

# Guiding tool 4

## Personal Competencies & Traits

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Master's admission  
for a diverse international classroom

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# 1. Introduction

## to the Mastermind Europe Toolkit

Mastermind Europe is an initiative to help finding a better way to decide which students are suitable for which Master's programme. With support of the ERASMUS<sup>+</sup> programme, the Mastermind Europe Consortium developed and tested a Toolkit and Expert pool that can support academic directors of Master's programmes who wish to improve their admission system. Toolkit and Expert pool were tested, first in eight broad Focus Groups and then in seven pilots at individual Master's level. The E+ project ended in September 2017 and the (slightly revised) Consortium decided to continue the work – on a not-for-profit basis.

This Guiding Tool No 4 “Personal Competencies & Traits” is part of a set of six Guiding Tools in the Mastermind Europe Toolkit. These Guiding Tools are:

1. Coherent Admission Framework
2. Subject-related Knowledge & Skills
3. General Academic Competencies
4. Personal Competencies & Traits
5. Language requirements, and
6. Managing Graduate Admission.

The Mastermind Europe Toolkit further contains the Mastermind Europe Manual, the Mastermind Europe Approach and three reports which strengthen the evidence base for Mastermind Europe:

- ❖ Report 1. Introduction to the Paradigm Shift: Changing paradigms in admission to Master's programmes in Europe
- ❖ Report 2. Admission to English-Taught Programs (ETPs) at Master's level in Europe: Procedures, regulations, success rates and challenges for diverse applicants
- ❖ Report 3. Restrictions; real or perceived? Legal obstacles to Master's admission in Europe

All parts of the Mastermind Europe Toolkit are freely accessible on the website [www.mastermindeurope.eu](http://www.mastermindeurope.eu), where there is also a repository of relevant literature and an explanation of the Mastermind Europe advisory service.

The set of Guiding Tools builds on the Paradigm Shift report, which shows how Master's programmes in Europe operate in an increasingly diversity environment. Because of this increasing diversity, many Master's programmes experience the need to improve their admission process, as well as the need for more transparent information to prospective students, and feedback loops between admission and curriculum implementation.

Guiding Tool 1 offers a coherent admission framework in which distinct categories of admission criteria are identified: criteria connected to subject-related, academic, personal and linguistic competencies. In addition, the Guiding Tool clarifies the distinction between criteria, norms and testing mechanisms.

Guiding Tool 2, 3, 4 and 5 zoom in on each of these categories of admission criteria. Each offers information on existing practices and research findings, and offers a 'language' to make more explicit the often implicit knowledge of core teachers about what students need to bring.

Guiding Tool 6 focuses on the crucial elements impacting the university's system and procedures in pre-admission communication, application, selection, and enrolment.

## to this Guiding Tool 4: Personal Competencies & Traits

As explained in Report 1: “Introduction to the Paradigm Shift”, applicants to Master’s programmes are increasingly diverse in terms of their discipline, their geographic/cultural background and their mix of educational and experiential learning.

In the labour market and in job recruitment, we see importance attached to personal traits and competences. More and more, employers tend to use so-called “assessments” to analyse a candidate’s personal strengths and ambitions. In higher education, learning outcomes in the sphere of personal competencies are still often more implicitly assumed than an explicit part of the designed curriculum.

there is still much less interest for personal characteristics.

But study and work are related; Higher Education institutions seek competitive advantage through the employability rates of their graduates. If HE institutions and Master’s programmes want their graduates to be employable, personal traits and competencies can’t be ignored.

And indeed, many Master’s programmes have elements in their admission requirements and admission process, which seem to relate strongly – or exclusively – with personal competencies or personal traits. Motivation statements, reference letters, information on extra-curricular activities, and interviews seem to be used to get a ‘feeling’ for what kind of a person the applicant student really is.

So we see that on the one hand it seems unavoidable to use personal traits within the admission process. On the other hand we see that the use of these traits in the admission process is a “can of worms”. A “can of worms” because the validity and reliability<sup>1</sup> of the instruments that are available and used in this area are highly debatable. There are legal issues (programmes can be sued if they apply them without diligence); having ‘personal things’ in the admission requirements creates a risk of bias against certain groups and also a risk of a fundamental conflict with the core vision and mission of the programme and the university.

This Guiding Tool provides a step-by-step approach to support Master’s coordinators in assessing if they want to give personal competencies or traits a more explicit place in their admission process and if so, how to do that.

It starts with a key question for admission:

### Key question:

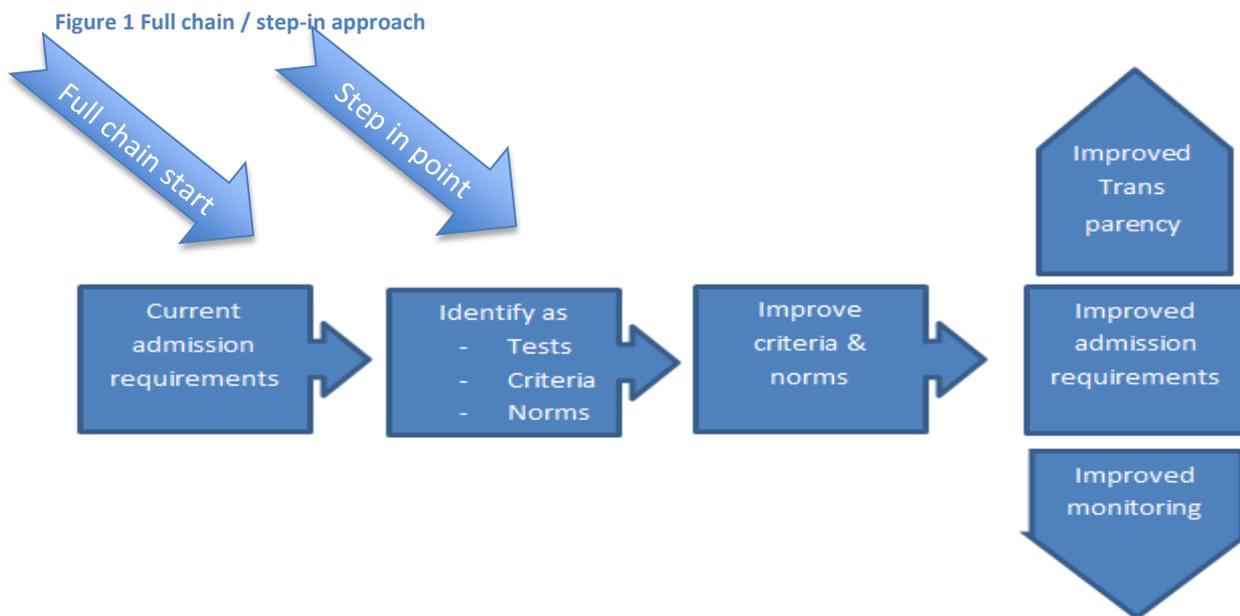
- how can students demonstrate
- that they are good enough
- in the things they need to be good at?

The Tool is based on “full chain / step in” model and on the Coherent Admission Framework developed in Guiding Tool 1.

The “full chain” works for Master’s programmes that already have other admission requirements than just a Bachelor’s degree. It starts at the top left of the visual: current admission requirements. The “step in” works for Master’s programmes that still fully rely on diploma-recognition. It starts one step to the right, because no admission requirements other than the Bachelor’s degree have as yet been defined.

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<sup>1</sup> Reliability refers to the requirement that a test needs to give the same results upon repetition. Validity refers to the requirement that a test needs to actually measure what is intended.



The Coherent Admission Framework allows Master’s programmes to analyse the current elements in their admission process in terms of the criteria and norms that are being used (often implicitly). Here, only the subsection for Personal Competencies & Traits is presented – the full matrix can be found in Guiding Tool 1.

Table 1 Coherent Admission Matrix

How do you a) know (= assessment mechanisms) if b) students are good enough (= norms-levels) in c) the things they need to be good at.				
Or, in logical order: 1) criteria, 2) norms/levels, 3) assessment mechanisms <sup>2</sup> with 4) testing scores				
	1 Criteria	2 Norms/ levels	3 Assessment mechanisms	4 Assessment scores
	What you are looking for		What you are looking at	
<b>Personal Competencies &amp; Traits</b> <b>(Guiding tool 4)</b>				

As many Master’s programmes will have limited time and resources, the Guiding Tool offers a Step-by-step approach to quickly identify where improvements in admission are possible. It is designed to help to decide if – and if so, which Personal Competencies & Traits are important to the programme. In other words, it helps to be more precise in the what, the why and the how of the ‘personal things’. This will help you to decide if you want to include them in the admission process

<sup>2</sup> “Assessment mechanisms” or “Testing mechanism” are used in all Mastermind Europe documents in a very broad and non-judgemental way. It includes all and any mechanisms that master’s programmes actually use in the admission process – even mechanisms that many observers and researchers would disqualify as unreliable or even perverting. It is precisely part of our objective to stimulate careful reassessment of these mechanisms.

and if so, what testing mechanisms you may use. It provides a step by step description of this decision-making process.

We offer this quick approach in two alternative ways. In both varieties, it does offer references to more in-depth analytical or practical expertise for those readers who want to delve deeper.

## 2. Step-by-step implementation

Even for Master's programmes that need a quick-and-dirty approach, it is inevitable to start with some words about what is meant by "Personal Competencies & Traits".

"Personal Competencies & Traits" form one of the three distinct categories developed in the Mastermind Europe project to look at 'things' that students might be required to be 'good enough' in: Subject-Related Knowledge & Skills, General Academic Competencies, and Personal Competencies & Traits.

We used these categories as a tool to scratch below the surface of "good enough students" – with Language Requirements as the fourth component. Throughout the Erasmus+ project (2014-'17), we found that the participants in the Focus Groups and Pilots – and many other groups – immediately understood that distinction and found it relevant. It closely resembles the three categories that OECD uses in its PIAAC survey of adult skills: professional-technical skills, cognitive skills, and social-emotional skills<sup>3</sup>.

In the personal – or interpersonal – domain, the key distinction is between personal competencies and personal traits. Although we can find varieties of definitions, there seems a fairly general consensus among organisational psychologists that personal traits relate to elements of the personality – deeply engrained, hard to change – while personal competencies (or competences) refer more to the behaviour and attitudes that a person actually shows.

For personality traits, there is also a broad consensus: about the Big Five Personality<sup>4</sup> traits, with recent pleas to extend with a sixth trait to the [HEXACO](#)<sup>5</sup> Personality Inventory.

For personal competencies, there is some literature referring to the "Great Eight"<sup>6</sup>. In Mastermind Europe, we have focused on the five dimensions in the Competence Instrument for Dutch universities developed by NOA, a psychological research and consultancy organisation that is linked to the psychology department of the Faculty of Human Behaviour and Movement at the *Vrije Universiteit* Amsterdam and works closely with many of the Dutch HE institutions. This seems more relevant than the OECD Competency Framework<sup>7</sup> which is very specifically job-focused and less congruent with psychological research.

A second useful way to look at personal competencies is provided by the VALUE Rubrics<sup>8</sup>. These have been developed by the Association of American Colleges and Universities (AAC&U) to monitor educational progress in undergraduate education in the US. But they have proven to be very useful to express the competencies required upon entrance to a Master's programme as well. Of the 16 VALUE Rubrics, 6 relate to elements of personal competencies and traits. The other 10 relate more to General Academic Competencies and are treated in Guiding Tool 3.

Further down in this section, more – although not exhaustive – background information will be given on the "Personal Competencies & Traits" both from the existing standardised tests and from psychological literature.

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<sup>3</sup> See Desjardins

<sup>4</sup> See Judge

<sup>5</sup> See <http://hexaco.org/>

<sup>6</sup> See Bartram

<sup>7</sup> See Ananiadou

<sup>8</sup> See <https://www.aacu.org/value-rubrics>

But even without that background, the step-by-step approach sketched here may help Master's programmes to find out if they want to make specific changes in their admission that regard General Academic Competencies, and to identify quickly implementable improvements in admission.

## Quick approach, two alternative ways

We offer this quick approach in two alternative ways (see table below outlining both):

- One which starts with the tacit knowledge of the academics about what they see as required Personal Competencies & Traits – and then relates those to the HEXACO personality traits and the five competencies in the NOA instrument.
- The other which starts with the VALUE rubrics developed by the AACU.

Below the table, we elaborate on the various steps in the table, which should help you to decide which role Personal Competencies & Traits should have in your admission process and how to achieve that.

In addition, we offer references to more in-depth analytical or practical expertise for those readers who want to delve deeper: in parentheses and footnotes, and even more in the Annexes.

Table 2 Step by step approach

Step-by-step approach in two alternative ways	
<p><b>Tacit knowledge</b></p> <ol style="list-style-type: none"> <li>1. Sit down with senior academics of your programme and identify the Personal Competencies &amp; Traits (PCT) that – in your experience – have been recurrent reasons why students (and alumni) have succeeded or failed.</li> <li>2. Decide which of these PCT need to be considered as part of your admission process. Choose no more than maybe 4 or 5 you deem most important. Consider the <b>zero</b> option (see below).</li> <li>3. Decide which level of competence is required at the start of your programme for the chosen competencies.</li> <li>4. Relate your conclusion to the Competency Instrument developed by NOA for the Dutch universities and/or the Big-5/HEXACO framework for personality traits<sup>9</sup>.</li> </ol>	<p><b>VALUE rubrics</b></p> <ol style="list-style-type: none"> <li>1. Sit down with senior academics of your programme and decide which parts of the 6 relevant VALUE Rubrics best reflect the crucial success/fail factors for your students.</li> <li>2. Chose no more than maybe 3 or 4 you deem most important. Consider the <b>zero</b> option (see below).</li> <li>3. Decide which of the described levels of competence in those VALUE Rubrics best reflect the required entrance level of your programme.</li> <li>4. Relate your choices to the NOA Competency Instrument for Personal Competencies and/or the Big-5/HEXACO framework for personality traits<sup>3</sup>.</li> </ol>
<ol style="list-style-type: none"> <li>5. Decide if PCT is something you want to test – and feel confident that you can choose in a reliable way – or rather rely on self-selection based on clear articulation of what personal competencies or traits you expect. Deciding <b>not</b> to select on personal competencies or traits, we call the <b>zero option</b>.</li> <li>6. Chose one or more testing mechanisms to assess if students meet the required level in the chosen general academic competencies.</li> <li>7. Decide the required rating of these testing mechanisms in your admission process.</li> <li>8. Decide if and how prospective students can use alternative ways to prove their PCT.</li> <li>9. Decide if and how prospective students can acquire the necessary PCT between the admission decision and the start of your programme. And also decide if and how they acquire them after your programme has started, whether as part of your programme or extra-curricular.</li> <li>10. Decide if one lower score might be compensated by another high score, and for which elements this is possible.</li> <li>11. Communicate <b>all of this</b> in a clear, transparent way to prospective students.</li> </ol>	

<sup>9</sup> This will help you compare your approach to that of other Master's programmes elsewhere.

## Further explanations and details to the alternative step-by-step approaches

For both approaches (tacit knowledge and VALUE rubrics), what we basically suggest is that you critically confront current admission practice (“what you are looking at”) with an improved understanding on the underlying required levels of competency (“what you are looking for”).

This goes two ways:

- We recommend that you look for implicit assumptions about required personal competencies or traits levels – within the current admission practice.
- And we recommend that you look for the gaps and inconsistencies in current admission – from the perspective of underlying required competency levels.

In addition, we recommend that consider if your information to potential applicants adequately reflects what personal competencies you are looking for – and which ones will be part of the selection process.

### ***Required Personal Competency level or Personality to enrol***

What Personal Competencies or Traits are required at the start of the Master’s? And which of these are so important that they need to be assessed in the admission process? The answer to these questions should logically be derived from the intended learning outcomes of that Master’s programme.

Do you want to select on innate (and almost unchangeable) personality traits or rather on specific competencies? From the perspective of the Mastermind Europe project, we are not prone to advise Master’s programmes positively to make Personal Competencies or Traits parts of the selection process. We see quite significant problems of validity and reliability. In fact, we tend to advise Master’s programmes to consider if you can – particularly when you describe what required personal competencies for the Master’s as clear and SMART as possible – rely much more on self-selection: convince the students to make their own assessment if this Master’s programme is really something for them – and vice versa. If you do really feel need to select on personal elements, we would tend to advise to consider the competencies rather than the personality traits – unless the programme has a very clear focus on a profession with very clear personality requirement.

Please note that in this Guiding Tool is written primarily for Master’s programmes that already exist.

For newly developed Master’s programmes, the first step will, even more naturally, start with the learning outcomes. But those are beyond the scope of this guiding tool.

In addition, these learning outcomes should logically have been determined while taking the demands of the labour market for graduates into account.

A fairly generic description of learning outcomes at Bachelor’s, Master’s and Doctoral level has been given in the Dublin descriptors. A failed attempt to produce more specific learning outcomes was made in the OECD AHELO-project and is now being made in the EU CALOHEE-project. The VALUE rubrics developed in the context of the AACU were mentioned already and are explained below<sup>10</sup>.

Many Master’s programmes, particularly those with selection procedures, have motivation and references letters as standard elements in their admission process already. So they already take other considerations than only academic performance into account. Medical schools in particular show a widely spread practice of interviewing candidates as part of the admission process. For the medical profession, the conviction that practitioners need other qualities beyond intellectual ones is

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<sup>10</sup> See Tremblay (AHELO) and Zlatkin-Troitschanskaia (CALOHEE)

uncontested<sup>11</sup>. But where many Master's programmes require documents like a motivation statement, it is often not clear for students what those who read such statements are looking for.

"What personal attributes should I possess and how good do I need to be at them?" is the question that applicant students will want to ask when writing a motivation statement; what answer to that question can they find?

As with Subject-Related Knowledge & Skills and General Academic Competencies, the core academics of the Master's programme must play the key role in determining the required level of Personal Competencies & Traits. They are, after all, the experts on what is needed to succeed in their programme.

For programmes choosing the 'tacit knowledge' approach, the following set of questions can be used:

**Table 3 Examining tacit knowledge**

Deducting required personal competencies or traits from previous experiences	
Question	Room for answers
1. Can you remember a student or students <u>in past classes</u> who struggled or even failed, and where you feel this had to do with personal competencies or traits: e.g. emotional stability, networking skill, introversion, flexibility, integrity)?	
2. What was particularly relevant in the case of the student you have in mind, what made you think it played a role, particular occasions when you noticed it?	
3. Would you put that more in the category of deeply-rooted personality traits or more in that of competencies that may be developed? Can you find – in the NOA/HEXACO lists or the VALUE Rubrics some words that adequately describe the crucial element?	
4. Can you derive from these cases some minimal benchmark level in crucial traits or competencies for success in your Master's?	
5. Moving from admitted students to applicants, can you remember applicants whom you either refused to admit, or did admit but with serious hesitations; again, not because of their subject knowledge or general academic competencies, but because of personal competencies and traits? Does that add to your identification of critical traits or competencies?	

***Linking entrance level to the required graduation level in a General Academic Competency***

Although it is beyond the scope of the Mastermind Europe project, Master's programmes may want to relate their admission requirements to the desired end result: the academic competencies that are most important for successful completion of the Master's programme and/or entrance into the job market.

<sup>11</sup> See Eva

**Higher personal competencies & traits level needed upon graduation:**

- a. does the programme already cater for that?                      yes/no  
     If not:
- b. does the programme offer support for students to develop a higher level of competence?
- c. does the programme offer room to get support elsewhere?
- d. is it left up to the student to arrange for this?

The assumption here is that there is a difference between the level, needed to enrol in the programme and the level, needed upon graduation. For Subject-Related Knowledge & Skills, this is of course self-evident and reflected in the curriculum. For Personal Competencies & Traits (and for General Academic Competencies), the higher exit level is often implicitly assumed, but not very clearly reflected in the curriculum, in the study material and in the work methods in the programme.

***Finding words to define competency levels***

As indicated above, the Mastermind Europe approach relies on the basic distinction between a) personal traits – summarised in the HEXACO framework- and b) personal competencies – for which we use the Competency framework developed by NOA for the Dutch universities. As an alternative, we also describe the AACU VALUE Rubrics that relate to personal aspects. Thus, we offer two alternative way to express the Personal Competencies & Traits: to give words to the tacit knowledge of the experiences academics and to create a bridge between their subject-related experience and the world educational theory and practice.

We don't claim that these are the only ones or the best ones. We simply have found them the most useful in our Focus Groups and Pilots.

There is also a Competency Framework developed by the OECD; this – like VALUE – describes different levels of performance, but both the general categories and the specific competencies seem to have little or no correlation with existing scholarly literature on Personal Competencies & Traits and are so job-specific that they seem less useful in the context of admission to Master's programmes.

***The Hexaco framework of Personal Traits***

The Hexaco framework is an extension of the well-established Big-5 framework of the basic personality dimensions<sup>12</sup>. It categorises a large variety of personality traits in the six broad categories and gives examples that may be labelled positively or rather negatively – depending on the point of view or the context. It may help to recognise specific behaviour as a reflection of personality rather than of a specific personal competency.

**Table 4 HEXACO personality traits**

Honesty/ Humility	Emotional stability	Extraversion	Agreeableness	Conscientiousness	Openness
Sincere	Brave	Outgoing	Patient	Organised	Intellectual
Honest	Tough	Lively	Tolerant	Disciplined	Creative
Faithful	Independent	Extraverted	Peaceful	Diligent	Unconventional
Loyal	Self-assured	Sociable	Mild	Careful	Innovative
Modest/unassuming	Stabile	Talkative	Agreeable	Thorough	Ironic
		Cheerful	Lenient	Precise	
		Active	Gentle		
<b>versus</b>	versus	versus	versus	versus	versus
Sly	Emotional	Shy	Ill-tempered	Sloppy	Shallow
Deceitful	Oversensitive	Passive	Quarrelsome	Negligent	Unimaginative
Greedy	Sentimental	Withdrawn	Stubborn	Reckless	Conventional

<sup>12</sup> See Kyllonen, 2014

Pretentious	Fearful	Introverted	choleric	Lazy
Hypocritical	Anxious	Quiet		Irresponsible
Boastful		Reserved		Absent-minded
Pompous				

The NOA Competency Framework

Whereas a personal trait is often deeply ingrained, competences tend to develop over time. NOA (Development Research Training assessment) describes a competence as a unique combination of knowledge, skills and attitude which find their expression in outward behaviour and are key to a person’s success in their job and career (competence instrument for the Dutch Universities, VSNU-NOA). NOA developed a competence model framed for the professional and personal development of individual university employees.

Table 5 NOA Competency framework

Analysing and Devising	Communicating & Influencing	Realising and Evaluating	Personal Effectiveness	Managing & Supervising
Vision	Empathy	Planning & organization,	flexibility,	managing for
Conceptual capacity	Persuasiveness	monitoring, result	integrity, stress	results, coaching,
Analytical capacity	Cooperating,	Orientation, cost-	resistance, self-	binding
Inventiveness	Networking skills	Consciousness,	reflection	leadership,
Capacity to learn	Organisational sensitivity	commitment to the client,		delegating,
Environment orientation	Written fluency	accuracy, initiative,		decisiveness
	Verbal communication,	entrepreneurship		
	Presenting			
	Negotiating			

We can’t repeat it enough: we don’t argue in any way that Master’s programmes should consider taking all these competencies on board; we provide them as a language in which to express what the core academics recognise as the (most) important aspects of what students need to bring to the programme.

The AACU VALUE Rubrics

In the Mastermind Europe project, we have found that the VALUE Rubrics offer a second valuable way to give words to the tacit knowledge of the experiences academics and to create a bridge between their subject-related experience and the world educational theory and practice. The VALUE Rubrics were developed under the aegis of the Association of American Colleges and Universities (AACU).

In the original VALUE initiative in 2007-09, teams of faculty and other educational professionals from over 100 higher education institutions in the US developed and tested the 16 VALUE rubrics.

Six VALUE Rubrics seem to connect rather to the Personal Competencies & Traits of the Mastermind Europe approach and are discussed in this Guiding Tool; the ten others connect more to the General Academic Competencies discussed in Guiding Tool 3<sup>13</sup>.

Below, spread over two tables, is an overview of these 6 VALUE Rubrics, each of them consisting of five to six main dimensions.

<sup>13</sup> NB The attribution of these Rubrics to ‘General Academic’ or ‘Personal’ may in some cases be open for discussion and we claim no final verdict. If these Rubrics are found useful, it doesn’t really matter under which label they are put.



And one from “Team work”:

	Capstone 4	Milestones 3	2	Benchmark 1
Contributes to Team Meetings	Helps the team move forward by articulating the merits of alternative ideas or proposals.	Offers alternative solutions or courses of action that build on the ideas of others.	Offers new suggestions to advance the work of the group.	Shares ideas but does not advance the work of the group.

Mastermind Europe does not pretend full scholarly competence in matters of didactics or the relevant fields of psychology. But we have checked this analytical framework for Personal Competencies & Traits with specialists in these fields, who have confirmed that it is coherent with state current state of research and theoretical thinking.

**Assessing the current admission procedure – and finding ‘low hanging fruit’ for improvement**

Once you know specifically what Personal Competencies or Traits students need to have at the start of their Master’s programme, you can compare this with your current admission process. You may find the following set of questions useful:

Table 8 Finding Low Hanging Fruit

Current admission process	
Question	Room for answers
Are there elements in your admission process that relate to Personal Competencies or Traits? Or that really only can be explained as relating to PCTs? Which elements?	
If so, what kind of proof do you require?	
Do you ask for documents that clearly relate to personal competencies and/or traits – but without a clear idea which personal competencies or traits you are actually looking for?	
Did you ever encounter any difficulties in assessing an applicant's personal competencies or traits?	
If so, could you briefly describe these difficulties?	
Are you satisfied with how you communicate the required competencies to potential students?	
Where these elements fit best? In one of the categories of the Big-5 HEXACO framework of personality traits? Or in one of the categories of the NOA framework of personal Competencies? Or rather in some of the VALUE Rubrics? Which specifically?	
Are you satisfied with the articulation of the competencies (and level of competency) in your current admission process?	
Can the HEAXOCO or NOA framework or the VALUE Rubrics help to make your description improve your articulation of the required levels of competency more precise?	
What tests or mechanisms do you currently use to assess the competency of applicants?	

**Assessing Personal Competencies or Traits: How you assess, how you value the assessment**

In the paragraphs above, we have discussed that you may articulate more precisely what Personal Competencies & Traits you would want your incoming students to possess. We have argued

that you may want to consider carefully if you really need to assess these in your admission process, or rather explain what you're expecting and rely on self-selection. Below we discuss what tools you might choose – if you do feel you must – for that assessment, and how you rigorous or flexible you can be in using these tools.

If you find your current admission process inadequate in its assessment of Personal Competencies or Traits, you can either develop your own tests or decide to use existing standardized tests/assessment mechanisms.

When it comes to evaluating personality traits, there are various instruments that are being used to reveal personal traits. We can divide these instruments in two categories: self-assessments or observer reports.

The first category contains the personality tests/assessments or motivation statements. The purpose of these personality/competence tests or statements is to gain insight in your personal strengths and weaknesses. In practice they are used in the selection process of candidates to make more informed choices.

The second category contains the reference letters and interviews that are used already in many admission processes.

***Most commonly used self-assessments:***

The self-assessment test that is available for admission processes within universities is the **ETS facets test**. Twenty-one behavioural dimensions within the big-5 traits are tested. Applicants are measured on the tests by filling in forced choice questions. In 2014, Yale University of Management was the pilot testing school to make use of the ETS facets test.

The **HEXACO** test is available as a self-reporting instrument and as an observer report and is conducted in various languages. Since 2009 a shorter, less time-consuming version is also available. Personality traits have – in literature – a stronger predictive value, but they are much less subject to change at the age of Master's students. Using personality traits in admission may be seen as contrary to the developmental aims of education.

The Dutch Psychologists company **NOA** develops and implements tailor-made tests on personal characteristics. NOA developed a test for a Dutch university in which they assess competencies and personality traits. These tests can be used for students to increase their self-knowledge and understand their skills and skills potential in the context of their study. There is no standardised NOA test, as NOA argues that the test needs to be tailored to each Master's programme in terms of the choice of the characteristics to be tested and the calculation of their predictive value. NOA claims their tests are reliable and valid, but can't be used as a one-size-fits-all: they contend that the test needs to be tailored to specific Master's programmes after qualitative analysis of the programme and the objectives of admission.

**UKCAT** ([UK Clinical Aptitude Test](https://www.ukcat.ac.uk/ukcat-test/)<sup>14</sup>) is used in the selection process of candidates to make more informed choices. It originally focused on general cognitive (General Academic) competencies. But more recently it has added a Situational Judgement test and a Decision Making component. In these, students are asked questions on a series of scenarios with possible actions and considerations. In the first part of the test they will be asked to rate the appropriateness of a number of options in response to the scenario. In the second part the student has to rate the importance of the options to respond to a certain scenario. Thus, the PCT components of the UKCAT test are based on self-assessment.

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<sup>14</sup> <https://www.ukcat.ac.uk/ukcat-test/>

**Personal Statement**

Many Master’s programmes require students to write a personal statement as part of their admission processes, asking them to explain what added value they think they bring to the Master’s programme. These Personal Statements are fraught with problems. They are open to all kinds of fraud and manipulation – and bring a significant risk of bias by the academics or administrators who assess them. In our experience, it is difficult for universities to assess and rank personal statements in a balanced and equitable way.

Quite recently (February 2017), a PhD dissertation at Groningen University demonstrates how problematic the use of motivation and other personal elements is in admission to higher education, both in terms of bias and predictive value<sup>15</sup>.

If you do use for example a personal statement, have look at how this testing mechanism is working for you by answering the below questions:

Table 9 Sample analysis

The Motivation statement	What can you say about it?
One professor reads all motivation statements	This is a subjective and qualitative testing mechanism.
What criterion is involved?	That may be unclear: to the university, to the students, even to the professor.
What norm is applied?	Similarly, that may be unclear to all involved.
How satisfactory is this practice?	Possible answers: <ul style="list-style-type: none"> <li>- We are satisfied, no change.</li> <li>- We want to change in some ways; see next rows.</li> </ul>
Possible conclusions in terms of articulation of criteria/norms	<ul style="list-style-type: none"> <li>- We need to explain what PCTs we look for in the Motivation statement, using the PCT framework (see GT PCT).</li> <li>- We feel unable to articulate precisely what we are looking for.</li> </ul>
Possible conclusions in terms of testing mechanisms	<ul style="list-style-type: none"> <li>- We will articulate more precisely what personal competency or trait students must have – at what level (using one of the PCT frameworks).</li> <li>- We will have Motivation Statements (all or random samples) assessed by more than one professor and will introduce a Motivation Statement assessment protocol.</li> </ul> Or <ul style="list-style-type: none"> <li>- We will stop using Motivation Statements because we can’t articulate precisely what we are looking for.</li> <li>- We will stop using Motivation Statements because, although we do know what we are looking for, we feel that Motivation Statements are not a valid and reliable assessment mechanism.</li> </ul>
Possible conclusions in terms of transparency	We need to explain better to students what it is that we are looking for.
Possible conclusions in terms of monitoring	We need to include Motivation Statements in our student success monitoring: see if the assessment of these Motivation Statements predicts study success better than other indicators for PCT.

**Most commonly used observer reports**

<sup>15</sup> See Niessen

- *Interview techniques*

At various universities, interviews are used to get more insight into the applicants' motivation and knowledge. These interviews range from loose conversations to moderately or very structured interviews (panel interviewing) (Goho, J., Blackman, A, 2006). Within panel interviewing multiple interviewers increase the accuracy of assessing the candidates skills. Nowadays master programmes (for example in Medicine) also make us of the Multiple Mini Interview (MMI) originally developed by McMaster University<sup>16</sup>. The MMI consists of a series of short, structured interview stations to assess personal traits. For each station students receive a scenario or question and have a short period of time to prepare. The advantage in this case is that you get a wide variety of different opinions about each candidate and the candidates can be assessed on a variety of skills. The interviewers usually have no knowledge of a candidate's background prior to their interaction. The general criticism of interviews as being prone to bias and the halo effect is at least partially neutralised.

- *Reference Letters and Reference Letter Tools*

Many universities ask for reference letters as part of the admission process, but the way these reference letters are evaluated varies. In most cases, universities wish to see specific examples that illustrate the students' talents and ambitions. To make sure that reference letters also provide the information the universities wish to obtain, they sometimes make use of standardized questions within the recommendation letters. In some cases they also ask referees to fill in certain grids for students (for example a leadership grid at Stanford business school). Within the context of the standardization of reference letters, ETS came up with a Web based tool in which evaluators provide feedback about applicants on 6 attributes. The system is based on a combination of a rating form and a traditional letter of recommendation. With Reference Letters, one may encounter the same risks as with Personal Statements: fraud and bias.

Table 10 Sample analysis

The Reference Letter	What can you say about it?
The students upload their reference letter into our system and one professor reads these letters	Reference letters are open to fraudulent practices and it is a subjective testing mechanism.
What criterion is involved?	You may require that it needs to be written by a professor at their current programme. The content related-criteria may be unclear: to the university, to the students, even to the professor.
What norm is applied?	Similarly, that may be unclear: to the university, to the students, even to the professor.
How satisfactory is this practice?	Possible answers: - We are satisfied, no change. - We want to change in some ways; see next rows.
Possible conclusions in terms of articulation of criteria/norms:	- We need to explain what we expect from a reference letter and on which elements a professor should elaborate when writing a reference letter for a student. - We feel unable to articulate precisely what we are looking for.
Possible conclusions in terms of choice of testing mechanisms	- We improve the system by letting referees upload their letters with standardized questions in a web based tool - We stop it because we feel unable to articulate precisely what we are looking for. - We stop it because, although we do know what PCT we are

<sup>16</sup> [http://mdprogram.mcmaster.ca/md-program-admissions/how-we-select/multiple-mini-interview-\(mmi\)](http://mdprogram.mcmaster.ca/md-program-admissions/how-we-select/multiple-mini-interview-(mmi))

	looking for, we feel that reference letters aren't a sound and reliable way to test if the students have them.
Possible conclusions in terms of transparency	We need to explain better to students and to referents what we are looking for.
Possible conclusions in terms of monitoring	We need to include Reference Letters in our student success monitoring: see if it predicts success better than other indicators for PCT.

Summarising the various options to assess personal competencies and traits:

Table 11 Overview of PCT assessment mechanisms

	Self assessment	Observer	Test
<b>Hexaco Personality Inventory</b>	✓		–
<b>ETS Workforce assessment</b>	✓		–
<b>UKCAT situational judgement &amp; decision making</b>	✓		–
<b>Personal statement</b>	✓		–
<b>Reference letter</b>		✓	–
<b>Interview</b>		✓	–

Regardless of which assessment mechanism you choose, there are some issues to be considered:

- Standardised tests do not tell you which testing score is adequate for your Master's programme. You will need to determine the suitable testing score range for your programme.
- Most tests sternly warn against using them as a simple mechanism for a Yes/No answer; they strongly urge to use the test as just one of a set of factors in your decision.
- If applicants fail to meet the required score, do they get an opportunity to improve their competencies and meet the required levels in time? Do they get that option in time for the start of the programme or in time for graduation?
- Will you only consider the highest scores, or is there a minimum score required (or both)? Does a low score automatically lead to rejection, or could it also lead to a conditional admission? And would this condition then be the student's responsibility (the student having to ensure to be good enough before the admission turns into an unconditional one), or

would it be a signal to the programme (with the programme taking responsibility to provide extra care to the student in this field)?

- Also: could it be that a low score on personal competencies or traits might be compensated by a high score on subject-related knowledge and skills and/or general academic competency?

We want to underline once more the huge risks of lack of validity and predictive value and the risk of bias in the assessment of personal competencies & traits.

### **Institutional research**

No matter how carefully designed an adapted admission process is, the only way to determine whether the right choices have been made in selecting admission criteria and norms will be to monitor how accepted students perform in the course of the programme – as well as after their graduation!

The full chain / step-in analysis of the admission process in search for potential improvement mentioned in the introductory paragraph is, of course, a repetitive exercise.

### **Information for prospective students**

After discussing criteria, norms and testing mechanisms, and after adapting your admission process accordingly, it is important to be transparent about what you expect from the applicants. A clear description - and explanation - of your requirements may work as an additional motivation for qualified students to apply, and may discourage unqualified students.

This is particularly relevant in the domain of Personal Competencies & Traits: we very often find that public information on admission to Master's lacking in information on what is expected in terms of the content of the motivation statement and reference letters. Without such explanations, reference letters then to become fairly standard, almost ritualised phrases describing "the good student".

For the motivation statement, it would help to guide students in their statement by identifying elements that students should reflect on within their statement. The below example (Delft University) gives a clear description of what a "motivation essay" for this programme should address.

A clear and relevant essay in English (1,000- 2,000 words) addressing the following:

- Your motivation for taking the MSc programme of your choice;
- Your motivation for taking the MSc programme of your choice;
- Why you wish to pursue this programme abroad and/or in the Netherlands in particular;
- Why you are interested in TU Delft and what you expect to find here;
- If there are optional specialisations in the Master's programme of your choice, which specialisation(s) interest you most, and why?
- Describe your hypothetical thesis project; what kind of a project would you prefer if you were free to make a choice? Also briefly explain what you would want to explore in your thesis project. Provide a maximum of three hypothetical thesis topics and elaborate on your particular interests in them.

## Annex A: Key questions

The guiding tool for personal traits will help masters coordinators to define what type of students (with what kind of personal traits) they want for their programme. A few questions should be answered:

### Questions on the relevance of soft skills

- Do you believe that personal traits/ facets/competences are important for success within the programme?
- Do you believe that personal traits/ facets/ competences are important for (career) success after graduation?
- Do you believe that personal traits/ facets/competences are important (for the student in order to)fit in class?
- Do you believe that personal traits/ facets/ competences are important to contribute to diversity in class?

### Questions on the choice of personal traits

- Which of the big 5 or 6 Hexaco traits do you presume to be important (relevant) for your programme?
- Can you sort the traits/facets in order of importance?
- In more detail which of the facets that describe the traits do you presume to be important?
- Are there any traits that you believe to be important but not mentioned?

### Questions on the way you measure these personal traits

- Is there a justification for sub scores? Or should there be one index?
- Can the traits compensate one another?
- Can you measure personal traits free of cultural background, language, gender and age differences etc., or how to use them in an international context?
- Should you evaluate an applicants based on traits described by self-assessment or by a referent or by both?
- Is it possible to describe a comprehensive framework for these personal traits? What are the challenges, especially when used in an international context?

## ANNEX B: Examples

Below, we give some examples of Self-assessment tests, a reference tool and a score tool used by universities today.

### Self-assessment test: ETS Facets (self-assessment and judgment test)

The ETS facets test measures up to 21 behavioural dimensions within the big 5 traits. The test uses “forced choice” questions. In 2014 Yale University of Management was the pilot testing school to make use of the ETS facets test.

High/low example from the IPIP
complete tasks successfully/misjudge situations like order/leave a mess follow the rules/break rules work hard/do just enough to get by get chores done right away/waste my time avoid mistakes/rush into things
worry about things/relaxed most of the time get angry easily/rarely get irritated often feel blue/feel comfortable with myself am easily intimidated/am not embarrassed easily often eat too much/easily resist temptations panic easily/remain calm under pressure
make friends easily/am hard to get to know love large parties/prefer to be alone take charge/wait for others to lead the way am always busy/like to take it easy love excitement/dislike loud music radiate joy/am seldom amused
trust others/distrust people would never cheat on taxes/use flattery to get ahead am easy to satisfy/have a sharp tongue dislike being center of attention/think highly of myself sympathize with the homeless/believe in eye for eye
have a vivid imagination/seldom daydream believe in the importance of art/do not like poetry experience emotions intensely/seldom get emotional prefer variety to routine/dislike changes like complex problems/avoid philosophical discussions tend to vote for liberals/believe in one true religion

**Personal Potential Index: PPI Reference feedback**

The PPI is a web based tool in which evaluators provide feedback about applicants on 6 attributes. The system is based on a combination of a rating form and a traditional letter of recommendation. The 6 attributes were identified by master’s coordinators as important for success in their programme. Within these 6 areas, 24 statements were offered. The individual evaluation report shows the mean scores of the applicants on all areas as rated by their references<sup>17</sup>.

NEO PI-R Facet	IPIP Scale Name
<b>Conscientiousness</b>	
Competence	Self-efficacy
Order	Orderliness
Dutifulness	Dutifulness
Achievement-striving	Achievement-striving
Self-discipline	Self-discipline
Deliberation	Cautiousness
<b>Neuroticism (Emotional Stability)</b>	
Anxiety	Anxiety
Hostility	Anger
Depression	Depression
Self-consciousness	Self-consciousness
Impulsiveness	Immoderation
Vulnerability	Vulnerability
<b>Extraversion</b>	
Warmth	Friendliness
Gregariousness	Gregariousness
Assertiveness	Assertiveness
Activity	Activity level
Excitement-seeking	Excitement-seeking
Positive Emotions	Cheerfulness
<b>Agreeableness</b>	
Trust	Trust
Compliance	Morality
Straightforwardness	Cooperation
Modesty	Modesty
Tender-mindedness	Sympathy
<b>Openness</b>	
Fantasy	Imagination
Aesthetics	Artistic Interests
Feelings	Emotionality
Actions	Adventurousness
Ideas	Intellect
Values	Liberalism

<sup>17</sup> Kyllonen, 2008

**Sample PPI based on interviews with faculties and deans:**

ETS® Personal Potential Index (ETS® PPI) measures six personal attributes that are key to success in graduate, business and professional school. The six ETS PPI dimensions are the result of interviews with deans and faculty members working at numerous universities (Briel et al., 2000), and a more in-depth follow-up interview phase (Walpole, Burton, Kanyi, & Jackenthal, 2001). Walpole et al. (2001) asked faculty members to identify variables they felt were predictive of graduate school success and that could be used as part of the admissions process. A number of non-cognitive variables were ranked highly (e.g., persistence, tenacity, collegiality, communication, and enthusiasm) and functioned as basis for the ETS PPI. ETS says PPI will broaden the applicant pool with more relevant information on the applicants. It makes it possible to make better admission decisions by identifying who is likely to success and thus create a more diverse successful pool within the graduate programmes. Evaluators provide an overall evaluation and rate applicants on the following:

<b>Knowledge and Creativity</b>
Has a broad perspective on the field
Is among the brightest persons I know
Produces novel ideas
Is intensely curious about the field
<b>Communication Skills</b>
Speaks in a clear, organized and logical manner
Writes with precision and style
Speaks in a way that is interesting
Organizes writing well
<b>Teamwork</b>
Supports the efforts of others
Behaves in an open and friendly manner
Works well in group settings
Gives criticism/feedback to others in a helpful way
<b>Resilience</b>
Accepts feedback without getting defensive
Works well under stress
Can overcome challenges and setbacks
Works extremely hard
<b>Planning and Organization</b>
Sets realistic goals
Organizes work and time effectively
Meets deadlines
Makes plans and sticks to them
<b>Ethics and Integrity</b>
Is among the most honest people I know
Maintains high ethical standards
Is worthy of trust from others
Demonstrates sincerity

### The Fellowship scorecard

The *Vrije Universiteit* Amsterdam makes use of a scorecard tool to evaluate scholarship applicants. Academic coordinators rate applicants when on evaluating their motivation letter by checking various aspects which they deem relevant for successfully completing their degree.

Name student	
Student number	
Nationality	
Previous education	
Country previous education	
Admissibility: Conditional/unconditional	
If conditional, what are the conditions?	

<b>A. GPA</b>	<b>Max. 3 points</b>	
Excellent (85-100%)	3 points	
Very good(75-84%)	2 points	
Good (70-74%)	1 point	
<b>B. Top university</b>	<b>Max. 3 points</b>	
Shanghai Top 1 – 50	2 points	
Shanghai Top 51 - 500	1 points	
Partner University VU	1 point	
<b>C. Motivation letter</b>	<b>Max. 1 point</b>	
Specific for the programme	½ point	
Future perspective	½ point	

<b>D. Points faculty scholarship committee</b>	<b>Max. 3 points</b>	
<b>Explanation D:</b>		
<b>Total</b>	<b>Max. 10 points</b>	

#### C. Motivation letter (translation from Dutch)

Applicant students are requested to give several reasons why they believe they qualify for a VUFP scholarship. We will grant half points for reasons pertaining to the specific degree programme (is there a convincing explanation why the student chose this specific programme; did the applicant study the programme in detail) and does the student already have an inkling of what s/he will do with the expertise to be gained at VU? Are these expectations realistic?

#### D. Expertise grants committee (translation from Dutch)

De faculty level grants committee may award additional points, if they feel the applicant will be an excellent student. In this context, the committee may consider:

1. If the applicants prior education is a good match with the Master's programme
2. If the applicant's curricular and extracurricular activities demonstrate a specific interest in the subject area.
3. The enthusiasm in the reference letters.
4. Different, notably .....

## THE HEXACO PERSONALITY INVENTORY - REVISED

**A MEASURE OF THE SIX MAJOR DIMENSIONS OF PERSONALITY** (extended from the big 5 with one extra dimension: Honesty)

Scale Descriptions

Domain-Level Scales

<p><b>Honesty-Humility</b></p> <p>Persons with very high scores on the Honesty-Humility scale avoid manipulating others for personal gain, feel little temptation to break rules, are uninterested in lavish wealth and luxuries, and feel no special entitlement to elevated social status. Conversely, persons with very low scores on this scale will flatter others to get what they want, are inclined to break rules for personal profit, are motivated by material gain, and feel a strong sense of self-importance.</p>
<p><b>Emotionality</b></p> <p>Persons with very high scores on the Emotionality scale experience fear of physical dangers, experience anxiety in response to life's stresses, feel a need for emotional support from others, and feel empathy and sentimental attachments with others. Conversely, persons with very low scores on this scale are not deterred by the prospect of physical harm, feel little worry even in stressful situations, have little need to share their concerns with others, and feel emotionally detached from others.</p>
<p><b>Extraversion</b></p> <p>Persons with very high scores on the Extraversion scale feel positively about themselves, feel confident when leading or addressing groups of people, enjoy social gatherings and interactions, and experience positive feelings of enthusiasm and energy. Conversely, persons with very low scores on this scale consider themselves unpopular, feel awkward when they are the center of social attention, are indifferent to social activities, and feel less lively and optimistic than others do.</p>
<p><b>Agreeableness (versus Anger)</b></p> <p>Persons with very high scores on the Agreeableness scale forgive the wrongs that they suffered, are lenient in judging others, are willing to compromise and cooperate with others, and can easily control their temper. Conversely, persons with very low scores on this scale hold grudges against those who have harmed them, are rather critical of others' shortcomings, are stubborn in defending their point of view, and feel anger readily in response to mistreatment.</p>
<p><b>Conscientiousness</b></p> <p>Persons with very high scores on the Conscientiousness scale organize their time and their physical surroundings, work in a disciplined way toward their goals, strive for accuracy and perfection in their tasks, and deliberate carefully when making decisions. Conversely, persons with very low scores on this scale tend to be unconcerned with orderly surroundings or schedules, avoid difficult tasks or challenging goals, are satisfied with work that contains some errors, and make decisions on impulse or with little reflection.</p>
<p><b>Openness to Experience</b></p> <p>Persons with very high scores on the Openness to Experience scale become absorbed in the beauty of art and nature, are inquisitive about various domains of knowledge, use their imagination freely in everyday life, and take an interest in unusual ideas or people. Conversely, persons with very low scores on this scale are rather unimpressed by most works of art, feel little intellectual curiosity, avoid creative pursuits, and feel little attraction toward ideas that may seem radical or unconventional.</p>

### Facet-Level Scales within the 6 factor model

In the Hexaco model, distinct aspects within each of the 6 domains were identified, which may be scored separately and allowing for a more refined scoring of individuals.

<b>Honesty-Humility Domain</b>
The <i>Sincerity</i> scale
assesses a tendency to be genuine in interpersonal relations. Low scorers will flatter others or pretend to like them in order to obtain favours, whereas high scorers are unwilling to manipulate others.
The <i>Fairness</i> scale
assesses a tendency to avoid fraud and corruption. Low scorers are willing to gain by cheating or stealing, whereas high scorers are unwilling to take advantage of other individuals or of society at large.
The <i>Greed Avoidance</i> scale
assesses a tendency to be uninterested in possessing lavish wealth, luxury goods, and signs of high social status. Low scorers want to enjoy and to display wealth and privilege, whereas high scorers are not especially motivated by monetary or social-status considerations.
The <i>Modesty</i> scale
assesses a tendency to be modest and unassuming. Low scorers consider themselves as superior and as entitled to privileges that others do not have, whereas high scorers view themselves as ordinary people without any claim to special treatment.
<b>Emotionality Domain</b>
The <i>Fearfulness</i> scale
assesses a tendency to experience fear. Low scorers feel little fear of injury and are relatively tough, brave, and insensitive to physical pain, whereas high scorers are strongly inclined to avoid physical harm.
The <i>Anxiety</i> scale
assesses a tendency to worry in a variety of contexts. Low scorers feel little stress in response to difficulties, whereas high scorers tend to become preoccupied even by relatively minor problems.
The <i>Dependence</i> scale
assesses one's need for emotional support from others. Low scorers feel self-assured and able to deal with problems without any help or advice, whereas high scorers want to share their difficulties with those who will provide encouragement and comfort.
The <i>Sentimentality</i> scale
assesses a tendency to feel strong emotional bonds with others. Low scorers feel little emotion when saying good-bye or in reaction to the concerns of others, whereas high scorers feel strong emotional attachments and an empathic sensitivity to the feelings of others.
<b>Extraversion Domain</b>
The <i>Social Self-Esteem</i> scale
assesses a tendency to have positive self-regard, particularly in social contexts. High scorers are generally satisfied with themselves and consider themselves to have likable qualities, whereas low scorers tend to have a sense of personal worthlessness and to see themselves as unpopular.
The <i>Social Boldness</i> scale
assesses one's comfort or confidence within a variety of social situations. Low scorers feel shy or awkward in positions of leadership or when speaking in public, whereas high scorers are willing to approach strangers and are willing to speak up within group settings.
The <i>Sociability</i> scale
assesses a tendency to enjoy conversation, social interaction, and parties. Low scorers generally prefer solitary activities and do not seek out conversation, whereas high scorers enjoy talking, visiting, and celebrating with others.
The <i>Liveliness</i> scale assesses one's typical enthusiasm and energy. Low scorers tend not to feel especially cheerful or dynamic, whereas high scorers usually experience a sense of optimism and high spirits.
<b>Agreeableness Domain</b>
The <i>Forgivingness</i> scale

assesses one's willingness to feel trust and liking toward those who may have caused one harm. Low scorers tend "hold a grudge" against those who have offended them, whereas high scorers are usually ready to trust others again and to re-establish friendly relations after having been treated badly.
The <i>Gentleness</i> scale
assesses a tendency to be mild and lenient in dealings with other people. Low scorers tend to be critical in their evaluations of others, whereas high scorers are reluctant to judge others harshly.
The <i>Flexibility</i> scale
assesses one's willingness to compromise and cooperate with others. Low scorers are seen as stubborn and are willing to argue, whereas high scorers avoid arguments and accommodate others' suggestions, even when these may be unreasonable.
The <i>Patience</i> scale
assesses a tendency to remain calm rather than to become angry. Low scorers tend to lose their tempers quickly, whereas high scorers have a high threshold for feeling or expressing anger.
<b>Conscientiousness Domain</b>
The Organization scale assesses
a tendency to seek order, particularly in one's physical surroundings. Low scorers tend to be sloppy and haphazard, whereas high scorers keep things tidy and prefer a structured approach to tasks.
The Diligence scale
assesses a tendency to work hard. Low scorers have little self-discipline and are not strongly motivated to achieve, whereas high scorers have a strong "work ethic" and are willing to exert themselves.
The Perfectionism scale
assesses a tendency to be thorough and concerned with details. Low scorers tolerate some errors in their work and tend to neglect details, whereas high scorers check carefully for mistakes and potential improvements.
The Prudence scale
assesses a tendency to deliberate carefully and to inhibit impulses. Low scorers act on impulse and tend not to consider consequences, whereas high scorers consider their options carefully and tend to be cautious and self-controlled.
<b>Openness to Experience Domain</b>
The Aesthetic Appreciation scale
assesses one's enjoyment of beauty in art and in nature. Low scorers tend not to become absorbed in works of art or in natural wonders, whereas high scorers have a strong appreciation of various art forms and of natural wonders.
The Inquisitiveness scale
assesses a tendency to seek information about, and experience with, the natural and human world. Low scorers have little curiosity about the natural or social sciences, whereas high scorers read widely and are interested in travel.
The Creativity scale
assesses one's preference for innovation and experiment. Low scorers have little inclination for original thought, whereas high scorers actively seek new solutions to problems and express themselves in art.
The Unconventionality scale
assesses a tendency to accept the unusual. Low scorers avoid eccentric or nonconforming persons, whereas high scorers are receptive to ideas that might seem strange or radical.
<b>Interstitial Scale</b>
The Altruism (versus Antagonism) scale
assesses a tendency to be sympathetic and soft-hearted toward others. High scorers avoid causing harm and react with generosity toward those who are weak or in need of help, whereas low scorers are not upset by the prospect of hurting others and may be seen as hard-hearted.

## The Multiple Mini Interview

The Multiple Mini Interview (MMI) is an interview style used by certain university programs as part of their admissions process. We assist applicants with MMI interview preparation

A multiple mini interview consists of a series of short, structured interview stations used to assess non-cognitive qualities including cultural sensitivity, maturity, teamwork, empathy, reliability and communication skills. Prior to the start of each mini interview rotation, candidates receive a question/scenario and have a short period of time (typically two minutes) to prepare an answer. Upon entering the interview room, the candidate has a short exchange with an interviewer/assessor (usually about 8 minutes). In some cases, the interviewer observes while the interaction takes place between an actor and the candidate. At the end of each mini interview, the interviewer evaluates the candidate's performance while the applicant moves to the next station. This pattern is repeated through a number of rotations. The duration of the entire interview is usually about two hours.

Generally, the situational questions posed in an MMI touch on the following areas:

- Ethical Decision Making;
- Critical Thinking;
- Communication Skills;
- Current Healthcare and Societal Issues.

Although participants must relate to the scenario posed at each station, it is important to note that the MMI is not intended to test specific knowledge in the field.

Instead, the interviewers evaluate each candidate's thought process and ability to think on his or her feet. As such, there are no right or wrong answers to the questions posed in an MMI, but each applicant should consider the question from a variety of perspectives.

### Sample MMI Questions

Station #1: (Read and consider for 2 minutes):

A close friend in your 1st-year medical school class tells you that his mother was recently diagnosed with breast cancer. He feels overwhelmed by his studies and is considering dropping out of medical school to spend more time with his mother. How do you counsel your friend? YOUR RESPONSE: (Speak for 8 minutes)

Station #2: (Read and consider for 2 minutes):

Joe is a pizza delivery worker. The pizza shop he works for has a 30 minutes or less delivery guarantee or else the customer does not have to pay. On Joe's most recent delivery, he spots a woman bleeding on the street. There is no one else around and the woman seems to be unable to move by herself. However, Joe knows that if he returns empty handed again, he will be fired from this job which he most desperately needs. What do you think Joe should do? Justify your solution in terms of practical and ethical considerations. YOUR RESPONSE: (Speak for 8 minutes).

## Annex C: Suggestions for further reading

Reference / title	URL (where available)
Ananiadou, K., & Claro, M. (2009). 21st century skills and competences for new millennium learners in OECD countries.	<a href="http://bit.ly/2e980zq">http://bit.ly/2e980zq</a>
Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. <i>Personality and Social Psychology Review</i> , 11, 150-166.	
Bardes C.L, Best C. B., Kremer S.J., Dienstag J.L (2009). Perspective: medical School Admissions and Noncognitive Testing; Some open Questions. <i>Academic Medicine</i> , Vol.84, No.10	
Bartram, D. (2005). The Great Eight competencies: a criterion-centric approach to validation. <i>Journal of applied psychology</i> , 90(6), 1185.	<a href="http://bit.ly/2FtmAKM">http://bit.ly/2FtmAKM</a>
College affordability guide. Retrieved from Internet on March, 2015	<a href="http://collegeaffordabilityguide.org">collegeaffordabilityguide.org</a>
Desjardins, R., Thorn, W., Schleicher, A., Quintini, G., Pellizzari, M., Kis, V., & Chung, J. E. (2013). <i>OECD Skills Outlook 2013: First Results from the Survey of Adult Skills</i> .	<a href="http://bit.ly/2tmXz2E">http://bit.ly/2tmXz2E</a>
Drasgow, F., Stark, S, Chernyshenko, O. S., Nye, C. D., Hulin, C. L., & White, L. A. (2012). Development of the Tailored Adaptive Personality Assessment System (TAPAS) to support Army selection and classification decisions (Technical Report No. 1311). Fort Belvoir, VA: Army Research Institute for the Behavioral and Social Sciences.	
ETS® Personal Potential Index (ETS® PPI). Retrieved on November 5, 2014 from <a href="https://www.ets.org/ppi">https://www.ets.org/ppi</a>	<a href="http://www.ets.org/ppi">www.ets.org/ppi</a>
Eva, K.W., Reiter, H.I., Rosenfiled, J., Norma, G.R. (2004). <i>The relationship between Interviewers traits and ratings assigned during a Mutiple Mini-Interview, Aacademic Medicine, Vol 79, No6.</i>	
Facts and Figures 1/2014: Hidden Competences from Cimo website. Retrieved on February 28, 2015	<a href="http://bit.ly/1q3hBFX">http://bit.ly/1q3hBFX</a>
Giorgio Brunello, Martin Schlotter. (2011). <i>Non cognitive skills and Personality traits: Labor market Relevance and their development in Education &amp; Training systems. IZA discussion Paper series.</i>	
Goho J., Blackman A. <i>The effectiveness of academic admission interviews; an exploratory meta-analysis. Retrieved on May 23, 2015</i>	<a href="http://bit.ly/2EiKiMD">http://bit.ly/2EiKiMD</a>
It takes more than a major: Employer Priorities for College Learning and Student Success: An Online Survey Among Employers Conducted On Behalf Of: The Association Of American Colleges And Universities By Hart Research Associates, April 10, 2013	<a href="http://bit.ly/1M7WPS0">http://bit.ly/1M7WPS0</a>
Jesús F. Salgado & Gabriel Táuri. (2012). The Five-Factor Model, forced-choice personality inventories and performance: A comprehensive meta-analysis of academic and occupational validity studies. <i>European Journal of Work and Organizational Psychology</i> .	

Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. <i>Journal of applied psychology</i> , 85(5), 751.	<a href="http://bit.ly/2oYKAyD">http://bit.ly/2oYKAyD</a>
Key Findings from 2013 Survey of Employers.	<a href="http://bit.ly/2FJTDtW">http://bit.ly/2FJTDtW</a>
Kyllonen, P. (2014). Noncognitive skills assessment can be improved with innovative new measures.	<a href="http://bit.ly/2DdgP2P">http://bit.ly/2DdgP2P</a>
Kyllonen, P. C. (2008). The research behind the ETS personal potential index (PPI). Princeton, NJ: ETS.	<a href="http://bit.ly/2FC2uOe">http://bit.ly/2FC2uOe</a>
Kyllonen P.C., Lipnevich A., Burrus J., Roberts R. ( 2004) Personality, Motivation, and College Readiness: A Prospectus for Assessment and Development.	<a href="http://bit.ly/2CwVkkh">http://bit.ly/2CwVkkh</a>
Lenton P., Personality Traits, Educational Attainment and Wages: An Economic Analysis Using the British Cohort Study.	<a href="http://bit.ly/2BWBFlA">http://bit.ly/2BWBFlA</a>
Maureen A. Conard. (2006). Aptitude is not enough: How personality and behavior predict academic performance. <i>Journal of Research in Personality</i> 40, 3339–346.	<a href="http://bit.ly/2GPKscS">http://bit.ly/2GPKscS</a>
McCrae, R. R., & Costa, P. T. (2003). Personality in adulthood: A five-factor theory perspective. Guilford Press.	<a href="http://bit.ly/2BaGG9Y">http://bit.ly/2BaGG9Y</a>
McCrae, Robert R.; Terracciano, Antonio. (2015). Cultural differences: openness in Asia (; Personality Profiles of Cultures Project. "Personality profiles of cultures: aggregate personality traits". <i>Journal of Personality and Social Psychology</i> , 89 (3): 407–25. doi:10.1037/0022-3514.89.3.407. PMID 16248722.	
Michael C. Ashton, Kibeom L., Reinout E. de Vries, 2008. The HEXACO Honesty-Humility, Agreeableness, and Emotionality Factors: A Review of Research and Theory.	
P21 Partnership for 21 <sup>st</sup> Century Learning, Life and Career Skills.	<a href="http://bit.ly/1fu5Ba4">http://bit.ly/1fu5Ba4</a>
Poropat, A. E. (2009). The model was used to grasp the relation between personal traits and academic performance "A meta-analysis of the five-factor model of personality and academic performance". <i>Psychological Bulletin</i> 135: 322–338	<a href="https://doi.org/10.1037/a0014996">doi:10.1037/a0014996</a>
Sedlacek, W. E. (2004). Beyond the big test: Noncognitive assessment in: higher education. San Francisco, CA: Jossey Bass.	
Susan Niessen Predicting academic achievement in college admissions	<a href="http://hdl.handle.net/(...)48-8aa1-69f09a499005">http://hdl.handle.net/(...)48-8aa1-69f09a499005</a>
The Erasmus Impact Study, Effects of mobility on the skills and employability of students and the internationalisation of higher education institutions.	<a href="http://bit.ly/2hcZqQ0">http://bit.ly/2hcZqQ0</a>
Tremblay, K. (2013). OECD assessment of higher education learning outcomes (AHELO). In <i>Modeling and measuring competencies in higher education</i> (pp. 113-126). SensePublishers, Rotterdam.	<a href="http://bit.ly/2D9VGpC">http://bit.ly/2D9VGpC</a>
Trapmann S.,Hell B., Hirn J., Schuler H.. (2007) Meta- Analysis of the Relationship Between the Big Five and Academic Success at University. First publ. in: Zeitschrift f für Psychologie 215 (2007), 2,pp. 132-151	

University of Oxford, Oxford Interview Your Guide. Retrieved on December 2, 2015	
VSNU and NOA (2011). Competence Instrument for the Dutch Universities	<a href="http://bit.ly/2DqZXsl">http://bit.ly/2DqZXsl</a>
Wikipedia on Big-5 and HEXACO	<a href="http://bit.ly/2B9dekJ">http://bit.ly/2B9dekJ</a>
Zlatkin-Troitschanskaia, O., Pant, H. A., Lautenbach, C., Molerov, D., Toepper, M., & Brückner, S. (2017). An Overview of Assessment Practices. In <i>Modeling and Measuring Competencies in Higher Education</i> (pp. 7-19). Springer VS, Wiesbaden.	<a href="http://bit.ly/2ts9bkD">http://bit.ly/2ts9bkD</a>