INTERLOCALITY
INCREASED LOCAL EMPLOYABILITY OF INTERNATIONAL STUDENTS

Manual

I AM Talent
Employability Survey Tool

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Colophon

The I AM Talent Employability Survey Tool is developed by Dr. Loes van Beuningen, Dick Siesling and Marian Thunnissen (Fontys UAS). Many thanks to others who have contributed to this tool: Hans Slaghuis, Berin Hrnjic (Fontys UAS), Sandra Slotte, Susanna Fabricius, Rizwan Ullah (Arcada), Werner Mikkelsen and Sarah Kathrine Norre Andersen (UCN).

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About the I AM Talent tool

The I AM Talent tool is a diagnostic and monitoring tool created by the INTERLOCALITY consortium. The tool has two different manifestations:

1. **Paper and pencil self-assessment tool**
   The self-assessment tool can be used by international students and alumni to give them insight into their personal employability and their fit with the (side-)job and organisation. The outcomes of the tool can be used as starting point for a conversation with their lecturer or coach, and offers information on potential tools to improve their employability.

2. **Employability survey**
   This survey can be used by higher education institutions (HEI) as a diagnostic instrument to measure and monitor the employability and career steps of their international students and alumni, at a program or institutional level. This information can help the HEI to improve their policies and support regarding international students. Moreover, when the extended survey is integrated into the learning management system (LMS) of the HEI, it can be used as a dashboard for students to monitor their employability and offer information on support and guidance by the HEI.

This manual explains how HEI can use the abovementioned **I AM Talent Employability Survey**.
The use of the paper and pencil self-assessment tool by the students themselves is explained in a separate document.

Target groups

I AM Talent Employability Survey is created for:

- **international degree students**, i.e. students who are not citizens of their host country and have not completed prior education in the host country. International degree students are students who pursue an entire degree in another country, while exchange students complete only a part of their studies or an internship abroad (for example via the Erasmus programme). I AM Talent does not take international exchange students, intermediate vocational education students or training students into account.
- **international alumni**, i.e. graduates or former international students who are not citizens of their host country. I AM Talent takes into account international alumni who are still working in the host country where they have pursued their degree, those who have returned home after studying in the host country, and those who are working in a different country than their home country or host country where they pursued their degree.

Aim of manual I am Talent Employability Survey Tool

The aim of this manual is to explain how HEI can use the I am Talent Employability Survey. We present a tens steps approach in how to use the survey in your HEI. All relevant information regarding those steps is put in the appendices and can be found via interactive links.

Ten steps to increase your contribution to the employability of your international students

1. **Start with defining 'why'**

- Define the objectives for using the I am Talent Employability Survey, and how you can and will use the information afterwards in your policy towards international students.
- Determine which aspects of employability need to be measured. Go to appendix 1 to learn about the theoretical framework behind the I am Talent Employability Survey tool.
- Determine how often you want to use the I AM Talent tool. If you want to integrate it into a learning platform for international students to learn about their employability themselves a more frequent use is recommended (e.g. twice per year). If you want to monitor a whole cohort of international students once a year might be sufficient.

2. **Engage Stakeholders**

- Identify and involve all relevant stakeholders (e.g., students, alumni, employers, academic staff).
- Organize workshops or meetings to gather input, feedback and commitment in implementing the monitoring tool.
- Make sure that someone in the implementation team has research experience to ensure the quality of the monitoring tool and process.

3. Make the I AM Talent tool fit for your HEI

- The I am Talent Employability Survey is a validated questionnaire that can be used to measure all relevant aspects regarding the employability of international students. This survey can be found in appendix 2, section 1; information on the validation of the survey can be found in appendix 3.
- The I AM Talent tool consists of blocks that can be adapted to the specific context of your HEI (see appendix 2, section 2). Adjust these blocks to customize the survey.
- Decide on what survey platform you are going to use to deploy the I AM Talent tool within your HEI. Examples are LimeSurvey, Microsoft Forms or Qualtrics. Please keep in mind that not all the survey tools available online have GDPR survey compliance! This means that using such a tool could compromise your institution's data privacy policy.
- Check whether your survey platform has the possibility to provide the respondents their personal scores. For example, this is possible in Qualitrics. When you use MS Forms it is possible when you link the survey to Power Automate (see appendix 4).
- Think of a communication plan to increase the response rate (e.g., communication channels, message, etc.).

4. Conduct a Pilot Phase

- Conduct a pilot study with a small group of international students.
- Collect feedback and make adjustments based on the results.

5. Collect Data

- Implement the I am Talent Employability Survey and start collecting data. Send the international students and alumni a personal email in which you ask them to participate in the research. See appendix 5 for an example of the email to be send.
- Ask users for consent (this is part of the I am Talent Employability Survey).
- Be transparent about the purpose of the survey and who will access the collected data.
- Ensure regular updates and reminders to achieve a high response rate.

6. Analyse Data

- Analyse the collected data to identify trends and patterns. For the I am Talent Employability Survey we have guidelines for interpreting the scores of the constructs in the I am Talent Employability Survey. They can be found in appendix 2, section 3.
- Use statistical software or data analysis tools to process the data, such as SPSS.

7. Report and Communicate

- Prepare user friendly reports with the findings and share them with all stakeholders, including the international students and alumni themselves.
- Identify relevant internal and external groups and platforms and organize presentations to discuss the results and how to use them.

8. Develop Action Plans

- Use the findings to develop action plans that improve the employability of international students.
- Determine what stakeholders need to be involved in making these plans a success.
- Set concrete goals and timelines for the implementation of these plans.

9. Evaluate

- Repeat the survey within the intended frequency, and regularly evaluate the effectiveness of the monitoring instrument and action plans.
- Make adjustments and improvements based on the evaluations. Be aware that if you are going to change the content of the I am Talent Employability Survey it is not possible to benchmark the findings over the years and cohorts.

10. Integrate into curriculum and learning management system

- For a sustainable contribution you can integrate the I AM Talent tool in the learning management system of your HEI, so it can be used as a dashboard for students to monitor their employability and offer information on support and guidance by the HEI. Appendix 6 offers an opportunity to learn from the experiences of Fontys UAS, who developed a first prototype of the I AM Talent Platform during the INTERLOCALITY project.

Appendices

Appendix 1

Theoretical framework: the employability process model

The I am Talent Employability Survey is based on an employability process model. We used academic literature on employability to develop the model. We finetuned it for the specific circumstances of international students and alumni, and their difficulties and complexities in getting a job at the local labour market, as we know from literature and empirical research conducted during the INTERLOCALITY project.

We start with explaining the meaning of employability. After that the employability process model is introduced and we will elaborate on the four phases of the model.

What is employability?

Employability is set of achievements – skills, understandings and personal attributes – that makes a person more likely to gain employment and be successful in their chosen occupation, which benefits themselves, the workforce, the community, and the economy. When a person is employable, one can gain initial employment, maintain employment, and obtaining new employment in the future (Yorke, 2004).

Employability is the result of a complex integration of personal factors and structural or contextual factors, as well as their interactions over time, all of which affect the outcome. In this context, personal factors are tied to the person (age, gender, cultural background, competences, etc.), whereas structural or contextual factors can play a role at the level of the job, the organisation, or the society (availability of jobs, etc.) (Van der Heijde & Van der Heijden, 2006).

The employability process model

The employability process model maps out which main personal factors influence the chances of international talent to find a fitting job on the local labour market, as identified via our extensive literature research and qualitative research. Within the framework, we use the inclusive approach of talent: we assume that all students and employees have valuable qualities and talents that can be productively applied within the educational or work context. The aim is to create the best fit and opportunity for students and employees to use their talents, to bring out the best in everyone, allowing everyone to realize their full professional potential (Meyers, 2016).

Individual characteristics and competencies determine professional opportunities on the local labour market. De Fillippi and Arthur (1994) and Inkson and Arthur (2001) use the term ‘career

capital'. We distinguish three dimensions of this career capital: orientation, qualification, and networking. Related to those dimensions Akkermans, Brenninkmeijer, Huibers and Blonk (2012) identified six career competences: reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control. As figure 1 shows, we turned the dimensions of career capital into phases. We also include a fourth phase: landing. In this phase the international student or alumnus is working in a (side)job or internship, and a good fit with the job or organization is crucial. This fourth phase completes the process and creates a circular employability journey. After all, both people and jobs change, therefore the process can start all over again in the case of wanting to find a better fitting job.

Figure 1 Employability process model

Phases

1. Orientation phase: knowing why?

In the orientation phase, motivational characteristics are central. De Fillippi and Arthur (1994) and Inkson and Arthur (2001) speak of knowing-why. They mainly refer to the reflection on oneself: on the interests and motivation that people give to their careers, and the fit with the unique qualities and talents the person has. Knowing-why involves themes of individual motivation, the construction of personal meaning and identification (who am I as a professional?). This **self-awareness** through self-reflection (Kuijpers, 2000) or reflection on motivation (Akkermans et al., 2012) incorporates traditional career development concerns about individual uniqueness, reflected in constructs such as personality, aptitudes, values and interests (what are my interest and qualities?) (Kuijpers, 2000). Knowing-why further incorporates attitudes to family, lifestyle, and other non-work factors that affect career choice, adaptability and commitment. These career expectations or preferences can influence a person's labour market opportunities (Parker & Arthur, 2004).

It is also important to reflect on the outside world. We therefore also consider **labour market awareness** through work exploration (Akkermans et al, 2012) as an important career competency. This refers to knowledge about career options, possible employers, available jobs, the skills demanded by employers for those jobs, and the channels to look for jobs (what are local employers looking for?). Information acquisition can take place on the different levels; information about work on the labour market, in a specific organisation or on work activities. It handles content and development of work (Meijers & Wijers, 1997; Reynaert & Spijkerman, 1995). So, work exploration is the competency to explore the labour market and specific work environment for suitable work (activities) and mobility prospect, in accordance with the capacities and motivation of a person (Kuijpers, 2000). This is especially important for international students and alumni since they are less informed about the local labour market in their host country by default than their local peers.

In addition, also **career control** (Akkermans et al., 2012) is part of the orientation phase. It is the competency to plan and act upon one's own learning and working process (Kuijpers, 2000). Taking into consideration self-awareness and labour market awareness, it becomes possible to formulate a strategic career plan (where do I want to go?): setting long and short-term goals, determine activities to achieve one's goals and evaluate the results (Reynaert & Spijkerman, 1995). Besides career planning, control of the learning process is of importance for career control (Onstenk, 1998). Activities of learning process control are for example: define and analyse learning questions, evaluate and obtain appropriate training and development activities. Thirdly control of one's work process seems to influence career development. This indicates activities that affect the content of work in a way that work makes a better fit with one's capacities and motivation. Part of control of the work process is the balance of work and private life (De Filippi & Arthur, 1996; Meijers, 1995).

2. Qualification phase: Knowing how?

In the qualification phase, the ability or knowing-how is central (De Fillippi & Arthur, 1994; Inkson & Arthur, 2001). Knowing-how reflects an individual's repertoire of job-related skills and expertise. These may include formal qualifications and training, **hard skills** like digital literacy and proficiency in languages, as well as informal and tacit knowledge that emerges from education and work experience (soft skills). **Soft skills** are attributes that are difficult to both master and measure, such as the capacity to communicate, problem solving, teamwork skills, leadership skills, time-management skills, critical thinking, curiosity, creativity and resilience (Succi & Canovi, 2020). Especially important for international students and alumni is the soft skill intercultural sensitivity, defined as a deeper understanding and appreciation of cross-cultural differences, such as differences in communication, reaction, performance, interaction and teamwork, but also beliefs, values, attitudes, perceptions and expectations (Mahoney & Schamber, 2004). Through reflection on qualities, defined as reflecting on strengths, shortcomings, and skills with regard to one's personal career (Akkermans, et al., 2012), it becomes clear which skills still need to be developed to increase employability (what do I need to develop to get my ideal job?).

We also add **career competencies,** also known as self-profiling (Thijssen, 2001; Akkermans et al., 2012), important for acquiring an adequate employment position. They can be defined

as presenting and communicating personal knowledge, abilities and skills to the internal and external labour market. One should be able to make clear to relevant others what one wants careerwise and what one is able to fulfil (Kuijpers, 2000). This can take the form of writing a CV and cover letter, but also presenting oneself during a job interview or networking event, or using LinkedIn and other social media for professional purposes.

3. Networking phase: Knowing whom?

In the networking phase, the individual's social capital is central (Bourdieu, 1985). Social capital is crucial for the development of labour market knowledge. De Fillippi and Arthur (1994) and Inkson and Arthur (2001) therefore attach great importance to this knowing-whom. Granovetter (1988) emphasizes that employers obtain an important part of their information about prospective employees from people who know the candidates. Knowing whom involves a person's work relationships and includes all professional connections that can support his or her career, like (former)employers or colleagues. It also incorporates broader contacts with family, friends, fellow-alumni, and professional and social acquaintances (who can help me get my ideal job?). Any of these contacts can enhance a career by providing support, transmitting reputation or affording access to information (Parker & Arthur, 2004). So, **networking** can be defined as the awareness of the presence and professional value of an individual network, and the ability to expand this network for career-related purposes (Akkermans et al., 2012). This phase of identifying and deploying career-enabling relationships is especially important for international students and alumni since they have less social capital in their host country by default.

4. Landing phase: Is there a fit?

In the landing phase finding a fitting job on the local labour market is put central. In this phase, it is important to reflect on the fit of the job and the organisation a person works in, as every person brings in their own personality, motivation, values, attitudes, and set of skills to work (how am I doing as a professional?). The person-organisation fit refers to the degree to which a person's personality, values, goals, and other characteristics match those of the organisation (Kristof, 1996). Person-job fit is the degree to which a person's knowledge, skills, abilities, and other characteristics match the job demands (Kristof-Brown et al., 2005). A mismatch between the person and the job or organisation may result in dissatisfaction and an intention to leave. On the other hand, people who match with their job and organisation tend to be more satisfied with their jobs, more committed to their employers, are more influential in their organisation, and remain longer in the organisation (Anderson, et. al., 2008; Kristof-Brown, et. al., 2005).

If the fit is not optimal, one can take action on the job (by applying job crafting, job carving or additional training) or outside the job (finding vacancies and applying elsewhere for a better fitting job and organisation). The employability process is a frequent process of reflection, by orientating oneself on the developments on the labour market and in the profession, identifying the qualifications and skills needed for a new job, or future work in general, and identifying and deploying social capital to stay employable.

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Appendix 2:

The I am Talent Employability Survey

This appendix consists of three sections. Section 1explains the constructs of the survey as well as the items used to measure the constructs. Section 2 clarifies which parts of the survey may be adjusted or not. Section 3 gives guidelines on how to interpret the scores during the process of analysing the data.

Section 1: Main constructs and items of I am Talent Employability Survey

In chapter 2 we presented the four phases of the employability process model. The phases of orientation, qualification and networking are based on the career competencies of Akkermans et al. (2012). The landing phase focusses on work fit and the related person-job and person-organisation fit by Kristof-Brown (1996; 2005). All these constructs are building blocks in the survey. Table 1 gives an overview of the constructs.

Table 1 Constructs of I AM Talent

Construct	Phase	Dimension	Operationalisation
Career competencies	Orientation	Reflection on motivation	The competency to reflect 'on values, passions, and motivations with regard to one's personal career' (Akkermans et al., 2012, p. 249)
		Work exploration	The competency to actively explore and search 'for work-related and career-related opportunities on the internal and external labour market' (Akkermans et al., 2012, p. 251)
		Career control	The competency to actively influence learning processes and work processes related to one's personal career by setting goals and planning how to fulfil them (Akkermans et al., 2012, p. 251)
	Qualification	Reflection on qualities	The competency to reflect 'on strengths, shortcomings, and skills with regard to one's personal career.' (Akkermans et al., 2012, p. 249)
		Intercultural sensitivity	The competency to 'develop emotion towards understanding and appreciating cultural differences that promotes appropriate and effective behaviour in intercultural communication' (Chen & Starosta, 1997, p. 5).
		Self-profiling	The competency to present and communicate 'personal knowledge, abilities and skills to the internal and external labour market' (Akkermans et al., 2012, p. 251)

Construct	Phase	Dimension	Operationalisation
	Networking	Networking	The competency to be aware 'of the presence and professional value of an individual network, and the ability to expand this network for career-related purposes' (Akkermans et al., 2012, p. 251)
Work fit	Landing	Person-job fit	The compatibility 'between a person's characteristics and those of the job or tasks that are performed at work' (Kristof-Brown et al., 2005, p. 284).
		Person-organisation fit	The compatibility 'between people and organisations that occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both' (Kristof, 1996, p. 4).

The career competencies are measured with the 21-item Career Competencies Questionnaire of Akkermans et al. (2012), with an additional category of 4-items: Intercultural Sensitivity. Reflection on Motivation, Self-Profiling, and Work Exploration are each measured with three items, while Reflection on Qualities, Networking, Career Control, and Intercultural Sensitivity are each measured with four items. These items are measured on a 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree).

Person-job fit is measured with the 6-item Person-Job Fit Scale developed by Cable and DeRue (2002) and Cable and Judge (1996). Person-organisation fit is measured with the 3-item Person-Organization Fit Scale developed by Cable and DeRue (2002). These items are also measured on a 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree).

The complete **I am Talent Employability Survey** addresses the following building blocks[1]:

1. Consent for participation.
2. Personal information about home country, reasons for coming to host country as an international student, and the chosen degree programme.
3. Information about current job(s); type and level of position, location, work hours, type of organisation, business sector.
4. Intentions to stay in current job(s) and in host country.
5. Fit with current job and organisation (perceived person-job fit and person-organisation fit).
6. Career competencies needed for successful labour market entry (reflection on motivation and qualities, work exploration, career control, networking, self-profiling, intercultural awareness).

Table 2 below shows all items on these six building blocks, so they can be used in the survey tool of your choice. The I am Talent Employability Survey was developed in Microsoft Forms by Fontys. It is possible to duplicate the form and use it by clicking on this link:

[1] The I Am Talent self-assessment tool only focusses on (5) work fit and (6) career competences.

https://forms.office.com/Pages/ShareFormPage.aspx?id=ZWdrxpS3K0qE7YRbNBwIalDc6_kAXCBPuWOIK9Q1sb9UOFJZQjFQOFpJNFM5OUE2QVFJQ1IzTVRaVCQlQCN0PWcu&sharetoken=kkKmGY48HZ7FdU6A6B4B

Table 2: items of the I am Talent Employability Survey tool

Block	Question	Possible answers
Consent	- I consent to my University of Applied Sciences processing anonymously the data resulting from using this questionnaire.	Yes No > end of survey
	- If yes: I want to receive personalised feedback on my responses in the sections 'Work fit' and 'Career competencies'. Therefore, I fill in my email address:	*Free text*
Personal data	- What is your gender?	Male Female Non-binary Prefers not to answer
	What is your year of birth?	*Dropdown list of years*
	What is your region of origin?	EU/EEA Outside of EU/EEA
	What is your country of origin?	*Dropdown list of countries*
	What is your current host country?	*Dropdown list of countries*
	Since when you have been in your host country?	*Dropdown list of academic years*
	Why did you relocate to your current host country?	*Multiple answers possible:* For study For work For family reasons For my partner Other > *free text*
	I agree that staff from my University of Applied Sciences may contact me in the future: - to fill in this questionnaire again as a student or as an alumnus. - to ask me to participate in guest lectureship or provide information to students. - to inform me about alumni events. - to inform me about further training.	Yes No > *to next block*
	If yes: For this purpose, please fill in your personal email address:	*Free text*

Block	Question	Possible answers
Education	What is your highest level of education prior to applying to your University of Applied Sciences?	Secondary education Associate degree Bachelor's degree Master's degree
	What is the degree level of the programme you are currently enrolled in at your University of Applied Sciences?	Associate degree Bachelor Master PhD
	What type of degree programme are you currently enrolled in?	Arts, Design and Architecture Business, Economics and Management Engineering Health and Sports ICT and Software Engineering Language and Communication Logistics Social Studies Teacher Training Other > *free text*
	What year are you in?	B1 B2 B3 B4 M1 M2 PhD Other
Work experience	At this moment I have a professional activity. This includes an internship, side-job, voluntary job, paid job or self-employment.	Yes No > *to block Career Competencies*
	If yes: What type of main employment do you currently have?	Internship Side-job Voluntary job Parttime job Fulltime job
	What type of main position do you currently have?	Permanent position Temporary position with prospect of permanent position

Block	Question	Possible answers
		Temporary position without prospect of permanent position Self-employed
	What is your current main job title?	*Free text*
	What is the required level of education (by your employer) for your current main job?	Secondary education Vocational education (practical training) Bachelor's degree Master's degree
	What is the required field of study (by your employer) for your current main job?	My own field of study A related field of study Another field of study No particular field of study
	What is the average number of working hours per week in your current main job?	*Dropdown list of hours between 1 and 40*
	In what business sector do you currently work?	Accountancy, banking or finance Agriculture or environment Business, consultancy or management Computing or IT Creative arts or design Education Energy or utilities Engineering or manufacturing Healthcare Hospitality or events Law Law enforcement or security Leisure, sports or tourism Marketing, advertising or PR Media Property or construction Public services or administration Recruitment or HR

Block	Question	Possible answers
		Retail or sales Science or pharmaceuticals Social care Transport or logistics
	What is the size of the main organisation you currently work at?	1-9 people 10-24 people 25-49 people 50-99 people 100-249 people 250-999 people 1000 or more
	Where is the main organisation you currently work at located?	In host country (where your University of Applied Sciences is located) Outside of host country
	If in host country: In what city/town is the main organisation you currently work at located?	*Free text*
	If outside host country: In what country is the main organisation you currently work at located?	*Dropdown list of countries*
	To what extent does your current main position correspond to the degree programme you follow(ed) at your University of Applied Sciences?	*On a Likert 5-point scale from not at all to completely*
Intentions to stay	In the near future, I will continue to work at this organisation.	*On a Likert 5-point scale from strongly agree to strongly disagree*
	In the near future, I will continue to live and work in this country.	
	Recently, I have been seriously considering the option of returning to my home country or go to another country. (R)	
	Do you have another job at this moment?	Yes > *fill in twice work experience block* No
Person-job fit	There is a good fit between what my job offers me and what I am looking for in a job.	*On a Likert 5-point scale from strongly agree to strongly disagree*
	The attributes that I look for in a job are fulfilled very well by my present job.	
	The job that I currently hold gives me just about everything that I want from a job.	
	The match is very good between the demands of my job and my personal skills.	

Block	Question	Possible answers
	My abilities and training are a good fit with the requirements of my job.	
	My personal abilities and education provide a good match with the demands that my job places on me.	
Person-organisation fit	The things that I value in life are very similar to the things that my organisation values.	
	My personal values match my organisation's values and culture.	
	My organisation's values and culture provide a good fit with the things that I value in life.	
Reflection on motivation	I know what I like in my (future) work.	*On a Likert 5-point scale from strongly agree to strongly disagree*
	I know what is important to me in my (future) career.	
	I can clearly see what my passions are in my (future) work.	
Reflection on qualities	I know my strengths in my (future) work.	
	I am familiar with my shortcomings in my (future) work.	
	I am aware of my talents in my (future) work.	
	I know which skills I possess.	
Work exploration	I know how to find out what my options are for becoming further educated.	
	I know how to search for developments in my (future) area of work.	
	I am able to explore my possibilities on the local labour market.	
Career control	I can make clear career plans.	
	I know what I want to have achieved in my (school or work) career a year from now.	
	I can create a layout for what I want to achieve in my (school or work) career.	
	I am able to set goals for myself that I want to achieve in my (school or work) career.	
Self-profiling	I can clearly show others what my strengths are in my (future) work.	
	I am able to show others what I want to achieve in my (school or work) career.	
	I can show the people around me what is important tom e in my (future) work.	
Networking	I know a lot of people within my work who can help me with my (future) career.	

Block	Question	Possible answers
	I know a lot of people outside of my work who can help me with my (future) career.	
	I know how to ask for advice from people in my network.	
	I am able to approach the right persons to help me with my (future) career.	
Intercultural sensitivity	I am open-minded to people from different cultures.	
	I adjust my language to meet the needs of people in a culturally diverse setting.	
	I invest into developing relationships across cultures and building culturally diverse networks.	
	I use cultural diversity as a source of learning and innovation.	

Section 2: Adaptability of the survey

The I am Talent Employability Survey is based on valid scales, developed in academic research. The I am Talent Employability Survey is also tested during the INTERLOCALITY project. The psychometric research showed that we developed a reliable and valid survey. Information about this psychometric research of the I am Talent Employability Survey can be found in appendix 3.

It is important to note that certain blocks of items (i.e. scales) can be adapted while others cannot be adjusted without risking the reliability and validity of the block. Table 3 shows which blocks can be adapted or not.

Table 3: adaptability of survey

Possible to adapt	Not recommended to adapt
- The **personal information block**, regarding home country, reasons for coming to the host country as an international student, and the chosen degree programme, can be adapted to meet the needs of the higher education institution. Be aware that the more personal information you ask, the GDPR can be at risk.	- **Consent for participation** is a mandatory block within any survey: it is an important requirement of ethical research when you collect personal data.
- The **work experience block**, regarding current job(s); type and level of position, location, work hours, type of organisation, and business sector, can also be adapted to meet the needs of the higher education institution.	- The items regarding the **work fit** (perceived person-job fit and person-organisation fit) can not be adapted without risking the reliability and validity of the block.
- The block regarding **the intentions to stay** in current job(s) and in host country can be adapted to meet the needs of the higher education institution.	- The items regarding the **career competencies** needed for successful labour market entry (reflection on motivation and qualities, work exploration, career control, networking, self-profiling, intercultural awareness) can not be adapted without risking the reliability and validity of the block.

Section 3: How to interpret the scores

Table 4 shows how the scores per scale can be interpreted.

Table 4: interpretation of data

Construct	Score	Interpretation
Reflection on motivation	3-11	Low score means that the respondent is not (yet) able to reflect on his/her values, passions, and motivations with regard to his/her (future) personal career.
	12-15	High score means that the respondent is able to reflect on his/her values, passions, and motivations with regard to his/her (future) personal career.
Work exploration	3-11	Low score means that the respondent is not (yet) able to actively explore and search for work-related and career-related opportunities on the internal and external labour market.

Construct	Score	Interpretation
	12-15	High score means that the respondent is able to actively explore and search for work-related and career-related opportunities on the internal and external labour market.
Career-control	4-15	Low score means that the respondent is not (yet) able to actively influence his/her learning processes and work processes related to his/her personal career by setting goals and planning how to fulfil them.
	16-20	High score means that the respondent is able to actively influence his/her learning processes and work processes related to his/her personal career by setting goals and planning how to fulfil them.
Reflection on qualities	4-15	Low score means that the respondent is not (yet) able to reflect on his/her strengths, shortcomings, and skills with regard to his/her (future) personal career.
	16-20	High score means that the respondent is able to reflect on his/her strengths, shortcomings, and skills with regard to his/her (future) personal career.
Intercultural sensitivity	4-15	Low score means that the respondent is not (yet) able to effectively and respectfully communicate and interact with people from different cultures and backgrounds.
	16-20	High score means that the respondent is able to effectively and respectfully communicate and interact with people from different cultures and backgrounds.
Self-profiling	3-11	Low score means that the respondent is not (yet) able to present his/herself and communicate about his/her personal knowledge, abilities and skills to the internal and external labour market.
	12-15	High score means that the respondent is able to present his/herself and communicate about his/her personal knowledge, abilities and skills to the internal and external labour market.
Networking	4-15	Low score means that the respondent is not (yet) aware of the presence and professional value of an individual network, and/or that he/she does not (yet) have the ability to expand this network for career-related purposes.
	16-20	High score means that the respondent is aware of the presence and professional value of an individual network, and that he/she has the ability to expand this network for career-related purposes.
Person-job fit	6-23	Low score means that the personality, skills, values and interest of the respondent do not seem to align with the requirements and characteristics of his/her job.
	24-30	High score means that the personality, skills, values and interests of the respondent seem to align with the requirements and characteristics of his/her job.

Construct	Score	Interpretation
Person-organisation fit	3-11	Low score means that the personality, skills, values and interests of the respondent do not seem to align with the values and culture of the organisation he/she works at.
	12-15	High score means that the personality, skills, values and interests of the respondent seem to align with the values and culture of the organisation he/she works at.

Besides the career competences and the work fit, the I am Talent Employability Survey also gathers:

- demographic information (*gender, age, region of origin, country of origin, host country, date of arrival in host country*)
- study career information (*highest level of education before arrival in host country, level of degree programme in host country, field of study in host country, year of study*)
- professional career information (*type of employment, required level of education, required field of study, average number of working hours per week, business sector, size of organisation, location of organisation*)
- intention to stay or leave the host country.

These personal data help to monitor the career steps of international students and alumni, and to analyse whether the subjective measures of career competencies and person-job fit/person-organisation fit (the self-assessment part of the survey) are related to actual career steps. This analysis can be performed using SPSS by calculating the correlation coefficients.

Appendix 3:

Psychometric testing of survey

Scale Validation

Instrument
First, we clearly defined the constructs that the questionnaire is intended to measure (see Table 1). These constructs are based on the theoretical framework, existing literature and questionnaires, and the research objectives. Then, a pool of questions based on the defined constructs were developed.

Career competencies were measured with the 21-item Career Competencies Questionnaire of Akkermans et al. (2013), with an additional category of 4-items: intercultural sensitivity. Reflection on motivation, self-profiling, and work exploration were each measured with three items, while reflection on qualities, networking, career control, and intercultural sensitivity were each measured with four items. These items were measured on a 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree).

Person-job fit was measured with the 6-item Person-job fit Scale developed by Cable and DeRue (2002) and Cable and Judge (1996). Person-organisation fit was measured with the 3-item Person-Organization Fit Scale developed by Cable and DeRue (2002). These items were measured on a 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree).

The I AM Talent Questionnaire also gathers demographic information (*gender, age, region of origin, country of origin, host country, date of arrival in host country*), study career information (*highest level of education before arrival in host country, level of degree programme in host country, field of study in host country, year of study*), professional career information (*type of employment, required level of education, required field of study, average number of working hours per week, business sector, size of organisation, location of organisation*) and intention to stay or leave the host country. These personal data help to analyse whether the subjective measures of career competencies and person-job fit/person-organisation fit are related to actual career steps.

After creating the questionnaire, we pilot tested it and assessed reliability and validity.

Sample size
The target group of the I AM Talent Questionnaire is made up of international students and recent alumni in Northern-Europe who have any type of work experience (e.g. voluntary job, side-job, internship, fulltime job) or are working on their employability during their degree programme. To determine a representative sample size for the larger group of international students and alumni in Northern-Europe, we have used an online sample calculator

(steekproefcalculator.com). With a 8% margin of error, 92% confidence level, 35,000 research population (the number of international students at Dutch Universities of Applied Sciences) and 50% degree of spreading, the desired sample size was 120.

Procedure

The data from the pilot test were anonymously obtained from international students at different higher education institutions in the Netherlands, Finland and Denmark. The online call for participation was sent out by the partner institutions within the INTERLOCALITY consortium via e-mail and LinkedIn. After being given the research information and consent form digitally, the participants filled out the questionnaires online via Microsoft Forms. A total of 116 questionnaires were submitted: two of the participants did not consent and were excluded from analyses. After filling in the survey, the respondents were also asked to provide input for the evaluation of the survey.

Inclusion criteria for the pilot were international students and recent graduates (≤ 5 years) of Universities of Applied Sciences located in the North-European countries participating in the INTERLOCALITY consortium who have sufficient proficiency in English. Exclusion criteria were local students, underaged (≤ 18 years old) international students, international students who are enrolled in a degree programme at a research university or international students who are not proficient in English.

Data was extracted from Microsoft Forms in an Excel data file and analysed with the Statistical Package for the Social Sciences (SPSS). All data are safely and anonymously saved on the Fontys Research Drive, according to GDPR.

Participants

The majority of the 114 consenting participants were located in the Netherlands (61.4%). Finland counted for 36% and Denmark for 2.6%. More than half of the participants were non-EU/EEA (54.4%) and female (52.6%). The mean age was 25.25 years. 96 participants were enrolled in a bachelor's degree programme (84.2%), 13 in a master's degree programme (11.4%), and 5 were recently graduated from a bachelor's degree programme (4.4%). Many participants studied Business, Economics and Management (46.5%) or Engineering (25.5%).

Most participants had work experience: fulltime job (7%), parttime job (31.6%), internship (21.1%) or voluntary job (3.5%). These participants worked an average of 26.1 hours per week, with the majority of this group working in the fields of engineering and manufacturing or hospitality and events.

Reliability

We looked into the reliability of the questionnaire by measuring the internal consistency in SPSS: the extent to which the items in the questionnaire categories are interrelated using Cronbach's alpha coefficient (see Table 5). A value between 0.70 and 0.80 is generally considered acceptable. A value between .80 and .90 is considered good. A value of 0.90 or higher is considered excellent.

Table 5 Reliability

Item dimension	Number of Items	Cronbach's Alpha
Reflection on motivation	3	,799
Work exploration	3	,884
Career-control	4	,862
Reflection on qualities	3	,848
Intercultural sensitivity	4	,793
Self-profiling	3	,849
Networking	4	,864
Person-job fit	6	,904
Person-organisation fit	3	,947

All 25 items on the seven categories of career competencies together had a Cronbach's Alpha of ,926. All 9 items on person work fit together had a Cronbach's Alpha of ,894. These results imply that the internal consistency is good or event excellent: the items are consistently measuring the same underlying constructs, providing confidence in the reliability of the questionnaire for measuring those specific constructs.

Inter-item correlations were also calculated in SPSS, to measure the internal consistency, for every dimension of the career competencies and work fit (see Table 6). Inter-item correlations between 0.2 and 0.5 display that items measure the same construct and their appropriate allocation to the scale. Inter-item correlations > 0.7 indicate that the items measure almost the same and one of them might be deleted.

Table 6 Internal consistency

Item Dimension	Inter-Item Correlations Mean
Reflection on motivation	0.575
Work exploration	0.719
Career-control	0.613
Reflection on qualities	0.587
Intercultural sensitivity	0.492
Self-profiling	0.663
Networking	0.613
Person-job fit	0.602
Person-organisation fit	0.857

Only the work exploration and person-organisation fit items show an inter-item correlation of > 0.7 (0.719 and 0.857), but they both only consist of three items. So, it was decided to keep these items.

Validity

The validity, the extent to which the survey measures what it is supposed to measure, was verified looking first at content validity. Two experts were asked to comment on the questionnaire questions, to see if they cover all aspects of the constructs being measured. Based on their feedback, we edited the research information and introductory texts for the different parts. There was no need to change the items of the questionnaire itself based on their feedback.

The face validity, the opinion of the respondents if the questionnaire measures what it is intended to measure, was verified by adding additional questions asking for ratings and feedback during the pilot testing. On a scale of 0 (bad) to 5 (excellent), the mean of the rating of the structure of the questionnaire was 3.97 (0.954 SD), the mean of the rating of the number of questions was 4.14 (0.901 SD), the mean of the comprehensibility of the questions was 4.17 (0.968 SD) and the mean of the relevance of the questions was 4.05 (0.976 SD). Therefore, the face validity of the questionnaire can be considered as good.

Construct validity was measured by exploratory factor analysis in SPSS. The Kaiser-Meyer-Olkin Test value of the questionnaire was 0,683. KMO test values should be greater than 0,6 for an acceptable factor analysis. The Bartlett's Test value of the questionnaire was <0,001. Bartlett's test should have a significance value less than 0,05 for a suitable factor analysis. A factor analysis examines which underlying factors are measured by a number of observed variables. Each variable has a quality score called an Eigenvalue. Only variables with Eigenvalues of at least 1 are likely to represent real underlying factors (see Table 7).

Table 7 Factor analysis

	Initial Eigenvalues		
Variable	**Total**	**% of Variance**	**Cumulative %**
1	9,897	29,108	29,108
2	4,958	14,583	43,691
3	3,455	10,161	53,853
4	2,219	6,527	60,380
5	1,578	4,642	65,022
6	1,473	4,334	69,356
7	1,263	3,715	73,071
8	1,080	3,176	76,247

The 34 variables seem to measure eight underlying factors. This is because only the first eight components have Eigenvalues of at least one. The other components are not assumed to represent real traits underlying the 34 items. To what extent the eight underlying factors account for the variance of the 34 input variables can be answered by the R square values, which are called communalities in factor analysis (see Table 8). Variables having low communalities - lower than 0.40 – do not contribute much to measuring the underlying factors.

Table 8 Communalities

Dimension	Variable	Extraction
Reflection on motivation	I can clearly see what my passions are in my (future) work.	,687
	I know what is important to me in my (future) career.	,597
	I know what I like in my (future) work.	,693
Work exploration	I am able to explore my possibilities on the local labour market.	,840
	I know how to search for developments in my (future) area of work.	,860
	I know how to find out what my options are for becoming further educated.	,749
Career control	I am able to set goals for myself that I want to achieve in my (school or work) career.	,737
	I can create a layout for what I want to achieve in my (school or work) career.	,741
	I know what I want to have achieved in my (school or work) career a year from now.	,740
	I can make clear career plans.	,688
Reflection on qualities	I know which skills I possess.	,767
	I am aware of my talents in my (future) work.	,738
	I am familiar with my shortcomings in my (future) work.	,628
	I know my strengths in my (future) work.	,671
Intercultural sensitivity	I use cultural diversity as a source of learning and innovation.	,722
	I invest into developing relationships across cultures and building culturally diverse networks.	,777
	I adjust my language to meet the needs of people in a culturally diverse setting.	,661
	I am open-minded to people from different cultures.	,727
Self-profiling	I can show the people around me what is important to me in my (future) work.	,771
	I am able to show others what I want to achieve in my (school or work) career.	,698
	I can clearly show others what my strengths are in my (future) work.	,614
Networking	I am able to approach the right persons to help me with my (future) career.	,799
	I know how to ask for advice from people in my network.	,775
	I know a lot of people outside of my work who can help me with my (future) career.	,756
	I know a lot of people within my work who can help me with my (future) career.	,759
Person-job fit	My personal abilities and education provide a good match with the de1ds that my job places on me.	,778

Dimension	Variable	Extraction
	My abilities and training are a good fit with the requirements of my job.	,856
	The match is very good between the de1ds of my job and my personal skills.	,794
	The job that I currently hold gives me just about everything that I want from a job.	,828
	The attributes that I look for in a job are fulfilled very well by my present job.	,889
	There is a good fit between what my job offers me and what I am looking for in a job.	,867
Person-organisation fit	My organization's values and culture provide a good fit with the things that I value in life.	,909
	My personal values match my organization's values and culture.	,904
	The things that I value in life are very similar to the things that my organization values.	,905

We can conclude that all the 34 input variables have high communalities and contribute to measuring the underlying factors. But which items measure which factors? The component matrix shows the Pearson correlations between the items and the factors. These correlations are called factor loadings. Ideally, each input variable measures precisely one factor. Unfortunately, that is not the case for our questionnaire. Some questions measure multiple factors simultaneously. If a variable has more than one substantial factor loading, we call those "cross loadings". They complicate the interpretation of factors. The solution for this is rotation: redistributing the factor loadings over the factors in SPSS. This redefines what the factors represent. The most common method for rotation is variable maximization rotation (see Table 9).

Table 9 Rotated factor loadings

Rotated Component Matrix[a]								
	Component							
	1	2	3	4	5	6	7	8
I can clearly see what my passions are in my (future) work.	,378		,590					
I know what I like in my (future) work.			,525					-,367
I know what is important to me in my (future) career.	,515		,481					
I know how to search for developments in my (future) area of work.						,897		
I am able to explore my possibilities on the local labour market.					,316	,818		
I know how to find out what my options are for becoming further educated.	,305					,760		
I am able to set goals for myself that I want to achieve in my (school or work) career.	,815							
I know what I want to have achieved in my (school or work) career a year from now.	,767				,307			
I can create a layout for what I want to achieve in my (school or work) career.	,742				,333			
I can make clear career plans.	,417		,362		,463	,374		
I am aware of my talents in my (future) work.			,800					
I know which skills I possess.			,798					
I know my strengths in my (future) work.			,742					
I am familiar with my shortcomings in my (future) work.			,692					
I am open-minded to people from different cultures.							,807	
I invest into developing relationships across cultures and building culturally diverse networks.							,801	
I use cultural diversity as a source of learning and innovation.							,767	
I adjust my language to meet the needs of people in a culturally diverse setting.	,609						,450	
I can show the people around me what is important to me in my (future) work.	,718						,326	
I am able to show others what I want to achieve in my (school or work) career.	,702							
I can clearly show others what my strengths are in my (future) work.	,468					,308	,309	,332
I know a lot of people outside of my work who can help me with my (future) career.					,756			
I am able to approach the right persons to help me with my (future) career.	,374				,712			

Rotated Component Matrix[a]								
	Component							
	1	2	3	4	5	6	7	8
I know a lot of people within my work who can help me with my (future) career.					,706			
I know how to ask for advice from people in my network.	,466				,663			
The attributes that I look for in a job are fulfilled very well by my present job.		,886		,303				
There is a good fit between what my job offers me and what I am looking for in a job.		,870						
The match is very good between the demands of my job and my personal skills.		,869						
The job that I currently hold gives me just about everything that I want from a job.		,859						
My personal abilities and education provide a good match with the demands that my job places on me.		,630						,554
My abilities and training are a good fit with the requirements of my job.		,314						,841
My organization's values and culture provide a good fit with the things that I value in life.				,918				
The things that I value in life are very similar to the things that my organization values.				,870				
My personal values match my organization's values and culture.				,868				
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.								
a. Rotation converged in 8 iterations.								

The factors presented by the factor analysis can be interpreted as follows:
1: Self-profiling for career control, networking and work exploration
2: Person-job fit
3: Reflection on oneself
4: Person-organisation fit
5: Networking for career control and work exploration
6: Work exploration
7: Intercultural sensitivity
8: Undefined

- Factors 1 and 5 combine multiple variables. Factor 1 measures self-profiling, partly career control, partly work exploration and partly networking. Factor 5 measures networking, partly career control and partly work exploration. This indicates that the communicative career competencies, being able to effectively communicate with others to improve the chances of career success (networking and self-profiling), have some overlap with the behavioural career competencies, being able to actually shape one's career by proactively taking action

(work exploration and career control). This observation is not surprising, since many of the competencies within both communicative and behavioural dimensions rely on similar skills that are used across various aspects of career development. Both communication skills and proactive behaviour are integral to employability.

- Factor 2 measures the person-job fit, with only one variable also measuring the person-organisation fit, and two variables measuring an undefined 8th factor.
- Factor 3, which combines reflection on qualities and reflection on motivation, is based on the dimension of reflective career competencies: reflection on oneself. Reflective career competencies focus on creating an awareness of one's long-term career and on combining personal reflections and one's professional career. Reflection on motivation and reflection on qualities are both derived from this dimension (Akkermans et al., 2013). In this sense, the overlap of these two variables for this factor is not surprising.
- Factor 4 measures the person-organisation fit without any overlap.
- Factor 6 measures work exploration, with two variables overlapping with the communicative and behavioural career competencies. Again, this is not surprising given the fact that both communication skills and proactive behaviour are integral to work exploration.
- Factor 7 measures intercultural sensitivity, with one variable also measuring communicative career competencies. This is not surprising, as this specific variable measures language use.
- Factor 8 measures an undefined factor. Its Eigenvalue was also just on the threshold of 1,080.

The results of the factor analysis suggest that some factors are more distinct (person-job fit, person-organisation fit, and intercultural sensitivity), while other items measure related constructs that correlate with one another (e.g. factor 1, factor 3 and factor 5). This does not necessarily mean that the construct validity of the questionnaire is compromised, but rather that the constructs being assessed are of a multifaceted nature.

Lastly, the descriptive statistics per factor were analysed (see Table 10). The mean and standard deviation of the responses to the I AM Talent questionnaire can provide some insights into its hypothesis validity, although they are not direct measures of validity themselves.

Table 10 Descriptive statistics

Factor	Mean	Minimum	Maximum	Std. Deviation	Variance	Items
Reflection on motivation	12,26	11,754	12,681	2,058	4,235	3
Work exploration	10,77	10,299	11,412	2,782	7,740	3
Career control	14,71	13,524	15,836	3,345	11,187	4
Reflection on qualities	16,23	15,792	16,62	2,502	6,261	4
Intercultural sensitivity	17,79	17,32	18,68	2,193	4,811	4
Self-profiling	11,92	11,598	12,495	2,321	5,389	3
Networking	12,44	11,504	13,856	3,862	14,916	4
Person-job fit	19,96	17,016	22,908	5,770	33,295	6
Person-organisation fit	11,36	11,019	11,673	2,837	8,051	3

The mean of responses on factors can give an indication of the central tendency of the data. In a well-constructed questionnaire, one can expect the mean responses to be around a certain value if the questions are measuring what they are intended to measure. On a scale of 1 to 5, we would expect a mean score of at least 3 if the I AM Talent Questionnaire is valid, and a higher score on intercultural sensitivity since the respondents are all international students and alumni. This is the case: the factor intercultural sensitivity shows a mean of 17,79 on 20, and all other factors have a mean higher than the average of the highest possible score.

The standard deviation measures the spread or dispersion of the responses around the mean. A smaller standard deviation suggests that responses are tightly clustered around the mean, while a larger standard deviation suggests more variability in responses. In normal distributions, 68.27% of the respondents deviate at most 1 standard deviation from the mean. That is the case for all factors in this questionnaire. In the context of questionnaire validity, this normal standard deviation may indicate that respondents interpret the questions similarly, which is a sign of good construct validity.

The relatively little dispersion or low variability in the questionnaire responses that we have detected is ideal, because this means that we can make better predictions about the population based on these sample data.

Appendix 4:

Linking the survey to Power Automate

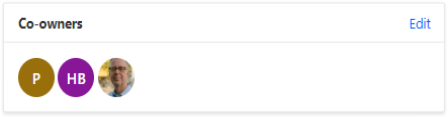
It is possible to provide the respondents of the survey with information on their scores by linking the MS forms to Power Automate. Below we will describe how the calculation of the score on career competencies and fit with current job and organisation is handled by Power Automate with an automated flow. This score is automatically sent by email to the respondent, if he/she filled in his/her email address for this purpose.

Power Automate
Microsoft Power Automate, formerly called Microsoft Flow, is a cloud-based software that allows employees to create and automate workflows and tasks across multiple applications and services without help from developers. Automated workflows are called flows. To create a flow, the user specifies what action should take place when a specific event occurs.

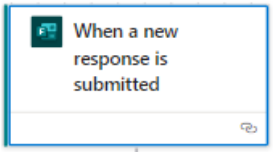
In this case, the event that triggers the flow of I AM Talent is a submitted questionnaire with work experience and for a successful flow the email address needs to be provided at question 2:
“I want to receive personalised feedback on my responses in the sections 'Work fit' and 'Career competencies'. Therefore I fill in my e-mail address” .

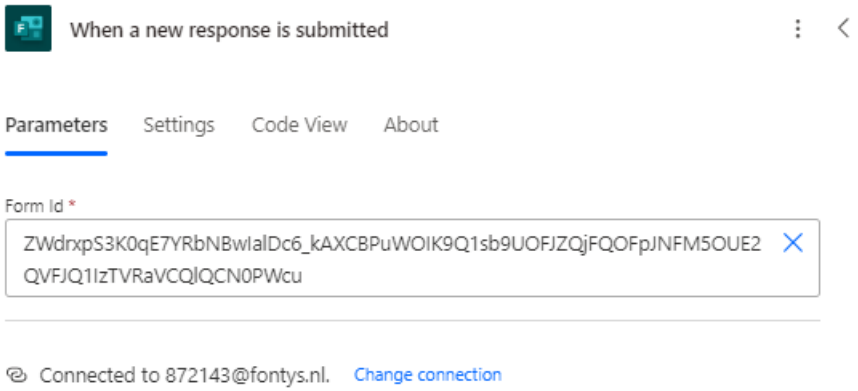
Flow overview and explanation

0. **Flow location**
   This Power Automate Flow can be edited in the Power Automate Suite.
   When the Flow is shared with an individual it will appear in the “Shared with me” section within “My Flows” on make.powerautomate.com.
   Within Flow the “co-owners” can be viewed and edited.

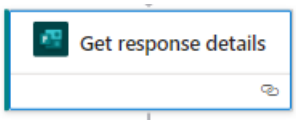


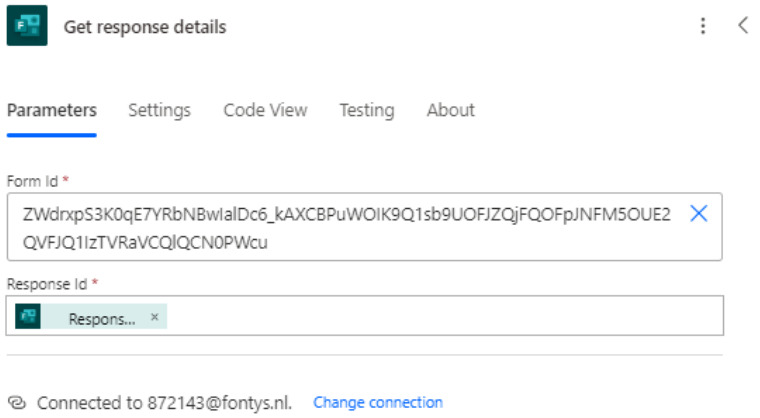
1. **A response is submitted (flow trigger and flow identifier)**
   Every time a Form is submitted Microsoft Forms sends an trigger (automated) to Power Automate.
   The abbreviated card is shown on the right, when selected within the Flow the options will appear (below). Within these options several configurations can be made but the most important is the “Form Id”.
   The Form ID is the unique identifier to the I AM Talent Form.



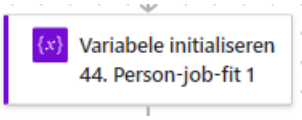


2. **Get response details (all contents of the questionnaire response)**
   In step 1 the flow is identified and triggered by MS Forms.
   In this step all the data from the Form is loaded into Power Automate and made available for the subsequent steps.
   This step also contains the unique identifier within the options section.





3. **Initialize Variable (structure the results)**

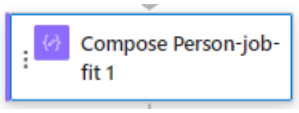


The data from the previous step is unstructured, has no datatype and is not keyed to a particular question. In the “Initialize Variable” operation we address all of the above. First of all we select the question/answer from the “dynamic content” and give it a abbreviated name instead of a key value. In this operation the datatype is set to “string”, this is important for further calculations.

For example:
Dynamic Content Value:
"@{body('Get_response_details')?['r1b4c6a4a305a4ff0842d196a5504e291']}"
Abbreviated Name:
"PJF_1"
Type:
“string”

This operation needs to be replicated for all the questions and answers. The “Person Job Fit” section contains six scored answers which all need to be structured. The same applies for the other sections within the questionnaire.

4. **Compose (calculate the score per question/answer)**

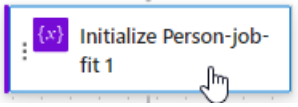


Now that the Power Automate Flow has structured the responses from the questionnaire we can calculate the score per question/answer. The calculation is a “IF” formula and checks what answer was given and translates this to a digit.

For example: the response “Strongly Agree” is translated to the scoring number 5, “Strongly Disagree” is translated to a score of 1. Everything in between is translated to a number as well.

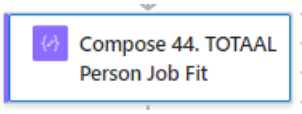
Just like the operation above, the compose operation is being replicated over all the questions/answers.

5. **Initialize Variable (extract and load variables from previous compose action)**



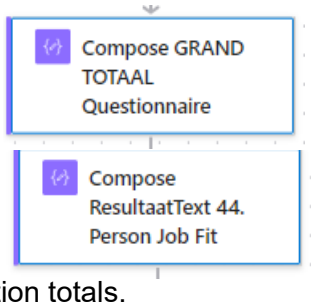
Until now the data was structured and the score was calculated from the string response. The score per question is numerical and can be used in mathematical calculations. Before we can use the scores we need to set a data type. Power Automate won’t be able to do mathematical calculations with a digit in the data type string. In this step we set the datatype to a “integer”.

6. **Compose Total (calculate totals per section)**



The outputs from the previous steps are of a correct datatype and can be added up together to calculate a total per section.
For “Person Job Fit”, “Person Organization Fit”, and so on.

7. **Compose Grand Total**
   All the section totals are being added up to a Grand Total, so we have a grand total score to use as dynamic content.

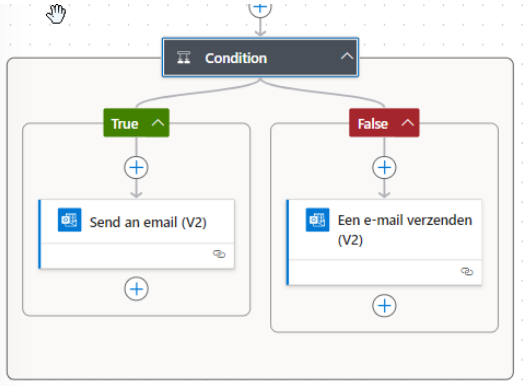


8. **Compose custom text using the total scores**
   Per section there are score ranges and depending on the score the respondent receives an advise based on his or hers score.
   The calculation of which predefined text is to be used is performed in this operation within the flow. This operation is replicated over all the section totals.

   For example:
   The output score from the section total (step 6) is evaluated in which range (per section) it falls. After the range is decided the output of this step is an advice.
   “*You have a high score on the person-job fit: this means that your personality, skills, values and interests seem to align with the requirements and characteristics of your job.”*

9. **Condition (check if email address is provided)**
   Before sending an email to the respondent the flow checks if an email address is provided by the respondent. If the email address is not provided the flow will fail because it is not possible to send an email without a recipient address.

   If the condition returns an “True” result (the email is provided) the flow will continue to the last step which is composing an email and sending it to a respondent.



10. **Send email to respondent with calculated totals and custom text.**
    In step 3, “dynamic content” was briefly mentioned.
    But what is dynamic content?
    An official explanation is:
    Dynamic content in Expression Power Automate refers to the capability of retrieving and manipulating data in real-time during the execution of a workflow. It offers the flexibility to work with variables, arrays, and objects, allowing for more customization in your automation processes.

    Underlined are the words “retrieving” and “manipulating”, these are very important in this case. Until now we have manipulated data which we have retrieved from Microsoft Forms or the data which was an output from previous flow steps.

    Every step in the flow has an input and an output, the output from any of the steps can be retrieved from wherever in the flow, so there is no chronological requirement in using

the output. It doesn't matter if the output was generated in the previous step or in step 1, we can use it wherever we want. This flexibility is very important when composing our email which will be sent to the respondent.

Below is the formatted code/email which is sent to respondents. The email consists of plain text and retrieves dynamic content (yellow). This content is an output of one of the previous steps.

Dear respondent of I AM Talent,
Thank you very much for filling in the questionnaire!
You have helped us to improve the survey, so that we can better track and collect objective and subjective data on the factors that hinder or enable international students' local career, personal and professional development.
As promised, the survey also gives you as an international student or alumnus insight into the career competencies you possess and if your current job suits you as a person.
Here are your results:

Work fit
Person job fit = 6 items (6-30 score range)
Score: @{outputs('Compose_44._TOTAAL_Person_Job_Fit')}
@{outputs('Compose_ResultaatText_44._Person_Job_Fit')}
Person organization fit = 3 items (3-15 score range)
Score: @{outputs('Compose_45._TOTAAL_Person_Organisation_Fit')}
@{outputs('Compose_ResultaatText_45._Person_Organisation_Fit')}

Career competencies
Reflection on motivation = 3 items (3-15 score range)
Score: @{outputs('Compose_46._TOTAAL_Reflection_on_motivation')}
@{outputs('Compose_ResultaatText_46._Reflection_On_Motivation')}
Reflection on qualities = 4 items (4-20 score range)
Score: @{outputs('Compose_47._TOTAAL_Reflection_on_qualities')}
@{outputs('Compose_ResultaatText_47._Reflection_On_Qualities')}
Work exploration = 3 items (3-15 score range)
Score: @{outputs('Compose_48._TOTAAL_Work_Exploration')}
@{outputs('Compose_ResultaatText_48._Work_Exploration')}
Career control = 4 items (4-20 score range)
Score: @{outputs('Compose_49._TOTAAL_Career_Control')}
@{outputs('Compose_ResultaatText_49._Career_Control')}
Self profiling = 3 items (3-15 score range)
Score: @{outputs('Compose_50._TOTAAL_Self_Profiling')}
@{outputs('Compose_ResultaatText_50._Self_Profiling')}
Networking = 4 items (4-20 score range)
Score: @{outputs('Compose_51._TOTAAL_Networking')}
@{outputs('Compose_ResultaatText_51._Networking')}
Intercultural Sensitivity = 4 items (4-20 score range)
Score: @{outputs('Compose_52._TOTAAL_Intercultural_sensitivity')}
@{outputs('Compose_ResultaatText_52._Intercultural_Sensitivity')}

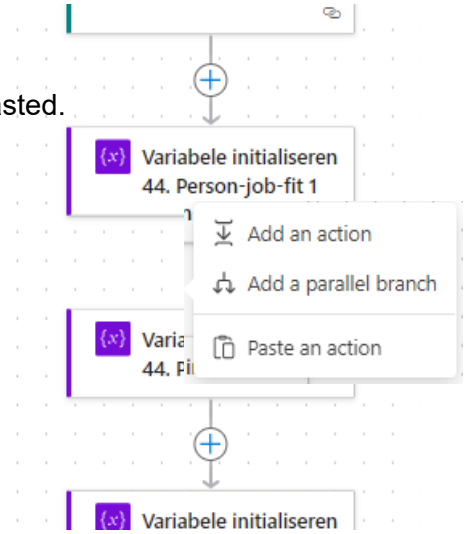
We hope this feedback helps you identify the career competencies you could further develop to better prepare yourself for the local labour market and reflect on your current work fit.

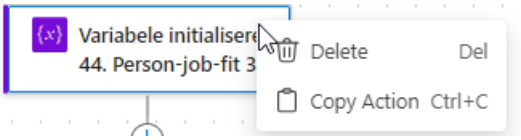
Kind regards,
<Name of HEI>

Adding new questions to the flow

Adding a question/answer or even changing the key of the form is possible, but needs to be executed in certain steps and thoroughly tested in the development phase. Please keep in mind that the I am Talent Employability Survey as it is presented was validated. If you change questions or add questions, this alters the survey and thus, the survey is no longer validated.

In between every operation in the flow there is a plus icon.
Clicking on the icon an operation (action) can be added but even pasted.
Copying an existing operation is very easy and the developer only needs to right click the desired operation and can make a copy.



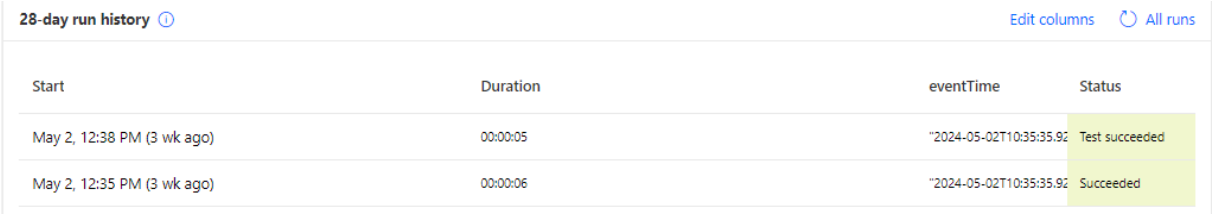


Even without this describing document about the Power Automate Flow a developer can easily “Reverse Engineer” the logic and add new questions or adjust the email response. When every step is followed as described in steps 3 till 10, adding new questions or answers won’t be that challenging.

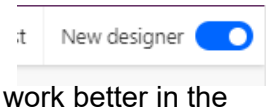
Error Handling

If the flow works, logically there is no error handling. During reconstruction of the flow with additions or deleting certain steps, errors can arise.

Before starting with the errors, there is also a section within Power Automate which informs you about the 28-day run history. This section can be found in the Flow Dashboard. When the “All Runs” link is clicked, a list of flow executions will be shown.



All executions will be shown in the history. Even testing executions.

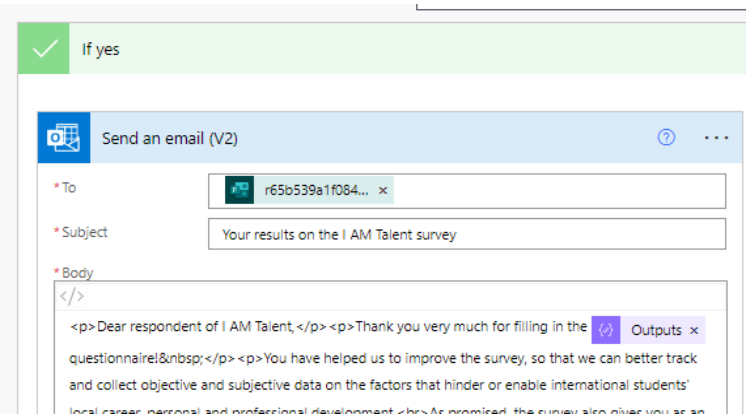


When editing the flow in the upper right corner you can choose between the “New Designer” and the “Old Designer”. This is very awkward in Power Automate, but some editing steps work better in the old and other work better in the new designer. It is up to the Flow Developer to find out when to use which designer. Microsoft still has some quirks to sort out here.

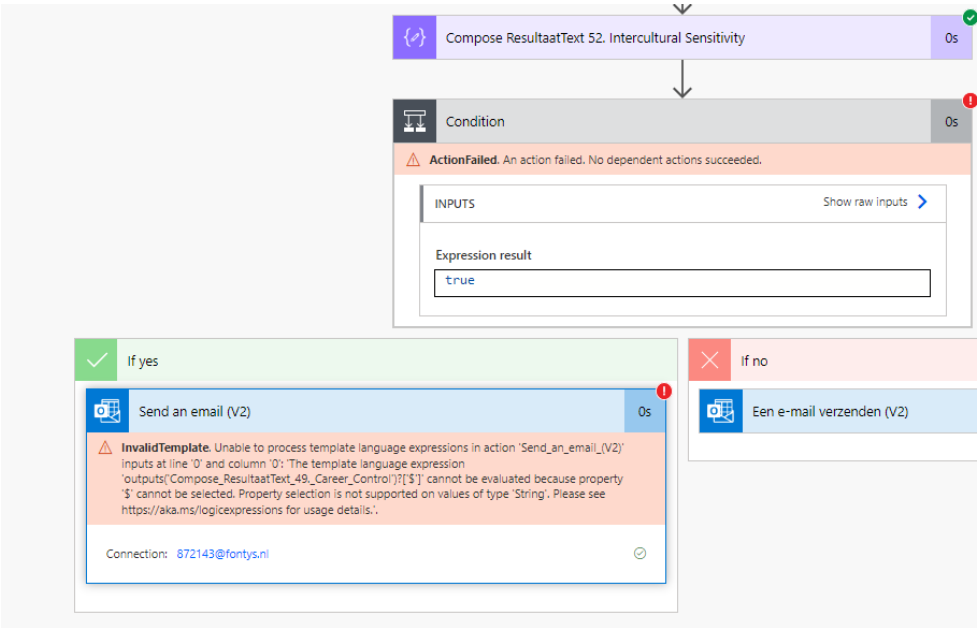
***Example of an error**:*

In the “Old Designer View” within the flow adding “Dynamic Content” to the email (in this case it is the “Outputs” icon within the text).

Everything looks okay and should be ready to test. When a test is run, the test fails and the message from below picture is shown.



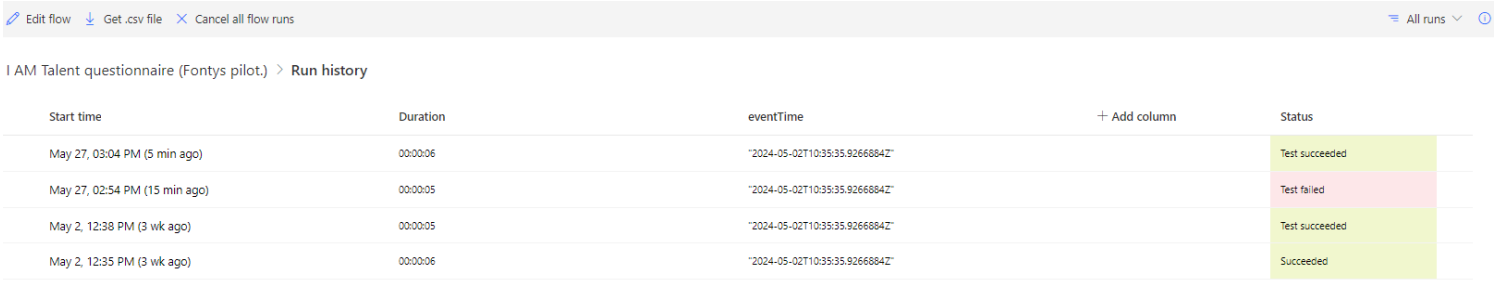
Something about the process template language. This error message is remedied by opening the “New Designer” view and adding the “Dynamic Content” to the email using the New Designer.



This is not an error occurring only in the emailing step. It can occur in any of the steps. When editing an step, closing it and then reopening it you suddenly see that the Dynamic Content Icon is changed to an icon resembling a $-sign. When this $-sign is shown, testing the flow will result in an “template language” error.

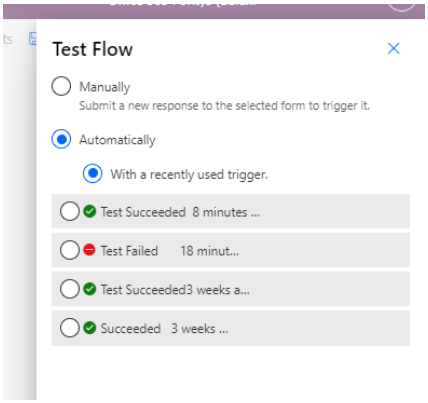
Testing

When working on the I AM Talent flow or any flow, we advise you to test it thoroughly. Please test the flow repeatedly. This will improve the flow and help the iterative process.

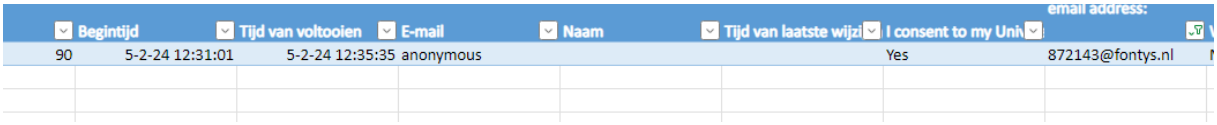


Testing is made very easy in Power Automate. You can do it manually or automatically. The flow trigger is a submitted questionnaire but a developer does not need to repeatedly submit new questionnaires. Using the automatically testing function, an historically submitted questionnaire can be used repeatedly.

The four test executions below where all the same submitted questionnaire with different statuses.



Status succeeded was the initial submission of a questionnaire by the developer. (see below).
Test succeeded (3 weeks…) was a successful test using the previous submission.
Test failed (18 min..) was also using the initial submission content of the questionnaire.
Test succeeded (8 min….) the same as above.



	Begintijd	Tijd van voltooien	E-mail	Naam	Tijd van laatste wijzi	I consent to my Uni	email address:
90	5-2-24 12:31:01	5-2-24 12:35:35	anonymous			Yes	872143@fontys.nl

The test flow also displays that the results of the questionnaire are not affected by running tests. The picture above shows the “Succeeded (3 weeks…)” submission of the questionnaire which was submitted using Microsoft forms. But for running three tests after the initial submission only the stored data in Power Automate was used for testing purposes, no additional lines in the MS Forms data were created.

Appendix 5:

Example of email to international students and alumni

Dear <NAME STUDENT>,

You are studying at <NAME HEI> or you have recently graduated from <NAME HEI>. We are interested in knowing how things are going for you regarding your career.

Do you want to know how you score on the essential career competencies needed to successfully land on the labour market? Do you have a (side) job now, and do you want to know how you score on job fit? Then fill in the I am Talent Employability Survey!

Go to the questionnaire: <HYPERLINK>

About

I AM Talent is a tool designed to give you insight into your career competencies, and into your job and organisation fit, using self-assessment. After the self-assessment, you get personalized feedback to help you increase your employability or better deploy your talents on the labour market!

It takes about 15 minutes to fill in if you have work experience. If you do not yet have any work experience, it takes only about 5 minutes.

By completing the I am Talent Employability Survey, you will help future international students. The data collected via the survey will help <NAME HEI> to improve the study programme regarding the development of the essential career competencies.

Your privacy is of course fully protected in accordance with the General Data Protection Regulation (GDPR).

More information

More information about I AM Talent can be found on <HYPERLINK>.

Questions? Contact <NAME CONTACT PERSON HEI> from <NAME HEI> via <EMAIL ADDRESS>.

On behalf of the teachers and future students of your study programme: thank you for your effort and the best of luck in your future career!

Kind regards,

<NAME CONTACT PERSON HEI>

Appendix 6:

The development of an I AM Talent platform: lessons learned from the pilot at Fontys UAS

Background information
Based in the Netherlands, Fontys UAS - with over 41.500 students and some 5.500 employees in 2024 - is regarded as the biggest University of Applied Science (UAS) in the southern part of the country. Around 6.150 students in the academic year 2024/2025 are international, making up around 15 percent of the total student population at Fontys. The UAS is organized into different (knowledge) domains, which are in turn divided into business units or institutions. Each business unit contains multiple study programs.

Fontys had the whish to make the I am Talent Survey Tool part of a broader learning platform for international students, which could also offer insight in the development process as well as information the career counselling and extra activities could also be offered. Based on design thinking techniques Fontys UAS developed a first prototype during the INTERLOCALITY project. This implies an iterative approach, in which involvement and feedback of end users (i.e. international students and their lecturers) is key. Below the steps taken as well as the evaluation based on the feedback are presented.

Phase I: Developing the first ideas on the I AM Talent tool as a platform

Activities
Based on an extensive literature study, as well as qualitative research amongst international students, local employers, staff from higher educational institutions and third parties, we developed a framework for the I AM Talent tool (see appendix 1). It covers the different phases of employability and summarizes the key focus points within the international student's journey towards employability.

Based on the feedback given to us by the international students during the interviews of the qualitative study we established a first set of design criteria for the I AM Talent tool:

- Needs to be simple to use.
- Should not consume a lot of time.
- Should show results / outcomes to increase motivation.
- Should include an (alumni) network with information about professions, wages and job opportunities.
- Should have a personal / tailor-made aspect to it.

After establishing the framework together with the design criteria, we worked towards a first idea of the I AM Talent tool as a platform. The design criteria, as well as having to meet some level of usability, made us believe that an online, interactive tool could be the right fit. Particularly the suggestion of students to develop a tool that can provide them with instant

feedback and suggestions for improvement, made us believe that an online (learning and development) environment was essential. Although Fontys has a learning management system for students, we decided to develop a first prototype of the I AM Talent platform in another platform: Genially, an interactive e-learning and content creation platform. Genially offered us more room for experimentation and creativity during the testing with potential end users.

One of the first steps in the development of the IAMT platform was the visualisation of the employability process model, which lies at the basis of the I AM Talent tool: e.g. should we use a more linear approach, or should we consider employability as an ongoing process, thus having a more circular approach? Eventually we decided to visualize the model as a continuous circle.

Evaluation

We wanted to have continuous feedback from the end-users (i.e. international students) on the further development of the tool. For example, having feedback on the look-and-feel of the platform. Do the students find it understandable / logical? We therefore organized multiple 'review sessions' together with international students from a variety of different Fontys study programs. We approached them via a postulate a call on the intranet of the particular study programs and organized short MS teams meetings of 15-30 minutes in which we showed the first prototype and asked them directly for feedback. Table 11 shows all the feedback that we received from the different review sessions with international students on the first prototype of I AM Talent platform via Genially.

Table 11: Feedback based on first impressions of the prototype of I AM Talent

Topic	Feedback
Look-and-feel	Tool gives overwhelming feeling
Used questions	Answer possibilities are somewhat limited (e.g. 'true' or 'false') Insert another answer possibility like 'n/a'
Employability in general	Content is already familiar. More emphasis could be placed on the personal level / how to / tips tricks / practical information Personal Professional Development (PPD) classes are not very structured. Perhaps I AM Talent could be used to give structure to PPD in general
Content	The tool could be even better by integrating organisations within the tool (i.e. for finding suitable internships) Tips and tricks are somewhat general in nature. There is a need for more personalised information that is in line with the study program The tool could even be better by placing the external organisations more prominently within the tool and to align one's own qualities and expectations with corresponding organisations (personalized organisation-fit) Students experience the topic of person-job fit as something that is in practice more difficult to establish than what is being said on paper.
Usability	Tool is more attractive to students who are less aware of their own employability. For students who already have a clear idea on their employability the tool does not provide significant added value. The tool could be very helpful for self-reflection within the PPD courses

Phase 2: The start of the active involvement of two study programs

Activities

In phase 1 end users from all different Fontys schools were involved. To further test the prototype of the I AM Talent platform we decided to focus on two Fontys schools, and we asked two study programs within the domain of Engineering and Business Administration to further develop the first prototype with us. The programs both feel the urgent need for skilled professionals and international students represent a significant portion of the total amount of enlisted students in these study programs.

In this phase, multiple sessions were organized with a variety of stakeholders within the two schools. We spoke with policy makers, international coordinators, educational managers, student coaches and teachers. The main aim of these meetings was to share more background information on the INTERLOCALITY project, the I AM Talent framework and the first idea of the I AM Talent platform on Genially with the participants.

Based on the first design criteria, we wanted to develop a platform that could both provide person-level results to the student as well as providing suggestions for follow-up actions to strengthen their employability. The latter implies connecting the platform to existing support for international students within a school, such as activities by a student career centre, and the activities conducted by lecturers as part of the curriculum.

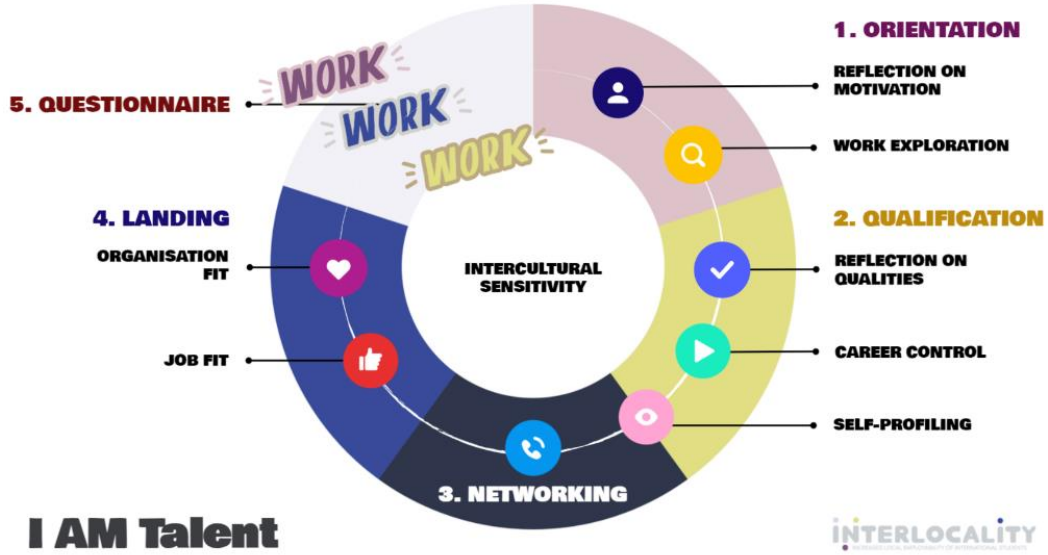


Figure 2: First impression of interactive platform

Evaluation

Overall, there was an agreement on the framework and its relevance for international students. However, we discovered that there were many different opinions and perspectives on the theme of 'intercultural sensitivity'. Using, for example the term 'awareness' instead of 'sensitivity' slightly alters the way in which the theme is approached. So, the terminology used within I AM Talent should be considered and used with great care. The feedback also raised our awareness of our own cultural background as developers, and its impact on the verbal and visual design of the tool. More diversity in the group developing and implementing the tool will strengthen the I AM Talent platform and its effective usage.

The interaction with different stakeholders pointed at the differences within the group of international students. For example, first-year students are more preoccupied with the first phase of the framework (orientation), rather than thinking about the relevance of networking and/or landing in the work field (resp. third and fourth phase of the framework). Also, a difference between genders and their approach to employability was raised during the meetings. The target group of the I AM Talent platform is more heterogenic than homogenic, and that supporting students in using the I AM Talent platform needs to consider these differences.

To achieve more impact, stakeholders pointed at the importance of the Personal Professional Development (PPD) coaches, and the need to train them in using the I AM Talent platform within their PPD classes. Study programs might have different approaches on how to guide (international) students towards employability. How one views their role as a coach in the student's journey towards employability might therefore play a pivotal role in the further establishment of the I AM Talent framework within existing curricula.

The linking of the I AM Talent platform to activities and tools provided by the school confronted us with two difficulties. First, the experienced 'competition' with the existing activities regarding internationalisation in the curriculum. Developing and using a platform could cost extra time and effort, for both students and staff. The question raised whether the use of the platform should be mandatory being part of the curriculum or optional. For the higher education institutes developing such an interactive platform we recommend starting that discussion in an early phase. Another practical challenge we faced was a so called 'over-tooling problem'. Fontys UAS offers a broad variety of tools to improve the wellbeing of students. Stakeholders in the schools did not want to over-tool their study programs and students. Therefore, we invested in getting to know other processes and tools within Fontys and started to invest in cooperating with the different departments across the organisation. Thus, integrating I AM Talent within existing tooling (like 'My Student Journey' at Fontys), rather than implement I AM Talent solely as a standalone tool. Integrating I AM Talent within existing tooling is the best option, but it is also the longest route to take. This is therefore a process that is still going on.

Phase 3: Personalising I AM Talent

Activities

Our next step was to take I AM Talent to another level in that sense that we wanted the platform to have personalized content. More specifically content that already was being used within Personal and Professional Development courses (PPD) of the particular study program. This is also in line with one of the design criteria we described beforehand. So, in another session with PPD coaches and teachers, we discussed the content that could be used within the I AM Talent tool. The content we collected ranged from YouTube videos on how to do a job-interview to a variety of online tools on how to behave professionally. All these tools and webpages were then linked to the corresponding phases of I AM Talent. For Engineering in particular, having the tool 'Meet and Match' – i.e. a platform where employers can present themselves and share vacancies for internships with students - integrated into the I AM Talent tool proved to be very helpful for the international students. Before, this tool was more or less used on its own, and by integrating it into the I AM Talent tool, 'Meet & Match' is placed into this greater context of becoming more employable. This is just one example of how the I AM Talent tool can support study programs by clustering all the different tools and webpages into one - for the international student - comprehensible structure.

Evaluation

We organised different review sessions with international students from Engineering to receive feedback from them on the second, more personalized version of I AM Talent. Table 12 lists the remarks that were made by the students.

Table 12: Feedback based on first impressions of the personalised prototype of I AM Talent

Topic	Feedback
Look-and-feel	The advice that is given after answering a question is gone after clicking the 'close window' button. The advice is not being saved. Text could be shortened and more to the point. Navigation is not always easy. It is hard to find a way back. Perhaps some information could be presented on a different tab/screen.
Content	Tool is more applicable for students who are somewhat clueless regarding their employability. Having a more 'advanced' route should be more helpful for students who have a clear idea on their own employability Answer possibilities are now to rigid. There should be more answer possibilities with corresponding advice/tips/feedback
Employability	Some international students do not have a side-job. So, it would be helpful if there was a possibility to skip any questions that are related to having a side-job. It would be very helpful to have PPD classes linked to I AM Talent so that one's self-evaluation can be discussed within the class.

Phase 4: Future steps for I AM Talent as a platform

As for now, the first personalized prototype of the I AM Talent platform on Genially is developed. Now the tool needs to be further integrated into the curriculum, and coaches and teachers need to be aware and capable of using I AM Talent within their PPD courses. We are now in the process of collaborating with different departments across Fontys to look for ways to integrate I AM Talent within existing tooling. Also, we are talking to policy makers and curricula developers to find opportunities to integrate I AM Talent into a specific study program as well.

Conclusions: Ten Lessons learned from the pilot at Fontys UAS

1. **Early Engagement with End-Users**
   International students should be involved from the outset, not only to define criteria but also to provide continuous feedback. Subtle nuances in design and usability emerge through ongoing user interactions.
2. **Diversity in Development Teams**
   Including diverse perspectives in development ensures that cultural and visual elements resonate across a broader audience, enhancing the tool's inclusivity and effectiveness.
3. **Iterative Design is Key**
   The platform's success depends on iterative development cycles, which leverage user feedback to refine its design and functionalities continuously. This approach ensures relevance and usability.

4. **Avoiding Over-Tooling**
   Introducing new tools risks redundancy and complexity. Integrating I AM Talent within existing institutional systems ensures streamlined and efficient usage without overwhelming users.
5. **Comprehensive Integration of Tools**
   The I AM Talent platform excels by consolidating disparate tools and resources into one structured environment, aiding study programs in providing cohesive support for employability.
6. **Linking with Curricula**
   Successful adoption relies on embedding the platform within existing curriculum structures, such as Personal and Professional Development (PPD) courses, to create seamless educational experiences.
7. **Employer Engagement**
   Connecting employers to the platform enhances its value by addressing international students' networking and internship needs. Employer involvement fosters real-world opportunities and aligns academic efforts with market expectations.
8. **Terminology Sensitivity**
   Language used within the platform significantly impacts user perception. For instance, choosing terms like "awareness" over "sensitivity" can shift attitudes and improve engagement.
9. **Differentiated Needs of Students**
   The platform must accommodate varying levels of employability awareness among students. Those with a clearer understanding may find limited added value, highlighting the need for adaptive features. Background Information, page 4
10. **Crucial Role of Educators**
    Teachers and student coaches must be trained to use the platform effectively, as their guidance is essential in encouraging students to engage with the tool.