



A strong start: Designing a positioning test for bachelor students in the humanities and social sciences

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ABSTRACT

Higher education in Flanders is open-admissions (except for medical and some arts programmes), meaning that anyone with a secondary education diploma can enrol in university. In addition, tuition fees are relatively low compared to other countries. These factors make it essential to support students in making well-informed study choices, which is the goal of the orientation process. Positioning tests take place in the later stages of this process, giving the students an opportunity to assess whether their preferred study choice matches their interests and skills. Positioning tests, such that exists already in STEM, are thus meant to help students reflect on their initial choice.

At this moment, we are developing positioning tests for humanities and social sciences, in response to an impulse from both the university and the Flemish government to improve study success, especially during students' first year. The aim of the development of these positioning tests is threefold: the test has to (1) provide a reliable and valid idea of the necessary starting competencies of the programme, (2) predict academic success and inform the student on their potential, and (3) be able to indicate the learning needs of starting students, offering targeted remedial support.

In this paper, we will further elaborate on the rationale and genesis of the positioning test. We will detail how the to-be-tested starting competences were selected, how the content of the test was further inferred from that and how the questions were developed. In addition, we will discuss piloting the first version of the positioning test involving over 1.000 students and 24 stakeholders, researching the reliability and validity of the test. A close collaboration between the involved faculties and the project team was central in every step of this process.

Keywords: positioning test, humanities and social sciences, test design, educational innovation, university transition

Introduction

In some European countries, like Germany, France and Italy, public universities have an open admissions system (though selective admission procedures apply to programmes such as medicine and related fields). This means that admission to a university is generally non-selective. Anyone with a secondary education diploma can enrol, regardless of the programme completed in secondary school or academic performance. This is primarily intended to promote social mobility and create equal opportunities. However, this can lead to higher dropout rates, due to what Oppedisano (2009) called 'experimenting' with university. Students might enrol without a clear academic plan, find academia more demanding than expected and experience a mismatch of expectations about an academic study.

This is also the case in Flanders, Belgium. Eurostat (2025) data indicate that up to more than 40% of people between 18 and 24 are enrolled in tertiary education, one of the higher rates in Europe. However, dropout rates are also substantial, especially during the first year. On average, 30% of the students discontinue their

studies (Statistiek Vlaanderen, 2025), but these numbers vary by level and programme. According to OECD data, in the Flemish Community, only 33 % of new bachelor entrants complete within the theoretical duration and 54 % within one additional year, which is lower than both the OECD and European averages (OECD, 2025). To counter this, Flanders has implemented some policies, such as implementing a learning account system and developing enhanced orientation and study choice guidance.

One measure designed to help students make a well-informed study choice is the development of positioning tests (“ijkinstoetsen”). These tests take place in the later stages of the decision-making process, after prospective students have broadly explored the available programmes in higher education. Positioning tests give students an opportunity to assess whether their competencies match the expected starting competencies of the study programme, while simultaneously providing an initial impression of the programme’s content. Positioning tests thus aim to help students reflect on their preliminary choice. Although the results give students an additional indication of their match with a specific programme, they are not binding, and they do not exclude students from programmes, irrespective of their performance on the test. In Flanders, positioning tests already exist for many STEM programmes. Research has indicated that students are mostly positive about the feedback they receive from positioning tests and are encouraged to address specific skill gaps (Adriaens et al., 2020).

Setting the stage

Prompted by both the university and the Flemish government, KU Leuven started developing positioning tests for humanities and social sciences, driven by several factors. First, this initiative aligns with broader efforts to improve study success in higher education. The Flemish Government’s coalition agreements (2019-2024 and 2024-2029) emphasise the importance of early orientation and reorientation to enhance study efficiency. Secondly, KU Leuven had already played a pioneering role in developing positioning tests for civil engineering (and architecture) programmes. The expansion of such tests was included in the university’s education policy plans for 2017-2021 and 2021-2025. Third, study data revealed that only a small proportion of first-year students in the humanities and social sciences pass all their courses, with some programmes showing study success rates below 25%. Many students also switch programmes within these fields, but still lack the necessary starting competencies. Given the high and diverse enrolment in these programmes, the university saw a need for a clearer indication of the competencies required at entry. The aim of the development of these positioning tests is threefold: the test has to (1) provide a reliable and valid measurement of the required starting competencies of the programmes in humanities and social sciences, (2) promote a sense of responsibility, and activate prospective students, while also encouraging and supporting them in their study choice, and (3) be able to indicate the learning needs of starting students, allowing to offer targeted remedial support.

From concept to auditorium: Piloting a positioning test

From exploration to selection, from ideas to focus

During the design phase of the project, study programmes from the seven faculties of the Humanities and Social Science Group were systematically consulted to identify the competencies most essential for inclusion in the test construct (see Table 1). The initial inventory of necessary competencies that was constructed based on this consultation round was the basis for a systematic survey in which programmes

indicated their support for each competency and inspired subsequent discussions regarding the support and feasibility for each competency. This process shaped the test construct and informed the development of the modules. Ultimately, three domains were prioritized: “academic reasoning”, “strategic language skills”, and “data literacy”. Since a test on “strategic language skills” had already been developed within KU Leuven, the project focused on developing the two remaining modules. To allow for the necessary flexibility in programmes, a modular approach was chosen, allowing each programme to select the modules most relevant to its context and student population.

Table 1 Competencies inventory and indicated support percentages

	Competencies	Ess.	Des.
Reasoning	Analytical and/or logical reasoning	70%	15%
	Abstract, critical, and conceptual thinking	80%	10%
Language	Strategic language skills	70%	15%
	Basic language skills	65%	15%
	Foreign language skills	60%	15%
	Oral and conversational skills	20%	55%
Mathematics	Mathematics	20%	20%
	Applied statistics	5%	5%
	Data literacy	30%	35%
Other	Psychosocial competencies	15%	65%
	Global citizenship	30%	50%

Ess. = percentage of programmes rating this competency as essential; Des. = percentage of programmes rating it as desirable.

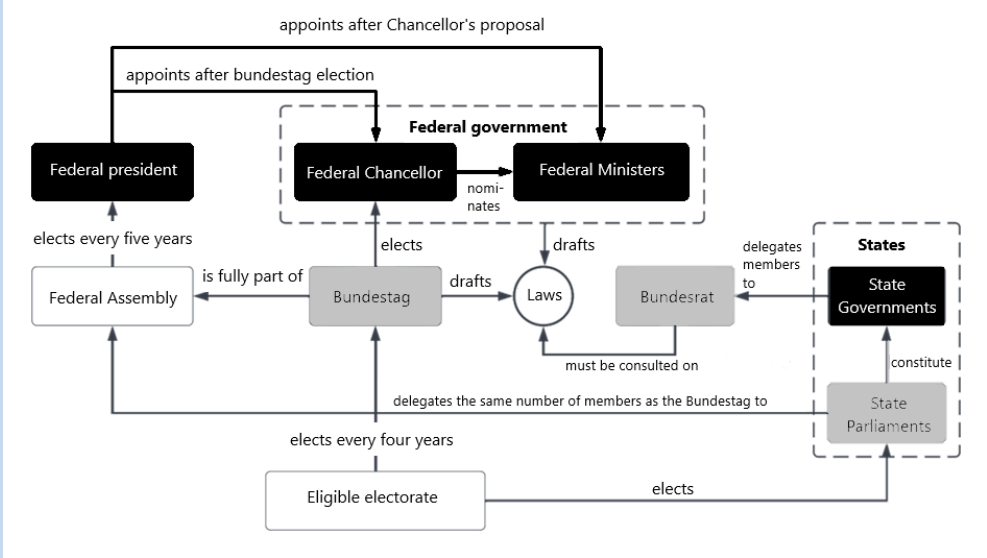
From spark to structure, from inspiration to design

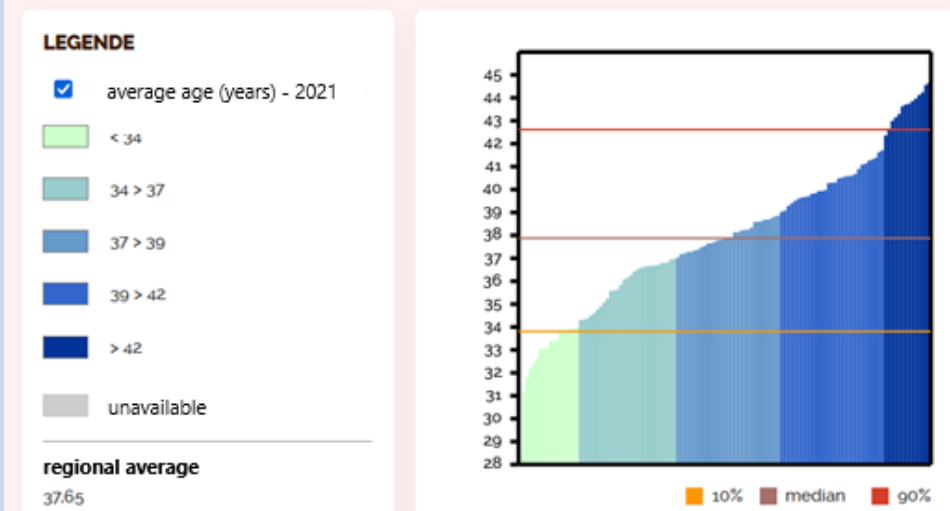
In the meantime, the project team compiled a benchmark of national and international entry-level tests, examining their content, usage, and sample questions. This extensive benchmark served as inspiration for a task-force composed of experts from all seven faculties, to develop a tailored positioning test. Initially, it guided a workshop in which an assessment matrix was drafted, defining the desired content of each module more clearly. Afterwards, task-force members developed test questions between meetings, drawing on the benchmark and their own experience in teaching. These test questions were then reviewed and refined during subsequent meetings, until the entire task-force reached consensus on their suitability (in terms of content, difficulty, and layout) for the positioning test. This process was repeated until all subcomponents of the competencies identified in the assessment matrix were covered. The finalized versions of the modules were then tested in the pilot study.

Infobox - The test

The test consists of closed-ended questions (e.g., multiple-choice, matrix, ordering and one-word or number responses) and is administered fully online through the university’s exam portal. All responses are scored

automatically. Students log in with their university profile and complete the fixed test in a supervised classroom, using either university computers or their own device. They receive basic information beforehand, do not need to prepare, and can navigate freely between questions during the two- to three-hour session.

Module	Example item (<i>The examples presented here are not actual test items, as the original items cannot be disclosed. However, they are representative of the types of questions used.</i>)												
Strategic language skills	<p>The researcher made an <i>extrapolation</i> based on data from a single region.</p> <p>What does extrapolation mean?</p> <ol style="list-style-type: none"> Generalisation Limitation Interpretation Comparison 												
Academic reasoning	<p>The flow chart below shows the relationships between the most important political bodies in Germany.</p>  <p>The flow chart illustrates the relationships between various political bodies in Germany. At the top, the Federal government (enclosed in a dashed box) includes the Federal Chancellor and Federal Ministers. The Federal President appoints the Federal Chancellor after a Bundestag election and appoints Federal Ministers after the Chancellor's proposal. The Federal Assembly elects the Federal President every five years. The Bundestag, which is fully part of the Federal Assembly, elects the Federal Chancellor and drafts laws. The Chancellor nominates and dismisses Federal Ministers. The Bundestag drafts laws, which must be consulted on by the Bundesrat. The Bundesrat delegates members to the States. The States consist of State Governments and State Parliaments. State Parliaments constitute State Governments. The Eligible electorate elects the Bundestag every four years and elects State Parliaments. State Parliaments also elect members to the Bundesrat.</p> <p>For each statement, indicate whether it is true or false.</p> <table border="1" data-bbox="336 1249 1315 1485"> <thead> <tr> <th></th> <th>True</th> <th>False</th> </tr> </thead> <tbody> <tr> <td>Before the Federal President can appoint the federal ministers, the Bundestag must nominate them to the President.</td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>All members of the Federal Assembly are also members of the Bundestag.</td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>Before a new law is introduced, advice must be sought from the Bundesrat.</td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> </tbody> </table>		True	False	Before the Federal President can appoint the federal ministers, the Bundestag must nominate them to the President.	<input type="radio"/>	<input type="radio"/>	All members of the Federal Assembly are also members of the Bundestag.	<input type="radio"/>	<input type="radio"/>	Before a new law is introduced, advice must be sought from the Bundesrat.	<input type="radio"/>	<input type="radio"/>
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Before a new law is introduced, advice must be sought from the Bundesrat.	<input type="radio"/>	<input type="radio"/>											
Data literacy	<p>We are studying the average ages of the inhabitants of all Brussels neighbourhoods. The graph below provides an overview of these average ages per neighbourhood. Each bar represents one Brussels neighbourhood. For example, the bar on the far right represents the Vogelenzang-Erasmus neighbourhood with an average age of 44.69 years.</p>												

average age (years) -2021

Note: Adapted from *Interactieve kaarten*, by Brussels instituut voor statistiek en analyse, n.d., Wijkmonitoring.

(<https://wijkmonitoring.brussels/Indicator/IndicatorPage/2269?Year=2021&GeoEntity=2&SubTheme=30>)

What percentage should be entered in the dots to make the following statement correct based on the graph above: in approximately ... of Brussels neighbourhoods, the average age of their residents is between 34 and 38 years.

- a. 10%
- b. 40%
- c. 50%
- d. 80%

From paper to practice, from proto-test to the first pilot run

In the pilot study (approved by ethical committee: SMEC, KU Leuven, G-2023-6579-R2(MIN)), the test was administered to a limited number of both students and subject-matter experts (see Figure 1). A total of 1,100 students filled in the test and a validated questionnaire (Smither et al., 1993) measuring their experience of the test. Their performance on the test was analysed to estimate the reliability of the modules and to detect potential ambiguities in the questions. The questionnaire measured the face validity of the test. 24 experts and representatives/boards of education of all faculties assessed the content of the different modules. Experts were asked to rate each test question on 6 criteria: (1) fit within the intended competency, (2) appropriate level of difficulty, (3) recognisability of the content, (4) familiarity with the content, (5) clarity of the language, and (6) clarity of the layout. In addition, they were asked if they identified any gaps in the module. The representatives/boards of education of the faculties were asked to make a holistic judgement of the assessment matrices and modules.

Results from the student data showed adequate to good reliability of the modules, slightly positive face validity, and identified specific test questions that functioned less effectively within the test. Experts

assessed the test positively as well, although they also identified some questions that were less suited for the test. In addition, some gaps were identified, especially in the “academic reasoning” module.

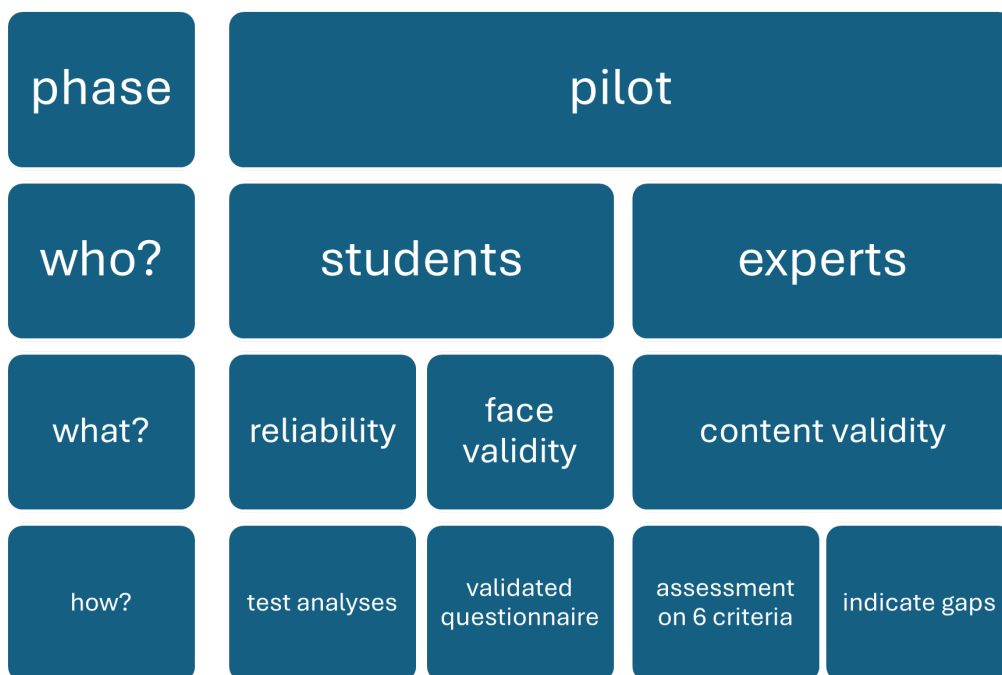


Figure 1 Structure of the pilot study

Reflections and horizons: Refining and scaling positioning tests

One key lesson learned from this development process is the importance of clearly defining the content of the modules: what do we want to measure? This needs to be concrete and specific, avoiding broad tests that measure ‘a bit of everything’. It is better to have a clearly outlined focus, even if it requires compromise, than to create a fragmented instrument that fails to provide reliable or useful results.

The close collaboration and involvement of faculties and programmes proved necessary, useful, and challenging at the same time. While it offered valuable feedback and made the positioning test a shared and supported endeavour, the differences in disciplinary content and perspectives made finding the perfect common ground difficult. In addition, the process required substantial time investment from task-force members and experts, many of whom already had full schedules. Balancing these demands remains an ongoing challenge for scaling and sustaining the initiative.

The specific focus on competencies relevant to the social sciences and humanities combined with a flexible, modular approach, allowing each programme to choose which modules to use in their version of the positioning test, was greatly appreciated. This flexible approach allows programmes to supplement the test with programme-specific modules as well. All this ensured that the development of the positioning test was tailored to the diversity of our programmes.

Overall, the development and first pilot run showed a promising path to further develop a positioning test for the social sciences and humanities. Both students and experts offered valuable feedback to optimize the modules. The feedback showed that there was cautious optimism about the test and identified clear areas for improvement. Based on the pilot run, the different modules are further refined.

In the future, the positioning test is intended to become a standard step in the student orientation process, strengthening student support through targeted remediation trajectories based on the results of the positioning test, enabling students to address gaps and giving them the best opportunity to start their academic career strongly.

Biographies

Dr. Ena Coenen is a validity researcher specializing in positioning tests for humanities and social sciences. Previously, she coordinated large-scale monitoring tests in primary and secondary education. Her work builds on a strong academic foundation, including a PhD in Criminology and a Master's in Experimental Psychology.

Dr. Leen Sevens is an educational technologist at KU Leuven with a PhD in computational linguistics. She works at the intersection of AI, language, and education, coordinating innovation projects for the Humanities and Social Sciences. Passionate about accessibility and technology, she supports inclusive, future-ready teaching in higher education.

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