



# L&D SUPPORT

the human growth company

Scientific background  
L&D Support Instrument

Summary of the basic scientific theories  
of the multidimensional model

## L&D Support Instrument - scientific background

### Introduction

Internationally, as well as in everybody's region, there is an immense number of tests and measurement procedures that can be used to assess personality, behaviour, characteristics, attitudes, performance, motives, motivation, learning behaviour, social skills and much more. Offer support. A distinction must be made between sound procedures that are based on scientific principles and constructed according to generally accepted scientific standards and pseudoscientific or dubious procedures. For laypersons, an assessment is sometimes difficult. In addition, well-founded procedures that are used for objectives that do not fit are hardly useful.

The use of well-founded methods can be useful, provided that there is a corresponding objective of the participating persons and the methodological competence of the coach to select the appropriate tool. In this context, the unreflective use of personality tests must be evaluated critically, since - as evidenced by the Big Five model of personality psychology, for example - personality traits can be regarded as stable after the age of 30. However, L&D support focuses on changeable variables. In this respect, the use of personality-based methods is only partially effective.

To capture the variables that are also changeable, the L&D Support Tool provides the desired insights. It is based on scientific principles. The underlying model of the L&D Support tool is not a static personality model but is based on several scientifically founded psychological theories. An overview of these is presented below:

### Regulation focus theory

The regulatory focus theory (RFT) of the psychology professor Edward Tory Higgins (Higgins, 1997; 1998; 2005) postulates two foci that differ in terms of their origin and in their behaviour, including the associated motives:

The promotion focus strives for positive results. Its origin is shaped by an upbringing that emphasises the growth and development of the child. A promotion focus reveals itself to the (also risky) strategy of achieving goals as guaranteed as possible. Difficulties do not lead to giving up, but rather to improved performance. Central behavioural motives are therefore success and growth.

The prevention focus strives for non-negative results. Its origin is shaped by an upbringing that emphasises on safety needs, protection and responsibilities. A prevention focus is evident in the (conservative) strategy of preventing non-achievement of the goal. In case of difficulties, people give up relatively quickly in order to avoid mistakes. Central behavioural motives are security and responsibility.

## Locus of control and attribution theories

The locus of control is based on the social learning theory or attribution theory of the US psychologist Julian B. Rotter (Rotter, 1966) and describes the extent to which an individual expects effects to be subject to internal or external control. The locus of control thus describes the extent to which one believes that the occurrence of an event is dependent on one's own behaviour, i.e. whether the locus of control lies within or outside the individual (internal vs. external locus of control). The German term "internale versus exterale Kontrolle der Verstärkung" (internal versus external control of reinforcement) is briefly referred to in German-speaking countries as "Kontrollüberzeugung".

The attribution theory of Seligman (1975), known for his theory of learned helplessness, extended the model of attribution theory by the dimensions of "stable vs. variable" and "general vs. specific" in order to be able to explain the development of depression.

## Self-efficacy expectation

Self-efficacy was developed by the Canadian psychologist Albert Bandura (Bandura, 1977a; 1997). It describes the conviction of an individual to be able to carry out actions and achieve goals on the basis of his or her own competences - even in extreme situations. People who assume that they can make a difference by acting independently, even in challenging situations, have a high self-efficacy expectation. This is often accompanied by the assumption that external circumstances, people, coincidence and other uncontrollable factors should not be considered as causal (see above "locus of control").

## Stress theory

The general adaptation syndrome of the Austrian-Hungarian/Canadian physician, biochemist and hormone researcher Hans H. B. Selye (Selye, 1955; 1956; 1974) is considered the original stress concept. It describes the process and consequences of chronic stress. The perception of any stressor is followed by an adaptive response. It has been proven that every tension phase is followed by a relaxation phase, as a stable level between relaxation and arousal can only be maintained with sufficient recovery. If further stressors follow at short intervals, the arousal level continues to grow, which causes a short-term increase in resistance, but can lead to physical damage in the long term.

The work of the cardiologists Friedman and Rosenman (1959) on so-called type A behaviour, which is considered a risk factor for coronary heart disease, should also be seen in this context. Type A behaviour can be characterised by impatience, restlessness, ambition, competitive orientation as well as anger and hostility.

## Transactional stress model

The transactional stress model of the US psychologist Richard Lazarus supplements existing stress models with personal evaluation levels (Lazarus & Folkman, 1984). I.e. stress is essentially influenced by cognitive evaluation processes and is thus always the result of an interaction between the (individual) person and their environment. It has been proven that stress can be influenced by attitude and experience. Stressful situations are therefore complex interaction processes between the demands of a situation and the person concerned and not a mere reaction to a stimulus. The stress depends on the (always subjective)

evaluation by the person concerned. Whether stress is felt or not is up to the individual. The model is called transactional because there is an evaluation process between the stressor and the stress response.

## The model

In addition to the above-mentioned scientific foundations, the L&D support tool is based on the theories of Chesney et al. (1981), Friedman et al. (1986), Jung (1988), Kolb (1981, 1984), Kolb, Boytzis and Mainemelis (1999) and Lüscher (1973). Multiple scales were constructed and validated for operationalisation. The tool focuses on a person's interaction with other people (cooperation style), one's own working method, how one deals with stress and a person's core structure (cf. Fig. 1).

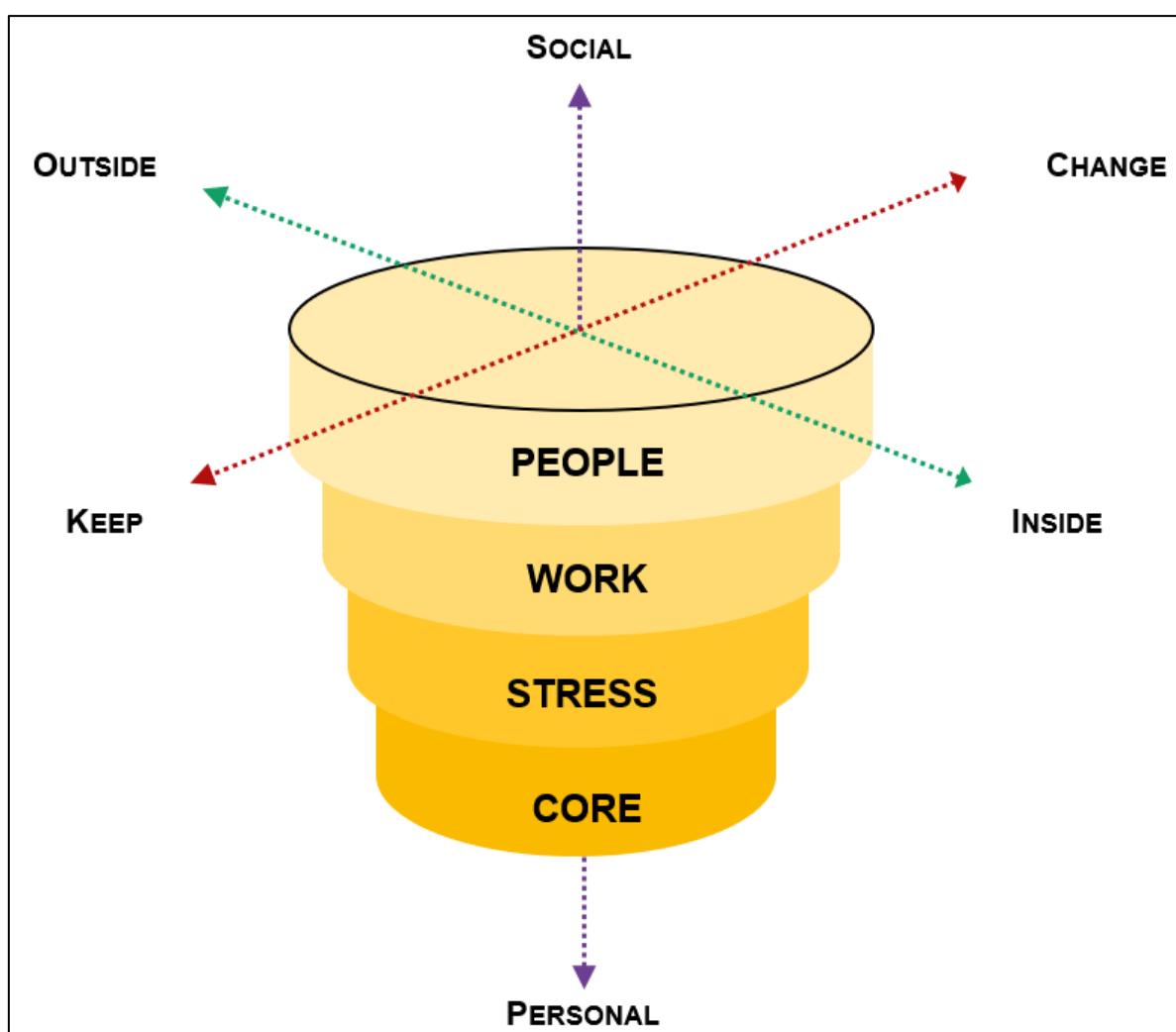


Fig. 1: Levels and dimensions of the L&D Support Tool.

The model shows four systemic themes: Cooperation Style (English Version: People), Work Method (English Version: Work), A Person's Dealing with Stress (English Version: Stress) and A Person's Core Structure (English Version: Core), which are oriented along a vertical axis. The vertical axis runs from the pole "individual" to the pole "collectivist". The further one approaches the "individual" pole on the axis, the less social contact with others is indicated and vice versa. Each topic area is also oriented towards two further axes: internal perception–external representation and preserve-change.

Four personal preferences emerge for each topic area (see Fig. 2).

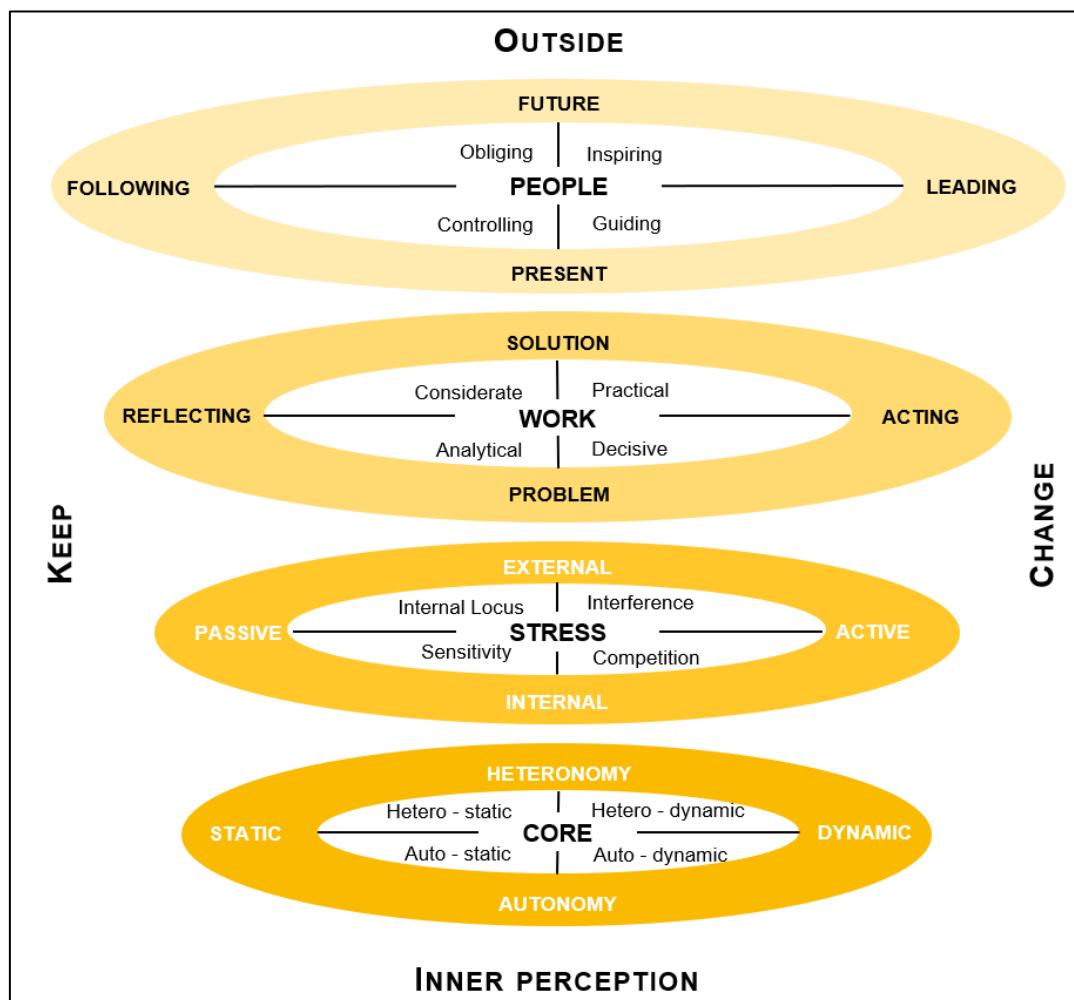


Fig. 2: Topic areas and preferences of the L&D Support Tool

## Cooperative style (People)

Starting from the top level ('People') four interpersonal traits can be found: Obliging, Inspiring, Controlling and Guiding. The scientific foundations for this are provided by Alimo-Metcalfe and Nyfield (2002), Bandura (1977), Bass (1985, 1998), Blake and Mouton (1964, 1982), Hersey and Blanchard (1977), Hersey, Blanchard and Johnson (2007)., Benjafield and Muckenheim (1989), Leary (1955, 1957) and Mead (1913). An overview is given by Kiesler (1996).

## Work style (Work)

The next layer is about working styles. Again, four preferences are distinguished: Considerate, Practical, Analytical and Decisive. There is a direct connection with the learning and working styles of Kolb (1976, 1981, 1984, 1999; 1973; 1976) or Jung (1988). The two sub-dimensions used are problem-solution and reflecting – acting.

## Handling stress (Stress)

One level further down is the layer regarding coping with stress or stress resistance. Stress in the workplace has a high economic significance (Mark & Smith, 2008). The psychological and physical aspects are described by Cox and Griffiths (1995); Selye (1955, 1956, 1974); Selye (1955, 1956, 1974), Lazarus und Folkman (1984) and Van Houdenhove (2005).

In the stress layer is found the Michigan model of work stress, originally developed at Ann Arbor University by Caplan and colleagues (Caplan, Cobb, French, Harrison & Pinneau, 1975; Edwards & Cooper, 1990; French jr., Caplan & Harrison, 1982). In this model there are four aspects of (coping with) stress. These are Locus of control (Rotter, 1966), Interference, Sensitivity and Competition (Chesney et al., 1981; Eysenck, 1990; Friedman & Rosenman, 1959; Friedman et al., 1986).

## Core structure (core)

The deepest level of the model is formed by the core elements of the human being. The Big Five model (McCrae & Costa jr. 1986, 1989, 1996) as well as the work of Jung (1988) and Bowlby (1969, 1973, 1980) is fundamental here. Only after the age of 30 do the values remain largely constant.

## Summary

The development and validation of the L&D Support tool was based on scientific theories and selected aspects of psychological concepts, which have been incorporated into its model. The scientific principles and theories presented are generally recognised as sound and their validity has been proven by numerous studies.

The quality of the tool was also confirmed by a review procedure of the EFPA (representing 37 different European psychology associations with a total of 300,000 psychologists in Europe), which attests the procedure good to very good values in the areas of "overall adequacy of reliability" and "overall adequacy of validity" (internal consistency of the various scales between 0.63-0.82; Cronbach's  $\alpha$  average at 0.74) (see document "Test Quality Criteria").

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