Facilitating participatory steps for planning and implementing low-cost improvements in small workplaces

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Abstract

In this paper, practical means of facilitating participatory steps taken in workplace improvement programs in small workplaces were reviewed. The reviewed programs included those organized by partners of our Asian inter-country network for small enterprises, construction sites, home workplaces and agricultural farms. Trainers who commonly acted as facilitators were found to play multiple roles in helping managers, workers and farmers take initiative and achieve immediate improvements. The participatory steps were more successfully facilitated when the trainers supported (a) building on local good practice, (b) focusing on a range of basic ergonomics principles, and (c) stepwise progress through feedback of achievements. The use of action-oriented toolkits comprising low-cost action checklists and group work guides was commonly helpful. The locally adjusted nature of the toolkits seemed essential. Trainers could thus help people build local initiative, plan and implement low-cost ideas through serial group work steps and confirm benefits in a stepwise manner. The review of the results suggested that a local network of trainers trained in the use of locally adjusted toolkits was vital for facilitating effective improvements in different small workplaces.

Keywords: Participatory steps; Small workplaces; Facilitation; Action-oriented toolkits; Developing countries

1. Introduction

Recent reports on participatory action-oriented programs in workplaces indicate that these programs led to many ergonomic workplace improvements by means of a series of group work steps (Vink et al., 1995; Zalk, 2001; Haines et al., 2002; Kogi, 2006). These steps were effective in small workplaces when a group of trainers facilitated the use of participatory methods for identifying and implementing locally practicable improvements (Kogi, 1997; Kawakami and Kogi, 2001; ILO, 2004; Khai et al., 2005; Itani et al., 2006). It appears useful to know the practical means of facilitating group work steps leading to effective types of improvements.

Experiences in inter-country networking of participatory programs for small workplaces demonstrate the importance of encouraging initiative of local people for taking improvement actions (Thurman et al., 1988; Hägg, 2003; Kogi, 2002). Trainers helping local people usually act as facilitators while playing multiple roles. Their roles are crucial in achieving immediate improvements in small workplaces despite their many constraints. It is important that these roles are played in a similar fashion by trainers for different target groups (Kawakami and Kogi, 2005; Kogi, 2006).

It is therefore useful to discuss the facilitating roles of trainers in organizing successive stages of participatory workplace improvement programs. A strategic view is necessary to encourage the program participants to consistently build their own good practice. By looking at the practical support means used by competent trainers, we can clarify how participatory steps are facilitated in different work settings. Attention is drawn to the practical means of initiating the building on local good practice, selecting practical improvements that are effective in the local situation, and obtaining feedback about gained improvements.

2. Methods

The roles of trainers in facilitating participatory steps in workplace improvement programs for small workplaces
were reviewed. The review covered programs undertaken by partners of our Asian inter-country network (www.win-asia.org). They included (i) risk management programs for reducing work-related risks through participatory programs (Koda et al., 1997; Kogi et al., 2003; Ito et al., 2006; Koo et al., 2006; Udo et al., 2006; Yoshikawa et al., 2006); (ii) participatory programs for small enterprises and home workplaces applying the WISE (work improvement in small enterprises) methodology developed by the ILO (Thurman et al., 1988; Hiba, 1998; ILO, 2004; Takeyama et al., 2006); and (iii) training workshops for farmers applying WIND (work improvement in neighborhood development) methods in Thailand, the Philippines and Vietnam (Kogi et al., 2005; Khai et al., 2006). The programs for developing occupational safety and health management systems by implementing participatory programs for work improvement were also examined (Kogi, 2002).

These programs were organized as participatory action-oriented training courses or workshops by commonly applying group work steps with the support of trainers. Program effectiveness was evaluated by interviewing the participants and by analyzing their proposed improvements. They reviewed how trainers facilitated the participatory steps to achieve these workplace improvements.

3. Results and discussion

3.1. Facilitating roles of trainers in building on local good practice

All the reviewed programs included organizing short-term training courses or workshops with the active support of trainers trained in participatory methods. These participatory steps were, as a rule, learning from existing good practice, planning workable improvements and reinforcing implementation through feedback. This was consistent with the participatory nature of the short-term training supporting the initiative of local people and the subsequent implementation of improvements.

The trainers’ role as a facilitator focused on local, practical improvements that had real impacts in the workplace. Main features of the facilitation undertaken by the trainers in the reviewed programs are summarized in Table 1.

The programs dealing with work-related risks were organized according to the target groups. Typical work-related risks addressed were needle stick injuries, musculoskeletal disorders, mental stress situations, irregular hours and overwork situations. Trainers played facilitating roles by presenting local good practices, adjusting training sessions to local conditions and focusing on locally practical, low-cost options. This was possible as the trainers visited the workplaces first and collected local good examples of practical improvements, interviewed managers, workers and farmers, and developed training materials incorporating these examples. Trainers often utilized feedback from the participants obtained from interviews and reports about achieved improvements for sustaining their initiative.

WISE training programs were also applied to different target groups including small and medium-sized industrial enterprises, small construction sites and home workplaces. Trainers played crucial roles in facilitating the learning of local good practice, use of low-cost ideas and follow-up activities. Trainers played similar roles in WIND programs for farmers. The initial checklist exercise done during household visits at the beginning of training activities as well as subsequent mini-workshops led to group work on practical options that farmers were usually able to implement immediately. Trainers reported back on the improvements. Trainers in WISE and WIND programs contributed greatly to adjusting training materials to local conditions by observing local good practices and photographing good examples. These photos were inserted in the training materials.

Thus, the facilitating roles of the trainers in these programs may be indicated in each of the three main stages of the participatory steps reviewed. It was striking that these roles were commonly played by the trainers in all the programs reviewed. The common roles played by trainers are shown in Table 2.

The first stage of supporting the local peoples’ initiative in making concrete changes at the workplace was
imperative to the whole participatory process in all the programs. This was confirmed through interviews with participants and the lively atmosphere of their group discussions. This was commonly done by relying on the good-practice approach as it could relatively easily convince local people of the utility of making changes and the benefits.

The good-practice approach was reinforced in the planning and implementation stages. Each of these facilitated stages focused on locally viable improvements including many simple, inexpensive improvements.

The initial stage built on local good practices by highlighting existing improvements and showing photographs of these examples. Video clips were also used to demonstrate existing good practices. To help participants understand the approach, trainers normally drew their attention to locally viable, low-cost improvements that aided in several areas such as: materials handling, workstation changes, environmental conditions and welfare facilities including drinking water and resting facilities. Typical examples of low-cost easy-to-implement improvements are shown in Fig. 1.

Facilitating this good-practice approach was usually done in two steps. First, assist participants in learning from local good examples. Second, assist them in identifying locally viable, low-cost options. These options were usually identified by comparing the good examples with their existing conditions and group discussions on practical improvements. These processes are presented in Fig. 2.

Trainers usually collected and presented brief case studies including photographs of low-cost improvements achieved locally. These examples were collected during several workplace visits and compiled after subsequent analysis of photographs showing existing good practice and interview results. The examples addressed multiple areas including: materials storage and handling, workstation changes, physical environment, welfare facilities and work organization. The presentation of these local examples provided concrete guidance on the way to set goals for similar improvements. In each program the participants had group discussions and proposed many improvements to their existing conditions. Focusing on good practices and low-cost solutions accomplished locally were useful in stimulating managers, workers and farmers to embracing the good-practice approach.

3.2. Facilitating the steps aimed at planning and implementing practical improvements

The second stage of facilitation by the trainers concerned the planning of immediate improvements. The planning was done by participating managers, workers or farmers themselves. This stage appeared to be crucial in all the programs reviewed as the participants always made concrete plans of immediate improvements in their own workplaces. This stage was conducted in several group discussion sessions about available improvement options and basic principles applicable to each local situation from ergonomics and occupational hygiene viewpoints. The participants were divided into small groups. Each group discussed good points found in the workplace and then agreed to propose a few improvements in that workplace. The group selected a reporter who presented their discussion results to all the participants. A clear focus was placed on low-cost improvements that would address multiple problems. These proposed solutions addressed issues such as materials storage and handling, workstation design, physical environment, welfare facilities such as sanitary and resting facilities and work organization. Many improvements were proposed in these multiple areas in each of the programs.

With the advice of trainers, the participants in each program could look at locally workable options, prioritize and select improvements. The planning and implementation stages were usually done by guiding group toward practical improvements as shown in Fig. 3. In the planning stage, the trainers gave concrete advice about (i) selecting simple low-cost improvements available in the local situation and (ii) applying basic principles of ergonomics and occupational hygiene in the technical areas addressed. Many of the proposed solutions addressed materials storage and handling, working postures, ergonomic workstation designs, lighting and ventilation, machine guards, isolation or screening of hazard sources, welfare facilities and teamwork arrangements.

In the implementation and follow-up stages, the trainers facilitated the participatory process by providing support for group work in two ways: (1) consensus building about immediate improvements; and (2) confirming benefits through participant feedback. These steps are illustrated in Fig. 3.

The trainers helped participants address multiple technical areas using action-oriented toolkits. These toolkits expedited participatory procedures in planning effective types of low-cost improvements. The toolkits usually incorporated the following three elements:
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Fig. 1. Examples of low-cost improvements collected through participatory programs in different settings: (a) Materials storage and handling (Multiple shelves, a push-cart, feeding materials); (b) Work station changes (A wheeled stand, elbow-height work, local language labels); (c) Physical environment (Machine guards, skylights, enclosure of noisy machinery); and (d) Welfare facilities (Drinking water, a resting corner, providing a first-aid kit).

< In the initiative-building stage>

- Learn from local examples of good practice
- Identify locally practicable low-cost options by group work
- Building the initiative of local people in taking a good-practice approach

Presenting examples done in similar local conditions of work life in a manner easy to learn the benefits

Guidance on the merits of low-cost ideas in improving existing conditions in multiple technical areas

Fig. 2. Facilitating roles of trainers in the initial stage for learning local good practice.
(1) local examples showing good practice in multiple technical areas. The local examples were presented by a number of actual improvement cases locally achieved, usually with photographs and explanations about the basic principles of ergonomics and occupational hygiene applied;

(2) action checklists covering these areas. Each of the action checklists comprised a list of 30–50 typical low-cost improvement actions practicable in the local situation. Each of these actions was presented in the action form, such as “clear and mark the transport-ways”, “provide mobile racks and push-carts”, “adjust working height at elbow level”, “attach simple-worded labels”, or “ensure safe wiring connections”. The users of the checklists selected those improvement actions that were considered important for improving the workplace under consideration, and the check results were used in the subsequent group discussion about proposing immediate improvements to be taken;

(3) illustrated guides about how to make low-cost improvements with real impacts. The illustrated guides described how to make improvements at low cost for the common types of improvement actions. Illustrations or photographs showing typical improvements are usually included, together with explanations of a few simple actions to be taken. Each guide covered several technical areas.

These toolkits had important common features. They were action-oriented so that their users could look at immediate low-cost actions chosen from local examples. They covered multiple technical areas useful for prioritizing necessary improvements. They suggested actions based on principles in ergonomics and occupational hygiene. This reference to basic improvement principles seemed to ensure that the improvements in the participatory steps had real effects on reducing existing risks. Examples of these principle include: efficient materials handling (organized storage, mobile racks and lifters), better workstation design (easy reach, elbow-height work, effective use of fixtures and easy-to-distinguish coding), improved physical environment (good lighting and ventilation, machine guards and isolation of hazard sources), provision of essential welfare facilities (drinking water, sanitary facilities and resting facilities) and work organization (teamwork, rest breaks and job sharing). Trainers facilitating these basic principles was generally found useful in achieving effective improvements across situations.

3.3. Support functions for facilitating the participatory steps

The effects of facilitating the participatory steps were confirmed in reviews from inter-country network of partners. These reports noted that usually a number of practical improvements had been achieved in work and life conditions of the different target groups. The reported improvements in reduced injury risks, improved work environment, reduced physical and muscular loads, strengthened anti-stress measures and better welfare and daily life conditions. For example, reduced injury risks were reported by WISE programs and programs for preventing needle stick injuries, and reduced physical and muscular loads resulted from shop-floor improvements in materials handling and workstation changes. Improved work environment conditions in lighting, ventilation, machine guarding and chemicals handling were found in
most these programs. Better daily life conditions in farm households were achieved in many workshops applying WIND methods. The effects of facilitation by trainers in achieving these improvements are summarized in Table 3.

The results of these programs confirm that focusing on multiple low-cost improvements and basic ergonomics and occupational hygiene facilitated the participatory steps of local people in different settings. By targeting immediate improvements through these steps and practical advice from trainers were essential. The trainers’ follow-up activities immediately after the implementation proved essential to confirm benefits and encourage participants to continue improvements. Participants from the training programs reported many new improvements in follow-up meetings. Based on these observations, we concluded that three trainer support functions were important in facilitating the participatory steps in these programs. These support functions are (a) building local initiative for action, (b) focusing on practical options and (c) confirming benefits of the improvements achieved and receiving feedback. The trainers’ facilitative role appeared to be more effective when all three functions were addressed. When the trainers visited the workplaces and encouraged the participants to report their improvements in a relatively short period of time, the improvements were reported more consistent. For building local initiative, the trainers usually acted as resource persons for setting goals learned from local good practice. In focusing on viable options, they then tried to give advice on effective improvements that had real impacts on reducing existing risks and improving work life. In confirming benefits of the action taken by people while obtaining feedback from them, the trainers further encouraged them to take stepwise actions.

Participatory programs using the stepwise process enabled the programs to adapt to each local situation. Using local examples of good practice in the training sessions and the group discussions across technical areas led to concrete improvements. The good-practice approach contributed to the local adjustment of the improvement processes.

These results suggest that facilitating participatory changes in workplace improvement programs can be effective if done within a strategic context with trainers acting as resource persons and facilitators. The learning gained through these programs should be considered when organizing similar programs. The close relationship between the action-oriented approach and the facilitation by means of locally focused training toolkits deserve attention.

The local network of trainers was useful in facilitating these training sessions. Networking trained trainers was effective for collecting local good examples, developing locally adjusted toolkits and upgrading the training skills in taking the good-practice approach.

4. Conclusions

The participatory steps in these workplace improvement programs were more effective when facilitated by trained trainers, when trainers built upon local good practices, when solutions were taken in an action-oriented manner, when they focused on the applying basic ergonomics and occupational hygiene principles, when they emphasized low-cost improvements. The use of group work toolkits comprising low-cost action checklists and illustrated guides were useful.

The effective support functions of the trainers were to assist people in building local initiative, to provide advice on effective improvement options and to encourage them to take sustained actions by confirming benefits gained. Fulfilling these support functions seemed essential in achieving concrete results. A local network of trainers trained in the use of locally adjusted toolkits was vital for

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facilitating effective improvements in different small workplaces.

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