReader (to read image pdf files). For non-print disabled (NP) participants, the primary requirement was magnification for which they used magnifying glasses, smartphone apps or magnifying software inbuilt in operating systems. The interviewees had a minimum experience of 1.5 years and a maximum experience of 11 years. Two interviewees belonged to the middle management level, nine belonged to the junior management level and one had a non-managerial role.

Sandelowski (1995) in her discussion regarding the adequacy of sample size cites Morse (1994) as suggesting a minimum sample size of 6 for a phenomenological study.
Creswell (1998) also suggested a size of 5 to 25 participants for phenomenological studies. Hence, from a saturation perspective (Sandelowski, 1995), interviews with 12 VI bank employees were considered sufficient to provide the necessary homogeneity for a phenomenological study (Robinson, 2014) of experience of VI bankers, while still affording some diversity concerning print/non-print disability, seniority in organization and type of tasks handled.

An interview guide was prepared based on initial insights from the literature and informal interaction that one of the authors had with a VI bank employee regarding his experience. The set of questions around which the interview would evolve was shared with all the interviewees over e-mail before conducting the interviews. The intent of the research was also informed to the interviewees in this e-mail. This allowed the respondents to decide whether they were comfortable in talking about inclusion at their workplace and whether they wished to partake in the study. All interviews were conducted telephonically, usually after office hours to ensure that the interviewees could participate in the interview and talk freely about their organizational experience without any inhibitions. The interviews lasted between 25 and 50 min with an average of approximately 36 min. All interviews were conducted in a semi-structured manner, where the authors began by revealing their own identity and repeating the purpose of the study. The authors made a conscious choice to avoid asking leading questions and let the interviewees discuss their experience freely with minimal intervention. By not conditioning the responses of the interviewees, the authors were able to garner previously unanticipated themes during analysis, making this study more comprehensive.

The authors elicited details of the kind of visual impairment, educational background, work experience and job role of all interviewees. The interviewees were assured of total confidentiality regarding the information gathered from them, with suitable masking of their personal and employment information. All interviews were recorded after taking due permission from the interviewees. Subsequently, the authors themselves selectively transcribed the interviews for analysis. Table I provides details about the interviewees and duration of interviews conducted.

As stated earlier, one of the researchers is also a person with visual impairment, which made it imperative to be cognizant of possible bias in data collection and/or analysis (Norris, 1997). While some researchers, like Mantzoukas (2005), have suggested that removing bias...

<table>
<thead>
<tr>
<th>Interviewee ID</th>
<th>Organization</th>
<th>Gender</th>
<th>Age</th>
<th>Work experience (years)</th>
<th>Organizational level/customer facing role</th>
<th>Print disability</th>
<th>Interview duration (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP1</td>
<td>Bank_1</td>
<td>Male</td>
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<td>3</td>
<td>JM/Yes</td>
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<td>29</td>
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<tr>
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<td>10</td>
<td>MM/No</td>
<td>No</td>
<td>35</td>
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<tr>
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<td>2</td>
<td>JM/No</td>
<td>No</td>
<td>29</td>
</tr>
<tr>
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<td>4.5</td>
<td>JM/Yes</td>
<td>No</td>
<td>45</td>
</tr>
<tr>
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<td>26</td>
<td>3</td>
<td>JM/Yes</td>
<td>Yes</td>
<td>24</td>
</tr>
<tr>
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<td>Bank_1</td>
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<td>36</td>
<td>5</td>
<td>JM/No</td>
<td>Yes</td>
<td>24</td>
</tr>
<tr>
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<td>Male</td>
<td>40</td>
<td>11</td>
<td>MM/No</td>
<td>Yes</td>
<td>26</td>
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<td>1.5</td>
<td>JM/No</td>
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<tr>
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<td>Bank_8</td>
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<td>41</td>
<td>6</td>
<td>JM/No</td>
<td>Yes</td>
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<tr>
<td>PD8</td>
<td>Bank_8</td>
<td>Male</td>
<td>41</td>
<td>6</td>
<td>JM/No</td>
<td>Yes</td>
<td>44</td>
</tr>
</tbody>
</table>

Table I.
Details about interviewees and interview duration
from research is neither feasible nor desirable, the authors did take some steps to remove any negative impact of such bias on the research. Though the VI author’s own experience was pivotal in formulating the initial questionnaire, the first few interviews were conducted by the two authors together, where the non-VI author took the lead. This helped in avoiding any bias arising from the experience of the VI author. During the analysis phase also, the data were analyzed by the two authors independently, after which points of disagreements were discussed and mutually resolved.

Results
Print disabled versus non-print disabled bankers
This study focuses on the organizational experience of persons with visual impairment, and the experience of persons with a print disability was observed to be much different from that of persons without print disability:

For a person who is not print disabled, the technology puts him/her at par with non-disabled peers. But for a print disabled person, at least in banks, technology can help him/her become employable, but certain challenges like the use of printed material for certain tasks remain. (NP02)

Thus, for further analysis, the interviewees were segregated as PD and NP. All the respondents had requested installation of screen readers on their workstations at their respective banks for efficient working. Some used their personal devices like handheld magnifiers for better work efficiency. Most of the banks used CBSs, like Financle. The experiences of some individuals revealed that due to the challenge with the nature of work, there were certain tasks which VI employees were not allowed to perform, and there were certain information systems (for example, CBS) to which access was not provided to VI employees:

CBS is the heart of banking. I only have access to “check”, i.e. just read the information. I am not authorized to do any transaction due to my visual impairment. I had requested for full access but was denied. Even the current access was granted after I had a new boss. (PD05)

Hence, in this study, we restricted our analysis to those systems and processes to which the interviewees had been provided partial/full access.

Workarounds
All the participants shared their experience of workarounds when dealing with information systems. Taking a cue from Alter (2014), this study is not restricted to system workarounds alone and also includes other related processes.

Experience of NP bankers: The accommodation required by NP persons is a magnification system for both their workstations and for printed material. In this respect, most of the NP employees used shadow system workarounds, i.e. magnification through their mobile or other devices:

When I receive a hard copy, I do a scan through my CamScanner which gives me an opportunity to enlarge it on my mobile screen and even do an OCR for reading through my talking software on mobile (NP01).

One of the participants who is in a customer contact role pointed out that sometimes even partial bypass had to be adopted when there is pressure on doing things fast:

In some cases, when I have to verify the signature for payment purposes, I have to request my colleague to do the checking on my behalf in the system, and I then do the remaining work [...] (NP04).
Experience of PD bankers: In case of print-disabled persons, the role of workarounds becomes all the more important when the systems are not fully accessible. Most of the PD employees have used shadow system workarounds, but their use of such shadow systems was different from that of their NP colleagues:

When I was in [XYZ] department, we were supposed to generate a report from a website. A sighted person can easily navigate the website and prepare the report in 30 minutes but since the website was not accessible, we had to just take out the data and replicate the work on MS Excel which consumed time, almost two days, and there is a chance of error also (PD04).

We use Lotus Notes for e-mail. The system is not fully accessible especially the mail in the frame format. With the help of my colleague, I get the cursor on the frame text, and then I copy the text in MS Word and then read it through JAWS (PD05).

From the latter comment, it is evident that sometimes there are partial bypasses of the system, as another sighted person performs tasks (such as reading the e-mail) on behalf of the VI employee. An interesting observation was that most of the banks still required printed records of all jobs and transactions necessitating partial bypasses by PD employees:

Today itself I submitted a report to my supervisor, but he asked me to provide a signed hard copy. My team member (subordinate) had to take a printout and then get it signed by me. I have to depend on others as the organization still requires the printed documents (PD04).

From the above discussion, it seems that shadow system and partial bypass are the two main workarounds which VI people have been using for better role performance. The above discussion also reflects the importance of social support for VI employees, which is discussed next.

Social support
As stated earlier, social support plays an important role not just during the workarounds (partial bypass) but also in many other circumstances. We observed that social support was experienced in multifarious forms by VI employees as they carried out their job roles.

Support from the supervisor: There was a mixed response concerning support from the supervisors of VI employees:

My present boss is very much aware of my situation. He knows how I can work, and how he can extract work from me. So when he gives me documents, he tells me what all to go through to get a brief introduction to it. And then he tells me to prepare the reports, and he tells me that once I prepare the report, he will go through it to check for errors and rectify that himself. (PD05).

Once I joined the branch the other officer went on leave, and the manager gave all the work to me - like check verification, cash [. . .]. and with my visual problem, I could not check that. I told the manager that I am receiving 200-300 vouchers for cash a day, how do I manage all this. And he was like [. . .] you are an officer, you have to do it. So I became a scapegoat to do the work. (NP04)

Another important aspect which influenced the nature of support received by VI employees was the attitude of their superiors toward disability:

People have different experiences. It also depends on the wisdom of your immediate boss. Like once I was (position) to the (department head), but he was reluctant [to get support for VI employees]. But, when he got transferred, and another person took his place then I requested him for [the special assistance] I needed, and he provided. (PD05).

Many of the participants were also of the view that a sensitization training of coworkers was required:
There is no training for awareness and sensitization for coworkers, and we are trying to bring one such training in our organization. (PD02)

Only two participants in the interviews shared instances of receiving emotional support from their supervisor, one being positive and the other being negative.

**Support from coworkers:** Co-workers’ role in helping VI persons appears to be equally, if not more important in comparison to the role of the supervisors. While some interviewees narrated anecdotes about support from their supervisors, almost all respondents shared their views regarding support from co-workers. Respondents reported mixed experience in relation to coworkers’ support, similar to their experience with supervisors’ support:

The support from peer group has been very mixed and varied. Sometimes it is positive, and sometimes it is very negative. Also how long can you depend [on someone else] – you don’t know what all you can ask, what all you can’t ask? To be fair, for one or two days it is fine. But, every day it also becomes irritating for [the coworkers]. (PD03)

Concerning task-related support, as suggested earlier, there was mixed response as well:

I have gone to my peers and bothered them a great deal and asked them, please tell me how to do this and how to do that. I have asked people for their feedback and asked them to train me, and they did train me. (PD07)

[Bank name] has a lot of customers. Sometimes when you go to your colleague, and you request him for some information, due to the heavy crowd [in the bank branch], s/he cannot help you. (PD01)

From an emotional perspective, the interviewees shared their experience regarding co-workers’ role (both positive and negative) in providing emotional support to the VI bankers:

It was my first job (non-customer facing then), but my manager and my colleagues were very supportive. They helped me not just in tasks but in other matters also. (NP04)

It depends how your colleagues are. The support of colleagues is most important; other things can be managed. If the colleague says that you are no good and just sit in the corner, then it reflects poorly. Even I don’t feel nice. (PD08)

**Support from customers:** Two interviewees, who were in customer-facing roles, provided some evidence of the role of customer support. While one was of the view that the consumers require quick results and are least bothered about a VI employee’s challenges (PD03), the other had a different opinion (PD01):

The chances of having unpleasant [experience] are very high, especially in reading documents when you want to interact with customers. […] The customers want suggestions; they are not interested in knowing how much we can see and how much we can’t see. (PD03)

When I joined the organization, the support from the customers was fine, the support from the supreme authorities was all right, but support from colleagues was lacking. (PD01)

**Support from subordinates:** Some interviewees shared their experience with subordinates, and all reported positive task support. One shared his experiences like this:

In the evening when the cash received by the cashier is to be verified […] [My subordinate] shows me the notes and tells me how many bundles of each currency denomination are there. So I calculate on the calculator and check the totals. He also shows the books to me. He does not try to cheat me. (NP04)
Another factor which came to light about social support was the role of VI employees themselves as they were hesitant to ask for support (NP01). This observation underscores the role of the support people seek and receive from other VI employees.

Support from other VI employees: All the interviewees mentioned receiving support from fellow VI employees either within the same organization or working with other organizations. From a task perspective, VI people shared their individual experiences, like procedure to access Lotus notes attachments (PD05), shortcuts for Finnacle through a WhatsApp group (NP03), or issues of day-to-day work, with fellow VI employees in a different branch (PD01). These findings, especially the use of calls or WhatsApp, were in line with the role of mobile phones in creating ties and navigating inaccessible work environment (Pal and Lakshmanan, 2015).

The most important aspect from the perspective of social support of fellow VI employees though was the emotional support which people felt they were receiving. Three of the interviewees were the founding members of VIBEWA. Two of these interviewees shared stories on how VIBEWA was formed to support all VI employees. Some of the respondents also showed their sense of belonging to the VI community:

I am very active in the mailing groups that we have especially for the visually impaired. (PD02)

Now we have created a group on WhatsApp where we discuss the problems that we are facing and whatever we are learning. (PD01)

One interviewee also shared his willingness to be not only a receiver of support but also the giver of help to non-disabled peers:

In fact, a couple of colleagues came to learn how to print statements from me. (PD06)

The above results provide some interesting insights about the experience of VI employees, once they receive assistive technologies and get down to their work. The next section discusses these results and their impact on VI employees.

Discussion
Based on the above findings, extant literature may be extended as illustrated in Figure 2. First, this study demonstrates that PD and NP employees differ in the workarounds used. Second, the study illustrates that VI persons seek support not only from superiors and coworkers but also from subordinates and customers.

The focus of this research was on the workarounds which VI bankers use in case of partial accessibility or with respect to other challenges faced while using information

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**Figure 2.** Revised state of literature on experience of PwDs after receiving reasonable accommodations
systems. The results delineate some of the techniques which VI people use to navigate around their routine tasks involving information systems. The workarounds identified are either at the individual level or are shared in small groups. A list of some of the workarounds used by VI bankers are as follows:

1. **PD**
   - copying material from website and then doing analysis in spreadsheet through screen reader;
   - requesting colleague to get the cursor at the right spot and then using the screen reader for reading mails; and
   - checking report through screen reader and subsequently taking a printout and signing the report with the help of colleagues.

2. **NP**
   - magnification through mobile apps to enlarge the document image; and
   - colleague support to verify signatures on printed documents.

These workarounds can be useful in providing feedback for improvement of information systems from an accessibility perspective and providing training so that desired skills for working with the information systems can be imparted.

The workaround of partial bypass required support from colleagues, thus, focusing the authors' attention on the social support received by the focal VI employee. Unlike the use of workarounds in everyday use of technology (Shinohara and Tenenberg, 2009), the use of workarounds by VI employees at workplace demand time and effort from supervisors and co-workers. Hence, the attitude of sighted colleagues and the stereotypes they hold play a major role in the provision of social support to VI employees (Stone and Colella, 1996). Furthermore, results of this study show that work pressure and work environments do not always allow quick and prompt support from sighted colleagues. Likewise, the need to frequently adopt partial bypass may lead to a feeling of lack of independence and control from the perspective of the VI employee (Shinohara and Tenenberg, 2009). Hence, this study further emphasizes the need for training and sensitization of coworkers toward the issues faced by PwD (Kulkarni and Lengnick-Hall, 2014) with particular reference to accessibility.

The interviewees were found to be getting higher emotional support from other VI employees, even when they were part of different organizations/banks. This emotional support can be the result of social identification with other similar individuals (O'Connor et al., 2015). Organizations that are focusing on the integration of PwDs in general and VI employees in particular can facilitate formal focus groups where VI persons can share their experiences and thoughts with similar colleagues.

The data for this study also revealed that some interviewees who had been employed in the banking system for a long time and had risen through the organizational hierarchy had created an association of VI bankers. Through this, they had been working on policy interventions and collective bargaining for VI bank employees. This information further highlights the importance of senior VI persons taking up leadership roles in supporting the work activities of other VI employees, thereby working toward collective welfare and eradication of disabling barriers (Oliver, 2013; Peters et al., 2009).

The type of task handled by VI bankers was also found to have a significant impact on the kind of workplace experience that they had. Many routine tasks in Indian banks still require a substantial amount of accompanying paperwork, making it very challenging for PD employees to carry out such tasks without support from other sighted employees.
Furthermore, some tasks require visual inspection of financial documents, such as checks, for tallying signatures. Interestingly, this observation highlights the need for greater computerization of activities within organizations, given that the computerized tasks are more accessible to PD employees. This is of course subject to accessible designing of the information systems and the availability of assistive technologies (Takagi et al., 2003).

Though there are very few roles identified for VI employees in the organizational guidelines governing the banks in India, some of those do require customer interaction. The results of this study reveal that VI employees involved in customer-facing roles found their jobs to be more challenging in comparison to their counterparts who were not involved in customer-facing roles. As a result of the challenges encountered in customer-facing roles, coworker support for such positions becomes all the more necessary for the better performance and satisfaction of PwD employees (Babin and Boles, 1996). Moreover, this study indicates that when PwD employees are involved in customer-facing roles, they may benefit from the support received from their customers. Support from co-workers and customers can assist in better workplace integration for the PwDs.

**Conclusion**

The current paper attempts to provide some additional insights to the literature on integration of PwDs at the workplace. The first one important learning is that researchers need to understand the diversity within disability. Woodhams and Danieli (2000) point to the fact that HRM practices should look at the type of disability, as there is diversity within disability. The current study further highlights this issue by explicating that even within the same kind of disability (visual impairment), the severity of disability has a role to play in the experiences of VI employees. Further research should look at both type and severity of disability, and the nature of the task, for any inquiry on integration/inclusion of PwDs.

The current study used Zainuddin and Staples’s (2016) taxonomy of workarounds for VI people and found that it provided results which were an improvement on the workarounds proposed by Shinohara and Tenenberg (2009). This research thus provides empirical support for Zainuddin and Staples’s framework, and this may be further extended for examining workarounds in other contexts such as social networks (Voykinska et al., 2016).

Research on social support at the workplace has given importance to four categories, namely, supervisors, co-workers, family and friends (Frese, 1999). This study enlarges this group and looks at the support of two other groups, namely, customers and subordinates. The role of subordinates may be further explored on other types of diversity where the supervisor belongs to a marginalized group and may require emotional or task support. This study also indicates the influence of support giving on support receiving (Bowling et al., 2005) in case of people belonging to marginalized groups.

Though this study has tried to make significant contributions, it has its limitations. The study used snowball sampling to identify respondents for the research. As suggested by Biernacki and Waldorf (1981), snowball sampling may bias the results when the phenomenon involves a network of participants. Thus, the result regarding social support of VI employees may have been affected by the network of the participants. Future studies may look at a more robust sample to examine the social support network of VI employees.

Owing to the novel nature of this study concerning the experience of VI employees after being provided reasonable accommodations, the principal purpose was to gain deeper insights into the “lived experience” of VI employees for which a phenomenological study based on a small sample of twelve interviewees sufficed (Sandelowski, 1995). However, these findings are by no means generalizable to a wider VI population, and we urge scholars to carry out follow-up studies using larger and more diverse samples.
One of the methods of data collection for the study of workarounds as observed in Shinohara and Tenenberg (2009) was observation of the participants using computer systems to understand the workarounds they used during their work. The current study explored workarounds based only on the information provided by VI employees. This may not have captured the workarounds completely because some of the actions which may seem workarounds for a person who is nondisabled may have become routine for a VI person.

From the theoretical viewpoint, the study investigated two important kinds of support providers, namely, supervisors and co-workers, at the workplace. As pointed out by other studies, organizational support also plays a crucial role in the workplace (Rhoades and Eisenberger, 2002). Granting of reasonable accommodations is only one part of the organizational support for PwDs. Other kinds of support provided by the organization, in scenarios when the systems were not completely accessible, could also have been part of the study.

The results and the above limitations bring certain new aspect which can be further studied as part of future research projects. First, studies on social support in the workplace can look at the support provided by subordinates as distinct from that provided by co-workers, like the influence of reverse mentoring (Marcinkus Murphy, 2012). Second, the impact of support from customers in organizations/roles with high employee-customer interaction could be studied in future. This kind of support seems to be very important for employees belonging to some marginalized groups like PwDs where there can be some delay in job performance. Third, the study also identifies certain additional areas for research in the field of accessibility and workarounds. The study highlights some of the workarounds which people with visual impairment have adopted for their work. A study evaluating the contribution of workarounds and the feedback of the end users in developing accessibility features can throw some light on the positive role of workarounds in IT systems research. Fourth, from the perspective of PwD studies, the role of reciprocity could be a possible topic for future research. Current research has most often depicted PwDs as receivers of support, but sometimes, help is not welcome as it can impact the self-esteem of the individual (Deelstra et al., 2003). Future research could look at the role of PwDs as support givers and its impact on their receiving support (reciprocity).

Notes

1. According to the National Health Portal of India, “Visual impairment is when a person has sight loss that cannot be fully corrected using glasses or contact lenses”. It defines two categories of visual impairment: being partially sighted or sight impaired – where the level of sight loss is moderate – and severe sight impairment (blindness) – where the level of sight loss is so severe that activities that rely on eyesight become impossible. In addition, The Persons with Disabilities Act 1995 of the Government of India identifies visual impairment as either blindness referring to complete absence of sight or limited visual acuity or limited field of vision or low vision referring to impairment of visual functioning in a person even after standard refractive correction but where he/she can plan or execute a task with appropriate assistive devices [2 (b) & 2(u)].

2. At the time of this study, the PwD Act 1995 was in force. A revised act, referred to as The Rights of Persons with Disabilities (RPD) Act, was enacted on December 27, 2016, and the rules governing the Act were notified on June 15, 2017. At the time of writing this paper, the rules regarding reservation in jobs for persons with disability are still in the draft phase, and 3 per cent reservation prescribed by the PwD Act 1995 is still in force.

3. As per the new RPD Act 2016, public sector organizations are mandated to have accessibility of ICT systems. Government of India also launched a program called Accessible India Campaign toward achieving this goal.
4. VIBEWA is an association of people with visual impairment working in banking, insurance and financial services sectors in India. For more information, please refer to www.vibewa.org/about-us/

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