

Rainer Hensel^a, Frans Meijers^a, Rien van der Leeden^b and Joseph Kessels^c

¹The relation between Personal Growth Needs concerning the development of personal qualities and the Five Factor Model of personality

^aResearch group of Professional Development in Vocational and Organisational Learning, The Hague University of Professional Development, The Netherlands; ^bInstitute of Psychology, Methodology and Statistics Unit, Leiden University, The Netherlands; ^cDepartment of Organisational Psychology and Human Resource Development, Twente University, The Netherlands.

Abstract

In this study the relationship of personal growth needs (PGN) concerning competence development with the Five Factor Model (FFM) of personality variables is studied. Hereby we only focused on competences with personal qualities as developmental goals. To effectuate competence development personal growth needs are considered to be essential motivational elements of an employee's personality that form a stable basis to effectuate personal change concerning competence development. The overall conclusion of this study is that moderately weak relationships exist between PGN and the FFM domain variable openness. Relatively strong relationships exist between PGN and three FFM facets variables, sociability, openness for change and goal directedness. Therefore, competence development seems to have quite strong relationships with social aspects of work like synergy and good cooperation between colleagues, with openness towards new behavior patterns or new ways of doing things and with being goal directed. Additionally added items, constructed with the purpose to assess issues directly related to personal growth needs, proved to be valid and reliable measures of personal growth needs. Strongest relationships with PGN were found for the experienced meaningfulness of competences. Although strong relationships existed between the three mentioned facets and personal growth needs, it is advised to add extra items to measures to measure the essence of personal growth needs for selection or developmental assessment purposes. Further implications for the development of competences within organizations were discussed.

Key words: Five Factor Model of personality, work related competence development, personal qualities as developmental goals; personal growth needs, personal change.

¹ A draft of this contribution will be presented and discussed at the Decowe Conference: Ljubljana, Slovenia, 24-25 September 2009.

Introduction

Nowadays, personal qualities closely related to the Five Factor Model (FFM) of personality are highly relevant for many aspects of an organization's effectiveness (Teth & Rothstein, 1991; Barrick & Mount, 1991; Salgado, 1997; Anderson & Viswesvaran, 1998; Barrick, Mount & Judge, 2001; LePine, 2003; Peeters, Van Tuijl, Rutte, & Reymen, 2006). The fast development of knowledge (Kessels, 2001; Kessels & Kwakman, 2007) and highly changeable jobs and work roles (Anderson, Lievens, van Dam, & Ryan, 2004) have illustrated the importance of studying personal qualities that form the basis of adaptive capacities of employees and students to perform effectively in a quickly changing environment.

Interestingly, the majority of personal qualities are closely related to FFM variables (Furnham (2008). For instance, the capacity to be innovative is very much overlapping with the FFM domain variable openness, and the capacity to cooperate effectively in teams shows a great amount of overlap with the FFM variables sociability, altruism, the appreciation of personal honest feedback and trustfulness. The Five Factor Model of personality, being the dominant model in the field of work related personality research (Smith & Schneider, 2004, p. 388; Furnham, 2008, p. 124; Arnold, Silvester, Cooper, Robertson & Burnes, 2005, p. 119), offered "a simple, unifying framework that allowed research to flourish and contributed substantially to the accumulation of knowledge on the correlates of personality variables" (Smith & Schneider, 2004, pp. 389).

According to Furnham (2008), the essential part of the concept competency is formed by personal qualities related to variables in the FFM of personality. Furnham (2008), but also Kluytmans (1999) or Merriënboer, Klink van der, & Hendriks, (2002) argue that a great amount of conceptual overlap can be found between personality traits measured by FFM variables, the vast majority of work related personal qualities and competences. An example is the competence social sensitivity, which is used for British general practitioners.

This competence is very close related to the FFM major dimension altruism, especially with two of its sub scales: cognitive and emotional supportiveness. If these concepts overlap to a large extent, work related personal qualities and competences should also be considered as very stable constructs over time, just as it is widely accepted for the construct of personality (John & Srivastava, 1999; McCrae & John, 1992). As a result, the development of work related personal qualities and competences will require a strong, intrinsic need for personal change or personal growth (Smith & Schneider, 2004). Indeed, Hogan (2004, 1996) and Hogan & Holland (2003) emphasize that the need for personal growth should be defined as a stable, situation independent characteristic, being an important part of an employee's personality or identity. According to these authors personal growth needs are motivational elements that form a stable basis for goal directed behavior or purposive action, thus highlighting the importance of personal growth needs for the development of work related personal qualities.

Hensel, Meijers, van der Leeden and Kessels (2009) show that personal growth needs are related to a positive attitude concerning competence development, with only personal qualities as developmental goals. They also demonstrate that the effect of personal growth needs on this attitude was fully mediated by the experienced meaningfulness of competence development with personal qualities as developmental goals. In their study, the need for personal growth is conceptualized as a latent variable, measured by several indicator variables. Although Hogan (2004) stresses that a need can be qualified as a stable, situation independent characteristic describing a person, it is unclear whether the need for personal growth can be conceptualized as a personality trait. The FFM of personality does not seem to offer the possibility to assess personal growth needs. A major point of criticism on the Five Factor Model is its comprehensiveness (Smith and Schneider, 2004, pp. 389). Some authors

point out that important relationships, like the one between personal growth needs and FFM domain variables, are unclear (Staw, 2004, pp. 16; Smith and Schneider, 2004, pp. 390). As we explained above, the need for personal growth is considered to be an essential, motivational factor to effectuate developmental goals that are related to personal qualities or competences. Therefore the valid and reliable measurement of personal growth needs during a development of selections assessment can be of considerable use, when developmental capacities concerning personal qualities are important for the job. Because work related personal qualities related to FFM variables are relevant for an organization's effectiveness, the assessment of employees' personal growth needs with respect to the development of personal qualities related to FFM variables is important.

In this paper we re-examine the approach of Hensel et al (2009^a) to measure personal growth needs and we study the relationship of this latent variable with the variables in the Five Factor Model (Big Five Model) of personality. We will focus on personal growth needs with respect to the development of competences with personal qualities as developmental goals. In most cases where the relationship between FFM variables and work related behaviors is studied, researchers only examine the five major dimensions called domains, often referred to as the "Big Five". As far as we know, no studies are available that focus upon the sub dimensions, called the facets. Smith and Schneider (2004) argue that lack of knowledge concerning the relevance of the facets for specific work related behaviors is a major point of criticism on the use of the FFM. In this paper, we will therefore study the relationship of the need for personal growth with both FFM domain and facet variables. "Because the quintessence of personal growth needs can not be grasped by the FFM variables" (Funder, 2001), we expect to find non-existent or weak relationships between personal growth need and the domain variables

and moderate to relatively strong relationships between personal growth need and specific facet variables.

MIMIC model of Personal Growth Needs: Measurement and Prediction

A MIMIC model (Jöreskog & Goldberger, 1975) was hypothesized for personal growth needs concerning the development of personal qualities by a S-HRD program. MIMIC stands for a multiple indicators and multiple causes model, in its simplest form containing a single latent variable. The model consists of a measurement part and a prediction part. The measurement part can be compared to a confirmatory factor model in which one latent variable is measured. The prediction part can be seen as a multiple regression model in which the latent variable serves as the outcome. Two versions of this model were studied: one using the five FFM domain variables as predictors, the second one using a set of FFM facet variables.

The model is illustrated in Figure 1 below for the case of the domain variables.

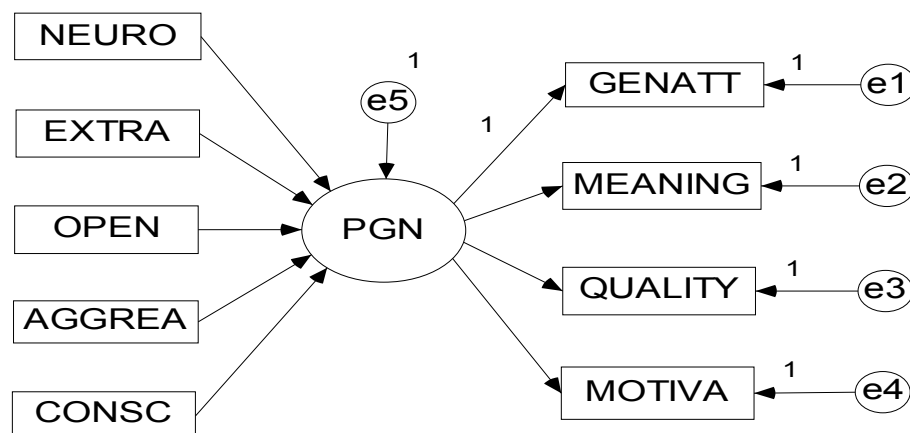


Figure 1. Conceptual diagram for the MIMIC model containing the domain variables as predictors.

In Figure 1, the latent variable Personal Growth Needs (PGN) is measured by four indicator variables, GENATT, MEANING, QUALITY and MOTIVA, which are discussed in detail in the method section below. We study the relationship between personality variables and personal growth needs with the regression part of the model.

Method

Participants

Data were obtained for a sample of professionals (N=122) in higher vocational education participating in a S-HRD Program, where only personal qualities served as developmental goals.

Measures

Personal Growth Needs. Four items were used to measure PGN. The choice of these items is based on the study of Hensel et al (2009^a). The four items are described as follows.

- (1) I am strongly intrinsically motivated to develop personal qualities to improve my work as a professional (MOTIVA).
- (2) I consider the development of competences, with personal qualities as developmental goals as very meaningful (MEANING).
- (3) The development of personal qualities in higher vocational education will led to significant improvement of the work (QUALITY).
- (4) Generally speaking, I consider myself to be very positive about competence development, with personal qualities as developmental goals (GENATT).

Personality variables. FFM domain and facet variables were measured using the Dutch version of the Neo PiR (Hoekstra & De Fruyt, 1999).

Statistical analysis

SPSS reliability analysis was used to estimate the reliability of the four item instrument measuring PGN. Facet variables that could act as predictors for PGN were selected by inspecting correlations between facet variables and a sum score of the four items measuring PGN.

Linear structural relations modeling was used to test the MIMIC model described above. Fit of the model was evaluated by several indices of model fit, including: χ^2 , the ratio of the χ^2 to the degrees of freedom, the Bentler-Bonnett (1980) normed fit index (NFI), the comparative fit index (CFI) (Bentler, 1988), and the root mean square error of approximation (RMSEA). Tabachnick and Fidell (2007) give rules to choose among, and to evaluate fit indices. These include: χ^2 should be non significant, the ratio of the χ^2 to the degrees of freedom should be less than two and values of NFI and CFI should be higher than 0.90. The value of RMSEA should be 0.06 or less for a good fitting model, between 0.06 and 0.10 for a modest fitting model; values larger than 0.10 are indicative for a poor fitting model.

Models were estimated with AMOS version 16.0, using the method of maximum likelihood. Regression weights were tested using t-tests. Standardized solutions were used for interpretation. All other analyses were performed using SPSS version 17.0.

Results

The reliability of the four item instrument measuring PGN proved to be very satisfactory (Cronbach's Alpha of 0.8).

MIMIC model with FFM domain variables as predictors

In Figure 2 below the standardized solution is presented of the MIMIC model using domain variables as predictors for PGN.

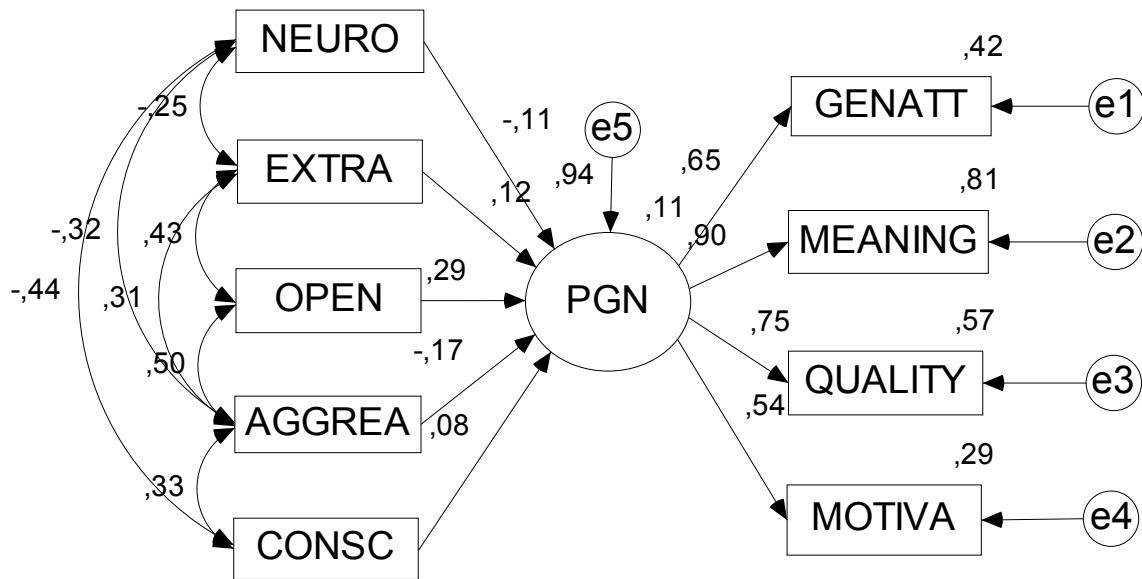


Figure 2. Diagram showing the standardized solution of the MIMIC model with FFM domain variables as predictors for PGN.

The fit of this model is very good ($\chi^2 = 20.2$, $df = 20$, $p = 0.45$, $\chi^2/DF = 1.1$, $NFI = 0.94$, $RMSEA = 0.009$, $CFI = 0.99$). Results presented in figure 2 show that all four variables are good indicators of PGN. MEANING is the strongest indicator of PGN (loading equals .90), whereas MOTIVA (loading equals .29) is the weakest. The proportion explained variance of the four indicator variables is 0.42 for GENATT, 0.81 for MEANING, 0.57 for QUALITY, and 0.29 for MOTIVA, respectively.

The regression part of the model shows that only openness (OPEN) is a significant predictor of PGN ($p = 0.018$). The other domain variables have non significant weights (EXTRA, $p =$

0.26; AGGREA, $p = 0.149$; CONSC, $p = 0.47$ and NEURO, $p = 0.31$). Together the FFM domain variables explain 11% of the variance of PGN.

MIMIC model with FFM facet variables as predictors

FFM facet variables were selected to be a predictor, if their correlation with the sum score of the four items measuring PGN, was higher than 0.2. A first model was tested including the following facet variables as predictors in the MIMIC model: sociability (SOCIA), openness for esthetics (ESTETH), openness for change (CHANGE), openness for values (VALUES), goal directedness (GOALD) and ambition (AMBITIO). In this model the facet variables ESTETH, VALUES and AMBITIO appeared to have non significant relations with PGN and were therefore removed from the model. The final model tested is PRESENTED in Figure 3 below.

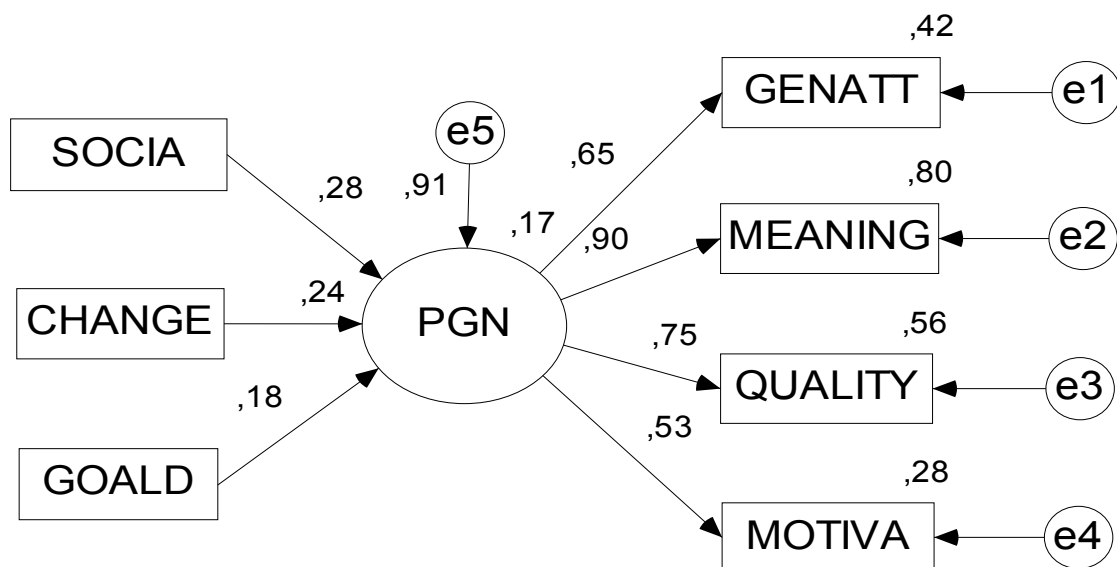


Figure 3. Diagram showing the standardized solution of the MIMIC model with specific FFM facet variables as predictors for PGN.

The fit of this model is good ($\chi^2 = 20.7$, $df = 14$, $p = 0.11$, $\chi^2/DF = 1.48$, $NFI = 0.90$, $RMSEA = 0.06$, $CFI = 0.97$). The part of the model measuring PGN is highly similar to that in the model using the domain variable as predictors. Also the proportion of explained variance regarding the four indicator variables is similar to the values reported for that model (see Figure 2).

The variables SOCIA ($p = 0.004$), CHANGE ($p = 0.01$) and GOALD ($p = 0.047$) are significant predictors of PGN. Together these three FFM facet variables explain 17% of the variance of PGN.

Discussion

The overall conclusion of this study is that moderately weak relationships exist between personal growth needs and the domain *openness*, and relatively strong relationships exist between the facets *sociability*, *openness to change* & *goal directedness* and personal growth needs concerning the development of competences. It should be highlighted that in this study we only focus on competence development, with personal qualities as developmental goals. This was done to focus only on the development of competences that can be related to a need for personal growth or personal change. This is based on the assumption that the development of job related operational skills or knowledge is unrelated to personal growth needs. The four items constructed to measure PGN in a direct way can be considered as valid and reliable measures of the latent variable personal growth needs (PGN). The reliability analysis in SPSS resulted in a Cronbach's Alpha of 0.8, the percentage explained variance of PGN on the items GEANTT, MEANING, QUALITY and MOTIVA were 0.42, 0.8, 0.56 and 0.28 respectively. These results can be considered as very satisfying. It is interesting to see that the experienced meaningfulness (MEANING) and the experienced added value (QUALITY) show the

strongest results, whilst the explained variance of the item measuring intrinsic motivation was significantly lower. Earlier research by Hensel et al (2009) has shown that the experienced meaningfulness of the concept competence should be considered to be a mediating variable, fully mediating the effect of personal growth needs on the overall evaluative summary of overall attitude cornering competency. As the found relationship for intrinsic motivation is weaker than those found for meaningfulness, a need for personal growth seems to be closely related to meaningfulness. Experienced meaningfulness is a very personal characteristic. Subsequently, competency is interpreted according to personal cognitive and affective frames of references. Because a personality trait is defined as a strong inner tendency to think, feel and behave in a specific way in most situations (McCrae & Costa, 1989) the assumption seems to be justified that personal growth needs can be considered as an important characteristic of an employee's personality. Therefore, the experienced meaningfulness should be considered to be highly determined by a latent variable belonging to an employee's personality or professionals identity: personal growth needs.

The FFM facets variables seem to match in a more specific way to personal growth needs than the FFM domain variables. The use of the facets in the MIMIC model resulted in better results than using the domains. The three facets *sociability*, *openness to change* and *goals directedness* seem to grasp the essence of personal growth needs in a more specific way than the domain *openness*. Concerning the relatedness of the domain *openness* with personal growth needs a significant but small effect could be detected (*11% explained variance, leading to a multiple correlation of 0.33*). Therefore, we assume that personal growth needs cannot be directly measured by FFM domain variables. The use of the three facets, *sociability*, *openness to change* and *goals directedness* in the analysis leads to stronger results, 17% of the variance is explained, leading to a multiple correlation of 0.41. The fact that these three facets originate from three different domains makes us conclude that personal growth needs have no

direct relationship to the five dimensional structure of the Five Factor model of personality. We consider *sociability*, *openness to change* and *goal directedness* to be relatively strong facilitating variables, measuring a relatively wide range of aspects of competence development, with personal qualities as developmental goals. They can be considered as reasonable measures of personal growth needs for developmental or selection purposes, although additional items have to be constructed to capture the quintessence of personal growth needs as the motivational basis for personal change to develop competences. The fact that the three facets originate from three different domains makes us assume that personal growth needs are related to three issues of an employee's personality, affiliation with the social aspects of work, innovative capacities and conscientiousness. These three issues seem to represent the underlying characteristics of the three FFM domains, from which the three mentioned FFM facets originally belong to: *extraversion*, representing the social dimension of the personality, *openness* representing the innovative and creative dimension and *conscientiousness* representing planning and control of goal directed behavior. Further research on the matter could clear whether even stronger relationships can be found if items are added to the existing FFM personality test with the purpose to measure those aspects that are directly related to the social, innovative and conscientious aspects of personal growth needs. This is in line with the work of Staw (2004) arguing that a taxonomy used for the measurement of personality traits should include additional measures for personal growth needs. The fact that personal growth needs form an essential motivational basis for competence development with personal qualities as developmental goals is based on an earlier study (Hensel et al, 2009). This study has shown that personal growth needs form an important motivational basis for competence development.

The fact that the strongest relationships are found for, *sociability*, *openness to change* and *goal directedness* can easily be interpreted. Competence development, with personal qualities

as developmental goals seems to be a social issue. *Sociability* measures enjoyment interacting with others, a strong inner appreciation of a work environment which can be characterized by intense cooperation and synergy between colleagues. It could mean that *sociability* is correlated to a kind of social sensitivity that certain personal characteristics are positively related to synergy between employees, effective group decisions making, cooperation and communication between colleagues and departments. Characteristics related to the facet *sociability* can be considered to form a motivational basis for reflecting on personal qualities, inhibiting dysfunctional behaviors and developing new effective behaviors or personal qualities. *Openness to change* needs no extensive explanations. This is a positive predisposition for change, including personal change. *Openness to change* is defined as a strong consistent inner tendency to behave in a new, different way, being intellectually curious to find new ways of doing things. The implication and relatedness to competence development is pretty obvious. The relevance of the facet *goals directedness* seems to show that employees with stronger personal growth needs are not only reflective but also goal directed. They have a strong consistent inner tendency to achieve goals to effectuate a personal change. But it is the combination of the three facets that makes sense. Competence development has strong social aspects, one needs to be open for new behavior patterns. But reflection and insight alone is insufficient, the effectuation of personal change is supported by goal directedness.

The relationship between the three facets *sociability*, *openness to change*, *goal directedness* and personal growth needs has implications for competence development programs, when personal qualities have to be developed to support the effectuation of the organizational strategy. Lower averages on these three FFM facets have a significant negative effect on the experienced meaningfulness of the personal qualities or competences that have to be developed. Subsequently intrinsic motivation will be low as studies have shown that a

negative experienced meaningfulness will lead to a negative attitude towards competence development (Hensel et al, 2009^a). The implication for Strategic Human Resource Development (S-HRD) programs used for the development of personal qualities is that different policies should be applied, dependent on the strength of personal growth needs of employees participating in the S-HRD program. Personal growth needs can be assessed using the three mentioned facets, but these measures should be combined with additional items, measuring specific issues of the applied competence development program. Employees with low personal growth needs should participate in S-HRD goal setting. The rationale behind this is that participation in the process of creating and designing competences which are of strategic importance will enhance the employee's commitment for the development of personal qualities. By reflecting on competences which are of critical importance for the success of the job employees are stimulated to analyze critical successful behaviors related to personal qualities or competences. A goal setting dialogue should be held with employees with high personal growth needs. Goals setting should be used to match the employees' personal growth needs with those developmental goals, which are considered to be the key qualifications of the S-HRD competence development program.

It is surprising to see that *openness to values*, a facet of the domain *openness*, which was highly relevant for the relationship between personality and professional development, does not appear to have a significant relationship with personal growth needs. A study has shown that this FFM facet is one of the most relevant variables for work related learning used for professional development (Hensel, Meijers, van der Leeden, Kessles & Hayes, 2009^b). This can be explained by the fact that the key issue studied is competency, not personal qualities. A major point of criticism on the concept competency is its lack of conceptual clarity and the great variety of clearly different definitions (see for an overview on the matter in Furnham, 2008, pp. 319-320; or Kluytmans, 1999; or Merriënboer, Klink van der, & Hendriks, 2002).

Rainer Hensel is a lecturer and research associate at the research group of Professional Development in Vocational and Organisational Learning, The Hague University of Professional Development, The Netherlands. His research interests include Strategic Human Resource Management and Strategic Human Resource Development. He is currently working on a PhD project concerning the relationship between personality, attitudes and the strategic development of personal qualities, in collaboration with the Department of Psychology and Human Resource Development at Twente University, The Netherlands. He has worked for about 20 years in the field of management development, selection and assessment of professionals and managers.

Frans Meijers, PhD, is professor at The Hague University of Professional Development and director of Meijers Research & Development. His research focusses on career learning in both profit (HRD) and non-profit organizations (vocational education).

Rien van der Leeden is an assistant professor at the Methodology and Statistics Unit, Leiden University, The Netherlands. His research interests include multilevel analysis, structural relations modelling and the development of statistical software. He is (co)author of several papers on theory and application of multilevel analysis and structural relations analysis in a variety of research fields.

Dr. Joseph Kessels is professor of HRD at the University of Twente and member of The Learning Company. His research focuses on learning and development in a knowledge economy with a special interest in Social Capital and Knowledge Productivity.

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