

Can Evidence Based Coaching Increase ROI?

Otto Laske, PsyD, PhD

Interdevelopmental Institute, Medford, MA , USA.

Abstract

This paper inquires into the effects of coaching carried out within an evidence based framework highlighting and supporting three *generic coaching processes*. It focuses on the enhancement of “return on investment” that may result from using (intake and outcome) assessments that make explicit how clients presently manage their mental and emotional disposition and work capability. The paper presents results deriving from coaching focused on potentiating clients’ own processes. Since the three coaching processes follow principles of lifespan development, they produce a twofold return: behavioural and developmental. Accordingly, the Return on Investment (ROI) of coaching is equally of a twofold nature: observable (behavioural) and inferable (developmental).

Keywords: Assessment-based Coaching, Coaching ROI (CROI), Developmental Shift, Lifespan Development Patterns, Interdevelopmental Coach Training.

Introduction

This paper employs methods of research in lifespan development to investigate patterns of the mental-emotional growth of six executives coached over 14 months. It approaches the issue of ROI from the perspective of three generic coaching processes found in all coaching, and measured in the study. To locate specific patterns of change, the methodology distinguishes two interrelated aspects of change: developmental shift and behavioural change.

The paper comprises five sections. In part A, I introduce three generic coaching processes and highlight their relevance for coaching theory. In part B, I state the basic tenets of evidence-based coaching. In part C, I introduce ECF, the study’s methodology, and make a distinction between ROI and CROI (Coaching ROI). Then, in part D, I present the findings of the empirical study and discuss their meaning for coaching theory. I conclude with reflections on implications of this study for the training of future coaches.

A. Three Generic Coaching Processes

Coaches, of whatever training background, life experience, or idiosyncratic approach use three *generic processes* to assist clients in achieving their goals (adapted from Basseches 2003, 542):

- Supporting and guiding attention
- Envisioning outcomes
- Enacting new behaviours and experiences.

Coaching schools teach these processes in various ways and under various ideological banners, without making them explicit. The first process has an impact on what clients presently pay attention to, and is largely of a cognitive nature. The second process is interpretive, and is based on insight into how clients presently interpret life and work experiences in terms of their own self definition. The third process brings to fruition what has been understood and acted upon by the coach regarding “where clients presently are developmentally.”

Importantly, the three coaching processes enhance *work capability*, by which discretion, choice, and decision making, as well as social relating, are brought to bear on goals as “what by when’s” (Jaques, 1994, 2002). Coaches are thus process enhancers and process consultants who insinuate their own processes into clients’ present mental-emotional make-up. Coaches’ processes grow in clarity and objectivity over the lifespan, across higher *coaching levels*, as do those of their clients.

The three generic processes named form a system; they are mutually supportive of, and supported by, the coaching relationship, and contribute to both parties’ “interdevelopmental” lifespan development.

B. From Industry Service to a Profession with a Shared Knowledge Base

In light of the above, it is evident that the more coaches know about the three generic processes they are engaged in and support in their clients, the more effective their work can be. Historically, this is indicated by the fact that research-based coaching was first introduced as *cognitive coaching* in 1994 (Costa and Garmston, 1994) and as *developmental coaching* in 1999 (Laske, 1999a-b; 2003b), thus through two related approaches geared to supporting mental-emotional processes. The quest for evidence was broadened to *evidence based coaching* in 2003 (Grant, 2003; Laske, Stober & Edwards, 2004), with an ideological mandate to restructure coach training and coaching practice. The mandate requires integrating scientific evidence regarding adult learning and development into intake, feedback, coaching conversations, and outcome assessment. For coach training, this entails transforming coaches into scientist-practitioners who are critical consumers as well as active users of coaching research.

In the context of evidence based coaching, *coaching research* might be said to be of two kinds: first, research IN coaching, and second, research ON coaching. The first type of research consists of mostly qualitative investigations into the coaching relationship itself, and the phases and outcomes of the coaching process. The second type comprises quantitative studies of wide scope constituting a mix of sociology, market research, and evidence based “legitimacy boosting.” Increasingly, both types of research are combined, leading to a mixed quantitative-qualitative methodology as grounding of a profession in the making.

Drawing on historical parallels with other helping professions, advocates of evidence based coaching argue that coaching as a profession requires a shared knowledge base drawn from the voluminous extant research on how people learn and grow mentally over the lifespan. They point to psychology as an example of a discipline that reached maturity as a profession only once it installed research based training and supervision.

The tenets underlying evidence based coaching are quite simple, and can be stated as follows:

1. Thought and perception produce all behaviour.
2. Thought and perception themselves depend on how individuals mentally and emotionally use attention, experience and interpretation at a particular time point, making progressive behaviour changes natural and inevitable.
3. 20th century research has produced a large number of transculturally valid patterns of behaviour in terms of which the thinking, perception, emotion, decision making, and social relating of adults develops over the lifespan, following ascertainable laws and principles.
4. Coaching is a helping profession whose *material* is human development.
5. Therefore coaching can benefit from structuring training and practice according to such laws and principles.

C. “Return on Investment” of Coaching is Complex

1. Two Aspects of Behaviour Change

As long as coaching was practiced as an extension of the North American self help movement, it seemed justified to be content with anecdotal evidence that coaching processes “work.” In the 21st century, given the above tenets, this stance on the ROI of coaching is becoming less and less justifiable. It is also less and less welcomed by organisations looking for explicit proof of coaching effectiveness. If behaviour change is indeed one of the foremost goals of coaching, then neglecting findings on behaviour and the developmental roots of behaviour is a risky course of action indeed.

One of the major issues in determining coaching outcomes is that changes in human behaviour take time, often an unpredictably long time. Another is that behaviour changes depend on developmental shifts that are non-linear (occur “in stages”). A third issue is that in their degree, onset, and maintenance, behaviour changes depend on readiness, or potential for change. In circumstances where behaviour change is bound to achieving externally proposed objectives (what by when), as in organisations, a dialectic is set up between achieving concrete outcomes for a third party and personal mental growth. This dialectic is the crux of executive coaching. Consequently, coaching practitioners must find ways of showing that “outcomes” are both organisationally desired and personally beneficial, which, for companies viewed long-term, is one and the same thing.

2. A Developmental Perspective on Behaviour Change

Proceeding according to such premises, I have found most helpful research done in the developmental sciences since 1970. There, insight has consistently grown that behaviour is developmentally rooted and that behaviour change is bound to different stages or levels of experiencing self and world. For this reason, these sciences have successfully distinguished between short-term, *behavioural*, and longer-term, *developmental*, change. They have done so by empirically establishing patterns of lifespan development, showing that these patterns are transculturally valid (Kegan, 1994; Wilber, 2000). Assuming a shifting developmental “Center of Gravity” from which people act (Graves, 1981), research has substantiated that behaviour is the

observable manifestation of a specific developmental position. This position, constantly progressing toward higher levels of maturity, is characteristic of people's thinking, feeling, social relating, and decision making at any time (Jaques, 1994; Kegan, 1982). In light of this ECF, the *Evidence Based Capability Framework* (Laske, 1999a-b, 2001, 2003c; Laske & Maynes, 2002), was created.

3. A Methodology for Coaching Research as Research in Adult Development

The ECF methodology was established based on laws and principles described by Basseches (1984, 2003), Jaques (1994), Kegan (1982, 1994) and Aderman (1967). It is supported by research done by Commons & Richards (1984); Fischer (1980); Graves (1981); Kohlberg (1969); Loevinger (1976) Laske (1999a, 2001), Wilber (2000), and many others (Demick, J. & C. Andreoletti, 2003). The methodology exists in two modalities: interviews (used in coach training; see www.interdevelopmentals.org) and on-line questionnaires (used in outcome research and developmentally oriented consultation; see www.cdremsite.com). In alignment with the three generic coaching processes named above, ECF comprises three interrelated assessment modules:

Generic Coaching Process	ECF Assessments*
Supporting and guiding attention	Thought Form Assessment
Envisioning/interpreting outcomes	Social-Emotional Assessment
Enacting novel behaviours and experiences	Need/Press Assessment (self conduct, task focus, emotional intelligence)

Table 1. Three Generic Coaching Processes and their Associated ECF Assessments.

The first assessment is cognitive in nature, and focuses on the client's processes of attention, especially the degree of systemic thought. The second assessment is one of clients' interpretative processes. It focuses on how people make sense of their present experiences, construct "reality," and, therefore, envision outcomes. The third assessment is directed to clients' organisational functioning, both regarding their own subjective needs and their experiences within the organisation they are part of.

In coaching practice and research, the first two assessments produce data making up the *developmental profile* of clients (and, potentially, of coaches) before and after coaching, while the third module establishes a client's (or coach's) *behavioural profile* between two successive timepoints. It focuses on a client's strengths, challenges, conflicts, energy sinks, job satisfaction, as well as his/her view of the organisation as a whole, all of which are summarized by an *Efficiency Index*. (To deepen the model of the client, ECF data may be linked to 360-feedback and other behavioural tools available.)

The dual character of the assessment reflects the notion that the behavioural profile, linked to "performance," reflects a mere fraction of what individuals can presently accomplish given their developmental potential. Accordingly, the developmental assessment is said to address **potential capability**, while the third, behavioural one regards (presently) **applied capability** (Jaques, 1994).

In alignment with the ECF perspective, operational zed by the three assessments, coaches consciously build an assessment-based *model of the client*. The model is part

of the coaching contract; it defines for both parties what mental-emotional processes in the client presently need attention. Coaches act as scientist-practitioners who understand the dual nature of the client's capability. Their mission is to extend their own mental-emotional processes into those of their clients from a point of neutrality, empathy, and support, thereby setting up an equilibrated system of interdevelopmental coaching processes (Laske, 1999b).

4. Two Notions of Return on Investment (ROI)

If, as ECF assumes, behaviour changes depend on developmental shifts, then one cannot be assessed without the other. Equally, if behaviour changes are the basis of determining ROI, then both variables have to be measured. When speaking of assessment based outcomes, I use the term "ROI" in the narrow sense of changes of behaviour (assessment no. 3), disregarding underlying developmental variables. I use the term 'CROI' (Coaching ROI) for outcome findings involving all three generic processes (and associated ECF assessments), with an emphasis on how longer-term changes – changes taking more time – are at the root of observable behavioural changes. ROI regards performance pure and simple (cut off from its roots), while CROI calibrates the ongoing developmental underpinnings of such changes through which the latter are *explained*, not just described. Through CROI, coaches' development plans gain a prognostic dimension.

To give a concrete example, a change in the clients' ability to manage time or affiliate with others (a behavioural change) regards their presently applied capability. Whether the newly enacted behaviour brought about by coaching can be maintained or remains transitory, will depend on clients' readiness for change, that is, their developmental potential (potential capability) at the time of coaching. On the other hand, a developmental shift to another level of mental growth ("stage") may only begin to occur for clients *after* the coaching process has formally ended. Assessing such shifts, and accounting for them in the coaching, empowers clients. It opens a time window in which behavioural changes can be shown to crystallize into reliable new competencies under the influence of naturally progressing lifespan development.

D. An Empirical Study of CROI and its Relevance for Coaches and HR Directors

Context

In 2001, I was approached by an HR Director in charge of the coaching program of a large internet service provider. The Director had been asked to staff a team able to contribute to a large Consortium, established to build a sophisticated internet banking system. Mandated by the company President and the Board of Directors, the HR Director wanted to know:

- Whether the company's middle management presently had enough capacity to successfully contribute to the Consortium.
- Whether there was a way of ranking developmental potential, to be used in the staffing of the Consortium team.
- Whether I could engage with managers selected for Consortium work in a type of coaching taking its cues directly from the assessments I would be making.

I welcomed this assignment as much as the "action science" context for a study of coaching outcome, since the outcome would be a direct contribution to solving crucial

HR problems. As constraints of my research, I had to accept the Director's proposal of six candidates for Consortium participation who became my coaching clients.

Methodology

In 2001, the on-lining of the ECF methodology in the form of internet-based scored questionnaires had not begun. Therefore, the developmental intake of the six executives was accomplished "manually," via Kegan's Subject-Object Interview (Lahey *et al.*, 1988; in on-line form called the *Social Emotional Assessment* (Laske & Stewart, 2004)). Additional data was gathered via the more directly cognitive *Thought Form Assessment* (Basseches, 1984; Bopp, 1981; Laske, 1999a, 2001, 2003c; Laske & Stewart, 2004), and the behavioural *Need/Press Analysis* (Aderman, 1967). The Thought Form Assessment discerns focus of attention; the Need/Press assessment scores clients' subjective need and pressure of interaction with the organisation in three related behavioural areas (self conduct, task focus, emotional intelligence).

The Subject-Object Interview is a semi-structured interview comprising ten predefined verbal "prompts" (topics) of which maximally four are typically discussed in depth during an interview. The prompts are chosen by the interviewees, and the interview agenda is therefore entirely theirs. It is interviewers' task to understand "how clients make meaning of their experiences," positive or negative, in order to discern the "level of meaning making" (developmental level) that defines clients' present Center of Gravity. Since according to Kegan's theory, adults pass through potentially 15 levels of development, interviewers (coaches) test hypotheses as to 1 of 15 such levels, and substantiate the correctness of their hypotheses by qualitative research skills such as probing, paraphrasing, developmental listening, and playing devil's advocate. Interrater agreement is used to substantiate the findings based on listening to the tape-recorded interviews.

In more detail, interviews are scored according to the generic sequence "X--X(Y)--X/Y--Y/X--Y(X)--Y," where X and Y are consecutive "main levels" and their combinations express "intermediate steps" from one main level to the next. Of the four intermediate levels, the central ones are conflictual, representing a conflict between two Centers of Gravity operating simultaneously, while the neighbouring two (X(Y) and Y(X)) just above or beneath the main level indicate either stepping away from the lower, or nearly reaching the higher, main level.

The four main levels involved are referred to by integers as 2, 3, 4, and 5. (In coach training, these are considered as "coaching levels."): Transcending a level means including the lower one (Wilber 2000). Level 3 indicates "other-dependence," the Center of Gravity where a person self-defines by the expectations of others, while level 4 indicates "self authoring," where a person acts from own authentic values and principles. Level 5 transcends and includes level 4, enabling people to relate to others as "inter-individual" selves no longer one-sidedly identified with one or the other aspect of their own character, competence, or history.

In the study here reported, all six executives scored between levels 3 and 4, with one exception (executive E), as shown in Table 2, below:

Executive	Before Coaching	After Coaching
A	L-3/4	L-4/3
B	L-4/3	L-4/3
C	L-4(3)	L-4
D	L-4	L-4
E	L-4	L-4(5)
F	L-4	L-4

Table 2. Developmental Level Differences between Start and End of Coaching.

To give some examples, a Center of Gravity of L-3/4 is a conflictual step between 3 and 4, resolving to level 3, rather than to level 4 as in L-4/3. 3(4) indicates a first move toward 4, and 4(3) a last “hanging on” to 3 before reaching level 4. Movement between levels depends on weighting of the main level relative to immediately lower and higher levels, as indicated by a “Risk-Clarity-Potential Index” (RCP), not shown here, but highly relevant in coaching.

Need/Press Analysis (Aderman, 1967; Gerson, 1969; Bales, 1950) comprises three sets of questions, one each for *subjective need*, *ideal press* (clients’ role expectations) and *actual press* (clients’ experience of the organisation). Gaps between the first two are seen as “energy sinks” since they amount to discrepancies of self and role, while gaps between the last two convey the degree to which clients understand organisational functioning and achieve job satisfaction. Put together and weighted, these gaps are summarized by a global *Efficiency Index* (Laske, 2003c) showing how much of clients’ performance capability is presently available despite deviations from managerial norms. Users answer yes/no questions ranging over the domains of self conduct, task approach, and emotional intelligence. Their answers are placed along a Likert scale from 0 to 9, and compared to managerial standards that have accrued for each of the 18 variables involved. Scores deviating from managerial standards, whether lying below or above them, indicate less than optimal efficiency.

The Study

The study proceeded based on the hypothesis that the present developmental level of the coach (in ECF called *coaching level*) has a decisive influence on the outcome of the coaching. An associated hypothesis was that, given the estimated range of levels of the six executives, the coach should be at least at the developmental level of “self authoring” (level 4) of the Kegan helix (Kegan’s “institutional self,” 1982, 120, 134 & 221-254). According to empirical studies, this level is reached by about 20-25% of adults (Cook-Greuter, 1999, 35). Self authoring adults have in place an idiosyncratic and consistent value system and are thus able to “march to their own drummer.” This is in contrast to the 55% of individuals who remain embedded in level 3. Such individuals assume an “interpersonal” or “other-dependent” stance, defining themselves by the expectations of physical or internalised others. Interpreting experience at level 4 is also in contrast to those 8% of individuals who proceed, in their self development, to the “leadership” or “self-aware” level (level 5) where the limitations of self authoring are transcended (see the overview in Wilber, 2000, 205).

In light of adult-developmental theory, the following predictions were made:

Coach Developmental Level	Client Developmental Level	Predicted Coaching Outcome
L-4	L-3	Developmentally positive; behaviourally positive depending on measured client potential
L-4	L-4	Developmentally minimal though mutual; behaviourally positive depending on measured client potential
L-4	L-5	Developmentally counter-productive; behaviourally ineffectual, if not harmful, to clients

Table 3. Hypotheses Regarding Coaching Outcome.

Briefly, Table 3 expresses the expectation that as long as the coach is at a developmental level commensurate with the client (either the same level or a higher level), a positive coaching outcome (ROI) can be expected. Conversely, wherever the client's developmental level exceeds that of the coach, coaching is either developmentally counter-productive or behaviourally ineffectual, or both. The reason for these predictions is that developmental level equates with level of *potential* capability. It equates with the way in which individuals interprets their experiences, or "world view," which in turn heavily influences individuals' decision making, accountability, social-emotional maturity, and cognitive grasp in an organisational context (for details, Jaques 1994, 1998a; Laske, 1999b, 2003a).

Study Results

The results of the study are shown in Table 4, below. (To simplify the discussion, I do not include results of the Thought Form Assessment, nor the RCP index associated with developmental level.) No original scores, only their differentials between two time points are shown.

Executive	Work Complexity *	Business Function*	Developmental Shift	Efficiency Index
A	II	Team leader	1	+5
B	II	Team leader	0	0
C	II	Team leader	1	+3
D	III	Team leader & Consortium liaison	0	-2
E	IV	Project leader	1	+6
F	III	Coordinator of teams	0	+1

* Work complexity is defined as one of eight levels measured by "Time Span Interview" (Jaques 1998b).

** Business function equates to "role," and is thus purely nominal.

Table 4. Differential Effectiveness Data from Pre- and Post-Test for Six Coaching Clients.

In Table 4, *Developmental Shift* is defined numerically in terms of the presence (1) or absence (0) of a shift in the clients' developmental level (center of gravity) as determined by the *Social-Emotional Assessment*. Findings are valid for individuals as

well as teams and groups (Laske & Maynes, 2002). When averaged over a group, developmental advances maximally equal 1, minimally 0.1 or less, depending on the size of the group. In the present case, 3 out of 6 team members achieved a developmental advance over the course of one-year long coaching (average = 0.5).

Behavioural outcomes are summarized by an *Efficiency Index*. The index states differences in work efficiency (applied capability) measured between two time points. When considered in light of developmental findings, these differences convey how behaviour and underlying capability (developmental potential) are linked in clients. Entries under *Efficiency Index* derive from measuring, by way of a pre- and post-test, self conduct, approach to tasks, and emotional intelligence using the Need/Press Questionnaire. While the index itself varies between 0 and 60, typical changes brought about by coaching tend to lie in the range of from 0 to 10, and can be positive (improvement) and negative (regression). Measurement of individual efficiency is more highly satisfactory in ECF than averaging. (In the present case, the change factor for the team is +2.17, indicating very moderate positive change overall. For the company, Consortium results remained far below expectations as is foreshadowed by the empirical findings.)

Discussion of Results

The specificity of the coaching effects described in below is a function of clients' assessed developmental-behavioural profile and the coaching agenda followed. Since these are not fully detailed here, the interpretations below have to be read as shorthand, each of which can be expanded into a comprehensive assessment report.

Executive	Developmental Shift	Efficiency Index	Developmental Shift Described*	Behavioural Changes Described*
A	1	+5	Client follows own values more assiduously, but remains conflicted between behaviours driven by others' expectations and self authoring; lack of strong internal value system	Improvement of initiative, upward/downward communication, time management
B	0	0	Client remains at level, lacking developmental potential, unable to overcome conflictual values and needs at work	Tenuous improvement in communication pattern, remaining hostility and social unpredictability
C	1	+3	Client makes developmental shift, showing high potential; dev. risk (of regression) is high, but balanced by existing potential	Improvement in managerial effectiveness due to principled rather than consensual mode of working and relating
D	0	-2	Client remains stuck at same level, but strengthens awareness of present level, coming to <i>own</i> her profile	Tenuous improvement of self conduct, with growing resistance to coaching interventions

E	1	+6	Client makes developmental shift, due to high potential; slight risk of over-stretching and loss of developmental balance	Move from managerial to leadership thinking; less micromanaging
F	0	+1	Client remains on level but diminishes developmental risk (of slippage under environmental pressure); more assured managerial stance	Slight improvement in terms of awareness of own value system and better respect for others' point of view & abilities.

For actual levels, compare Table 2. These short-hand descriptions derive from data on developmental level and organizational behaviour not made explicit in this study. Under 'Developmental Shift,' reference is made to ECF's *risk-clarity-potential index* (RCP) that indicates what kind of balance exists between risk of acting at a lower, and resources for acting at a higher, developmental level. "Clarity" expresses the degree of embeddedness in the level, considered as Centre of Gravity.

Table 5. Specific Meaning of the Outcomes for Six Executives Coached over One Year.

Outcome Patterns

When scrutinizing Table 4 (or the left side of Table 5), the following patterns emerge:

Executives	Outcome
A, C, E	Positive behavioural change accompanying developmental shift
B	Unchanged behaviour linked to lack of developmental shift
D	Behavioural regression (increased conflict and role uncertainty) due to low developmental level and lack of potential
F	Positive behavioural change despite developmental shift

Table 6. Developmental-Behavioural Outcome Patterns Found.

In short, positive behavioural change occurred in cases where a developmental shift (to a subsequent developmental level) guaranteed that it could be sustained over time (A, C, E). Such change could also occur in the absence of a developmental advance (being purely behavioural), but without the benefit of being sustainable (F). When developmental level remained unchanged over the period of coaching (B), behaviour tended to remain unchanged as well. Alternatively, lack of developmental advance could manifest as behavioural regression, where resistance or immunity to change increases over the coaching period (D).

E. The Justification for Evidence Based Coach Training

Following the developmental research tradition (Basseches, Cook-Greuter, Jaques, Kegan, Wilber and others), above I have outlined the foundations of an evidence based "performance recognition system." As shown, in evidence based coaching, return on investment (ROI) derives from investment in coaching programs actualised by coaches who support clients' attentional, interpretive, and experiential processes. To the extent that there is an equilibrium between program resources (including coaches' developmental level or "coaching level") and the mental-emotional processes of clients, a return on investment can be expected. Given that coach as well as client actualise the same or similar processes under the aegis of their lifespan

development, a coaching program—whether internal or external—can create a scaffold, in order for both parties’ processes to interact in more than superficially goal-oriented ways. These interactions can be scrutinised by a methodology like ECF that focuses on the enabling of novel behaviours by realising clients’ developmental potential (potential capability). As shown by this study, there are distinctive and recognizable *patterns* according to which developmental shifts and behaviour changes materialize between two successive time points (see Table 6).

Given the developmental human condition as it plays out in organisational environments, coaches can, to the extent that they possess an understanding of their own and clients’ attentional, interpretive, and experiential processes, be successful in helping clients benefit from the coaching relationship. Such an understanding is most readily schooled by a training program explicitly centred around the three generic coaching processes focused on in this study and on the “developmental-behavioural dance” of both parties to the coaching, in order to boost not only coaches’ process consultation expertise, but their self development. Furthermore, if clients show distinctive recognisable patterns of mental growth comprising both developmental shifts and behavioural change, then the same can be expected of *coaches*.

References

- Aderman, M.** (1967) *Industrial Personnel Inventory*, Chicago 1967.
- Bales, R. F.** (1950) *Interaction Press Analysis: A method for the study of small groups*, Cambridge, MA: Addison-Wesley Press.
- Basseches, M.** (2003) ‘Adult development and the practice of psychotherapy,’ in J. Demick & C. Andreoletti (Eds.), *Handbook of adult development*, 533-564, New York: Kluwer Academic/Plenum Publishers.
- Basseches, M.** (1984) *Dialectical Thinking and Adult Development*, Norwood, N.J.: Ablex.
- Bopp, M.J.** (1981) A coding manual for the dialectical schema framework. *Unpublished*.
- Commons, M. L. & Richards, F.A.** (1984) ‘A general model of stage theory, in Commons, Richards, and C. Armon (Eds), *Beyond formal operations*, Vol. 1, 120-144, New York: Praeger.
- Cook-Greuter, S.** (1999) *Post-autonomous ego-development: A study of its nature and measurement*, Ed.D. Dissertation, Harvard Graduate School of Education.
- Costa, A.L. & Garmston, R.J.** (1994) *Cognitive coaching: A foundation for Renaissance schools*, Norwood, MA: Christopher-Gordon.
- Demick, J. & Andreoletti, C.** (2003) *Handbook of adult development*, New York: Kluwer Academic/Plenum Publishers.
- Fischer, K.** (1980) ‘A theory of cognitive development: The control and construction of hierarchies of skills,’ *Psychological Review*, 87, 477-531.
- Grant, A.** (2003) ‘Keeping up with the cheese! Research as a foundation for professional coaching in the future,’ in Stein, I. (Ed.) *Proceedings, First ICF Coaching Research Symposium. IFC*, 1-19.
- Gerson, M.** (1969) ‘Need-press interaction as related to relevant industrial criteria,’ Dissertation, Illinois Institute of Technology.
- Graves, C.** (1981) ‘Summary Statement: The Emergent, Cyclical, Double-Helix Model of the Adult Human Biopsychosocial Systems,’ Boston, May 20 [quoted in Wilber 2000, 227].

- Jaques, E.** (2002) *The Life and Behaviour of Living Organisms*, Westport, CT: Praeger.
- Jaques, E.** (1998a) *Requisite Organisation*, Arlington, VA: Cason Hall & Co.
- Jaques, E.** (1998b) *Time-Span Measurement Handbook*, Arlington, VA: Cason Hall & Co.
- Jaques, E.** (1994) *Human Capability*, Falls Church, VA: Cason Hall & Co.
- Kegan, R.** (1982) *The Evolving Self*, Cambridge, MA: Harvard University Press.
- Kegan, R.** (1994) *In Over Our Heads*, Cambridge, MA: Harvard University Press.
- Kohlberg, L.** (1969) 'Stage and sequence: the cognitive-developmental approach to socialization,' in D.A. Goslin (Ed.), *Handbook of Socialization Theory and Research*, 347-480, Chicago: Rand McNally.
- Lahey, L., Souvaine, E., Kegan, R., Goodmann, R., Felix, S.** (1988). *A Guide to the Subject-Object Interview: Its Administration and Interpretation*, Cambridge, MA: Developmental Institute.
- Laske, O.** (2004). 'Looking for patterns in clients' developmental-behavioural dance with coaches,' in I. Stein (Ed.), *Proceedings, 2nd ICF Coaching Research Symposium* (Quebec), forthcoming.
- Laske, O. & Stewart, S.** (2004) 'The IDM Social-Emotional and Thought Form Assessments,' *Technical Report*, Medford, MA: The Interdevelopmental Institute.
- Laske, O., Stober, D., & J. Edwards** (2004) 'What is, and why should we care about, evidence based coaching?' Whitepaper, ICF Research and Development Committee, *Proceedings, 2nd ICF Coaching Research Symposium* (Quebec).
- Laske, O.** (2003a) [www.Cdremsite.com](http://www.cdremsite.com) [July 2004].
- Laske, O.** (2003b) 'An integrated model of developmental coaching: Researching new ways of coaching and coach education, in I. Stein (Ed), *Proceedings, 1st ICF Coaching Research Symposium*, 52-61, ICF (Denver, CO).
- Laske, O.** (2003c) 'CDREM™ Training Course,' Medford, MA: Interdevelopmental Institute.
- Laske, O. & B. Maynes** (2002) 'Growing the top management team: Supporting mental growth as a vehicle for supporting organisational learning,' *Journal of Management Development* 21.9, 702-727.
- Laske, O.** (2001) 'Linking two lines of adult development: The Developmental Structure/Process Tool,' *Bulletin of the Society for Research in Adult Development (SRAD)*, 10.1, 8-11.
- Laske, O.** (1999a) *Transformative Effects of Coaching on Executives' Professional Agenda*, Dissertation Abstracts International: Section B: the Sciences & Engineering, 60(5-B), 2386.
- Laske, O.** (1999b) 'An integrated model of developmental coaching,' *Consulting Psychology Journal*, 51(3), 139-159.
- Loevinger, J.** (1976) *Ego Development: Conceptions and Theories*, San Francisco, CA: Jossey Bass.
- Wilber, K.** (2000) *Integral psychology*, Boston, MA: Shambhala.

Otto Laske PhD, is an executive and academic coach, a coach trainer, process consultant, and researcher in adult development. He co-founded the Interdevelopmental Institute, Medford, MA, where he trains coaches as scientist practitioners.