A framework toward quality assuring in-house workplace training programmes

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Abstract

Workplace learning is important because it facilitates the application of acquired knowledge and sharpening the skills of employees. This may involve exposing employees to experienced peers who may serve as mentors and regarded as experts to less experienced employees. However, studies have shown that expertise is not correlated to number of years in experience. These studies focused more on skills that require decision making and less on the application of physical mechanical skills. Internal consistency [in decision making] has been proposed as an important criterion in determining expertise as well as agreement amongst experts [or to a standard]. Knowledge is also as important as its application within varying contexts. In general everyday work contexts, it is important to ensure that employees work according to set standards where reliability and consistency is important. Organizations may neither have the time nor expertise to design and implement sophisticated training and assessment tools for employees. This paper presents a generic framework for the quality assurance of in-house training to promote competency management of employees. Training is proposed as an annual event for all employees, “experts” and novices. Training interventions are designed to transfer knowledge based on vocational knowledge and organization specific standards as inputs to training outcomes. Process monitoring serves as another input but also as a mechanism to evaluate the effectiveness of training. Hence it serves as a single learning loop to improve worker performance. Evaluation of organization specific standards during training serves as the double learning loop toward continual improvement of organization performance using the expertise and experience of employees.

Keywords: quality assurance, in-house training, single loop leaning, double loop learning

Literature review on workplace learning

The acquisition of formal university [of technology] qualifications may not be enough to ensure sufficiency of skills to perform competently in the workplace (Coll & Zegwaard, 2011). Skills are specific activities, and competence is the ability to carry out an activity effectively, safely and
efficiently to pre-determined standards (Welsh et al., 2009). However, new competencies may be developed when a person enters a new situation or task in which action is not predetermined (Ley et al., 2005). Informal workplace learning may therefore be important to ensure organization objectives are achieved by reflecting on outcomes or receiving feedback from more experienced personnel (Ley et al., 2005). Organization planning to achieve this in a structured predictable manner is important to ensure that developing competencies and improving performance of employees does not occur by accident. Workplace Learning and Performance (WLP) in this regard is important as it brings a dimension of performance where activities intended to be achieved to a defined goal may be related to measurable outcomes (Carliner et al., 2006). If performance can be measured, standards may be set toward improvement. Countering ad hoc learning begins with planning for learning. In 2009, Jensen argued that learning involves adding to the knowledge and skills of the student [employee] to achieve an increase in knowledge and skills. In formal education, specific learning objectives are set for the student to achieve in order for her to be deemed competent (Jensen, 2009). Reaching organization goals through individual performance targets may be planned for by aligning learning objectives to these goals and targets (Miros & Dale, 1996). Curriculum is part of conventional planning in formal education systems where curriculum design begins with the end product in mind (Taylor, 2009). In 2011, Mayfield and Mayfield asserted that linking individual performance to organizational goals, monitoring performance and providing feedback form critical elements in the planning for workplace learning.

Planning for workplace learning

Kanji, in 1996, defined learning as a process in which the individual can change their attitude to adopt a continuous development of basic knowledge and skills in pursuit of total professionalism. Effective learning is achieved through on-the-job experience. Learning outcomes should define what (tasks) an individual should be able to perform and how well s/he should be capable of performing these tasks as a result of the learning process. Therefore outcomes should be related to
behaviour and performance (Kanji, 1996).

Research has also highlighted that exposure to the right information does not necessarily translate into the adoption of correct practices by workers (Rennie, 1999) if there are no mechanisms in place to motivate action and to generate positive attitudes toward adhering to correct work standards (Tones & Tilford, 1994). Therefore, the evaluation of training effectiveness should go beyond evaluation of merely training programmes and trainees (Ehiri et al., 1997). It should rather extend beyond the “classroom” (Cook & Casey, 1979) to determine if correct practices are adopted and consistently followed at operational level by workers (Powell et al., 1997). Training and the development of worker competence should be sustained through periodic re-training (Cotterchio et al., 1998). Regarding quality training delivery within informal training programmes, the European Centre for the Development of Vocational Training, in 2011, emphasized the need for basic competencies of trainers. The setting of training objectives by trainers is a critical competence of such trainers who may double as curriculum developers.

**Organizational learning: Single and double loop learning**

In 1993, Kim described individual learning as taking place in four stages, observe, assess, design and implement. Assessing and designing is a conceptual dimension while observation and implementing is related to operational experience. People assess the experience consciously or unconsciously. By reflecting on observations (seeing what and how others do), they design an abstract concept of performance (how they should do it) and then test this design through implementation. Of course, errors may originate during the conceptual aspect of learning and in turn may lead to errors in performance during the operational aspect. For this reason, employee feedback is important (Mayfield & Mayfield, 2011). Kim, in 1993, also suggested single and double loop learning. Single loop is when an organization compares performance to a predetermined standard. Learning in this regard is from organization to individual ensuring that individual performance is consistent with organization standards and ultimately, its goals. Double
loop learning is when organizations standards are reviewed toward improvement. This may be due to external pressure in a changing external environment. Here employees may question standards based on operational experience. Single loop learning may be planned through internal mechanisms e.g. audits, process measurements. Double loop learning is complex because you have to capacitate the individual to think the continued relevance standards. Balbastre and Luzón, in 2003, supported the idea of knowledge sharing and transfer from experienced to less experienced employees through group learning. This learning may form part of single loop learning. In 1998, Dobson and Tosh suggested the need for competence review of employees. Outcomes of training should be determined by a rigorous evaluation process which measures organization objectives against changes in behavior and performance. In 2003, Balbastre and Luzón asserted that organization can only learn through their members, but that organizational learning is not the accumulated result of individual learning. External mechanisms stimulate learning and are important for organization survival. Adaptation to a changing external environment ensures this survival. It is not enough to facilitate learning in the workplace to ensure employees perform according to organization standards. This is because standards may become redundant or obsolete over time e.g. displacement of mainframe computers by personal computers. Failure to adapt to changing customer needs and competitor influences may lead to the extinction of the organization e.g. Enron, Commodore and Kaypro (Dervitsiotis, 2003). Organizational learning, to counter external pressures may necessitate double loop learning interventions which should be an ongoing process and not events at a time (Kim, 1993).

A proposed quality assurance framework

Defining quality

Quality is defined as *fitness for purpose*, the *fitness* of the training intervention is tailored toward a specific work *purpose*. This purpose is to ensure that employees perform operating functions according to specific standards. Training outcomes must careful be planned to match the purpose of
specific training being planned. In the discussion that follows it will be shown that through performance measurement, effectiveness of training may be gauged.

**Training standards and outcomes**

From figure 1 we note three critical input requirements. Input\(_1\) uses the organization’s own internal standards e.g. procedures to set outcomes. Organizations that have certified management systems e.g. ISO 9001 to quality assure products or services may use related procedures in this regard. However, training need not be limited to quality of services or products. For example, organizations with food safety, occupational health and safety and environment management systems may also use relevant procedures to set specific training outcomes e.g. safe food handling, safe work practices. An advantage of using this proposed framework is that work processes or activities and related standards must first be documented in procedures. These procedures stipulate exactly how standards are to be achieved. Thereafter they serve as an input to setting training outcomes. Input\(_2\) stems from process measurement and may include assessment of employee performance in an operational setting. This links from the organization procedures. Procedures may be planned for and employees trained, however operational practice demonstrates compliance to procedures and related standards. This input informs training outcomes through deviations and noncompliance with procedures. By presenting (giving feedback to) employees with operational deviations or noncompliance observed e.g. during audits they are made aware of problems. Single loop learning is facilitated here where employees are shown their mistakes that are a result of personnel error. Double loop learning may facilitated by engaging with employees during training to discover root causes of errors, if errors are suspected to be related to other sources e.g. incorrect methods, faulty machines, poor grade raw material. Input\(_3\) benchmarks typical formal quality assurance practices of training by using unit standards. Unit standards are *building blocks* of training programmes and stipulate learning outcomes for specific learning or skills e.g. writing a business plan. The skills and expertise of the (in-house) training designer may allow such a person
to collate relevant unit standards and integrate them with the other two input factors to inform very specific training outcomes. Skilled trainers may also facilitate learning through judicious design of training aids and evaluation processes.

**Single loop learning**

From figure 1, we note two output factors. The first relates to knowledge transfer. Through training outcomes, a degree of vocational training may be facilitated depending of course, on the outcomes. The intention is to expose employees with relevant information in order for them to perform tasks to required standards. Here we also aim to influence the conceptual aspect of learning namely assessing and designing. This is done in the *classroom* and addresses the *know why* aspect of learning. Working in groups on learning tasks, employees may be provided with scenarios where, for example decisions are required as outcomes. Group interaction may facilitate individual learning.

Knowledge evaluation may be considered for certain training interventions. The test for training effectiveness may be gauged through monitoring, in an operational setting. Here, process monitoring (may be a normal organization function) may be carried out at a level that can be related to specific employees on specific tasks. Assessment criteria stem from the same standards and procedures used to inform training outcomes. Of course, deviations from standards are addressed by managers/supervisors immediately, and feedback may be given to employees on the job. However, these deviations are also suggested as input. Here we note that by doing this, we move the influence of assessing and designing back to the *classroom*. This may serve to reinforce employees and guide less experienced employees.

The operational aspect of learning is influenced by providing employees with feedback on compliance. This may be feedback on good performance or on deviations. This serves to reinforce employees to either maintain current work performance or improve. This process here is influenced out of the *classroom* (addresses *know how to*) and again reinforced in the *classroom*. This aspect of
the framework facilitates single loop learning.

**Double loop learning**

Planning for double loop learning will require close cooperation with the trainer and technical operational employees. This is because an understanding of challenges in the workplace do not necessarily relate to employee non-compliance or an inadequacy of training. It may be the case of not *are we doing things right* but *are we doing the right things?* With an understanding of these challenges, trainers may be better equipped to design training interventions. This will also depend on the type of training. For example, double loop learning may not be very pronounced if we are exposing employees with knowledge on personnel hygiene in food safety training. However, this may be different if we consider a training programme set for government employees conducting food safety inspectors. If input from inspection reports show non-compliance at food facilities but legal action is not followed up as per stated law or policies. Double loop learning may be integrated into for example, inspection techniques (training outcome) training to gauge discrepancies in reporting and action. One may discover that health professionals who assess inherent risks at these facilities may cite contraventions to law but where overall risk to public health is not significant. This may present a case for example, to grade inspection results in terms of risk, and not on number of regulated requirements contravened. Appropriate enforcement actions may then be related to risk and be more meaningfully applied. This may then influence policy. This is an example of the second output factor, *external knowledge transfer.* We note from figure 1, that double loop learning facilitate improvement of business processes. Here, business processes or related standards may be changed to ensure relevance and/ improvement.

**Limitations of the proposed framework**

The framework is best applied in organizations that have well developed management systems e.g. well defined procedures related to e.g. customer/regulatory standards. This includes well organized processes and activities for process monitoring. For those organizations where these
system and processes are not well defined, they must first be established.

Classical double loop learning theories suggest that organizations adapt to external changing environment toward improvement. This requires methods such as external monitoring mechanisms e.g. customer surveys, environment scanning, competitor analysis. The framework addresses single loop learning effectively, however double loop learning is confined within a specific internal context e.g. observed internal errors or challenges.

**Conclusion**

In-house training can be quality assured internally by aligning training outcomes to procedures, internal standards, process measurements and relevant unit standards. By reflecting on past mistakes, single loop learning can facilitated to counter re-occurring deviations from standards. Double loop learning in this regard may also be facilitated during training by reflecting on the relevance of standard based on employee experience on applying them. However, double loop learning in this framework is limited to the experience of employees. Training interventions may be planned as annual events. Each year outcomes may be amended based on for example process measurement results. This may serve as a reinforcing mechanism influencing the conceptual aspect of learning. The effectiveness of training may be gauged through process measurements. Providing employees with feedback on performance facilitates single loop learning and also influences the operational aspect of learning i.e. employees may adjust behavior to meet required standards. Training course designers should work closely with operational managers to determine training needs as well as to formulate training outcomes. This approach will ensure greater impact of the training event. The quality of training will ultimately be determined by its fitness for purpose i.e. by modifying worker behavior to achieve set standard gauged through process measurements.

**References**


Figure 1: A proposed framework to quality assure in-house training programmes