

Study 2012 – Quality Criteria:

“Matrix for the Development of Attitude” (MDA)

A module within the Power-Potential-Profile®

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Abstract

- The “Matrix for the Development of Attitude” (MDA)¹ is an instrument for measuring the attitudes of test subjects on six factors (self-esteem, independence, assertion, emotional responsibility, social responsibility and organisational responsibility).
- Assessment is carried out online using 26 items.
- The instrument can be used for the purposes of human resource development, e.g. for developing leadership qualities during training courses or coaching. It is, however, not suitable for selection during recruitment.
- The reliabilities achieved are good to acceptable. It has a good cost-benefit ratio.
- For important topics, the MDA should be interpreted primarily on the level of the subscales.
- The objectivity of the MDA is ensured through the standardised online procedure, rigorous selection of the consultants, licensing procedure and continual sharing of experience with the tool.
- Results from the MDA have an even greater range of applications when combined with other testing instruments, such as the JPP, FSL and FSS in the multidimensional Power-Potential-Profile® testing procedure. The MDA should therefore be used on its own only in exceptional cases.
- Correlations have been found with individual factors of the Jungian Personality Profile (JPP) and with biographical data such as age, sex and career position. These correlations should be known to licensed consultants so that they can take account of them as appropriate during consultations.²

¹ The MDA is available in its third version from 2012. This study refers to that version, which is based on the results from 284 test persons who had filled out the MDA for the purposes of a real-life coaching situation.

² Extraverted people assess themselves as more self-confident and assertive; Feeling types assess themselves higher on emotional responsibility. Extraverted Thinking types tend to assess themselves as more independent in their power of judgement. Men see themselves as more self-confident, more organisationally responsible, more independent and more assertive than women see themselves. Women, on the other hand, regard themselves as more emotionally responsible. The subjects appeared more self-confident, more organisationally responsible and more independent, the older they were. The higher they were on the career ladder, the greater they perceived their assertiveness and organisational responsibility to be.

Introduction: the MDA in the Power-Potential-Profile®

Ongoing development of the Power-Potential-Profile® (PPP)

The appraisal of the second revision of the Power-Potential-Profile® (PPP) by Dr Andreas Kastenmüller from the year 2006 (published in 2007) showed very good to good results for the instruments JPP (Jungian Personality Profile) and FSL (Future Skills for Leadership). For the third module of the PPP, the ARP instrument in use at that time, only good to satisfactory results were recorded for the quality criteria.³ That was our incentive to replace the ARP in the Power-Potential-Profile® with a new instrument, the “Matrix for the Development of Attitude” (MDA). The MDA has been newly developed by flow consulting gmbh and, similar to the ARP⁴, it measures the attitude of senior managers, junior managers and sales staff to assuming responsibility and to personnel authority.

The instrument MDA

The MDA (Matrix for the Development of Attitude) has been used as part of the PPP by approximately 50 licensed consultants since 2007. The instrument measures six factors: self-esteem, independence, assertion, emotional responsibility, social responsibility and organisational responsibility.

In practice very high face validity is observed. Participants report a good fit with their current attitudes to these factors. Pilot studies from 2006 and 2007 found good selectivity of the factors. A qualitative evaluation of the PPP⁵ documents the participants' subjective finding that the instrument was useful for their own

³ See Kastenmüller, Fischer: Gutachten – Gütekriterien des Power-Potential-Profile®, 30 January 2007, summary published on www.flow.de. The complete report is available from flow consulting gmbh.

⁴ The ARP is an instrument from Future Systems Consulting GmbH (FSC). FSC has continued developing the ARP, issues licenses for using this tool, and offers workshops on it.

⁵ See Kannenberg, Dieter: Evaluationsstudie. Der Nutzen des Power-Potential-Profile® aus Sicht der Anwender. Celle 2012. Published on the Internet: www.powerpotentialprofile.de

continuing development and ability to reflect. After five years of experience in application of the MDA, the present study now investigates its quality criteria.

The MDA in the Power-Potential-Profile® (PPP)

The Power-Potential-Profile® is a multimodal, multidimensional instrument for measuring certain areas of the personality and attitude, plus leadership and sales competencies. Its four psychometric testing instruments can be used either as individual modules or in combination.

The JPP (Jungian Personality Profile) measures stable personality factors that emerge from Jung's theory of psychological types.

The MDA (Matrix for the Development of Attitude) measures six factors for the attitude of persons to the levels of authority and assuming responsibility.

The FSL (Future Skills for Leadership) measures fields of competencies that are important for staff managers, and the FSS (Futures Skills for Sales) measures important sales competencies.

As a rule the MDA is not used on its own, but always in combination with one or more of the other modules in the PPP.

Objectivity

The objectivity of these instruments, including the MDA, is ensured by a standardised online application with automatically created standard application explanations issued by email, computer-controlled calculation of the results, and a written results report to back up the information provided by a consultant. Quality assurance for the application of the Power-Potential-Profile® is brought about by the strict selection of the consultants, a defined licensing procedure including explanations of rules for introducing the PPP, and regular sharing of experience among the consultants. The consultants are obliged by the licensor, i.e. flow consulting gmbh, to take part in regular exchanges for the specific purpose of quality assurance. At these meetings training courses are also held on the Power-Potential-Profile® that cover the MDA module.

Application in human resource development

The Power-Potential-Profile® including the MDA module is used exclusively for the purposes of human resource development and ongoing personal development (such as coaching, training, team development, career advice, etc.). The instruments in the PPP should not be used for recruitment selection. Non-voluntary participation in the procedure may distort the results towards the more socially desirable ends of the scales. The results require explanation by a licensed consultant. The strengths of the Power-Potential-Profile® can be exploited only in a face-to-face discussion with a consultant. With the MDA in particular, the overall context plays a major role that has to be taken into consideration during the meeting. In addition to an analysis of the current situation of the individual participant, tips for development and recommended actions can be elaborated during the consultation.

Notes on copyright

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The Power-Potential-Profile® is protected under trade mark law.

The concept, test design, items, questionnaires, evaluation texts, textual and graphical units, and the structure of the online application are subject to copyright law.

Results of the study

Reliabilities

The MDA instrument consists of six subscales. They are self-esteem (SEL, 5 items, $\alpha = .80$), independence (UNA, 5 items, $\alpha = .70$), assertion (DUR, 5 items, $\alpha = .65$), emotional responsibility (EMO, 3 items, $\alpha = .66$), social responsibility (SOZ, 3 items, $\alpha = .62$) and organisational responsibility (ORG, 5 items, $\alpha = .73$).

The reliabilities are therefore deemed to be good to acceptable. In some cases the reliability is relatively low (e.g. for the subscale social responsibility). However this is because these scales are measured using only a few items (3 items); the definition of Cronbach's alpha means that a small number of items automatically leads to lower values for alpha.

For application of the instrument in human resource development there is good reliability, accompanied by a good cost-benefit ratio. The instrument should not be used for selection during recruitment.

Intercorrelations and structure of the MDA

The correlations between the individual subscales are shown in Table 1.

These correlations indicate connections between the subscales within a higher-level cluster (authority and responsibility). For example, intercorrelations exist between the factors self-esteem, independence and assertion, and between the factors emotional responsibility and social responsibility. This is an indication that these connections can be discussed in the debriefing sessions.

Furthermore, we have examined the structure of the MDA with the confirmatory factor analysis in the AMOS program. We have tested this with several models. The six-factor structure was thus confirmed, and in this structure the best values are found (chi-square, CFI, SRMR and RSMEA). This study found the higher-level scales (authority and responsibility) to be worse than the six-factor structure. It follows that the debriefing should concentrate on the six factors. Bundling into two higher-level categories can be approached hermeneutically during the debriefing

meeting, to derive the context, the connections and the conclusions. Yet the consultant must always refer to the subscales as they represent the statistical foundation.

Table 1: Correlations (n = 384)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 SEL_g	1	.018	.173**	.507**	.032	.431**	.236**	-.042	.181**	.056	-.007	-.069	-.263**	-.186**
2 EMO_g		1	.003	.085	.333**	.076	.133**	.188**	-.375**	-.038	-.196**	.033	-.127*	.365**
3 ORG_g			1	.244**	.322**	.199**	.037	-.102*	.170**	-.166**	.148**	.174**	-.035	-.180**
4 UNA_g				1	.076	.456**	.226**	.041	.292**	-.016	-.064	.009	-.260**	-.277**
5 SOZ_g					1	-.021	.109*	.006	-.224**	-.052	-.026	.022	-.123*	.182**
6 DUR_g						1	.377**	.074	.180**	.016	-.033	.027	-.384**	-.148**
7 Extrav.							1	.253**	-.088	.192**	-.179**	-.124*	-.963**	.083
8 Intuition								1	-.380**	.491**	-.915**	-.467**	-.230**	.399**
9 Thinking									1	-.270**	.467**	.310**	.095	-.925**
10 Perceiv.										1	-.477**	-.937**	-.182**	.287**
11. Sensing											1	.525**	.214**	-.433**
12 Judging												1	.164**	-.280**
13 Introver													1	-.044
14 Feeling														1

** The correlation is significant at the 0.01 level (2-tailed).

* The correlation is significant at the 0.05 level (2-tailed).

Correlation between MDA and the Jungian Personality Profile (JPP)

Table 1 shows the correlations between the six factors of the MDA and the eight factors of the JPP (Extraversion, Introversion, Sensing, Intuition, Thinking, Feeling, Judging and Perceiving). The following connections can be observed:

- Self-esteem and Assertion correlate positively with Extraversion and negatively with Introversion. I.e. extraverted persons assess themselves as more self-confident and more assertive.
- The emotional factor correlates positively with Feeling and negatively with Thinking. I.e. Feeling types tend to assess themselves higher on emotional responsibility.
- Independence correlates with Extraversion and Thinking. Extraverted Thinking types tend to assess themselves as more independent in their power of judgement.

These correlations are not surprising; they are confirmed by the theory of the JPP. All licensed consultants should be aware of these correlations so they can take account of them at debriefing. This shows that the attitude of a person is influenced by his or her personality (among other things), so the debriefing should take account not only of the subject's specific situation, but also the personality of the individual. We therefore recommend combining the MDA with the other instruments in the PPP.

Differences between men and women

Men indicated significantly higher values than women on the subscales self-esteem ($F(1,382) = 12.39, p < .05$), organisational responsibility ($F(1,382) = 6.61, p < .05$), independence ($F(1,382) = 9.22, p < .05$) and assertiveness ($F(1,382) = 4.51, p < .05$). Women, by contrast, indicated higher values than men on the subscale emotional responsibility, ($F(1,382) = 15.18, p < .05$). There were no differences between the sexes on the subscale social responsibility ($F < 1.52, p > .20$). Men perceive themselves as more self-confident, more organisationally responsible, more independent and more assertive than women perceive themselves. Women, by contrast, see themselves as more emotionally responsible.

Differences between age groups

Spearman-Brown coefficients revealed positive correlations between age and self-confidence ($r = .11, p < .05$), organisational responsibility ($r = .30, p < .05$) and independence ($r = .14, p < .05$). So the subjects perceived themselves to be more self-confident, more organisationally responsible and more independent, the older they were.

Differences in career position

Comparative analyses demonstrate that career positions differ in relation to the variables organisational responsibility ($F(6,377) = 7.19, p < .05$) and assertiveness ($F(6,377) = 4.06, p < .05$).

No differences were found between the groups for the other four variables ($F < 1.78, p > .10$ for all groups).

Post-hoc analyses (LSD) revealed the following differences for the variable organisational responsibility: board members indicated significantly higher values than persons in other positions ($p < .05$; for all groups, with the exception of upper/middle management, $p > .15$).

In contrast, subjects in upper/middle management reported greater organisational responsibility than persons in groups not involved in leadership, the self-employed and other groups ($p < .05$ for all groups).

Subjects in the lower-level management group indicated higher values than subjects in the groups not involved in leadership, the self-employed and other groups ($p < .05$ for all groups).

All other differences were not significant.

Post-hoc analyses (LSD) revealed the following differences for the variable assertiveness: board members indicated significantly higher values than persons in other positions ($p < .05$ for all groups, with the exception of upper/middle management and the unemployed, $p > .22$ for both groups). Higher values were found for the upper/middle management group than for the lower-level management group ($p < .05$). All other differences were not significant ($p > .06$ for all groups).

To summarise: the subjects perceive themselves as more assertive and more organisationally responsible, the higher their position in the hierarchy of their organisation.

Summary

Continuing development of the MDA over the last six years has paid off. This process has generated a new instrument for measuring attitude, which may represent a useful addition to the standard inventory of personality tests.

Improvements to the structure of the items and their more refined formulation have enhanced the quality of the MDA.

Quality in application must be ensured by the licensor and the licensed PPP consultants. The present study should be of assistance, as it points out the strengths of the MDA and some correlations. However, its limitations also become clear: it is worth paying particular attention to the six subscales during the debriefing session; the instrument should not be used for recruitment purposes, but for personal or occupational development, e.g. during coaching.