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ABSTRACT
This paper looks at the challenges that most organizations face in the management of their work environments, with respect to the tools that they can use to effectively capture both the explicit and tacit knowledge held by their employees for subsequent reuse when decisions need to be made. The problem-identification workshop (PIW), which is a participatory tool for enhancing the management of work environment in an organization, was tested in an organization. Participants identified organizational problems, proposed solutions to them, realistically assessed the desirability and possibility of these solutions, and finally recommended action plans to the organization for its short-term, intermediate and long-term design and management of effective work environment towards enhancing work life and productivity in the organization. It was concluded that PIW is a good socio-pedagogic method that can be used as an intelligent participatory intervention tool by managers in organizations in the management of their work environments.

Introduction
In today’s competitive global markets, the need for faster time-to-market, lower costs and increased product quality has gained premium. Such need has brought in its wake increased challenges on innovation, productivity, which requires organizations to have workforce that is skillful and knowledgeable. For example, in the process industry, the increased use of automation is compelling large industrial companies to rely on a lean organization with multi-skilled workers capable of managing multiple areas of the business (Abrahamsson; Johansson & Johansson, 2009). This kind of organizational change also
introduces an element of increased complexity in the decision-making process, with the expectation that the act of decision-making and action-taking would lead to better utilization of organizational resources towards increased productivity. The increased complexity can be attributed to the difficulty in dealing and managing the workplace culture and organizational learning that emerges alongside the change. In this respect therefore, organizations need new mental images of themselves based on new technologies with a modern work organization that supports both high productivity and good working conditions (Abrahamsson et al., 2009; Abrahamsson & Johansson, 2008). This is because an organization, as a social structure, can be viewed as having its own sociocultural constraints that hinders the prospects of employees playing a decisive role in improving its performance (Sanda, Fältholm & Abrahamsson, 2010a). Thus organizational culture factors, including employees’ knowledge of their work environments, as well as the way they interact and commit themselves to organizational goals are important matters that managers need to understand. Since implicit and tacit knowledge held by individuals is most commonly transferred through personal experience, managers could exploit such knowledge to enhance the performance the organization. Yet, the ability to capture such knowledge is a major challenge for most managers. In order to overcome this challenge, managers need practical approaches matching management methods and techniques to the local conditions which they can use as strategic tools to capture employees’ tacit and explicit knowledge. Taking into account the fact that today, most organizations are saddled with numerous work environment management challenges, the question that arises here is; what future oriented methods and/or tools can such organizations use in order to be able to capture both the explicit and tacit knowledge that are held by their employees. Addressing this question will require organizations to adopt a more intelligent and proactive approaches to capturing knowledge for subsequent reuse when decisions need to be made. The purpose of this paper therefore, is to show the effectiveness of one such future-oriented participative approach, namely the problem-identification workshop (PIW), and the relevance of using it to enhance the management of the work environment in organizations.

LITERATURE REVIEW

In today’s business world in which organizations are striving for survival and growth, knowledge innovation and creation is one of the developmental ways that organizations can use to improve their human resource and productive capacities. Most experts in international business agree that for organizations to succeed in global business there is the need for their managers to have the flexibility to respond positively and effectively to evolving organizational practices and values that may be drastically different from what they are accustomed to (Sanda, 2011). By being innovative and creative in their knowledge development, the organizations can basically become communicative and intelligent (Adina, 2010). In the modern knowledge-based economies, as Constantinescu (2008) noted, one of the
major criteria for improving an organization’s economical performance is the increase of both individual and collective knowledge. Thompson (2004) has argued that since organizations are subsets of society, they offer their employees just a number of possible images and symbols to guide their organizational lives. By virtue of this, employees are continually engaged in organizational life processes that draw upon non-organizational (tacit knowledge) as well as organizational components.

Since activities in organizations are realized as individuals and cooperative actions, as well as chains and networks of such actions, both of which are related to each other by the same overall objective and motive, a distinction could be made from one activity to another according to their motive (Sanda, 2011; Kuutti, 1995). According to Sanda (2011), this raises the issue of how managers can understand and manage the way their employees’ sub-conscious activities (i.e. wildfire activities) influence the organization’s objective, when such employees are engaged in new work practices. A manager understanding such employee-work-related issue (tacit knowledge) is of relative importance during the organizational change process (Sanda, 2011). This makes it imperative for organizations to find strategic participatory tools that for capturing individuals’ implicit knowledge that could be used to cover the gap created by the difference between what each person in the organization knows and does. In the field of ergonomics, participatory tools, such as direct employee involvement, have been used as useful macroergonomic approach for solving various organization and work-related problems (Sanda, Fåltholm, Abrahamsson & Johannson, 2010b; Noro & Imada 1991; Wilson 1991). But as it noted by Liker, Nagamachi and Lifshitz (1988), the effectiveness of the participatory approaches can take many forms. In this respect, Sanda et al. (2010b) have argued that direct involvement of employees in the organizational change processes is one of the best ways to get them to share their tacit and explicit knowledge on issues in their own work environment that may prove daunting to managers of change in organizations. This view by Sanda et al. (2010b) is based on notion that employees feel empowered when their opinions are sought by their managers on organizational issues that affects them. It also reflects the importance of giving employees opportunities to explain and to identify organizational problems. The derivation of such employee empowerment is underscored by the reasoning (e.g. Johansson & Forsman, 2001) that only those who are affected by change can decide what is in their best interest. This is because the process of change entails the creation of new work identities for those to be affected. According to Fenwick (2005), the individual’s sense of his/her own knowledge of work, and the skills valued by the group to which the individual belongs are critical elements of the individual’s identity. In this context, Abrahamsson and Johannson (2008) explained that the creation of the new work identities also involves learning. Exemplifying the identity creation process, Abrahamsson and Johannson (2008) noted that individuals need to figure out what identities they have to enact as well as how to enact them. Additionally, the individuals also need to figure out how others might perceive their
new identities. This means that the actions of individuals and their identity formation at the workplace could be affected by the organizational structures and/or culture in different ways (Abrahamsson & Johansson, 2008). The identity creation process can therefore be understood as the individual’s socialization and learning process towards becoming a full member of the organization’s community of practice (Wenger, 1998). Yet, despite many promising production concepts, organizational models and new technology developed during the last decades to enhance this socialization and learning processes towards the acquisition of individual implicit knowledge, most organizations continue to face a large gap between productivity increase expectations and real implementation of newly developed methodologies. This observation has given rise to the thinking that for such gap to be removed, there is the need for the development of holistic knowledge that will help enhance managers’ capability of effectively integrating the functionalities of the technical, organizational and human systems of their organizations as well as developing deep specialized knowledge and learning in each area (Sanda et al., 2010a).

It is argued by Bassan, Srinivasan, Knights and Farrelly (2008) that the consequence of rapid staff turnover, multi-skilling and a reduced workforce in most organizations is the loss of explicit and tacit business knowledge held by individuals. This knowledge is rarely captured, often difficult to codify and is most commonly transferred through personal experience. Not only is this knowledge difficult to capture, but transferring information and knowledge between disciplines is slow, inefficient and details like contextual information are often unintentionally omitted (Bassan et al., 2008). The process of managing knowledge entails not only the related notions of knowledge transfer and knowledge sharing, but the entire knowledge acquisition and utilization process. The process begins with locating and capturing the knowledge, which is then enabled within the firm (Uhlmaner & Van Santen, 2007; Takeuchi & Nonaka, 2004; Choo & Bontis, 2002). It is therefore important that organizations analyze their embedded knowledge towards developing knowledge-based systems for supporting their human agents. Arguing from the perspective of Adina (2010), this is possible if the organization uses innovative techniques and methods that support human agents. As it is established in the literature, innovation is built on collective knowledge sharing activities of, especially, tacit knowledge (see Constantinescu, 2008; Nonaka, Toyama & Konno, 2000; Howells, 1996; Gibbons, 1994). Therefore, the innovative techniques and methods should have the capacity to enable knowledge creation through information extraction about the past experience, which can be analyzed and used in current and future situations (Adina, 2010). This implies that managers can get the correct picture of how organizational issues influence their employees’ mental well-being only by providing the requisite platform that could motive the employees to share their own perception of those issues (Sanda et al., 2010b). One of such platform is the problem identification workshop.

The problem-identification workshop (PIW) is a form of future-oriented workshop (Jungk & Mullert, 1987) which is a very
open process and which allow employees who would normally not express themselves at the workplace, but whose insights and concerns on the activities they undertake as well as observe in the organization are a useful resource to managers. In recent years, similar future-oriented methods have been applied to a much wider range of environments including companies, government departments and trade unions (Duinker & Greig, 2007; Strategic Futures Team, 2001). But as Glenn, Dator and Gordon (2001) observe, these traditional institutions are no longer as influential, respected, or popular as they once were. They argued that these institutions are gradually becoming uncertain about their current role and future mission, a situation that is making them to rethink what they are and where they are going. The rationale for such rethinking is that many organizations are becoming internally challenged, and hence uncertain of what to do to enhance their productivity and competitiveness (Sanda et al., 2010b). The base for such uncertainty is explainable from Aldrich’s (2008) bio-metaphorical representation of an organization as an organism comprising of individual cells, each of which contain a particular, partial changing image of itself in relation to the whole. Aldrich (2008) explained that in comparison to the aforementioned organism, an organization’s practice could be perceived to stem from the images of individual practices in the organization. This implies that the focus of study into organizational learning must be on the active processes of organizing which is at root, a cognitive enterprise rather than with static entities called organizations. This is because individual members of organizations are simultaneously engaged in acts of continuous attempts to know the organization as well as to know themselves in the context of the organization. Taking into account this observation, the issue of interest here is to understand the underlying process in carrying out the PIW.

PIW is a structured process with five defined phases (Sanda et al., 2010b; Sanda, 2006; Skoglund-Öhman & Shahnazav, 2004; Helali & Shahnazav, 1998). These are the preparation phase, the experience phase, the phantasy phase, the strategy phase, and the action phase. In the preparation phase, a clear, short and challenging ‘theme’ for the workshop, acceptable to all participants is defined. In the experience phase, all problems (small or large) experienced by participants with regards to the workshop’s theme are highlighted. Participants are made to concentrate on only the “negative” side of the theme with the view that what is good does not need to be changed. In the phantasy phase participant (employees) are made to come out of the daily limitations that usually lead to restraint, traditional thinking and acting. This is due to the fact that people have many ideas that have never been expressed or formulated because they were framed in what they believe was right and possible. In phantasia, everything is possible. There are no barriers, no economic, personal, technical or organizational limitations. The idea is to develop future visions that had enough power to solve all the critical problems that the group is working with. In the strategy phase, all the fantasies expressed by the participants are run through with the aim of finding possible barriers that could inhibit the realization of
the fantasies. Participants discuss whether any of the barriers could be removed, and if yes, how and when? At the strategy phase, a plan for the realization of the fantasies decided upon is then prepared. In the action phase, a complete report containing all the critical problems, fantasies as well as plans proposed by the workshop participants are prepared at this phase. This report then become a future resource for ideas and actions, and an acknowledgement (feedback) for participants to see how hard, intensive and creative they have worked. According to Helali and Shahnavaz (1998), the practical prerequisite for running a successful problem-identification workshop is a well-motivated participating group, a flexible and informal condition as well as two experienced and neutral workshop leaders. Problem-identification workshops have been used to identify various management problems, and to develop vision, ideas and action plan for improvement (Sanda et al., 2010a; Sanda, 2006; Helali & Shahnavaz, 1998). In this paper, therefore, the workshop that was held in a deep mine in an African country which experienced challenges in bridging a large gap between productivity increase expectations and real implementation of newly developed business practices to enhance the commercialization of its activities is highlighted.

**METHODOLOGY**

The PIW was conducted in an African-based Deep Mining firm within the framework of an ongoing research on developing an innovative work organization model that could be used as strategic tool for managing the work environment of the “Mine of the Future” (i.e. the Intelligent Deep Mine). The rationale behind the workshop was to allow for a fair understanding of some of the key challenges inherent in the organization’s deep (i.e. underground) work environment, and which knowledge could be used by the management as a future-oriented support base for improving the work environment towards efficient mining activity and increased production. In order to facilitate the application of this technique, a workshop guide entitled “Conduction of future workshop: user’s guide for workshop leaders” (Sanda, 2006) was used as a resource.

Seventeen employees representing management, senior staff and the junior staff from four departments of the organization participated. These included the Technical Services Department, the Ventilation Department, the Mining Department, and the Human Resources department.

At the start of the workshop session (i.e. in the preparation phase), the following theme was agreed upon by the participants: - making the underground work environment of our Deep Mine substantially safer, very friendly and sociable towards increased production. In the experience phase, each participant was granted the opportunity to briefly describe a concrete problem that he/she has experienced in the organization. Instead of making the participants’ voice out their problem statements, each of them was provided with a set of similar papers and pens (with no color variation) on which to write their respective problem statements, eliminating the possibility of each
statement source being identified by other participants. This made it easier for all the participants to express themselves genuinely and without showing any traces of apprehension by the presence of those in superior positions. The written statements by each of the participants were re-written exactly and boldly on large sheets of paper until a point was reached whereby no one among the participants had any more critical problems to write out. Thereafter, the participants were made to vote on the listed problems, with each participant being allocated seven votes to be given to the most serious problems, of which two received three votes each and the remaining one receiving only one vote. After calculating the votes, the listed-problems were compiled in ranking order based on their total votes. Following this, critical problems were identified out of which the workshop sub-themes were developed. This was followed by assigning the remainder of the listed-problems to the most appropriate of the four discussion topics. Later, the participants were made to verify whether their expressed problems were listed under the appropriate topic. The discussion topics were then classified as workshop sub-themes. This marked the end of the experience phase. The workshop then moved into the phantasy phase with the participants forming four working groups. Each group deliberated on one of the four sub-themes to come out with series of propositions for remedying some of the key challenges listed in the problem catalogue. Aided by three visual charts reflecting different organizational scenarios, participants in each group phantasied the best solutions to help overcome the problems and/or constraints identified with their respective sub-themes. The visual charts include; the triangular organization chart (figure 1 below), the circle organization chart (figure 2 below), and the cause-effect organization chart (figure 3 below). Using the visual aids, the participants came out of the daily limitations which usually lead to restraints, traditional thinking, and acting. As a result, many new ideas that the participants had in their unconsciousness popped up after thinking over their daily limitations. Everything was considered possible in this phase (i.e. no cultural barriers, and also no economic, personal, technical, and organizational limitations). For each group, each member’s phantasy was discussed with regards to its ability to solve one or more of the problems associated with the group’s specific theme. Disagreement within the group was allowed and accepted. The phantasies developed by each group for specific sub-theme were listed. Guided by the chart shown in figure 4 below, the participants conducted a desirability (D) and possibility (P) assessment of their various alternate phantasies (solutions) which allows for the practical choice of the most feasible. This marked the end of the phantasy phase, and also the start of the strategy phase.
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In the strategy phase, the participants discussed the D-P ratings of the solutions they assessed in the phantasy phase, and used it (i.e. D-P ratings) as guide to choose solutions they considered as feasible and practically attainable. Strategies for the realization of the chosen solutions were then prepared for management consideration and future action.

The role of the researchers in conducting the PIW was that of facilitators. The duration of the workshop was two days (i.e. from 6th to 7th October, 2010).

RESULTS

In the experience phase, the participants developed a catalogue of 301 problems (i.e. challenges), which they perceived as impacting negatively on the work environment and the quality of work life underground, and by implication the level of production. After a series of voting techniques in the critical phase, the problem catalogue of 301 challenges was narrowed down to reflect 26 critical challenges which were used as basis to develop the following four (4) discussion sub-topics (i.e. workshop sub-themes) to the main workshop topic (i.e. making the underground work environment substantially safer, very friendly and sociable towards increased production).

i. Addressing equipment-related challenges.

ii. Addressing the issue of poor planning.

iii. Addressing challenges related to the development of stopes.

iv. Addressing human resource challenges.

The solutions (i.e. future visions) that participants perceived to have enough power to solve all the critical problems

Figure 2: The circle organization chart used by the participants in the phantasy phase of the workshop (Sanda, 2006).

Figure 3: The cause-effect organization chart used by the participants in the phantasy phase of the workshop (Sanda, 2006).

Figure 4: The solution’s desirability and possibility assessment chart used by participants in the phantasy phase (Sanda, 2006).
and/or constraints identified under each of the three sub-themes above, and the participants’ assessment of the Desirability (D) and Possibility (P) of each solution are outlined below. The desirability and possibility assessment was to allow for the practical choice of the most feasible solutions.

**SOLUTIONS FOR ADDRESSING EQUIPMENT-RELATED CHALLENGES**

The following 5 propositions, and ratings for their desirability (D) as well as the possibility (P) of their realisation by management were made.

- Underground ramps must be concreted [D=100%; P=50%].
- Adequate illumination must be provided [D=100%; P=100%].
- Adequate drainage holes must be created [D=100%; P=100%].
- Adequate grader/compactor machines must be provided [D=100%; P=100%].
- Adequate mechanical support scalars must be provided [D=100%; P=100%].

**SOLUTIONS FOR ADDRESSING THE ISSUE OF PLANNING**

The following 10 propositions, and ratings for their desirability (D) as well as the possibility (P) of their realisation by management were made.

- Correct demarcation of ore boundary on the geology model [D=100%; P=70%].
- Long range planning involving all stakeholders to generate long term plan for the mine (i.e. for the next 10 years) [D=100%; P=100%].
- Providing every mining engineer with a short range planning engineer [D=100%; P=80%].
- Upgrade all existing software [D=100%; P=100%].
- Material sourcing and planning to be made ahead of job execution [D=100%; P=70%].
- Four (4) months drilled reserve must be available at any point in time [D=80%; P=60%].
- Labour requirement for jobs must be incorporated in both short-term and long-term planning [D=100%; P=70%].
- Layout approval must be done on time [D=100%; P=100%].
- Hydrafil schedule must be strictly complied with [D=100%; P=60%].
- Development partners should change over from pneumatic drilling to power drilling [D=80%; P=60%].

**SOLUTIONS FOR ADDRESSING CHALLENGES RELATED TO STOPE DEVELOPMENT**

The following 14 propositions, and ratings for their desirability (D) as well as the possibility (P) of their realisation by management were made.

- Acquisition of Hydraulic Jumbos [D=100%; P=100%].
- Competitive contractors [D=100%; P=100%].
- AGA to develop [D=50%; P=100%].
- Provide transportation underground [D=100%; P=100%].
- Improve ventilation system [D=100%; P=100%].
- Develop adequate passes [D=100%; P=100%].
- Reduce tramming time [D=100%; P=100%].
- Provide utility equipment [D=100%; P=100%].
- Acquire new scoops and dump trucks [D=100%; P=100%].
- Expand compressor house [D=100%; P=100%].
- Provide charger equipment [D=100%; P=100%].
- Provide communication gadgets [D=100%; P=100%].
- Provide hydraulic scaling equipment [D=100%; P=100%].
- Recruit new skilled and energetic young miners [D=100%; P=100%].

**SOLUTIONS FOR ADDRESSING HUMAN RESOURCE CHALLENGES**

The following 10 propositions, and ratings for their desirability (D) as well as the possibility (P) of their realisation by management were made.

- Provide housing for all employees [D=100%; P=40%].
- Improved wages/salaries [D=100%; P=100%].
- Make available car/building loans to employees [D=100%; P=80%].
- Provide transport to convey workers to and from underground [D=100%; P=100%].
- Give bonuses/allowances to workers [D=100%; P=100%].
- Enhance the promotion of employees [D=100%; P=60%].
- Develop an effective employee retention and replacement strategy [D=100%; P=100%].
- Provide employee counsellors [D=60%; P=100%].
- Conduct training gap analysis [D=100%; P=60%].
- Develop an effective human resource policy [D=100%; P=100%].

Based on the desirability and possibility assessment highlighted above, strategies considered by the participants as realizable within the limitations of the organization’s strength and capability were outlined for each of the four sub-themes for management’s consideration. These were meant to serve as added “future Visions” for the organization.

**STRATEGY FOR ADDRESSING EQUIPMENT-RELATED CHALLENGES**

The following strategy was outlined for the acquisition of sufficient underground equipment within a time frame of 24 months (i.e. by the end of the year 2012).

- Conduct GAP analysis on existing equipment in terms of underground conditions.
- Solicit for funds
• Select equipment applicable to Obuasi mines operations.
• Acquire new equipment.
• Ensure equipment support (after sales/services).
• Draw depreciation plan for underground equipment plan.

STRATEGY FOR ADDRESSING THE ISSUE OF PLANNING
The following strategy was outlined for Enhancing Long-range Planning.
• Geology to provide the mineable ore reserve model (i.e. grade, size, dip shape, etc.) for the next 10 years (i.e. up to the year 2020).
• Short range planning to demarcate into mineable blocks and schedules by the year 2012.
• Internal stakeholders must meet to brainstorm to decide on the following; mining methods, amount of development, types of equipment, labour requirement, size of excavation, access, raises, and chambers.

STRATEGY FOR ADDRESSING CHALLENGES RELATED TO STOPES DEVELOPMENT
The following strategy was outlined for the acquisition of sufficient Jumbo Trucks
• If there is enough funds, by NOW.
• Alternatively, borrow funds from financial institutions, lease with equipment suppliers, cut down certain expenses to accumulate funds over a period of time (e.g. cut down purchase of light vehicles, reduce number of expatriates.

STRATEGY FOR ADDRESSING HUMAN RESOURCE CHALLENGES
The following strategy was outlined for the enhancement of employee retention.
• Provide improved and competitive wages/salaries by the year 2011.
• Institute mechanism for providing employees with car/building loans by the year 2015.
• Ensure that deserving employees get immediate approval of their promotions.
• Provide all employees with adequate means of transport to and from the workplace.
• Provide housing for all workers by the year 2015.
• Conduct training gap analyses.

All the above results were discussed with the managing director of the organization, and this resulted in the taking of remedial actions on some of the problems identified at the workshop and for which feasible solutions were proposed by the participants.

DISCUSSION
The result above has shown that an organization is a social structure wherein employees can play a decisive role in improving its performance. The creation of a participatory platform provided a good understanding of cultural factors in organizations, including the way people interact with each other and commit themselves to organizational goals. The results have shown that making visible an employee’s tacit knowledge can help
determine the horizon of possible actions that can impact either positively or otherwise on organizational performance (Sanda, 2011). By bringing to the fore this understanding, intelligence which is a characteristic of the individual and of the individual action becomes a valued entity of the organization. Arguing alongside Aldrich’s (2008) views, the workshop participants, as members of the organization came to the workshop with their individual but incomplete self-image constructions of critical issues in the organization. The PIW provided them the requisite platform to complete their self-image construction of organizational issues which outcome was transformed into collective-image issues understandable in the context of the organization. This observation is reflective of the notion that dialogue and frequent interaction between different individuals or groups forms the basis for knowledge recombination and creation of innovation (Sanda et al., 2010a; Constantinescu, 2008). The interaction generated at the PIW facilitated the sharing of relationships and perspectives among the employees. This resulted in the creation of a cooperative atmosphere useful for the transfer of tacit knowledge (Gold et al., 2001). The implication here is that management can develop a good understanding of their work environment and be able to enhance increased productivity as well as improve the quality of work life in their organizations by matching management methods and techniques to the organizational aspirations of their employees. This is because, as increased competition in global markets continues to impose higher challenges on innovation, productivity, and product quality, organizations also have to respond by having a knowledgeable workforce with broader skills who are flexible and motivated to share their knowledge with their management. To achieve this, an organizational structure and management system is required in which operators’ knowledge and skill are continuously improved through education and training and the total company resources are fully utilized for optimum performance (Shahnavaz, 2002), and for dealing with rapidly changing problems at work (Sanda et al., 2010b). In this endeavor, by regarding employees as central to all their development initiatives, organizations can derive much benefit from their knowledge. As Abrahamsson and Johansson (2008) argued, skills and knowledge should not be seen as things that are simply static and accumulated by individuals, but rather as things that are created and changed in socio-cultural contexts, through individual as well as collective processes. This is because an organization, as Aldrich (2008) argued, is like an organism each of whose cells contain a particular, partial changing image of itself in relation to the whole (i.e. like such organism, practices in organizations stems from those very images). The implication being that knowledge is not only a question of individual behavior, but also about organization, power and identity (Fenwick, 2005). Because the introduction of new technology needs to be legitimized by the workers as well as by management, a number of studies have emphasized the significance of worker participation in the introduction process (Noro & Imada, 1991; Wilson, 1991). As it is observed by Liker, Nagamachi and Liftshitz (1989), effective
A participatory program can take many forms. In this regard, the best program for any organization in any culture may depend on its own unique history, structure and culture. This implies that organizational intelligence can be sourced and found in the degree of communication in organizations (Adina, 2010). As it is shown in this study, the PIW also served as an effective platform for enhancing verbal communication among the organization’s employees. It allowed participants to provide their colleagues and senior management with information that they previously found difficult to convey verbally (Abrahamsson et al., 2009), and thus remained tacit. The participatory platform created by the PIW enabled the participants to describe themselves and their own performances as they interacted with each other. It allowed for the externalization of tacit knowledge through discussion among colleagues (Uhlner & Van Santen, 2007). This means that approaches for enabling employee implicit knowledge and organizational learning must concern itself not with static, but with an active process of organizing which is a cognitive enterprise. Inferring from Aldrich’s (2008), this is because the employees, as individual members of the organization are continually engaged in attempts to know the organization, and to ‘know themselves’ in the context of the organization. Relating this observation to Thompsons (2004) argument, employees have unique configuration of convergent expectations which may be emergent within any one organizational encounter. This configuration consisted of a complex interplay of shared and non-shared (tacit) knowledge which is relationally animated within each employee. The results in this study showed that the PIW can be used as a strategic tool by managers to understand such employee’s configuration which needs to be well managed from inception to completion (Sanda, 2011). Thus PIW is a useful macroergonomic approach that organizations can use as a strategic tool to capture employees’ implicit knowledge for subsequent use in enhancing the management of their work environments towards increased productivity. The PIW provided useful insight of organizational knowledge that could be used by managers to conceive a plan for the future. It thus serves as a tool that could be used to develop annual plans through which future knowledge resources could be developed.

CONCLUSION

Based on the discussion above, it could be said that the problem–identification workshop is good method for identifying organizational problems and developing feasible and acceptable solutions for improvement. It also created a platform that enhances cooperation between managers and employees in a participatory problem-solving process. It is a socio-pedagogic method for the identification of a common problem, development of a vision, ideas and action plan among a group of people concerned. The technique can be used as a participatory intervention method by managers in organizations. It can also be used as a good qualitative instrument for decision-making and work environment analysis.

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