

# DEVELOPING PROFESSIONAL LEARNING IN K-BASED ECONOMY AND K-SOCIETY USING ACTION LEARNING AND ACTION RESEARCH APPROACHES

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## ABSTRACT

Following rapid economic and social advancement, Malaysia has placed a great emphasis on Information and Communication Technology (ICT) education and training, and particularly on the development of a knowledge or k-based economy and k-society. In the wake of new technologies and k-based activities, there has arisen an enhanced need for learning approaches that will develop professional knowledge and skills in line with new approaches to knowledge creation and utilization. Action Learning (AL) and Action Research (AR) approaches have received recognition as effective strategies for facilitating change in a variety of organizational learning and change-management contexts. This paper examines the basic concepts of AL and AR approaches that are widely used and suggests relevant learning strategies to develop work place or on-the-job learning in a k-based economy and k-society. A few critical success factors in AL and AR approaches are discussed in order to highlight human capacity building for k-workers and k-professionals.

Key words: Action learning, action research, knowledge-based economy and k-society, on-the-job learning, information and communication technologies, learning approaches.

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## INTRODUCTION

In recent years Malaysia has reengineered herself rapidly to meet the challenges of a new economy and ksociety. Efforts are being made to develop a knowledge-seeking culture among Malaysians in view of the rapid changes in technology and the increasing knowledge intensity of the economy. As the former Prime Minister of Malaysia, Tun Dr. Mahathir Mohamad (2002) had very perceptively pointed out:

*Recognising the critical need for knowledge as input, Malaysia has embarked on the transformation from the input-driven growth strategy that had served her well in the past to one that is increasingly driven by knowledge in order to achieve sustainable high growth and development.*

As Malaysia gradually transits from a production-based to a knowledge-based economy, several questions related to the above transformation are commonly posed. For example:

- What is a k-based economy?
- Why do we need a k-based economy and k-society?
- Do we have k-workers and k-professionals in our economy?

- How do we plan, implement and evaluate k-based events in our economy and k-society?
- Are we aware of the critical success factors or strategies to achieve the objectives of the k-based programs?
- Are there any policies and directions to help us effectively implement the k-based projects?

There are many concerns and issues that have been raised from time to time in understanding a k-based economy and k-society. Some of the concerns (the first three questions posed) are related to the concepts of k-based activities and the capacity building of human resource in k-based programs for k-workers and k-professionals. Others (the last three questions posed) pertain to implementation of k-based programs to meet new challenges of economic and sociocultural transformation. Although the questions, concerns and issues are pertinent, addressing all of them at once is difficult as there are multiple perspectives involved in defining and implementing k-based activities. There are many different definitions of a k-based economy. However, these definitions often revolve around the notion and concept based on the generation, utilization and distribution of knowledge that constitute the primary engines of growth and wealth creation in the economy.

In an attempt to formulate policies and direction, the Malaysian Knowledge-based Economy Master Plan (Institute of Strategic & International Studies, 2002) has suggested some directions and recommendations. For an overall development of Malaysia it proposes an economy in which knowledge, creativity and innovation will play an ever-increasing and important role. Several forums and organizations in Malaysia have been addressing the issues of k-based programs and implementation strategies. For example, the National Information Technology Council (NITC) has formulated the National Information Technology Agenda (NITA) that addresses the need for guidelines for k-based activities. Increasing attention has been given to the need for organizational change and the changing of mind-sets through continual and effective learning approaches. It is recognized that managing organizational changes and developing human capacity for changes require tools and strategies. The tools for k-based activities in the new economy and k-society are often provided through the use of state-of-the-art ICT. The tools, however, cannot be used effectively unless the people learn and develop knowledge and skills on how to use them for knowledge creation and utilization.

This paper proposes that AL (Action Learning) and AR (Action Research) can be used as catalysts to improve learning in the contexts of k-based activities and tools for k-workers and k-professionals in order to develop their capacities to implement k-based programs. The paper also focuses on the processes of learning that will generate new knowledge and understanding using AL and AR methodologies. The rationale for introducing AL and AR approaches into k-based events is three-fold. First, the transformation into k-economy and k-society is a paradigm shift from traditional ways of doing things to more creative and innovative ones. Second, in adopting and adapting k-based events, specific enabling skills are required to facilitate the processes of learning, understanding (thinking or reflectivity) and discovery. Last, the basic principles of AL and AR enable us to learn relevant enabling skills and tools in k-based events and contexts. These skills and tools enhance our thought processes in collaborative social learning environments. The AL and AR environments are conducive to the development of several core values in learning—such as synergy, team

spirit, permeability (being open to self-criticism and critique from others and to self-reflection and reflection with others) and symmetrical communication (mutual respect for individual needs and differences, and sharing responsibility for common goals).

### **ACTION LEARNING (AL) IN K-BASED CONTEXT**

AL is often used by people to learn on-the-job and to gain experience of working with others. It proposes that teamwork and cooperative learning will generate more fruitful results and considerably improve performances. The role of experiential and collective learning is crucial, as most of the k-based activities and events such as software development in ICT require the approaches of AL in the training of kworkers. Watson (1999) argues that AL is important as it provides experience of working with teammates and solving real problems, and it also offers tangible, meaningful results and rewards. Watson's studies are based on his experience of working with teams of software developers. He used AL approaches to find out team behaviour in learning (team spirit), communication skills of teammates (listening, persuading, arguing, questioning and interviewing), the monitoring and control mechanism in software project development process (team meetings, status reports, software documentation standards) and the risk management of the project (risk of misinterpreting job requirements, pressure of time constraints and client expectations). Watson's AL approaches make use of the basic principles of Kolb's (1984) model of experiential learning, which states "learning is the process whereby knowledge is created through the transformation of experience."

In the processes of AL, it is important that there be a designed program and a team of people with different learning experiences. Usually, the more experienced teammates serve as mentors to the less experienced ones. Mentoring can be conducted in different learning environments. For example, mentoring is not necessarily in a face-to-face context; it can be e-mentoring with Q&A in e-group discussions, e-forum, e-chat and other instructional or non-instructional formats.

Besides the social interaction of mentoring, there are other programmed learning tasks that are essential in the AL approaches. They include the four key activities:

- Reflective Observation (RO)
- Abstract Conceptualisation (AC)
- Active Experimentation (AE)
- Concrete Experience (CE)

The above activities can be factored into k-based project schedules using AL approaches so that the participants of the program can conduct RO or reflective observation (thinking about and questioning observations) with the teammates and mentors to solve a proposed problem. Such reflective skills will enhance their ability to develop mental models to think through the problems at hand and the system needed to solve problems. The AC or abstract conceptualization skills facilitate the ability to develop cognitive maps by organizing thematic consistencies in diverse information. AE or active experimentation involves building operational frameworks and prototypes, and running test or trial programs

to provide solutions to problems. CE or concrete experience is that stage of learning when the experimental knowledge is put into the system and utilized to solve problems.

It is apparent that the key AL activities generate the development of both personal knowledge and team knowledge. Some of the personal or team knowledge can be explicitly codified and made known to people; others remain as tacit knowledge that are hard to specify. Very often, the knowledge generated, used and shared can be the collective intellectual property or capital which can be promoted or further enhanced through learning and cooperation.

Based on his personal understanding of the concepts and growth of AL, Revans (1991) argues that the notion of cooperation in AL is crucial as there are strengths, weaknesses, opportunities as well as threats (SWOT) involved in AL activities. In the context of a k-economy and k-society, some of the issues of strategic partnership and cooperative learning require SWOT analysis. It is an area that is still underexplored as AL is not yet a dominant learning approach in our learning organization and sociocultural transformation.

## **ACTION RESEARCH (AR) IN K-BASED CONTEXT**

AR is often defined as a systematic investigation into human practices in order to provide understanding and improve the quality of learning and change needed by social organizations. It is often perceived as “the study of a social situation with a view to improve the quality of action within it” (Elliot, 1991).

AR is similar to the AL approach as both are related to reflective learning activities. However, AR is different in that it is more concerned with a form of reflective enquiry undertaken by participants in order to improve the “rationality” of their practices (Carr and Kemmis, 1986). Reflective enquiry involves dual moments of learning, that is, action (doing) and reflection (thinking) and the outcome is the generation of situational understanding and knowledge. Several approaches are used to conduct the reflective enquiry in AR, the most common being cyclic phases and learning activities, such as the following:

- **Posing Questions**

The purpose of posing questions is to critically examine the social context, problematic situations, dilemmas, concerns or taken-for-granted situations; to analyze and critique the issues, problems and practices with a view to change or improvement; to define the scope and focus of the investigation; and to identify the opportunities and venues for change and improvements.

This phase is crucial because it helps the action researcher and his/her teammates to understand their “reality” as far as possible, and to encourage as well as empower them to commit to change. It is a phase of reconnaissance when an understanding of the situation and context is crucial to establish a common concern for improvement and change. As we are moving into a keconomy and k-society, many events involve a paradigm shift to innovative ways. Thus, facing realities and posing questions for change and improvement are important starting points. For example, many of the decisions on using ICT as a tool for organizational improvement and k-based advancement are problematic as they may involve heavy

investments of time, money and human resources. Posing critical questions to create understanding of the real situations may help to clarify issues and promote shared concerns.

- Defining Problems And Making Need Analysis

Identifying the shared concerns after posing questions enables the AR team to address issues and define problems clearly and realistically. It also helps to do the need and gap analysis (the gap between the desired/expected and the real needs), and promotes the use of SWOT analysis to develop situational understanding and knowledge-in-use. In developing k-based events, clarity in problem definition may minimize the risk taken in the k-projects. Having a more realistic need provides a better understanding of the outcome of k-activities or deliverables.

- Proposing And Making Action Plans

Planning of action steps to redress problems or concerns is important in AR. It provides blueprints for action and suggests opportunities and alternatives for change. The development of the action plan involves a preliminary study, a data gathering process and finally the analysis of such data. This phase is pertinent to providing the groundwork and strategic planning, and to the implementation of change or improvement. During this phase, the collective undertaking for making possible such changes is crucial as collaborative efforts and responsibilities to source financial and human resources to improve the processes of change are some of the major tasks to be undertaken by the action research team.

- Implementing The Action Plans

In a k-based economy, formulating project objectives and proposing action plans may take some time. Thus, in implementing action plans, timing is crucial. During the implementation stage some of the objectives may change and events move fast, making the action plans out-of-date or behind time. Therefore, some of the k measures to promote the economy may be “just-in-time” action plans implemented with modification and adaptation.

In this phase, AR is needed to document the case studies of implementation and its impact. RA or reflective approach is strategic in order to learn the critical factors of success or failure and best practices as well as fatal events. In the context of a k-based economy project involving changes in life styles through the use of ICT, one is aware that the implementation will affect people, their knowledge base and their ways of life. For example, the advancement of mobile technologies such as hand-phones may affect life, health, and wealth of knowledge. During the implementation, a host of unexpected events and factors may be present and the objectives may have to be shifted. Various research methods and strategies (both qualitative and quantitative research designs) can be used to gather data in order to find out the impact and the outcomes of the action plans.

- Reflecting The Processes Of AR

Reflection is a tool used by action researchers to critically examine the processes, events and contexts involved in the project. Knowledge generation, utilization and creation during this phase are both summative and formative. It is a summative reflection if the entire process of posing questions, planning and implementing action should be carried out in the final stage of summing up the project. If it is formative, it should facilitate the formulation of the next action research by posing questions, raising issues and concerns for further action. In doing action research, there are many reflective skills that can be used to facilitate reflective enquiry. For example, the skills of advocating, negotiating, resolving conflict, problem solving and decision making enable better performance in implementing action plans.

In the contexts of k-economy and k-society, AR promotes professional learning of k-workers. It develops professional competencies in action (doing) and research (reflection). It helps the professional in collaborative learning and situational understanding. It provides the kworkers with the necessary research skills and knowledge to communicate their reflective learning outcomes to change and improve the quality of life of people.

## **HUMAN CAPACITY BUILDING IN AL AND AR**

With the emergence of k-workers and k-professionals, we need to examine how AL and AR approaches can facilitate the development of a number of abilities so that human capacity building in these areas is possible. Firstly, there are core competencies such as literacy and communication skills, creative and cooperative learning skills, and life planning and learning skills. These are generic learning skills that will enable k-workers to learn to use ICT effectively in their day-to-day activities. AL and AR will enhance these core competencies and refine some of the enabling skills. In the cooperative learning contexts of AL and AR, these skills are further enhanced. Some of the on-the-job learning in software industries indicates the importance of these enabling competencies (Watson, 1999).

Secondly, there are many cognitive abilities that can be developed using the AL and AR approaches. For example, AL helps in observation and experimentation, and in abstract conceptualisation (making cognitive maps); AR facilitates the situational understanding of controversial issues, making action plans and reflection. These cognitive skills, coupled with the core enabling skills, provide the capacity to develop communicative k-workers and k-professionals who can generate, utilize and create knowledge to improve the quality of life of people.

Thirdly, the motivational aspects of learning are developed because the achievement motivation and goal setting ability are enhanced if there are successes. However, if there are failures, the capability to take risk, and to tolerate ambiguity and failure will be strengthened. It was noted in some of the present author's involvement in knowledge-in-action studies of youth k-based community projects, that goal-setting motivation and achievement are important. Motivational aspects are important for sustaining the growth of the projects and many critical factors for success or failure involve the ability to have shared goal setting and risk taking. The strategic partners may not understand this motivational

dimension of learning well in advance. But as they progress through their projects, they realize that it is important that they share their common goals and mission in order to achieve the desired goals.

Fourthly, AL and AR stress the importance of interpersonal skills in collaborative learning and teamwork. In a k-economy and k-society, most strategic partners are cooperative learners and the interpersonal skills help them to have empathy for their coworkers and to promote feelings of efficacy in others. They will attempt to practice all-win situations and to develop emotional intelligence and intrapersonal capabilities to cope with different situations.

It is also important to note that AL and AR develop networking skills, the ability to influence net-workers, the goal-sharing ability and the micro-political awareness—the ability to sense and identify the work group and power coalitions with regard to the hierarchy and the orientation to the goals of the organizational change.

Lastly, with regard to learning outcomes of AL and AR, there are several important observations. It is noted that the outcome of learning in AR is more related to the establishment of a “community” of learners with shared concerns and goals. For example, in documenting a case study of AR for 22 years, Bruce and Easley (2000) point out the importance of accommodating differences and providing mutual support for long-term collaboration in organizational change. They note that in AR, the notion and concept of “community” is important as a community can raise as many problems as it solves and it can also create a sense of focus, of belonging to something, without denying individual differences in experiences, values and perceptions. However, the outcome of learning in AL is more related to individuals in teams or groups “learning how to learn” more effectively. Bourner and Frost (2000) studied the learning outcomes of action learning approaches of managers in open Human Resource Management (HRM) programmes and in-house HRM programmes. Their findings indicate that the development of self-understanding with regard to “learning how to learn” is more evident in AL than in AR approaches to learning.

## CONCLUSION

In a k-based economy and k-society, human capacity building is a pertinent area of concern. What are the learning approaches that will facilitate and enhance the development of k-workers’ and k-professionals’ ability as community members in the acquisition of k-transformation? This is an important area of investigation. This paper highlights AL and AR as two approaches that provide basic principles of learning to meet the challenges of k-economy and k-society. However, these two approaches still need exploration and discovery by those empowered to learn because the methodologies in these approaches are many and varied. Hollingsworth (1997) argues that there are multiple perspectives and discourses in action research. Kim (1997) examines the environments of action research and concludes that situational/contextual understanding is important to promote learning. Dadds (2002) gives a more inspiring note of AR by taking curiosity seriously in research-based professionalism. In essence, a k-based economy and k-society propose that human learners endeavour to seek knowledge, build, generate and utilize new knowledge using the tools of learning (reflective skills in AL and AR approaches) and tools of ICT technologies, also known as the hard skills of learning.

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