Continuing Professional Development (CPD), Education and Training as Part of Technology for the Learning Process in Malaysian Built Environment

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Abstract

Problems associated to the performance, delivery and quality of product or services emanating from ineffective performance of the human resource in the Malaysian built environment are a continuing debate. Critics have been frequent in associating these shortcomings with inadequacies within the continuing professional development (CPD), education and training provisions offered to the human resource.

This paper presents the investigations on the underpinning concepts of CPD), education and training which identify their differences and similarities. This was on the premise that understanding the similarities and differences are very important as they significantly influence how the technology is disseminated and roles that must be to be played by the parties responsible for their design and delivery. The findings suggest the need to understand similarities and differences in the application of the meanings of education, training and CPD are important; but more importantly, they must all be underpinned with learning. It is imperative that that the parties responsible for the education, training, learning, development must appreciate learning. This must be conceived collectively applied within the design and delivery to the provisions to be effective.

Keywords: Built environment, human resource, education, training, continuing professional development (CPD), learning

1. Introduction

It is a general belief that the way forward for ensuring sustaining performance of the human resource is through the process of continuing professional development (CPD), education and training. Imbued with this conviction, the Malaysian built environment initiated many initiatives to offer to the human resource. However, to date results have been variable and critics frequently argue that that many of the CPD, education and training offered to

the human resource have been somewhat inadequate and ineffective.

The common argument arising from the challenge of providing effective CPD, educate and train the human resource is the scope to which the responsible parties conceive, design and deliver the CPD, education and training provisions. The recurrent questions of; "Who should provide the education?", "Who should provide the training?", "Who should be responsible for CPD? and "How should these initiatives be coordinated?" continue to be debated. In conceiving this issue, some have contended that differentiating CPD, education and training is a non issue as it is just a case of semantics. Yet in the practical operational context, the understanding and the appreciation of the similarities and differences have significantly influenced the way in which the parties responsible designs and offers the provisions to the human resource.

In conceiving this issue, this paper discusses the differences and/or similarities between CPD, education and training, their sustentative meanings and their features before underlining the elements that facilitate their effective provisions. This was drawn from a research undertaken by the authors to investigate the validity and appropriateness of the current provisions offered to the Malaysian built environment human, which in-part investigates CPD, education and training. The significance of the holistic appreciation of CPD, education and training underpinned by learning is underlined in the conclusion.

2. Scenario of the Malaysian Built Environment Human Resource

At its best, the Malaysian built environment is capable of matching its counterparts from the more developed countries delivered with world-class standards and quality. This can be exemplified, amongst others, from the construction and administration of the new National Administrative Centre at Puterajaya, Multi-Media Super Corridor, Petronas Twin Towers and the Kuala Lumpur International Airport (KLIA). However, performance in many other areas has been poor. Complaints of products and services offered not up to the required quality are recurring, many completed built infrastructure are deteriorating rapidly, many construction projects not completed on time, within cost or quality and reliance on imported workers continue to be on the increase (CIDB, 2006, Sariah 2003).

Malaysia has always modelled the UK system in developing the human resource. CPD, education and training offered to the human resource and CPDs are offered through the academic, vocational and professional frameworks. Organisations such as technical colleges, institutions of higher learning, vocational schools, national training organizations, in-house construction organizations, employers and professional institutions play central roles in offering the range of improvement pathways and alternatives for the human resource.

Whilst this provides the advantage of creating linkages between the frameworks, the task of outlining the scope of education, training, development and CPDs has been very complex. This is because in many

circumstances, these frameworks overlap and tends to blur the demarcation between them. This blurred demarcation tends to impede some activities to educate, train, develop and provide CPD to the human resource. Hassan (1994), Arshad (1997), Ghani (2003) and Ismail (2005) pointed out that in many instances, education, training, development and CPD in Malaysia tends to be polarised and fragmented, and this tend render the many of the provisions ineffective.

In conceiving this issue, technology together with education, training and CPD were investigated.

3. Technology, Education, Training and CPD

3.1. Technology

CPD, education and training in the built environment falls within the disciplines of studies of technology within the realms of social sciences. Technology is a broad concept that deals with the usage and knowledge of techniques 'tools' and 'crafts' in a particular specialized field of endeavor (Franklin, 1989). Frequently, technology have been used to refer to a collection of techniques to combine resources to produce desired products, to solve problems, fulfill needs, or satisfy wants; it includes technical methods, skills, processes, techniques, tools and raw materials. The scope of technology is diverse. As pointed by Bergmann (2006), that technology can be viewed as an activity that forms or changes culture. It is not limited to the application of subjects such as math, science, and the arts for the benefit of life as it is known. This can be exemplified from the rise of communication technology, which has lessened barriers to human interaction

and, as a result, has helped spawn new subcultures; the rise of cyberculture has, at its basis, the development of the Internet and the computer.

Social science is concerned with the study of the social life of human groups and individuals which includes anthropology, communication studies, criminology, economics, geography, history, political science, psychology, social studies, and sociology (IES, 2007). The social sciences are sometimes criticised as being less scientific than the natural sciences, in that they are seen as being less rigorous or empirical in their methods. Studies in social sciences are considered to be largely observational, in that explanations for cause- effect relationships are largely subjective.

Built environment refers to the man-made surroundings that provide the setting for human activity, ranging from the large-scale civic surroundings to the personal places (Wikipedia, 2006).

Technology within the context of the built environment, CPD, education and training is an interdisciplinary field of study to address the design, management and use of these man-made surroundings, and their relationship to the human activities which take place within them. The field is generally not confined to just academic discipline in its own right, but as a "field of application" which also draws upon the individual disciplines of economics, law, management, design and technology.

3.2. Education

Education originates from the Latin word which means "to raise", "to train" or "to bring up". Wikipedia (2007)

defines education also as a discipline, a body of theoretical and applied research relating to the understanding and improving the process of teaching and learning. Allman (1982), Martin (1998), Hughey and Mussnug (1997) and Matrix (1998) converge to argue that many early definitions of education tends to advocate a front-end model of education, which put the idea that education occurs during the formulative years, and when socially matured, education ceases. Peter (1973) perceives education as a humanistic process that leads to of an individual being 'educated'.

Gura (1992) asserts that the current concepts of education emerged significantly from the earlier works of Friedrich Froebel and John Dewey. Friedrich Froebel (1782-1852), who introduced kindergarten as for early childhood education demonstrated that children learn by playing. John Dewey (1859-1952) introduced the idea that education and life are interrelated, not separate; children learn best by doing and acting on the world, and by continuity of experience which is essential to growth. Developing further from these concepts, Richardson and Wolfe (2001) and Dewey (2005), suggest that formal and informal education is important but they need to be differentiated. They conceive formal education as highly structured and informal education takes place mostly outside recognised educational institutions.

Reid and Barrington (2004) and Bereiter (2002) view education as also taking place beyond individual's early intellectual development stage. Jarvis and Griffin (2003) stresses that education must involve learning that must be built on understanding. They

add that education is not a single event and should be planned rather than haphazard. Cross (2006) and Merriam *at al* (2007) maintain that learning in education should not be limited only to the formal process; education should be principle driven, teaches general skills and knowledge for the sake of a field discipline rather than having a specific job focus.

3.3. Training

Wikipedia (2007) defines training as the teaching of vocational or practical which relates to specific useful skills. In noting the variable definitions of training, Anderson (1994) suggest that training is a systematic development of the attitude, knowledge and skill behavior pattern required by an individual in-order to perform adequately a given task or job. Thomson (1990), Gravan *et al* (1995), Reid and Barrington (1999) and Matrix (1998) are common in defining training as a deliberate, planned and systematic process to modify, develop knowledge, values, attitude, techniques and skills through learning experiences, to achieve a set level of performance in an activity or a range of activities. Consistent in their views were the belief that training must be derived from understanding the learning process and if successful will speeds up the learning process; training is focused to make the individual proficient by instruction and practice; and is a job specific form of education which can be general or organisation specific but does not necessarily relate to the job that the individual undertakes.

Thomson (1990) conceive training as a deliberate, planned and systematic process to modify, develop knowledge, values, attitude, techniques and skills through learning experiences. This is to

achieve a set level of performance in an activity or a range of activities. In differentiating training from education, Rodgers (1986) suggest that training have narrow goals and specifies the 'right' way to do something. Reid and Barrington (1994), Thomson (1990), and Harrison (1993) commonly maintain that training should focus at making the individual proficient by instruction and practice. It is a job specific form of education, which can be general or organisation specific, but does not necessarily relate to the job that the individual undertakes. Gravan *et al* (1995) emphasise that training must be developed from understanding the learning process and how humans learn because effective training speeds up the learning process. In differentiating formal from informal training, Thomson (1990) suggest that in contrast to informal training, formal training entails deliberate and structured learning process. Hendry *et al* (1995) underline the continuum of training as encompasses initial, continued skill training and re-training.

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Gravan *et al* (1995) emphasise that training must be developed from understanding the learning process and how humans learn because effective training speeds up the learning process. Martin (2006) conceives that training can be a subset of learning but warn that training alone is not powerful enough to develop people in organisations. In differentiating formal from informal training, Wilson (2005) suggest that in contrast to informal training, formal training entails deliberate and structured learning process. Hendry *et al* (1995) underline the continuum of training as encompasses initial, continued skill training and re-training. Axtell *et al* (1997) affirms that initial transfer of skills is an important pre-requisite of subsequent skill application at the workplace.

3.4. Continuing Professional Development (CPD)

CPD in the built environment originates from the concepts of human resource development within the context of general management. Baum (1995), and McIntosh (1994) identify development as more focussed to the learner than the learning. It is not concerned with the uniformity of learning outcomes as training is but concentrates on enhancing jobs by enhancing employees. Many of the notions of the development points to the issue of expanding one's potential through conscious and unconscious learning process with the view to

enabling the individual to take up a future role within an organisation. Amongst them, Pedler (1995) defines development as making the most that one can out of opportunities in both the outer and inner sphere, while Baum (1995) Lauermann (1992) characterises development as a process that can take place at any time and is not constrained by formal parameters or at specific points within an individual's life cycle. Neither it is confined to the classroom or coaching situation, nor is it situational term restricted to planned or formalised group sessions.

Knight (2002) and Eurat (1999) note that CPD emanate from the concern that the lifespan of knowledge gained during the initial professional course will decline with change. To circumvent this, especially within the current rapidly changing business environment, professionals need to adopt education and training as a continuous lifelong process to be in touch with the current developments. They maintain that this has been the basis for professional institutions to ensure that their members can continually maintain and develop the knowledge and competency level. This is supported by Cerverno *et al* (1992) who add that competence development is an integral part of becoming a sustainable competent professional.

Dreyfuss and Dreyfuss (1986) observe that a person's learning starts from a novice to become an advance beginner before proceeding to be proficient, then competent and finally an expert. Eraut (1999) suggest that much of the learning required to attain full professional competence in CPD actually occur after the completion of formal training. He suggest that off-the-job and work-based

learning as the fundamentals for ensuring the continuous process of development. Cheetham and Chivers (2001) suggest the important need to appreciate the processes that leads to professional competence. They assert that this must include the opportunity to experience a wide range of

developmental experience; the motivation to acquire the necessary competencies and to improve continuously with adequate practice in carrying out the various key tasks and functions in order to master the requisite competencies. They add that persistence in overcoming difficulties and in preserving when things are not going well together with the influence and support (when needed) of others as the essential ingredients of effective CPD.

4.   Evaluating the differences and similarities

Analysis of the education, training and CPD identified their differences and similarities. It is logical to suggest all are complimentary components of the same process, i.e. the enhancement of human potential or talent. Education is often viewed as the beginning of the individual's intellectual development. Training is frequently viewed as a pre-requisite for a job to they certify his/her ability and suitability to the prospective job. CPD appears to be the primary processes to which education, training and formal education contribute, which in turn facilitates 'growth' or 'development' within the individual and the organization.

There are important distinguishing features can be drawn. Education is generally focused at the individual and its objectives are usually less

quantifiable as each individual's learning priorities differ. In a training context, behavioral objectives are quite specific and are usually related to the present job. In CPD, it is focused primarily on future roles, behavioral objectives tend to be less precise. The nature of the learning process within education, training, development and CPD can be different. Training mostly involves learning in a structured mechanistic manner. On the other hand, education and CPD tends to emphasise on 'organic' learning practices where the focus of change in the individual, rather than what he or she can do. The learning context of each also varies. Training can also be associated with 'learning by doing' whereas education is more synonymous with 'learning by thinking'; and CPD involves learning thinking, doing and feeling.

The distinction between education, training, development and CPD is frequently a function of their use. Within the context of the development and improvement of the Malaysian built environment human resource, this may be part of the educational initiative, but may equally comprise an element of an industry level or in-house management training or CPD programme.

It is arguable that the debate about the similarities or differences between education, training and CPD is primarily academic. However, in the real implementation process there is a tendency to polarise them. Absolute definitions are usually not really helpful in understanding the role of education, training and CPD. Within the practice of the education, training and CPD in the Malaysian built environment, such distinction have occurred and is still occurring.

Identifying learning as the emergent and central underpinning theme in education, training and CPD, learning was investigated and is discussed as follows:

4.1. Learning

There is a great difficulty in defining learning precisely and this is largely due to the lack of a common accepted definition Merriam *at al* (2007). In acknowledging that learning covers such a wide spectrum of conditions, the culminating views of Gravan *et al* (1995), Mullins (2002), Osborne (1996), Beaton and Richards, (1997) suggest that learning be conceived as about the attainment of knowledge and skills.

The origins of the 'modern' study of learning based on the concepts of 'Behaviorism', 'Cognitivism' and 'Constructivism' drawn from the works of earlier leading psychology behavioral scientists such as Pavlov, Watson, Thorndike and Skinner were noted from Mullins (2002), Martin (1998) and Torrington *et al* (2002). 'Behaviorism' advocates the theory reflexes could be 'conditioned' to respond to new situation and stimuli. In 'cognitivism', cognitive theorists view learning as involving the acquisition or reorganization of the cognitive structures through which humans process and store information. They suggest that much learning involves associations established through contiguity and repetition, and the importance of reinforcement in providing feedback about the correctness of responses. "Constructivism' propounds the theory that knowledge is constructed from experience, learning is a personal interpretation of the world and is an active process in which meaning is developed on the basis of experience. Constructivism promotes

learning as should be situated in realistic settings; testing should be integrated with the task and not a separate activity. In appreciating these concepts, Abdullah (2001) adds that the individual cognitive learning process begins with the individual's sensory input where information coming from the senses is transformed, produced, elaborated, recovered and used. Gravan *et al* (1995) maintain that learning is not a single concept and there are many perspectives to learning which can lead to different types of learning.

In reviewing the works of Pavlov, Watson, Thorndike and Skinner, Klob (1984) and Mumford (1991) argue that 'passive' approach to learn neglects the human 'cognitive' elements such as curiosity, the desire to learn and feel. Klob (1984) proposes that learning takes the form of a cycle beginning with experience, followed by observation, theory building and putting into practice cycle. In supporting Klob's learning cycle, Mumford (1991) adds that the learning veers away from the cycle after repeated exercise. The theory of learning based on the 'learning curve' advocates the notion that individual's tend to learn a new task more rapidly at first and the 'learning curve' is steep, and then gradually plateaus after
acquiring significant experience (Martins, 1998) . It advocates the view that individuals tend to learn a new task more rapidly at first and the 'learning curve' is steep, and then gradually plateaus after acquiring significant experience. Torrington *et al* (2002) suggest a variation that in reality, the learning process is characterized by a series of learning curves and loops.

Rae (1999), Abella (1987) and Mathews (1995) suggest that in contrast to

traditional learning, 'active' learning is more effective because the individual will be able to learn better through activities such as 'action learning', 'experiential learning' and 'problem-based' processes. Abella (1987) identifies task-force, exercise, case discussion, simulation, games, role-play exercise, group discussion and presentation/lectures as the methods that can be applied in effective learning processes. Abdullah (2001), Bee and Bee (1998) and Reid and Barrington (2004) mutually believe that to promote effective learning, individuals should learn not only by adaptation but also through manipulation or 'interventions'.

5. CPD, Education and Training: An Integrated Approach

While the concepts discussed above are characterised as distinct in some way, there are elements common to all of them. To begin with, they are all concerned with learning. CPD appears to be the primary processes to which education, training and formal education contribute, which in turn facilitates 'growth' in both the individual and the organization. Education and training tends to be viewed as a pre-requisite for a job because they certify the individual's ability and suitability to the prospective job. It is therefore logical to suggest that all are seen as complimentary components of the same process, i.e. the enhancement of human potential or talent.

However, there are important distinguishing features can be drawn. Education is generally focused at the individual and its objectives are usually less quantifiable as each individual's

learning priorities differ. Within the training context, behavioral objectives are quite specific and are usually related to the present job. In development and CPD context, it is focused on future roles, behavioral objectives tend to be less precise. The nature of the learning process within education, training, development and CPD can be different. Training mostly involves learning in a more mechanistic manner. On the other hand, education and CPD tends to emphasize on 'organic' learning practices taking place at different phases of the individual's life where the focus of change in the individual rather than what he or she can do. The learning context of each also varies. Training tends to be associated more with 'learning by doing' whereas education is more synonymous with 'learning by thinking' while CPD involves more of learning by thinking, doing and feeling.

The distinction between education, training, development and CPD is frequently a function of their use. Within the context of the development and improvement of the Malaysian built environment human resource, this may be part of the educational endeavour, but may equally comprise an element of an industry level or in-house management training or CPD programme. It may be argued that the debate about the similarities or differences between education, training, development and CPD is primarily too hypothetical to be significant. However, in the real implementation process there is a tendency to polarise them especially when identifying parties, what they should do, especially when structuring the provisions for the human resource. In the final analysis absolute definitions are not really helpful in understanding the role of educators, trainers, and CPD

providers. In practice in the Manaysian built environment, such disconnection have and is still occurring.

6.   Need for a holistic view

There is a general tendency to view the concepts of education, training and CPD as separate, with education being viewed as occurring primarily in the school system and system of higher vocational education. Training is viewed as conducted by specific companies or organisations to meet a particular need which is often occupationally differentiated. In many training cases, the employee is not selected unless he or she is fully educated for the job prior to applying for it; training is job specific and many other learning activities are not the employers concern. Much training, development and CPD is mostly conducted on-the-job or through self-directed models, manual or curriculum.

As people and technology changes, the scope of professions is fast changing, distorting boundaries separating job and professions. It cannot be assumed that organizational or industrial CPD, educational and training programmes can adequately be covered along traditional mode anymore. The complexity, quantity and quality of knowledge, skills and competency have changed so much within the last decade, exacerbated by the speed at which information is transferred and exchanged. Employees must now cope simultaneously with large databases, integrated management and information systems as well as traditional manual systems. This tends to challenge the idea that places education first, training second, development follows and so on, on the justification that in the

information technology age now the human resource can now adapt to changes in a much shorter period of time than before (Hammet and Pettigrew, 1994).

The view that CPD, education and training as separate is now getting to be more outdated as they no longer have clear boundaries that they once did. The distinction is further blurred when one considers the increasing pressures on employees to be more 'self-dynamic' by being productive, innovative, and change orientated. CPD, education and training providers in the Malaysian built environment should start to be concerned with issues of relevance and practicality in terms of what they cooperatively provide.

7. Conclusion

This paper has provided significant evidence from which the understanding of the key concepts of CPD, education and training should be developed. Notwithstanding the situational variables of the human resource or the peculiarities of education, training and CPD; appreciation of the fundamentals of how the human resource can effectively learn is critically important.

While the debate on the similarities and the differences between education, training, development and CPD may be continuing, the holistic and sound understanding of their concepts and variable processes should be the principal starting point for the consideration of their provisions. There is much to be learned and re -learned if performance improvements of the Malaysian built environment human resource are to be better realised. It is imperative to appreciate that education,

training and CPD as an integrated process and as a whole, and bonded together with sound understanding of learning concepts.

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