

Supplemental Online Content

Appendix 1 – Assessment information

Exploring the value of an assessment for the professional coaching of residents

Journal of Graduate Medical Education

Lara Teheux, Ester H.A.J. Coolen, Brenda van Voorthuizen, Fleur L.H. van den Udenhout, Bernice A.M. Theeuwes, Jos M.T. Draaisma, Michèl A.A.P. Willemsen, Antoinette C. Bolte, Wietske Kuijer-Siebelink, Janiëlle A.E.M. van der Velden.

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This online, computer-based assessment is provided by PiCompany. PiCompany specializes in advanced online assessment and development tools, and talent analytics.

The assessment consists of three parts: the Connector Ability (intellectual capacity), the Reflector Drives (motivation) and the Reflector Big Five Personality (personality and competency).

The information in this document was provided by PiCompany.

Connector Ability 2.1

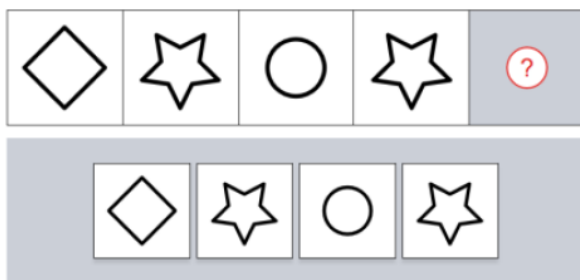
The Connector Ability assesses intellectual capacity. The Connector Ability was approved by Cotan (Dutch Committee on Tests and Testing) in 2016.

The intellectual capacity is measured based on three elements: series of figures, matrix's and numbers. Examples are provided below. The Connector Ability is a language-independent means of measuring intellectual capacity. It aims to measure "fluid" intelligence. [1] The intellectual capacity is measured adaptively, meaning that the difficulty level of presented items is adapted according to the candidate's responses. This allows a more accurate determination of intellectual capacity while limiting the number of required items. [2] The number of items per element ranges between 10-15, depending on how many questions are necessary to determine the intellectual capacity. The average test time including instructions is 60 minutes (range 30 to 100).

The candidate's results are compared to a control group based on the Dutch population of the same educational level. No significant differences in results were found based on gender, age and ethnicity.

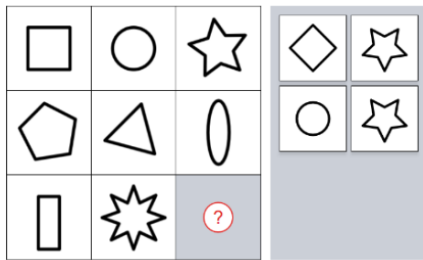
Example items Connector Ability

Series of figures



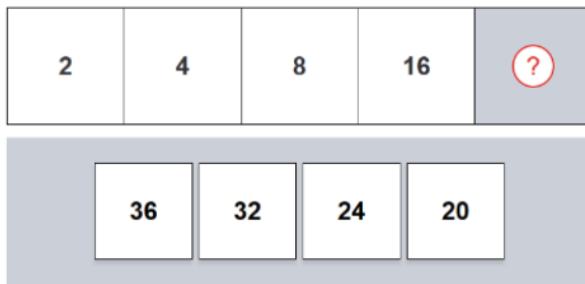
Which figure complements this series in the most logical way?

Matrix of figures



Which matrix complements this series in the most logical way?

Series of numbers



Which number complements this series in the most logical way?

Reflector Drives

The Reflector Drives measures motivational drivers and values related to the work environment. The Reflector Drives is based on the internationally validated value model of Schwartz, adopted to the work environment. [3, 4] Twelve motivational drives, divided in four quadrants, are assessed. The adapted motivational drivers are listed below. The assessment results provide a ranking of the motivational drivers.

The Reflector Drives consists of questions in a semi-ipsative and adaptive format. Three motivational drivers are assessed in one question. Each motivational driver is measured eight times in eight rounds. This adds to 32 questions in total. The average test time is 15 minutes.

Results are compared to a control group, which is balanced in terms of gender, age and discipline.

Motivational driver	Key words
<i>Profile</i>	
Power	Control, decide, direct
Achievement	Success, excel, recognition
Welfare	Financial reward, luxury, comfort
<i>Experience</i>	
Pleasure	Cheerfulness, humor, pleasure
Adventure	Variation, tension, taking risks
Freedom	Independence, self-direction, autonomy
<i>Connect</i>	
Dialogue	Encounter, diversity, inspiration
Care	Service, attention, helpfulness
Team	Together, commitment, loyalty
<i>Preserve</i>	
Justice	Honesty, righteousness, sustainability
Tradition	Maintain, conformity, respect
Security	Predictability, clarity, transparency

Reflector Big Five Personality

The Reflector Big Five Personality report consists of two parts: a personality and competency assessment.

Personality assessment is based on the Big Five Personality types by Howard & Howard.[5] The five factors are: emotional stability, extraversion, openness, agreeableness and conscientiousness. The assessment is based on the NEO PI-R by Costa & McCrae. [6] The assessment consists of 144 statements with a Likert-scale response format.

The competency assessment measures a person's capability to show/develop a set of desirable competency. The scores are based on a weighted combination of facets from the intellectual capacity, motivational drivers and big five personality tests. The assessed competencies are: collaboration, customer-centeredness, entrepreneurship, persuasiveness, planning and organizing, quality-centeredness, result-centeredness, sensitivity and situational awareness.

References

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5. Howard, P.J., Howard J.M., *The Big Five workbook*. 1997: CentACS.
6. Costa, P.T. and R.R. McCrae, *Normal personality assessment in clinical practice: The NEO Personality Inventory*. Psychological Assessment, 1992. **4**(1): p. 5-13.

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Appendix 2 – Interview guides

Exploring the value of an assessment for the professional coaching of residents

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Interview guide residents 1 week after coaching session

Opening questions

- What do you remember about the coaching?
- How did you experience the coaching?

Core questions

- What did coaching with the e-assessment mean to you?
- What role did the e-assessment play for you in that?
- In what ways did you use the e-assessment in the coaching?

- What insights did you gain from using the e-assessment in the coaching?
- What did you learn from the coaching with the e-assessment?
- Did you change anything in your behavior as a result of the coaching with the e-assessment?
- Did you change anything about your work / postgraduate training as a result of the coaching with the e-assessment?
If yes, what and why? If no, why not?
- Did the coaching with the e-assessment change your perspective about your work / postgraduate training?
If yes, how and why? If no, why not?

Follow-up questions:

Why is that?

What about the e-assessment played a role in that?

Can you explain that?

Why is that (not) so?

How exactly does that work for you?

Closing questions

- What other feedback would you like to give to the postgraduate training program regarding the use of the e-assessment for coaching during postgraduate training?
- Do you have any further questions or remarks?
- Do you feel like you were able to tell us everything?

Interview guide residents 3 months after coaching session

Opening questions

- What do you remember about the coaching?
- How do you look back on the coaching now?

Core questions

- What did coaching with the e-assessment mean to you in the past months?
- What role did the e-assessment play for you in that?
- In what ways did you use the e-assessment in the past months?

- What insights did you gain from using the e-assessment in the coaching?
- What did you learn from the coaching with the e-assessment?
- Did you change anything in your behavior as a result of the coaching with the e-assessment?
- Did you change anything about your work / postgraduate training as a result of the coaching with the e-assessment?
If yes, what and why? If no, why not?
- Did the coaching with the e-assessment change your perspective about your work / postgraduate training?
If yes, how and why? If no, why not?

Follow-up questions:

Why is that?

What about the e-assessment played a role in that?

Can you explain that?

Why is that (not) so?

How exactly does that work for you?

Closing questions

- What other feedback would you like to give to the postgraduate training program regarding the use of the e-assessment for coaching during postgraduate training?
- Do you have any further questions or remarks?
- Do you feel like you were able to tell us everything?

Interview guide coaches focus group

Opening questions

- How did you experience coaching residents with the e-assessment?

Core questions

- How did you use the e-assessment in the coaching process?
How would that go without the e-assessment?
How did you use the e-assessment in the preparatory phase?
How did you use the e-assessment during the session?
- What value did the e-assessment have for the coaching?
- Does the e-assessment change the way you go into the coaching session?
- Did you notice any effect of using the e-assessment on how the resident went into the coaching session?
- Did you notice any value using the e-assessment had for the resident in the coaching?
- Did you notice any difference between residents in the value the e-assessment had for them?
- To what extent did you feel the e-assessment correctly represented the residents' attributes?

Follow-up questions:

Why is that?

What about the e-assessment played a role in that?

Can you explain that?

Why is that (not) so?

How do other coaches feel about this?

How did that go for other coaches?

Closing questions

- What is for you the most important difference between coaching with the e-assessment and coaching without the e-assessment?
- What other feedback would you like to give to the postgraduate training program regarding the use of the e-assessment for coaching during postgraduate training?
- Do you have any further questions or remarks?