Performance learning

Peter A.C. Smith

The Leadership Alliance Inc., Holland Landing, Ontario, Canada

Describes a new methodology "Outcomes-driven performance learning and development" (performance learning or PL) which addresses shortcomings often evident in the practice of action learning. These shortcomings include lack of systemic strategic framing, problem-structuring, problem-solving and learning processes founded narrowly on the scientific method without regard for readily accessible up-to-date tools and methods; and lack of routine explicit exploration of mindsets and other "soft" factors important to personal development. Demonstrates that performance learning is consistent with the aims of Revans' Systems Beta, Alpha and Gamma. Concludes that performance learning is uniquely relevant to the development of a learning organization.

Introduction

This article explores aspects of the manner in which action learning is typically practised, and describes an alternative methodology, "outcomes-driven performance learning and development" (performance learning or PL) which should be considered when the context is appropriate. It will be demonstrated that performance learning is particularly relevant to the development of a learning organization

It is not claimed that the new methodology is action learning, or is even a variant of action learning. On the other hand, it is freely acknowledged that performance learning is based on the experiential principles of action learning, and owes a great debt to the previous work of an army of action learning practitioners.

Introductory discussion

Action learning as originated by Professor Reg Revans in the 1940s (Revans, 1945) embodied an approach based on "Comrades in adversity learning from and with each other through discriminating questioning, fresh experience and reflective insight". This seemingly very simple methodology has demonstrated in innumerable cases that its practitioners can effect the complex and often inscrutable processes of natural learning through personal and collaborative reflection.

It is probably fair to say that the majority of practitioners today conduct more complicated process variants on the original method for reasons of praxiology (Smith, 1997a) if for nothing else. Indeed, in the spirit of action learning, it may be healthy for action learning itself be the object of such questioning and revision (Botham, 1995), although it has been suggested that anything gained through simple tinkering inevitably negatively influences the power and simplicity of Revans' original method (Smith, 1997b).

Revans himself has steadfastly resisted the idea that additional protocols were necessary to ensure the method's usefulness (Revans, 1991). In fact Revans remained opposed to

even any detailed description of action learning itself "... the day it is accurately described in words will be the day to stop having anything to do with it" (Revans, 1983a). However, Revans did stipulate that participants follow three general processes which he defined and termed Systems Alpha, Beta and Gamma (Revans, 1971).

System Beta loosely frames the steps which Revans anticipated participants would undertake in progressing their problems to actionable solutions. Unfortunately, Revans set out Systems Alpha and Gamma in much less detail; System Alpha is concerned with strategic design; System Gamma addresses the managerial mindset and the means to monitor learning.

Of the systems proposed by Revans, only System Beta has found a receptive audience; even so, designers and facilitators of action learning programmes have in the main still preferred more laissez-faire approaches, based on their own idiosyncratic experiences. Lack of understanding of System Alpha has resulted in its almost total lack of application; the consequences of this ignorance include serious strategic weaknesses in the design of action learning programmes, and limited practitioner-learning at Bateson's important Learning Level 2 (Bateson, 1972). Furthermore, inability to come to grips with Revans' System Gamma has typically resulted in very weak monitoring of "learning to learn", and has essentially precluded anything as systemic as Bateson's Level 3 Learning (Bateson,

The issue of lack of systemic strategic focus is all the more critical since problem solving is the vehicle through which the learning in action learning takes place. As Ackoff has so eloquently illustrated (Ackoff, 1981), organizations and individuals do not face problems that are independent of one another, but rather must tackle dynamic complex tangles of interdependent problems which Ackoff called "messes". As practised in the typical action learning programme, the habit of learning to solve a problem in isolation from the overall systemic situation almost certainly results in sub-optimization (Senge, 1990).

Management Decision 35/10 [1997] 721-730

Mossman (1996) has posed the perceptive question: "What if action learning focused on creating desired outcomes rather than on solving problems?" This is consistent with Ackoff's approach to "messes" (Ackoff, 1981) which relies on dissolving them (changing the nature of the system in which the problems reside, or altering the environment so that the problem ceases to exist) rather than solving them (based on a scientific selection of means that it is believed will yield the best possible result). Furthermore, it is consistent with some current definitions of learning based on "creating the future that one desires" (Senge, 1990) and performance improvement (Smith, 1993a).

With insistence on problem solving as the vehicle for action learning, but without System Gamma or an alternative, the likelihood that Ackoff's "dissolving" will occur in the typical action learning initiative is slight. There is no question that action learning as typically practised is a proven powerful experiential learning method. However, this article proposes that a systemic outcomes-driven approach rather than a mechanistic approach, with its preoccupation with analytical problem solving, will tend to maximize the potential benefits inherent in the methodology, and will militate against the formation of counterproductive habits.

This article further proposes that process framing, such as was prescribed in Revans' systems, is both desirable and typically necessary if all the potential benefits inherent in the methodology are to be realized. However, the whole field of problem structuring and problem solving has become rich in alternative methods since the 1940s. For example, methods related to planning (Ackoff, 1981), quality (Scherkenbach, 1986), dialogue (Schein, 1993), operations research and "soft systems" analysis (Checkland and Scholes, 1990), problem structuring and solving (Rosenhead, 1989), systems thinking (Senge, 1990), and action science (Argyris, 1993), to name but a few, have all emerged or progressed during this period. It seems to this author that it is unduly limiting to constrain participants to only Revans' systems.

Revans directed that introduction of "programmed knowledge, P" must be avoided in action learning; it seems reasonable to suppose that if Systems Alpha, Beta and Gamma are not P, then other methods serving similarly useful ends will also not fall into this category. However, consistent with the aims of action learning, one must certainly reject methods which tend to place the consultant or set adviser in a central position "in control" of the participant group.

Unfortunately, a drawback with many methods, including System Beta, is that they are couched in terms which tend to not only overemphasize problem solving, but do so at the expense of personal development. When the participant's problem becomes the final destination rather than a stage in an ongoing journey of personal development, a significant intended benefit of action learning is lost (Revans, 1982a); indeed one might feel that under these circumstances action learning cannot easily be justified at all over other problem-solving methods.

In the spirit of action learning then, the question is posed: Is there a practical dynamic systemic questioning approach which is consistent with the tenets of action learning; which broadens choices for problem-structuring, problem-solving, and learning methods; which addresses "learning to do things right", "learning to do the right things" and "learning to learn"; and which places appropriate emphasis on self-development through performance?

It is proposed that a very simple, proven, practical, three-element performance model is the key to meeting these criteria, forming the basis for a new methodology which has been called "outcomes-driven performance learning and development" (performance learning or PL). It will be shown in this article that this outcomes-driven approach provides a practical framework for introduction of a variety of up-to-date problem and learning related methods in addressing the issues discussed above. It will also be shown that this approach remains consistent with the aims of Systems Beta, Alpha and Gamma, and with Revans' intention to set up conditions in which "Comrades in adversity learn from and with each other through discriminating questioning, fresh experience and reflective insight".

Systems Alpha, Beta and Gamma

As noted above, Revans (1971) has defined three subsystems which constitute the managerial system which he designated Systems Alpha, Beta and Gamma. System Alpha is concerned with the strategic positioning of managerial objectives and how strategy should be designed. System Beta is the model by which managers achieve their objectives, and System Gamma addresses the managerial mindset and means to monitor learning. Unfortunately only System Beta has been explored at length by Revans, and this is the only system which is clearly understood.

System Beta is a model defined by Revans involving five distinct steps:

Management Decision 35/10 [1997] 721-730

- 1 Survey: an observation stage.
- 2 *Hypothesis*: a stage for theorizing and conjecture.
- 3 *Experiment*: the stage in which practical tests are carried out.
- 4 Contrast: a stage in which actual and desired or theoretical results are compared.
- 5 Review: the results are assessed in relation to the overall objectives and situation.

System Beta mirrors Revans' strong classical scientific background (Revans, 1982b). The similarities to the Kolb (1984) and Honey and Mumford (1989) learning cycles are very clear, in spite of Revans' objections to the Kolb comparison (Revans, 1995). In practice, the learning processes in action learning sets are never this straightforward (Schlesinger, 1996). Issues which arise in applying System Beta when the environmental context changes dynamically have also been identified (Smith, 1997b).

In particular, what System Beta fails to highlight is the depth of reflection that must be undertaken by participants if lasting changes in mental models and behaviours are to be achieved through action learning activities. This has given rise to the need for "set advisers", part of whose role is to ensure that participants are aware of, and follow up, this need. To the extent that systems Alpha and Gamma are understood, they seem to address such concerns. However, these models are not well developed and they are not typically referenced in current set approaches.

Revans (1982b) also defined another six "media of management analysis" which touch on the mindsets and learnings of the participant managers, and the probabilistic and systemic nature of their activities. Set participants are seldom, if ever, made aware of these criteria, and they typically remain outside the set's consciousness and application.

In the following sections performance learning will be explored to underline its consistency with the intended positioning, processes and aims of action learning which Revans articulated so strongly; to highlight the ways in which it addresses the shortcomings discussed above; and to elaborate on the additional benefits that the methodology confers.

Performance learning

The outcomes-driven performance learning framework

It is unfortunate that neither System Alpha, with its emphasis on strategic positioning, nor the systemic aspects of "the media of

management analysis", have been clarified and made a matter of routine practice by action learning designers, advisers or participants. The impact of such failure is broader than at first sight. For example, Senge's five disciplines (Senge, 1990), in one way or another, are all negatively affected by this omission. Even when action learning is viewed solely as a development vehicle, the implied practice of encouraging practitioners to "think local and act local" must be condemned. In addition, individual development of personal mastery (Senge, 1990) is clearly unfeasible without an understanding of alignment potential. Unfortunately, there are only a few published accounts in which the person charged with initiating an action learning programme even involves participants in the actual design of the programme in an attempt to address this issue (Morris, 1987; Peters and Smith, 1996).

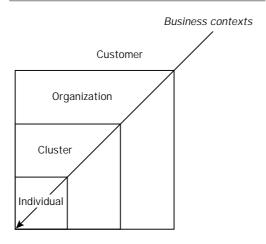
Performance learning, in contrast, is solidly founded on a systemic and/or strategic base and commences with one or more activities addressing this concern. In this phase, measurable outcomes of activities are defined which ultimately link to, and support, the highest level strategies of the organization. As will be shown in the following discussion, this preserves alignment, facilitates continuous improvement, and confers appropriate freedom of action.

Systems theory tells us that systemic demands are placed by each containing system on the systems it contains in a cascading manner. For example, as illustrated in Figure 1, a customer system will demand certain service norms of the organizational system; the organizational system in its turn will demand behaviours of the organization's functional and team subsystems which satisfy these behavioural norms; the subsystems in their turn demand appropriate detailed behaviours of the individuals that constitute them. In this way, alignment is secured as long as the various systems and subsystems are harmonious. For example, in this example, individuals must be rewarded for appropriate service-related behaviours. Often an intervening system, such as the organizational system, will wish to implement certain agendas originating within its borders. For example, if the organization wished to introduce a new people-management policy, it would be passed down to the subsystems in the same way as if it had originated outside the organization.

The environment illustrated in Figure 1 could be achieved with a spectrum of degrees of individual freedom of activity. In a highly controlled context, individuals on teams could have their jobs and activities so closely

Management Decision 35/10 [1997] 721-730

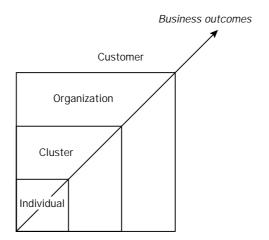
Figure 1
Outcomes-driven PL framework (business contexts)



proscribed that they would have essentially no freedom of behavioural action in achieving the desired service levels. In the more typical modern day organization, based on principles of so called empowerment, individuals and teams, etc. would have more freedom in fulfilling the service levels required. In this latter case, how are the systemic demands to be fulfilled and alignment ensured? The answer lies in defining measurable outcomes. High level outcomes are defined at, for example, the organizational level, which are used to define supportive linked outcomes at the next lower level. As Figure 2 illustrates, in this way a chain of coupled outcomes is defined. In theory, if the low level outcomes are achieved, then the higher level outcomes will be achieved.

This is not an exact science, nor is the linking other than "a leap of faith". For example,

Figure 2
Outcomes-driven PL framework (business outcomes)



at the organizational level the business plan might call for the organization to capture 20 per cent of the market (measured through market analysis). A linked high-level outcome might be excellent service to customers (measured through surveys). One of the outcomes at the unit level might be a clear understanding of the customers' service expectations (measured through employee-customer focus groups). At an individual level one of the outcomes might be available contingency resources (measured through employee forums).

As long as a particular system achieves its outcomes, flexibility of action can be accepted. Outcomes can be defined for "soft" as well "hard" topics. For example, teamwork can be ensured by defining outcomes which will foster team behaviour. Note that the outcomes must be measurable, although this measurement may be quantitative or qualitative. Such a system of outcomes was developed and used successfully to shape the role of the manager at the Canadian Imperial Bank of Commerce (Smith and Saint-Onge, 1996), while still allowing managers freedom of action to deal with local concerns. In contrast to this very large organization, unpublished work with some 50 coworkers at IKEA's Canadian Service Office also achieved significant performance breakthroughs by defining and measuring outcomes.

It should be noted that managers typically operate and make decisions at the boundaries of subsystems, for example, at the organization-production unit interface, or the production unit-production team interface. Systems theory tell us that behaviour and properties of the containing system cannot be optimized by optimizing each subsystem independently; it is the interactions of the subsystems which must be harmonized and optimized. Based on this premiss it is clear why there is potentially a negative impact when a manager makes important decisions without dialogue with the various stakeholders; it is also clear why collaborative inquiry before action is critical to success (Isaacs, 1993). The modern view of leadership is also consistent with this systemic premiss. The outcomes-driven framing and the PL processes described in the next section all nurture this collaborative approach.

The outcomes-driven framing is carried out either by an individual participant in a PL team, or by the PL team itself, depending on whether assignments are individualized, or there is one shared assignment. The method may be as simple as conducting a session to define outcomes within the PL group, or with appropriate stakeholders. Or it may involve more structured methods, such as those for building meaning (Dixon, 1997).

Management Decision 35/10 [1997] 721-730

By framing and driving the performance of any organizational system in this way, alignment and continuous improvement are addressed without unduly restricting creativity and freedom to act. More particularly, by requiring that an experiential learning group explore and develop an outcomes-driven framework for their own activities, we can provide an organizationally aligned context in which all of Bateson's learning levels will be nurtured, and the aims of Revans' System Alpha, and of action learning in general, will be adequately addressed.

The performance learning process

As previously discussed, it is not the author's contention that under appropriate conditions System Beta provides too little structure to action learning activities, or is an invalid method for solving problems and for learning. In fact, in circumstances where enlightened set facilitation is available, or the participants are fully experienced in action learning, are aware of the pitfalls discussed in previous sections, and make a serious conscious choice to use the scientific method, System Beta will probably achieve the learning and development aims desired. However, in this author's view, these conditions are seldom met.

In any event, it is the author's contention that the PL process provides a more general approach, which may include Revans' System Beta, but which overall is based on up-to-date methods and a simpler, more intuitively appealing overall process. This simplicity is not achieved at the expense of learning or personal development. For example, the dynamic nature of action learning as described by Schlesinger (1996) is acknowledged and leveraged in PL. Furthermore, attitudes, emotions, mindsets, etc. of both the practitioner him/herself, and the various individuals and communities involved (including the other PL participants), are explicitly explored in PL with resulting developmental benefits. As will be detailed below, this exploration is consistent with Revans' view that action learning contributes to selfenlightenment rather than simple behavioural improvement; for example he wrote (Revans, 1983b): "In whatsoever fashion each participant takes advantage of his set discussion ... in the final analysis his greatest need and the quality of which his set can help him most - is to understand himself: his beliefs, his values and his ambitions".

The PL process is based on the outcomesdriven performance model presented in Figure 3. The model draws inspiration from the earlier work of Johnson and Johnson (1987) and Honey and Mumford (1989) and has been introduced successfully since the mid-

1980s by the author into organizations as diverse as Exxon (Smith, 1993a), Canadian Imperial Bank of Commerce (Smith and Saint-Onge, 1996), and IKEA (Drew and Smith, 1995). The first application in a true action learning setting is believed to have been made by participants in an International Management Centres offering (Peters, 1995).

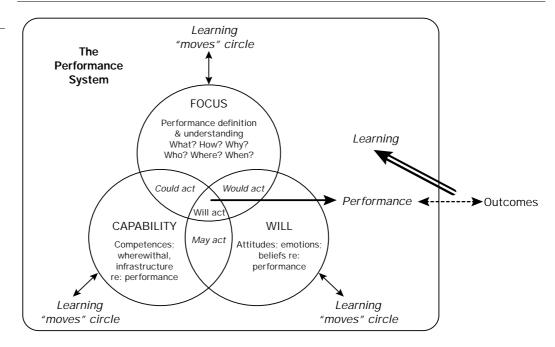
According to this model, performance is envisaged as dependent on three elements focus, will and capability. These three elements form a dynamic system. The performance level achieved by the system depends on the interactions and interdependencies of these elements. Focus represents a clear definition and understanding of the performance proposed; focus is associated with questions such as What?; How?; Who?; Where?; When?; Why? The element "will" represents strength of intent to action the performance defined in focus; will is associated with attitudes, emotions, beliefs and mindsets. Capability represents the wherewithal to transform into reality the performance defined in focus; capability is associated with such diverse areas as skills, infrastructure, budgets, tools, physical assets, etc. A change in any one of these elements may effect a change in the state of one or both of the other elements.

The most favourable set of conditions for optimal performance occurs when focus, will and capability form a self-reinforcing system, with all elements in balance and harmony. As Figure 3 shows, current performance potential is represented by the degree of overlap of the circles; optimal performance being represented by complete congruence of all three circles. Imbalance and lack of congruence will typically lead to misdirected and wasted efforts as well as loss of performance. For example, organizations often concentrate on the skills required to carry out a particular activity without regard for employees' understanding of what they are to do, or of their motivation to do it. This is doubly wasteful, since performance will not only be poor, but the time and resources concentrated on the training will be wasted.

Areas shown in Figure 3, where only two model elements overlap, are typical of reallife situations. For example, it is not unusual for an action learning set to founder because participants have a relatively clear understanding of the problem(s) they are charged to action (strong focus), adequate interpersonal skills and resources to carry out the actions (moderate capability), but no belief in the method or incentive to follow the method through (low will). The key to performance optimization is the continual dynamic tuning of the degree of overlap of the elements based on learning initiatives. In the example cited,

Management Decision 35/10 [1997] 721-730

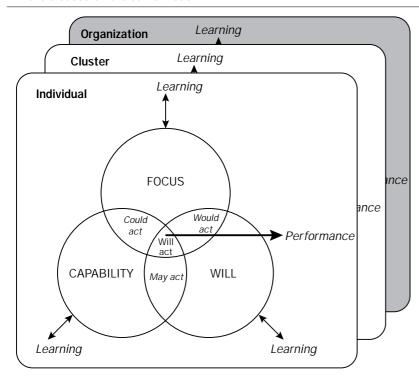
Figure 3
The performance system



exploration of will is a routine explicit step in the PL process, and learning initiatives would be undertaken to ensure that this exploration pinpointed the problem. Remedial activities could then be initiated.

As Figure 4 illustrates, the performance model is consistent across all levels of the

Figure 4
All levels based on the same model



organization; however, the meaning of focus, will and capability will change to reflect the changing context. For example, for a PL team working at the organizational level, focus might represent the firm's strategic plans to enter a new market; will would reflect the organization's cultural potential to support the new initiative; and capability could relate to the firm's asset position on entering that market. For a PL team working on a related but more local problem, focus might represent dividing up a sales territory; will would be associated with how the participants and members of the sales organization at large would feel about the proposed new segmentation; and capability would address the skill requirements and infrastructure required for the newly segmented salesforce to function adequately.

The performance system receives feedback by comparing measured performance versus the outcomes defined in the framing stage of PL. Dynamic tuning is undertaken by a PL practitioner to attempt to maintain harmony and balance based on this feedback; in other words through learning. As shown in Figure 5, this tuning and learning is greatly facilitated through the kind of collaborative learning pioneered in action learning. It is then a logical step, as illustrated in Figure 6, to adopt collaborative learning initiatives which are highly relevant to the performance element being explored. For example, focus may be tuned via methods for rational analysis as described by Senge (1990), Dixon (1997),

Management Decision 35/10 [1997] 721-730

Rosenhead (1989), and many others; will may be tuned using methods described by Argyris (1993), and Schein (1993); and capability could be tuned via audit methods described by Drew and Smith (1995).

By ensuring just-in-time availability of upto-date methods of rational analysis in modular, on-line, self-directed learning formats, with support from facilitators if required, PL practitioners have a ready means available to them to address performance opportunities fully. Freedom to use, or not use, a particular method of analysis is emphasized, and indeed the approach does nor preclude use of Revans' systems.

Relevance of performance learning to the development of a learning organization

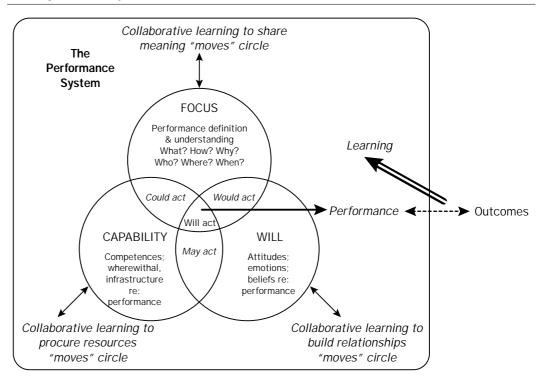
The most influential impetus for the concept and development of the learning organization has been provided by Senge (1990). He has defined the learning organization as: "...an organization that is continually expanding its capacity to create its future". This definition grows from his concept of "metanoia", meaning a shift of mind which facilitates members of an organization re-perceiving the world and their relationship to it. Senge described five disciplines which could bring about this "humanization":

- 1 personal mastery: the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively;
- 2 mental models: deeply ingrained assumptions or even pictures or images that influence how we understand the world and how we take action;
- 3 *building shared vision:* the capacity to hold a shared picture of the future we seek to create:
- 4 team learning: starts with "dialogue", the capacity of team members to suspend assumptions and enter into a genuine "thinking together"; and
- 5 systems thinking: (the discipline that integrates the other disciplines a conceptual framework, a body of knowledge and tools that has been developed over the past 50 years to make full patterns of events clearer, and to help us see how to change them effectively).

Others have adopted a somewhat different point of view, considering the learning organization as a metaphor. For example Pedlar *et al.* (1991) wrote:

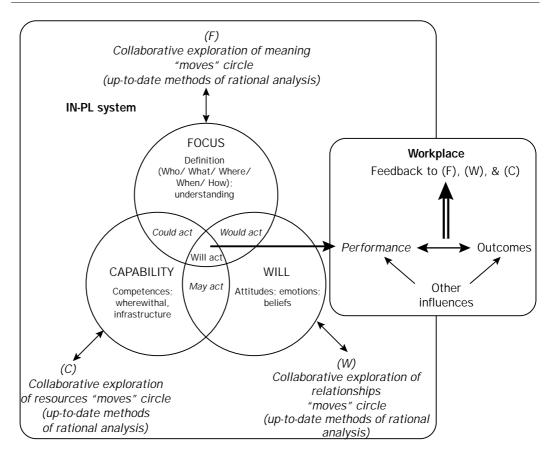
A Learning Company is an organization that facilitates the learning of all its members and continually transforms itself

Figure 5
Learning enhanced by collaboration



Management Decision 35/10 [1997] 721-730

Figure 6
Outcomes-driven performance learning



and Smith (1993b) provided the following definition:

A Learning Organization is a social system whose members have learned conscious communal processes for continually:

- generating, retaining and leveraging individual and collective learning to improve performance of the organizational systems in ways important to all stakeholders, and
- · monitoring and improving performance.

With regard to operationalizing the learning organization, Senge and Sterman (1991) note:

The challenge is how to move from generalizations about accelerating learning and systems thinking to tools and processes that help managers reconceptualize complex issues, design better operating policies and guide organization-wide learning.

and Senge (1989) writes:

There is much to be learned regarding the design of learning processes whereby large numbers of managers can develop their own insights. The essence of such learning processes is that it enables people to develop their own insights rather than leading (no matter how cleverly) people to a predetermined set of answers.

All the foregoing discussions of PL demonstrate that this methodology is fully consistent with these various definitions and points of view, and that PL embodies both the processes and tools recommended above for development of a learning organization. It is proposed that PL is unique in affording an integrated practical means for operationalizing the learning organization.

Summary and conclusions

In this article a methodology "outcomesdriven performance learning and development" (performance learning or PL) has been described which addresses shortcomings often evident in the typical practice of action learning. These shortcomings include lack of systems strategic framing; problem-structuring, problem-solving and learning processes founded narrowly on the scientific method without regard for tools and methods which are now available; and lack of routine explicit exploration of mindsets and other "soft" factors important to personal development.

It is not claimed that the new methodology is action learning or is even a variant of

Management Decision 35/10 [1997] 721-730

action learning, although it is firmly grounded in the experiential principles of action learning. Further, it is not suggested that PL replaces action learning, but rather that it is a practical alternative to be considered when the context is appropriate.

The exploration of PL presented here demonstrates that this new methodology is fully consistent with the various definitions of the learning organization, and that PL is unique in affording an integrated practical means to realizing such an organization.

Experiential learning, the performance model and the outcomes framework discussed here, and the various methods of rational analysis cited, are all well founded in practice. PL brings these various approaches together in one methodology, leveraging the synergy thus produced. However, it is already evident that certain tools and methods seem better adapted than others to this new approach. For example "The ladder of inference" (Argyris, 1990) is readily adopted by PL teams, whereas "Two-column analysis of actual conversations versus what is thought" (Argyris, 1990) seems much less productive.

Since potentially PL-suitable new methods and tools emerge regularly, fresh targets for research, and new insights from practice will continue to appear. In this way PL offers natural challenges as an object of continuous improvement. In a companion paper, Peters and Smith (1998) investigate some of these areas of practice for PL. In particular management, leadership, and high-potential performance learning (MPL; LPL; HPPL) are explored.

References

- Ackoff, R.L. (1981), *Creating the Corporate Future*, Wiley, New York, NY.
- Argyris, C. (1990), Overcoming Organizational Defenses, Allyn & Bacon, Boston, MA.
- Argyris, C. (1993), *Knowledge for Action*, Jossey-Bass, San Francisco, CA.
- Bateson, G. (1972), *Steps to an Ecology of Mind*, Ballantine. New York. NY.
- Bateson, G. (1979), *Mind and Nature*, Dutton, New York, NY.
- Botham, D. (1995), "Is action learning a cult?", *Action Learning News*, Vol. 15 No. 3.
- Checkland, P. and Scholes, J. (1990), Soft Systems
- Methodologies in Action, Wiley, Chichester. Dixon, N.M. (1997), "The hallways of learning", Organizational Dynamics, Spring.
- Drew, S.A.W. and Smith, P.A.C. (1995), "The learning organization: 'change proofing' and strategy", *The Learning Organization*, Vol. 2 No. 1.
- Honey, P. and Mumford, A. (1989), *Manual of Learning Opportunities*, Honey, Maidenhead.
- Isaacs, W. (1993), "Dialogue: the power of collective thinking", *The Systems Thinker*, April.

- Johnson, D.W. and Johnson, F.P. (1987), *Joining Together*, Prentice-Hall, Englewood Cliffs, NJ.
- Kolb, D.A. (1984), *Experiential Learning*, Prentice-Hall, Englewood Cliffs, NJ.
- Morris, J. (1987), "Action learning: reflections on a process", *Journal of Management Development*, Vol. 6 No. 2.
- Mossman, A. (1996), "Is there more to action learning than problem solving?", *Action Learning News*, Vol. 15 No. 1.
- Pedlar, M., Burgoyne, J. and Boydell, T. (1991), *The Learning Company*, McGraw-Hill, London.
- Peters, J. (1995), Private Communication, 3-Circle Performance Model in IMC MBA Programme.
- Peters, J. and Smith, P.A.C. (1996), "Developing high-potential staff: an action learning approach", *Journal of Workplace Learning*, Vol. 8 No. 2.
- Peters, V.J. and Smith, P.A.C. (1998), "In search of a development agenda that works", *Journal of Workplace Learning*, Vol. 10 No. 1.
- Revans, R. (1945), *Plans for Recruitment, Training and Education in the Mining Industry*, Mining Association of Great Britain, London.
- Revans, R.W. (1971), *Developing Effective Managers: A New Approach to Business Education*, Longmans, London.
- Revans, R.W. (1982a), "The nature of action learning", in *The Origins and Growth of Action Learning*, Chartwell-Bratt, London.
- Revans, R.W. (1982b), "The psychology of the deliberately random", in *The Origins and Growth of Action Learning*, Chartwell-Bratt, London.
- Revans, R.W. (1983a), "Action learning its terms and character", *Management Decision*, Vol. 21 No. 1.
- Revans, R.W. (1983b), "Action learning the skills of diagnosis", *Management Decision*, Vol. 21 No. 2.
- Revans, R.W. (1991), "Action learning its origins and practice", in Pedlar, M. (Ed.), *Action Learning in Practice*, 2nd ed., Gower, Aldershot.
- Revans, R.W. (1995), "Revans on the Kolb learning cycle", *Action Learning News*, Vol. 14 No. 3.
- Rosenhead, J. (Ed.) (1989), Rational Analysis for a Problematic World, John Wiley, Chichester.
- Schein, E.H. (1993), "On dialogue, culture, and organizational learning", *Organizational Dynamics*, Autumn.
- Scherkenbach, W.W. (1986), *The Deming Route to Quality and Productivity*, Ceep Press, Milwaukee.
- Schlesinger, E. (1996), "Beware the learning that says it comes in cycles", *Action Learning News*, Vol. 15 No. 1.
- Senge, P.M. (1989), Organizational Learning: A New Challenge For Systems Dynamics, Systems Dynamics Group Report D-4023, Sloan School of Management, MIT, Boston, MA, 14 February.
- Senge, P.M. (1990), *The Fifth Discipline*, Doubleday Currency, New York, NY.
- Senge, P.M. and Sterman, J.D. (1991), "Systems thinking and organizational learning: acting

Management Decision 35/10 [1997] 721-730

- locally and thinking globally in the organization of the future", in Kochan, T. and Useem, M. (Eds), *Transforming Organizations*, Oxford University Press, London.
- Smith, P. (1993a), "Getting started as a learning organization", in Watkins, K.E. and Marsick, V.J. (Eds), *Sculpting the Learning Organization*, Jossey-Bass, San Francisco, CA.
- Smith, P. (1993b), *The Learning Organization Conference*, Canadian Institute, Toronto, June.
- Smith, P.A.C. (1997a), "Action learning: praxiology and process variants", manuscript submitted for publication in the *Journal of Praxiology*.
- Smith, P.A.C.(1997b), "Q'ing action learning: more on minding our Ps and Qs", *Management Decision*, Vol. 35 No. 5.
- Smith, P.A.C. and Saint-Onge, H. (1996), "The evolutionary organization: avoiding a Titanic fate", *The Learning Organization*, Vol. 3 No. 4.

Application questions

- 1 How does the author's proposed approach differ from traditional training methods?
- 2 Consider the focus, will and capability levels of your organization.