LEVELS OF LEARNING: HITHER AND WHITHER

Guest editorial

Levels of learning: hither and whither

Over the past five decades, there has been growing research interest in learning in and by organizations, both in quantity of publications (Bapuji and Crossan, 2004) and of reviews of the field (Kim, 1993; Örtenblad, 2002; Shipton, 2006; Argote, 2011; Easterby-Smith and Lyles, 2011). Yet, in spite of this activity, this field is still seen as characterized by conceptual confusion and terminological ambiguity, even as an "organizational learning jungle" (Huysman, 2000, p. 81; Lipshitz *et al.*, 2007).

This conceptual confusion and ambiguity appears to be particularly pertinent in the case of conceptualizations of so-called higher levels of learning, despite attempts to impose a degree of theoretical order and coherence on some of these conceptualizations (Tosey, 2005; Visser, 2007; Chiva *et al.*, 2010; Tosey *et al.*, 2012). Table I displays 20 conceptualizations of levels of learning since 1963, without any pretense of completeness.

Not only the differences in number of levels and in the terminology-in-use are striking, but also the fact that the main conceptualizations and their theoretical antecedents all appear to have been firmly established in the 1960s and 1970s (Cyert and March, 1963; Bateson, 1972; Argyris and Schön, 1974). Finally, this is a field that is rich in conceptualizations, but rather poor in operationalization and empirical research, maybe because of the difficulty of measuring and analyzing deeper spheres of human thinking and acting.

In this special issue, we have brought together three contributions that fill some of these voids in research on organizational learning and the learning organization. The conceptual paper by Michele Rigolizzo, entitled "The LABS (learning as behaviors) framework for higher-order learning," is concerned with providing greater conceptual clarity to concepts of higher-order learning. Theoretically, it is based on a wide array of insights from social and cognitive psychology and from educational theory, which the author brings together in the Learning as Behaviors (LABS) framework. Its underlying assumption is that higher-order learning involves the ability to "critically reflect on a domain, or sphere of knowledge" (Mezirow, 1991), whereby domain-specific knowledge and expertise is being build up and adapted in long-term memory on the basis of continuous professional involvement in and experience with that domain. The author then specifies four particular learning behaviors that are required (in this particular order) for the critical reflection involved in higher-order learning:

(1) taking on a challenge;
(2) attending to information;

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0	1	2	3	Selected books and articles
–	Short run lrn.	Long run lrn.	–	Cyert and March (1963)
–	Learning	Learning to lrn.	–	Schön (1971)
Zero-lrn.	Proto-lrn.	Deutero-lrn.	Trito-lrn.	Bateson (1972)
–	Single loop lrn.	Double loop lrn.	–	Argyris and Schön (1974); Argyris (1976, 2010); Schön (1983a, 1987); Arthur and Aiman-Smith (2001)
–	Single loop lrn.	Double loop lrn.	Deutero-lrn.	Schön (1975); Argyris and Schön (1978, 1996); Sinkula (1994); Thomsen and Hoest (2001); Wijnhoven (2001); Argyris (2003); Visser (2007); Rowe and Boyce (2009)
–	Adjustment lrn.	Turnover lrn.	Turnaround lrn.	Hedberg (1981)
–	Single loop lrn.	Double loop lrn.	Meta-lrn.	Hedberg (1981); Prahalad and Bettis (1986); McKee (1992); Argyris (2003); Crossan (2003); Visser (2007); Su et al. (2014)
Zero lrn.	Single loop lrn.	Double loop lrn.	–	Schön (1983b)
–	Lower level lrn.	Higher level lrn.	–	Fiol and Lyles (1985)
–	Adaptive lrn.	Generative lrn.	Metanoia	Senge (1990); Chiva et al. (2010)
–	Exploitation in lrn.	Exploration in lrn.	–	March (1991)
–	Single loop lrn.	Double loop lrn.	Triple loop lrn.	Swieringa and Wierdsma (1992); Isaacs (1993); Nielsen (1993); Hawkins (1994); Torbert (1994); Flood and Romm (1996); Foldy and Creed (1999); Yuthas et al. (2004); Tosey et al. (2012)
–	First order lrn.	Second order lrn.	–	Lant and Mezias (1992); Virany et al. (1992); Arthur and Aiman-Smith (2001); Sörensen (2002)
–	Operational lrn.	Conceptual lrn.	–	Kim (1993)
Lrn. I	Lrn. II	Lrn. III	Lrn. IV	Hawkins (1994); Torbert (1994); French and Bazalgette (1996)
–	Incremental lrn.	Radical lrn.	–	Miner and Mezias (1996); Sörensen (2002)
Non-lrn.	Single loop lrn.	Double loop lrn.	Deutero-lrn.	Brunsson (1998)
Zero-lrn.	Single loop lrn.	Double loop lrn.	Triple loop lrn.	Snell and Chak (1998); Romme and Van Witteloostuyn (1999)
–	Passive lrn. orientation	Active lrn. orientation	–	Sadler-Smith et al. (2001)
Zero-lrn.	Adaptive lrn.	Generative lrn.	–	Chiva and Habib (2015)

Table I.
Conceptualizations of levels of learning in organizations, 1963-2018

(3) forming meaningful connections; and

(4) repeated practice with feedback, whereby it is unlikely that all individuals are equally motivated to engage in all four learning behaviors at the same time.

These behaviors in principle are directly observable and may be operationalized in specific organization and work contexts. The main contribution of the paper thus lies in delineating the different steps involved in higher-order learning (seen as critical reflection) and in making these steps amenable to empirical observation and measurement.

The conceptual paper by Alexander Kaiser, entitled "Learning from the future meets Bateson's levels of learning," is concerned with the question, to what extent it is possible to integrate learning from the past and learning from an envisioned future, in Bateson's (1972) framework of levels of learning. Theoretically, it is based on Bateson's distinction between learning levels 1, 2 and 3, which the author conceptualizes for both learning from past experiences and learning from an envisioned future, leading to six learning modes. As a next step, the author explores the possible applications of the concept of Ba to these six learning modes. Ba is a Japanese concept that refers to a "shared space" or "context" for knowledge and learning processes (Nonaka *et al.*, 2006, p. 1185). The author distinguishes between a past-experience Ba and future-experience Ba and also defines an overall learning Ba for meta-learning, denoting the "ability to choose an appropriate and optimal learning mode or combination of learning modes for a specific situation." Providing a practical example from a coaching process, the author sketches various implications and future research directions of his approach for exploring learning in systemic and experiential coaching processes, in innovation management, and in more inward directed self-reflection, in which consciousness and emotions play an important role. The main contribution of the paper, however, lies in the attempt to "link the important but still underexplored aspect of learning from the future to the complex and multi-faceted work of Bateson".

The empirical paper by Elise Marcandella and Khoudia Gueye, entitled "Tensions in collaborative innovation projects and higher-level learning," is concerned with learning at the front-end of a collaborative innovation project (CIP), geared at designing and implementing a plan to reduce micro-pollutant emissions in an urban community, and involving 17 participants from nine private and public sector organizations. Theoretically, these organizations are viewed as "activity systems" that experience equivocality when having to work together in the CIP, which may lead to tensions that can be solved through expansive learning (Engeström, 2001). Using a longitudinal qualitative case study, the authors find that "dynamics of learning appear from the moment when project managers and project members of the cluster become aware of the limitations of their own tools. This awareness enables both project managers and researchers to co-construct new management tools to improve collaboration and then slowly invite partners into this learning process." This expansive learning process bears close resemblance to Bateson's (1972) learning level III, "where a person or a group begins to radically question the sense and meaning of the context and to construct a wider alternative context" (Engeström, 2001, p. 138), which, as the authors make clear, is essentially a collective, collaborative endeavor. The main contribution of the paper thus lies in the ways it links CIPs, expansive learning and higher-level learning, and in its explicit attention to the social and relational nature of these learning processes.

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References

Argote, L. (2011), "Organizational learning research: past, present and future", *Management Learning*, Vol. 42 No. 4, pp. 439-446.

Argyris, C. (1976), "Single-loop and double loop models in research on decision making", *Administrative Science Quarterly*, Vol. 21 No. 3, pp. 363-375.

Argyris, C. (2003), "A life full of learning", *Organization Studies*, Vol. 24 No. 7, pp. 1178-1192.

Argyris, C. (2010), *Organizational Traps: Leadership, Culture, Organizational Design*, Oxford University Press, Oxford.

Argyris, C. and Schön, D.A. (1974), *Theory in Practice: Increasing Professional Effectiveness*, Jossey-Bass, San Francisco.

Argyris, C. and Schön, D.A. (1978), *Organizational Learning: A Theory of Action Perspective*, Addison-Wesley, Reading, MA.

Argyris, C. and Schön, D.A. (1996), *Organizational Learning II: Theory, Method, and Practice*, Addison-Wesley, Reading, MA.

Arthur, J.B. and Aiman-Smith, L. (2001), "Gainsharing and organizational learning: an analysis of employee suggestions over time", *Academy of Management Journal*, Vol. 44 No. 4, pp. 737-754.

Bapuji, H. and Crossan, M.M. (2004), "From questions to answers: reviewing organizational learning research", *Management Learning*, Vol. 35 No. 4, pp. 397-417.

Bateson, G. (1972), *Steps to an Ecology of Mind*, Chandler, San Francisco.

Brunsson, K. (1998), "Non-learning organizations", *Scandinavian Journal of Management*, Vol. 14 No. 4, pp. 421-432.

Chiva, R. and Habib, J. (2015), "A framework for organizational learning: zero, adaptive and generative learning", *Journal of Management and Organization*, Vol. 21 No. 3, pp. 350-368.

Chiva, R., Grandio, A. and Alegre, J. (2010), "Adaptive and generative learning: implications from complexity theory", *International Journal of Management Reviews*, Vol. 12 No. 2, pp. 114-129.

Crossan, M.M. (2003), "Altering theories of learning and action: an interview with Chris Argyris", *Academy of Management Executive*, Vol. 17 No. 2, pp. 40-46.

Cyert, R.M. and March, J.G. (1963), *A Behavioral Theory of the Firm*, Prentice-Hall, Englewood Cliffs, NJ.

Easterby-Smith, M. and Lyles, M.A. (Eds) (2011), "The evolving field of organizational learning and knowledge management", *Blackwell Handbook of Organizational Learning and Knowledge Management*, 2nd ed., Wiley, New York, NY, pp. 1-20.

Engeström, Y. (2001), "Expansive learning at work: toward an activity theoretical reconceptualization", *Journal of Education and Work*, Vol. 14 No. 1, pp. 133-156.

Fiol, C.M. and Lyles, M.A. (1985), "Organizational learning", *Academy of Management Review*, Vol. 10 No. 4, pp. 803-813.

Flood, R.L. and Romm, N.R.A. (1996), "Plurality revisited: diversity management and triple loop learning", *Systems Practice*, Vol. 9 No. 6, pp. 587-603.

Foldy, E.G. and Creed, W.E.D. (1999), "Action learning, fragmentation, and the interaction of single-, double-, and triple-loop change", *Journal of Applied Behavioral Science*, Vol. 35 No. 2, pp. 207-227.

French, R.B. and Bazalgette, J. (1996), "From 'learning organization' to 'teaching-learning organization'?", *Management Learning*, Vol. 27 No. 1, pp. 113-128.

Hawkins, P. (1994), "Organizational learning: taking stock and facing the challenge", *Management Learning*, Vol. 25 No. 1, pp. 71-82.

Hedberg, B. (1981), "How organizations learn and unlearn", in Nystrom, P.C. and Starbuck, W.H. (Eds), *Handbook of Organizational Design*, Oxford University Press, Oxford, Vol. 1, pp. 3-27.

Huysman, M. (2000), "Rethinking organizational learning: analyzing learning processes of information system designers", *Accounting, Management and Information Technologies*, Vol. 10 No. 2, pp. 81-99.

Isaacs, W.N. (1993), "Taking flight: dialogue, collective thinking and organizational learning", *Organizational Dynamics*, Vol. 22 No. 2, pp. 24-39.

Kim, D.H. (1993), "The link between individual and organizational learning", *Sloan Management Review*, Vol. 35 No. 1, pp. pp. 37-50.

Lant, T.K. and Mezias, S.J. (1992), "An organizational learning model of convergence and reorientation", *Organization Science*, Vol. 3 No. 1, pp. 47-71.

Lipshitz, R., Friedman, V.J. and Popper, M. (2007), *Demystifying Organizational Learning*, Sage, Thousand Oaks, CA.

McKee, D. (1992), "An organizational learning approach to product innovation", *Journal of Product Innovation Management*, Vol. 9 No. 3, pp. 232-245.

March, J.G. (1991), "Exploration and exploitation in organizational learning", *Organization Science*, Vol. 2 No. 1, pp. 71-87.

Mezirow, J. (1991), *Transformative Dimensions of Adult Learning*, Jossey-Bass, San Francisco, CA.

Miner, A.S. and Mezias, S.J. (1996), "Ugly duckling no more: pasts and futures of organizational learning research", *Organization Science*, Vol. 7 No. 1, pp. 88-100.

Nielsen, R.P. (1993), "Woolman's 'I am we' triple-loop action learning: origin and application in organization ethics", *Journal of Applied Behavioral Science*, Vol. 29 No. 1, pp. 117-138.

Nonaka, I., Von Korgh, G. and Voelpel, S. (2006), "Organizational knowledge creation theory: evolutionary paths and future advances", *Organization Studies*, Vol. 27 No. 8, pp. 1179-1208.

Örtenblad, A. (2002), "Organizational learning: a radical perspective", *International Journal of Management Reviews*, Vol. 4 No. 1, pp. 87-100.

Prahalad, C.K. and Bettis, R.A. (1986), "The dominant logic: a new linkage between diversity and performance", *Strategic Management Journal*, Vol. 7 No. 6, pp. 485-501.

Romme, A.G.L. and Van Witteloostuyn, A. (1999), "Circular organizing and triple-loop learning", *Journal of Organizational Change Management*, Vol. 12 No. 5, pp. 439-454.

Rowe, P.A. and Boyce, R.A. (2009), "Deutero-learning: implications for managing public health change", *The Learning Organization*, Vol. 16 No. 4, pp. 298-310.

Sadler-Smith, E., Spicer, D.P. and Chaston, I. (2001), "Learning orientations and growth in smaller firms", *Longe Range Planning*, Vol. 34 No. 2, pp. 139-158.

Schön, D.A. (1971), *Beyond the Stable State*, Random House, New York, NY.

Schön, D.A. (1975), "Deutero-learning in organizations: learning for increased effectiveness", *Organizational Dynamics*, Vol. 4 No. 1, pp. 2-16.

Schön, D.A. (1983a), *The Reflective Practitioner: How Professionals Think in Action*, Basic Books, New York, NY.

Schön, D.A. (1983b), "Organizational learning", in Morgan, G. (Ed.), *Beyond Method: Strategies for Social Research*, Sage, Newbury Park, CA, pp. 114-128.

Schön, D.A. (1987), *Educating the Reflective Practitioner*, Jossey-Bass, San Francisco.

Senge, P. (1990), *The Fifth Discipline: The Art and Practice of the Learning Organization*, Bantam Doubleday, New York, NY.

Shipton, H. (2006), "Cohesion or confusion: towards a typology of organizational learning research", *International Journal of Management Reviews*, Vol. 8 No. 4, pp. 233-252.

Sinkula, J.M. (1994), "Market information processing and organizational learning", *Journal of Marketing*, Vol. 58 No. 1, pp. 35-45.

Snell, R. and Chak, A. (1998), "The learning organization: learning and empowerment for whom?", *Management Learning*, Vol. 29 No. 3, pp. 337-364.

Sörensen, J.B. (2002), "The strength of corporate culture and the reliability of firm performance", *Administrative Science Quarterly*, Vol. 47 No. 1, pp. 70-91.

Su, H.-C., Lindermann, K., Schroeder, R.G. and Van de Ven, A.H. (2014), "A comparative case study of sustaining quality as a competitive advantage", *Journal of Operations Management*, Vol. 32 Nos 7/8, pp. 429-445.

Swieringa, J. and Wierdsma, A. (1992), *Becoming a Learning Organization: Beyond the Learning Curve*, Addison-Wesley, Reading, MA.

Thomsen, H.K. and Hoest, V. (2001), "Employees' perception of the learning organization", *Management Learning*, Vol. 32 No. 4, pp. 469-491.

Torbert, W.R. (1994), "Managerial learning, organizational learning: a potentially powerful redundancy", *Management Learning*, Vol. 25 No. 1, pp. 57-70.

Tosey, P. (2005), "The hunting of the learning organization: a paradoxical journey"*, Management Learning*, Vol. 36 No. 3, pp. 335-352.

Tosey, P., Visser, M. and Saunders, M.N.K. (2012), "The origins and conceptualizations of 'triple-loop' learning: a critical review", *Management Learning*, Vol. 43 No. 3, pp. 291-307.

Virany, B., Tushman, M.T. and Romanelli, E. (1992), "Executive succession and organization outcomes in turbulent environments: an organization learning approach", *Organization Science*, Vol. 3 No. 1, pp. 72-91.

Visser, M. (2007), "Deutero-learning in organizations: a review and a reformulation", *Academy of Management Review*, Vol. 32 No. 2, pp. 659-667.

Wijnhoven, F. (2001), "Acquiring organizational learning norms: a contingency approach for understanding deutero learning", *Management Learning*, Vol. 32 No. 2, pp. 181-200.

Yuthas, K., Dillard, J. and Rogers, R. (2004), "Beyond agency and structure: triple-loop learning", *Journal of Business Ethics*, Vol. 51 No. 2, pp. 229-243.

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