ABMLS Pilot Report 2018-2019

Methodology and preliminary findings

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Contents

Contents	2
1. Introduction	3
2. Methodology: validity and reliability of measures in the ABMLS.....	5
3. Data: students in the ABM Course and ABMLS respondents	19
4. The Broader Mind of Students at Vrije Universiteit Amsterdam.....	33
5. Working Paper: <i>Too busy to volunteer? Time use and civic participation among university students</i>	41
6. Master Thesis: <i>Contact and trust: A qualitative study among ABM participants.</i>	49
7. Appendix: Questionnaire	53

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1. Introduction

This report documents the development of the A Broader Mind Longitudinal Survey at the Vrije Universiteit Amsterdam. The Vrije Universiteit (VU) Amsterdam is a university in the capital of the Netherlands providing education to about 24,500 students in higher education. During their time at the VU, students not only gain knowledge and skills. VU Amsterdam greatly values providing students with opportunities to develop personally, and think about their responsibility in society. Reflecting these values, the university formulated the ambition in its strategic plan (VU, 2014) to engage students in society through community service and other activities.

A key program at VU Amsterdam that allows students to reflect on societal issues is A Broader Mind (ABM). This is an innovative educational program launched in the academic year 2018-2019, consisting of three components. The first component is a blended learning course open to bachelor students from all programs and mixing them in small groups. In its inaugural year, the A Broader Mind course was offered as an extracurricular course designed to stimulate personal development, moral sensibility and civic engagement. In February 2019 a pilot of the A Broader Mind course started among first-year Bachelor students at VU Amsterdam.

The second component of A Broader Mind is a set of courses that include Community Service Learning activities. While some programs have offered Community Service Learning courses, typically in the second or third year of Bachelor programs, opportunities for students to take such courses have been expanded greatly in the academic year 2018-2019.

The third component of A Broader Mind is the A Broader Mind Longitudinal Survey (ABMLS). The survey is designed to track the personal, academic, civic, and professional development of students as they progress through their study program. We survey students at VU Amsterdam at least every year to measure the attitudes, values, skills and behaviors reflecting “A Broader Mind” among students at VU Amsterdam. The survey provides a barometer of student life: how are students doing with respect to civic-mindedness, student engagement, professional orientation?

In due course, the data collected will enable an assessment of how students develop socially, academically, professionally and personally during their time at VU Amsterdam. To what extent do students get a broader mind during their studies at university? How do changes in the curriculum and the choices that students make affect their development?

In this report we present three products related to the pilot of the A Broader Mind Longitudinal Survey project: the questionnaire, the results of analyses of pilot data, and a master thesis on the A Broader Mind project.

Chapter two contains the methodology of the ABMLS. We summarize the process of designing the survey, present the composition and reliability of measurement instruments and explain how we sampled the first-year students at VU Amsterdam.

The next chapter examines self-selection into the A Broader Mind Course and the ABMLS. Participation in the A Broader Mind Course and the ABMLS is on voluntary basis, and the sample is likely to be not representative for the broader population of VU students.

Although the sample size is small, we present descriptive results of the ABMLS 2019 pilot based on the sample of first-year students at VU Amsterdam in chapter four. This chapter gives an indication of the research possibilities with ABMLS data.

In chapter five we present a working paper on time use and civic participation among students. How are time use and time pressure related to civic participation among students? To answer this research question we analyzed ABMLS data from the VU sample and data from a sample recruited through the online platform Prolific.

Naresh Mathoera, sociology student at VU Amsterdam, contributed to the A Broader Mind project with his master thesis on the role of contact, diversity and generalized trust among students participating in the A Broader Mind course. Chapter six contains a summary of his master thesis project.

2. Methodology: validity and reliability of measures in the ABMLS

This chapter describes the methodology of the ABMLS. First, we describe how we developed the survey, what the rationale was for the inclusion of measures in the questionnaire and how we pre-tested the survey. Second, we discuss the most important measurement instruments in the questionnaire. Finally, we describe the sampling method in the second semester of the academic year 2018-2019.

In September 2018 a team led by Prof. René Bekkers started working on the development of a longitudinal survey to measure the Broader Mind among VU students and alumni, called the A Broader Mind Longitudinal Survey (ABMLS). We started with identifying the key concepts of the 'A Broader Mind' in four clusters of outcomes: a) civic-mindedness; b) student engagement; c) professional orientation; d) personality characteristics. Table 1 shows the final ABMLS instruments per outcome cluster.

Based on an extensive literature search in the fields of service learning, civic education and development among young adults we collected a longlist of constructs per outcome cluster. We then formulated criteria on which we based a further selection of constructs. As a first criterion, the construct should be subject to change among adolescents. Second, the construct fits as much as possible in the content of the Broader Mind course and Community Service Learning activities. Finally, constructs should be relevant in the long-term, even if the content of A Broader Mind curriculum changes in the future. To measure these constructs we selected survey instruments that proved to be valid and reliable and consumed as little time to administer as necessary in order to prevent the questionnaire from becoming too extensive. We attempted to construct scales consisting of a maximum of 5 items, because of the strongly decreasing marginal utility of additional items (Cortina, 1993).

We programmed an extended version of the [survey](#) (25 minutes) in Qualtrics. We pretested this extended version of the survey on Prolific. Prolific is an online platform where researchers can recruit participants in a quick and reliable way in exchange for financial compensation. Through Prolific we collected data on a sample of 201 students from several European countries. With these data we were able to test and compare different measurements instruments. We conducted factor and reliability analyses and analyzed the correlations between measures. The majority of the scales included in the pretest pilot questionnaire behaved as predicted and demonstrated good to excellent reliability. In addition, we included 11 survey experiments in this survey in which we manipulated the order and formulation of questions and items. Table 2 summarizes the results of these survey experiments. Based on these statistical analyses we were able to decide whether to keep or remove measurement instruments and items.

We tested the revised version of the survey in focus groups with first year students from the participant pool of Communication Sciences at VU Amsterdam. Two plenary sessions gave us useful insights on top of the quantitative analyses in Prolific. It became clear that for first-year students some of the scales were too complex or too long, some items needed rephrasing and some questions were generally misunderstood. Based on these sessions we decided to exclude several instruments and rephrased items that were too complex or included words the students were not familiar with. Table 1 shows the final ABMLS instruments we used to survey first-year students at VU Amsterdam in February 2019.

Table 1: ABMLS instruments per outcome cluster

Background	Housing Mother's/father's educational level Sense of place Religious affiliation Religious participation Future
Civic-mindedness	Civic efficacy Civic behavior Life goals Social trust Diversity scale Issues in society Social distance
Student engagement	Sense of university belonging Interest in study activities Time use Academic and social interaction
Professional orientation	Type of organization Entrepreneur intentions Work abroad Future job Job preferences Labor Market preparation Service motivation Responsible employer
Personality characteristics	Life satisfaction Subjective physical health Subjective mental health Perceived pressure Big five personality domains Meaning in life Sense of place General self-efficacy Dispositional greed Empathic concern

In the next section we briefly explain the scale composition and reliability of the scales we use in the ABMLS. In addition, we list the measurement instruments we based on existing literature.

Table 2. Survey experiments tested with Prolific sample

Instrument	Question	Experiment	Result
Sense of place <i>asks respondents to what extent they feel themselves as belonging to different places or groups: my college, my neighborhood, the town I live in, my country, etc.</i>	How does including the items ‘the student population’ and ‘my religion’ (two social groups students belong to) affect answers on the other items? We may expect different mean scores on the ‘my college’ item if ‘the student population’ is included, because respondents disentangle their feelings towards the institute from their peers. In addition, these non-geographic references may influence the option that respondents may add in ‘Other identity I belong to, namely’.	A split-ballot design with four conditions that vary on including or excluding ‘The student population’ and ‘My religion (if applicable)’ or both in the list of places.	There was no clear effect of including the two items on the responses to the other items. There was no significant difference between the means on the item ‘my college’ for the conditions with and without ‘the student population’. Including ‘The student population’ and ‘my religion’ or both did not resulted in more responses on ‘Other identity I belong to, namely’. We decided not to include ‘the student population’ and ‘My religion’ so this questions refers only to geographic belonging.
Big Five Personality Domains <i>5 or 10 items</i>	Brief versions of the Big Five Personality Domains include a 10-item and a 15-item instrument. Do both versions measure the five personality domains in a reliable way?	A split-ballot design with two conditions, either a 10-item or 15-item version of the Big Five Personality Domains.	We conducted a Principal Component Analysis with Varimax Rotation, forced to 5 factors. The 15-item version proved to be the best solution with factor loadings of at least 0.63 with no cross loadings. In the 10-item version only one item had a high factor loading (0.87) on the domain ‘Agreeableness’. We use the 15-item version in the ABMLS.
Big Five Personality Domains <i>Agreeableness: quarrelsome or confrontational</i>	Does replacing ‘quarrelsome’ with ‘confrontational’ improve the instrument? With a majority non-native English speakers in the final sample at VU university, we are concerned that respondents do not understand the word ‘quarrelsome’. We think that ‘confrontational’ would be a reasonable alternative.	A split-ballot design with two conditions within the 10-item version of the Big Five Personality Domains, either using the word ‘quarrelsome’ or ‘confrontational’.	Using ‘Confrontational’ does not improve the instrument. We conducted a Principal Component Analysis with Varimax Rotation, forced to 5 factors. Using the word ‘confrontational’ did not result in a solution with five factors. Using the word ‘quarrelsome’ did result in a five factor solution but with only one high loading on ‘Agreeableness’. We decided to use quarrelsome in the 15-item version in the ABLMS.

Sense of university belonging <i>two 1- item questions</i>	<p>Surveys include single-item measures of university belonging, with different wordings. What is the validity of both single-item measures?</p>	<p>Split-ballot design with two conditions, either item 1: 'I feel proud of belonging to <name college>' or item 2: 'I see myself as a part of the <name college> community'. We examined Pearson correlation coefficients with other student engagement instruments.</p>	<p>Item 1 correlated with teacher interaction and the Psychological Sense of School Membership Scale while item 2 correlated stronger to peer interaction. Peer interaction is covered with the Academic and Social Interaction Scale. To cover all aspects of student engagement, including teacher interaction, we use item 1 in the ABMLS.</p>
Psychological Sense of School Membership vs. Academic and Social Interaction <i>Psychological Sense of School Membership (Goodenow, 1993; Ye & Wallace, 2014) .</i>	<p>What is the factor structure and reliability of the two instruments? We rephrased items of the Psychological Sense of School Membership to make them fit for universities and to have two negatively framed items per subscale. Subscales are 'Connection to teachers', 'Fitting in among peers' and 'Identification and participation'. The Academic and Social Interaction scale has four subscales: formal/informal peer interaction, and formal/informal teacher interaction.</p>	<p>Split-ballot design with two conditions, respondents either receive the Psychological Sense of University Membership scale or the Academic and Social Interaction scale.</p>	<p>The factor structure of both instruments did not correspond to the original subscales. Principal Component Analysis with Varimax Rotation for The Psychological Sense of School Membership resulted in two factors; no belonging vs. belonging. For Academic and Social Interaction PCA with Varimax rotation resulted in a six factor solution. PCA with Varimax rotation forced to four factors resulted in three stable factors (loadings above 0.57): 'contact with peers', 'informal contact with teachers' and 'formal contact with teacher's'. We use these three subscales from the Academic and Social Interaction scale with four items per subscale in the ABMLS. All subscales had a reliability coefficient of $\alpha = 0.77$ or higher.</p>
Dispositional Greed Scale <i>Range (1 Strongly disagree-5 Strongly agree)</i>	<p>Does the order of the items of the DGS impact the answers? The first three items of the scale are phrased in a way that it is clear that it measures how greedy you are, facing the risk of social desirability bias. The latter four items are phrased in a more subtle way. We would expect that if respondents first answer the original first three</p>	<p>A split ballot design with 3 conditions: 33,3% receives a random order of items, 33,3% receives the original order of items, and 33,3% receives a manipulated order. In the manipulated order the original first three items, ('1. I always want more',</p>	<p>Contrary to our expectation, the mean of the original scale was higher (3) than the adjusted scale (2.7) which would indicate less social desirability bias in the original scale. A t-test revealed that the difference in means between the original scale and the adjusted scale is significant $t(132)=2,15$, $p=0,03$. Reliability analysis showed that a random order of items has a</p>

	items, this will increase social desirability bias resulting in a lower scale mean.	'2. Actually, I'm kind of greedy', '3. One can never have too much money'), are the latter three items.	better reliability ($\alpha = 0.8$) than the original order of items ($\alpha = 0.77$). We use a random order of items in the ABMLS.
Attitudes towards diversity <i>Pluralistic Orientation Scale consists of 5 items. The self-constructed scale (Diversity Scale) consists of 7 items. The range for both scales is (1 Strongly disagree -5 Strongly agree).</i>	What is the validity and reliability of the POS and the self-constructed scale? In the POS respondents rate their own strength in openness towards others. We expect respondents to rate their own strengths in a social desirable way, which leads to high scores on all items. We constructed a scale with items on attitudes and skills related to diversity, phrased in way social desirability is less evident.	A split ballot design with 2 groups: 50% of the respondents receive the Pluralistic Orientation Scale (POS) (Engberg & Hurtado, 2011) and 50% of the respondents receive a self-constructed scale (Diversity Scale) on diversity attitudes.	Reliability analysis showed better reliability for the self-constructed Diversity Scale ($\alpha = 0.7$) compared to the POS ($\alpha = 0.6$). The average of the Diversity Scale was lower (3.8) compared to the POS (4.1). The correlation coefficient with empathic concern is 0.2 for POS and 0.3 for the Diversity Scale. PCA with Varimax Rotation did not result in an appropriate two-factor solution (skills vs. attitudes) for the Diversity Scale. Because the Diversity Scale has a better reliability and a lower mean we use this scale in the ABMLS.
Perceived problems A <i>Open question</i>	In this question we ask respondents to name the five most important issues facing either 1) 'your country', (2) 'society', (3) 'the world'. How do the three different conditions affect the answers? We expect that the answers will vary per condition as they trigger different associations.	A split ballot design with 3 conditions: we ask respondents to name the five most important issues facing either (1) 'your country', or (2) 'society', or (3) 'the world'.	Condition 1 ('your country') yielded significantly more answers around government and politics, migration and integration, traffic and housing, and the welfare state. Condition 2 ('society') prompted significantly more answers on discrimination and minority rights, and crime and security. Condition 3 ('the world') yielded significantly more answers on international issues, climate change and the environment, and poverty and famine. We use 'society' in the ABMLS because it is not restricted to a geographic area.
Perceived Problems B <i>Open question</i>	How does the order of the questions in the survey affect the answers on the Perceived Problems question? We expect that if the questions from the civic-mindedness block precede the Perceived Problems question, this will affect the answers.	Question order experiment: 50% of the respondents receive this question after six other questions on civic attitudes and 50% of the respondents	There are no differences in the type of issues respondents name depending on the placement of the Perceived Problems question.

	Thinking about topics like life goals, diversity and civic efficacy may bring about certain associations which in turn provoke certain issues at the 'Perceived problems' question.	receive this question before the six other questions on civic attitudes.	
Future A <i>Open question</i>	How does the use of certain words in the open question affect the answers of respondents? We manipulate the timeframe of the question because we expect the answers to have a different character depending on if you imagine you are halfway in your career or retired. In addition, we expect that the words 'proud' and 'satisfied' trigger different associations and therefore lead to different answers.	Split ballot design with 4 conditions. '<(A.1)> If you think about yourself and your career <(A.2)>, when would you be ?' 25% receives A1: Imagine you are retired B: proud 25% receives A2: in 20 years B: proud 25% receives A1: Imagine you are retired B: satisfied 25% receives A2. in 20 years B:Satisfied	The formulation of the open question did affect the answers. Latent Dirichlet Allocation (LDA) analysed and distinguished three topics in the open answers, reflecting the importance of (1) a steady job, (2) sufficient time for family, and (3) a contribution to society. ANOVA tests revealed that topic 1 was significantly less often mentioned in the retired condition ($F(1)=6.628$, $p=0.011$), while topic 3 was more often mentioned in this condition ($F(1)=12.480$, $p=0.001$). Using the word 'proud' vs. 'satisfied' did not yield significantly different answers. Because we are mainly interested in what people value in life in general and not necessarily in their career, we decided to use 'retired' in the formulation in the ABMLS.
Future B <i>Open question</i>	How does the order of the questions in the survey affect the answers on the Future question? We expect that answering questions on work expectation, career motivation, job preferences and career competences will influence respondents to give career-related answers to the Future question.	Question order experiment: we randomly place the Future question as either the first question on the professional orientation block or the last question on the professional orientation block.	Topic 2 (time for family) was less often mentioned when the open question was placed after the other professional questions, which is marginally significant in an ANOVA test ($F(1)=2.950$, $p=0.087$). Ultimately we decided to make this question the final question of the survey. Because we also changed the order of the survey blocks, the Future question is now placed after the background questions.

Scales: composition, reliability and references

Table 3: ABMLS scales and reliability

Scale	Scale reliability	Scale reliability in the ABMLS
Big five Personality Domains Hahn et al. (2012)	15 items (n=598) Neuroticism $\alpha = 0.66$ Extraversion $\alpha = 0.76$ Openness $\alpha = 0.58$ Agreeableness $\alpha = 0.44$ Conscientiousness $\alpha = 0.60$	15 items (n=100) Neuroticism $\alpha = 0.81$ Extraversion $\alpha = 0.85$ Openness $\alpha = 0.65$ Agreeableness $\alpha = 0.57$ Conscientiousness $\alpha = 0.56$
General Self-Efficacy Scale Jerusalem & Schwarzer (1979); Romppel et al. (2013)	10 items (n=19719) $\alpha = 0.85$	5 items (n=911) $\alpha = 0.76$
Dispositional Greed Scale Seuntjes et al. (2015)	7 items (n=78-215) $\alpha = 0.86$ to $\alpha = 0.90$	5 items (n=67) $\alpha = 0.78$
Empathic Concern Ingoglia et al. (2016)	4 items (n=1104) $\alpha = 0.69$	4 items (n=201) $\alpha = 0.84$
Academic and Social Interaction Meeuwisse et al. (2010)	28 items (n=523) Formal peer interaction $\alpha = 0.79$ Informal peer interaction $\alpha = 0.87$ Informal teacher interaction $\alpha = 0.80$ Formal teacher interaction $\alpha = 0.72$	12 items (n=95) Peer interaction $\alpha = 0.83$ Informal teacher interaction $\alpha = 0.81$ Formal teacher interaction $\alpha = 0.77$
Civic efficacy Scale Weber et al. (2004)	5 items (n=426) $\alpha = 0.80$	5 items (n=201) $\alpha = 0.75$
Service Motivation Scale based on: Public Service Motivation (PSM), Civic Minded Graduate (CMG), Civic Minded Professional (CMP); Bringle et al. (2004) Steinberg et al (2011); Hatcher (2008)	PSM 24 items (n=375) $\alpha = 0.90$ CMG 30 items (n=606) $\alpha = 0.96$ CMP 32 items (n=373) $\alpha = 0.95$	5 items (n=201) $\alpha = 0.76$
Diversity Scale based on: Pluralistic Orientation Scale (POS), Diversity Perspectives Questionnaire (DPQ); Engberg & Hurtado (2011); Podsiadlowski et al. (2013)	POS 5 items DPQ 27 items	7 items (n=100) $\alpha = 0.71$

Table 3 summarizes the scales we use in the ABMLS. In the second column we present the reliability coefficient (Cronbach's alpha) of the scale presented in the seminal paper. In the third column we present the results of the reliability analyses we conducted with data from the Prolific sample. Because we did not include the General Self-Efficacy Scale in the Prolific survey, we used sample data made available online to test reliability of the GSE (Jerusalem & Schwarzer, 1981). We present Cronbach's alphas for the scales we included in the final version of the ABMLS.

Big Five - 15 items

The Big Five framework has become the most extensively used model of personality (Gosling et al., 2003). In this questionnaire we use the 15-item version, originally developed for the German Socio-Economic Panel Study (Hahn et al., 2012). In this scale, every personality trait is measured with three items. We tested the 15-item instrument in the Prolific sample, and obtained sufficiently high reliability coefficients.

General Self-Efficacy scale – 5 items

The General Self-efficacy Scale consists of ten items and is originally developed by Jerusalem and Schwarzer in 1979. Romppel et al. (2013) shortened the scale to six items testing the scale with several samples (alphas ranging from 0.79 to 0.88). We conducted reliability analysis on sample data of the Netherlands, made available online by Ralf Schwarzer (Jerusalem & Schwarzer, 1981) (*data retrieved from <http://userpage.fu-berlin.de/health/selfscal.htm>*). To reduce the 6-item scale of Romppel et al. (2013) to a five-item scale we eliminated the item with the lowest item-scale correlation ('If someone opposes me, I can find means and ways to get what I want'). The 5-item scale obtained a reliability coefficient of $\alpha = 0.76$.

Dispositional Greed Scale - 5 items

Seuntjes et al. (2015) formulated a two-dimensional definition of greed: the tendency to always want more and never being satisfied with what one currently has. In addition, they developed a 7-item scale that captures individual differences in greed. We analyzed data from the Prolific sample. To reduce the scale we eliminated the two items with the lowest item-scale correlations ('It doesn't matter how much I have, I'm never completely satisfied' and 'One can never have too much money'). The 5-item scale obtained a reliability coefficient of $\alpha = 0.78$.

Empathic concern- 4 items

The Interpersonal Reactivity Index is originally developed by Davis in 1994 and the subscale 'empathic concern' measures empathy with 7 items (Wilhelm & Bekkers, 2010). We use the shortened 4-item version developed and tested by Ingoglia et al. (2016) ($\alpha = 0.69$). We tested this 4-item scale with the Prolific sample ($\alpha = 0.84$).

Academic and Social Interaction-12 items

The Academic and Social Interaction scale is developed by Meeuwisse et al. (2010). The scale consists of 28 items on four subscales measuring formal and informal interactions with teachers and peers. Some items are negatively framed. A factor analysis on the 28 items in the Prolific sample resulted in three clear factors, measuring general interaction with students, formal interaction with teachers and informal interaction with teachers. We selected four items per subscale based on the items with the highest factor loadings (ranging from 0.57 to 0.86) and including a negatively worded item in every subscale. The four subscales are contact with students ($\alpha = 0.83$), informal contact with teachers ($\alpha = 0.81$), formal contact with teachers ($\alpha = 0.77$).

Life Goals – 8 items

To measure life goals, we formulated items for two dimensions: materialistic life goals and postmaterialistic life goals. We use one item from the Monitoring the Future project and two items from the American Freshman project (Twenge, Campbell and Freeman, 2012). The other items are based on this study and on the Material Value Scale (Richins, 2004) but slightly rephrased. In the ABMLS respondents are asked to rank two sets of four life goals in order of importance.

Meaning in Life - 2 items

Steger et al. (2006) developed a 10-item instrument to measure the meaning in life. The instrument consists of two subscales; the presence of meaning in life and the search for a meaning in life. For every subscale we selected the item with the highest corrected item total correlation.

Social Distance – 11 items

To measure social distance, we adopted this question from the World Value Survey, first used in 1981 (Inglehart, 2000). To the list of social groups we added 'low-class people', 'high-class business people', 'Moroccan-Dutch people', 'Turkish-Dutch people', 'Surinamese-Dutch people', 'Antillean-Dutch people', 'Native Dutch people'.

Diversity Scale – 7 items

We constructed this instrument to measure skills and attitudes towards diversity. Several items are based on the Pluralistic Orientation Scale (Engberg & Hurtado, 2011) and the Diversity Perspectives Questionnaire (Podsiadlowski et al., 2013). We rephrased items and formulated new items resulting in two subscales. One subscale with four items that refers to skills and one subscale with three items that refers to attitudes. Out of these seven items, three items are negatively phrased.

Civic Efficacy Scale – 5 items

This scale is based on the Self-Efficacy Towards Service Scale (five items) developed by Weber et al. (2004). We rephrased the original item 'Each of us can make a difference in the lives of the less fortunate' so it is negatively worded and removed the item 'I can help people with handicaps' because we considered it to be too specific. In addition, we added the item 'Realistically, an individual person can do little to bring about changes in our society' from Astin et al. (1999). We tested this scale with the Prolific sample ($\alpha = 0.75$).

Job preferences – 8 items

The job preferences scale is based on the eight item instrument used by Esser & Lindh (2018). To cover extrinsic and intrinsic job preferences we excluded two items from this instrument and added two items ('easy work load' and 'good relations with your colleagues') based on the instrument of Gallie, Felstead & Green (2012). In the ABMLS respondents are asked to rank the items in order of importance, so respondents are forced to think about which job characteristics they value most.

Service Motivation Scale – 5 items

We constructed this scale by selecting items from existing scales and questionnaires. 'Doing well financially is definitely more important to me than doing good deeds' is selected from the Public Service Motivation Scale (Bringle et al. 2004). The other four items are selected from the Civic Minded Graduate Scale (Steinberg et al. 2011) ('I would say that the main purposes of work are to improve society through my career' and 'I feel a deep conviction in my career goals to achieve purposes that are beyond my own self-interest') and the Civic Minded Professional Scale (Hatcher, 2008) ('the education and knowledge that I have gained should be used to serve other's' 'My personal values and beliefs are well integrated and aligned with my work and career'). We tested this scale with the Prolific sample ($\alpha = 0.76$).

Perceived Pressure – 1 item

This item is based on items used in the project 'DP Student Workload and Well-being', a study into student workload and well-being among students in the International Baccalaureate Diploma (Ganzeboom, 2017). The original item in this project is 'During the past four weeks how often have you.... – found that you could cope with all the things that you had to do?'.

Issues in society – 1 item

This question is inspired by research from The Netherlands Institute for Social Research. In the study 'Continu onderzoek burgerperspectieven' respondents are asked what they find the five most important societal problems.

Trust – 1 item

We use a 1-item instrument to measure generalized social trust (Ingen & Bekkers, 2015).

Responsible employer and future job – 2 items

We adopted two questions from a survey developed by the Macquarie Graduate School of Management (Haski-Leventhal, 2014).

Entrepreneur intentions – 1 item

To measure entrepreneurial intentions we adopted a 1-item measure of Oosterbeek et al (2010).

The final questionnaire of the ABMLS for the February 2019 pilot is presented in the Appendix.

Sampling

The fieldwork was conducted between February 20 and March 6. Two weeks after the kick-off event on of the A Broader Mind course on February 5th, 2019, we sent out invitations for the survey to students enrolled in the A Broader Mind course via e-mail. At the same time we posted an announcement in the digital learning environment of the A Broader Mind course, encouraging students to participate in the survey. In the following weeks we sent reminders via e-mail and the digital learning environment. We also attended several meet-ups to personally encourage students to fill out the survey.

To protect the anonymity of the participants in the survey, they were not asked to enter their e-mail addresses or any other information that would personally identify participants. Qualtrics was programmed not to collect the IP address or location of the participant. In this way, individual respondents cannot be identified.

Because a large number of students dropped out of the A Broader Mind course the number of students that we could invite for the survey was substantially reduced. We sent the e-mail invitation to all 146 students enrolled in the course on 5 February 2019 but a substantial share of this group dropped out of the course before and during the fieldwork, which makes it hard to provide an accurate response rate. Among the invited students, 28 students gave consent to participate in the survey, 21 students answered the first question of the survey and 19 students finished the survey.

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3. Data: students in the ABM Course and ABMLS respondents

Students at VU Amsterdam participate in the A Broader Mind Course and the ABMLS on a voluntary basis. The sample of participants is not representative for the broader population of VU students. In this chapter we present an analysis of the characteristics of the sample of students who participated in the Course and the Survey. First, we compare our sample with first-year VU students who did not participate in the A Broader Mind Course. Students from Sociology, Health Sciences and Criminology were most likely to participate in the ABM Course. These students are more likely to be female, to have completed a program of vocational education (HBO) and to talk about their study topics in daily life. The average grades of students in the ABM Course are comparable with those of their peers. Second, we compare survey answers of VU students in the ABM Course with survey answers of participants that are recruited through the online platform Prolific. Compared to participants on Prolific, ABMLS participants are more connected with their university, more conscientious, in better health, and more motivated to contribute to social problems.

Service learning and self-selection

In Community Service Learning programs students engage in unpaid activities that benefit others, often in cooperation with a community organization (Van Goethem et al., 2014). There is a large literature on service-learning and the potential positive impact on students personal development and civic engagement. However, many studies into the effects of service-learning programs are unable to disentangle participation effects from selection effects (Meyer et al., 2019). If participation in community-service programs is voluntary, it is very likely that the participating students differ from the non-participating students. If these students differ on specific traits that the service-learning activity aims to stimulate, you can attribute effects to the service-learning program while this is actually due to students self-selecting into the programs.

Recently, scholars studied the effect of a voluntary community service program at a European university on self-efficacy, generalized trust, empathy and attributions to poverty. Using a pre-post design with a control group, they showed that empathic and trusting students self-selected into the program and that there were no participation effects (Meyer et al., 2019). In addition, females were more likely to participate, while students who were already volunteering were less likely to participate in the community service program.

In this chapter we try to examine self-selection into the A Broader Mind course and the ABMLS by comparing A Broader Mind participants with non-participants.

First-year VU Students: who joined A Broader Mind?

For a first analysis we used data from VU Analytics (2019). VU Analytics collects data on VU students from different data sources, including government agencies (CBS, DUO), a research agency (NOA) and different VU departments (e.g. C&M, IO, SOZ). In April 2019, we obtained a dataset with relevant variables and the anonymous ABMLS Participant ID. With this ID we were able to identify three groups: (1) students who dropped out of the ABM Course, (2) students who joined the Course but did not fill in the ABMLS, and (3) students in the Course who filled in the ABMLS.

Participation in the ABM Course and the ABMLS

Figure 1 shows these three groups of students for the five programs (see the Appendix of this chapter for tables corresponding to the figures). In total, there are 977 students in the dataset. For every study program, participation in the ABMLS is very low. For Sociology this is 15,6%, for Health Sciences 7,2%, for Criminology 3,9%, for IBA 1,2% and for Medicine this is 1,4%. The participation rate in ABM is the highest among Sociology and Health Sciences. Participation in ABM as well as the ABMLS is very low among Medicine and IBA.

Figure 1: Participation in ABM and ABMLS by study program. Source: VU Analytics

Figure 2 shows the previous education of the three groups. The share of students that comes from Higher Vocational Education (hbo) is higher in the ABM Course and in the ABMLS compared to the non-participating group.

Figure 2: Previous education by participation in ABM and ABMLS. Source: VU Analytics

Figure 3 shows that over three quarters of the ABM participants are. Males are a minority in the participating study programs, and are also less likely to join the course and the survey.

Figure 3: Share of men and women in ABM and ABMLS. Source: VU Analytics

Participation in the A Broader Mind Course across five study programs

Because the group of students that participated in the ABMLS is very small, we will focus our analyses on participation in the A Broader Mind Course. What makes first-year students participate in the Course? The data from VU Analytics allow us to analyze the association between educational performance, student characteristics and student attitudes with ABM participation. Most variables in these analyses come from the so-called matching survey that students fill in before the start of their studies.

Female and older students are generally more likely to participate in A Broader Mind. Educational performance, measured by the average high school grade and the amount of obtained EC's does not explain ABM participation. This suggests that students in ABM are not necessarily the most ambitious or intelligent students. Participation in ABM is not related to time use of students, measured by the hours they spend on study, work and extracurricular activities. Time pressure does not seem to hinder students to participate. Interestingly, ABM participation is also not affected by the study situation of students, for instance to what extent they experience barriers due to their financial situation, caring responsibilities for others or the absence of support from their surroundings.

Self-rated academic skills and scores on study program orientation do significantly influence ABM participation. Students who score higher on academic skills like setting study goals, the ability to concentrate, planning and self-discipline are less likely to participate in ABM, controlled for gender and age. Students who have a clear image of the content of their study program and are certain about their study choice are less likely to participate in ABM, controlled for gender and age.

To what extent students agree with certain statements about their study program differs for ABM participants and non-participants. In Figure 4 we see, for instance, that students who read and talk a lot about the topics discussed in their study programs are more likely to participate in ABM, while students who have a clear idea what they want to achieve with their study program participate less in ABM.

Figure 4: Percentage of students that agrees with statements by participation in ABM with 95% confidence intervals.
Source: VU Analytics.

Participation in the ABM Course by study program

Thus far we analyzed factors that influence ABM participation for the full sample. However, we get very different results if we take into account that students are clustered within study programs. In a multiple regression model, the significant differences on other characteristics disappear and ABM participation is only explained by study program. This is partly due to the fact that almost all Sociologists and almost no IBA students participate in ABM. 64% of the chances of participating in ABM is explained by study program. These results indicate that the characteristics of students that are related to ABM participation vary more strongly between the study programs, and not so much within each study program.

Examples are academic skills like planning study tasks and the ability to concentrate. Students who participate in ABM score lower on these academic skills and the average scores for Health Sciences and Sociology, the programs with the highest participation rates, are lower. Figure 5 shows the averages of the ability to concentrate for the five study programs. To gain more insights into who participates in the ABM we further visualize some average scores for ABM participants and non-participants within study programs.

Figure 5: Average score by ABM participation per study program with 95% confidence intervals (excluding Sociology). n=974
Source: VU Analytics.

Figure 6: Share of women in ABM-participants and non-participants per study program. Source: VU Analytics.

The percentage of female students per study program is 66% for Sociology, 85% for Criminology, 34% for IBA, 82% for Health Sciences and 74% for Medicine. In Figure 6 we can see that within study programs there is no large gender gap between students who participate in ABM and students who do not participate. (There is only one female Sociology student who is not participating in ABM).

Figure 7: Percentage of students that agrees for ABM-participants and non-participants with 95% confidence intervals. Source: VU Analytics.

In Figure 7 we can see that within study programs the differences between ABM participants and non-participants are smaller than between study programs in the share of students that selected the statement “I have a clear idea what I want to achieve with this education”.

To find out what explains participation within study programs we separately analyzed ABM participation for Health Sciences, Criminology and Medicine. We did not run the analyses for Sociology and IBA as almost everyone or no one participates in ABM in these study programs. There are only a few indicators that explain what makes students participate in A Broader Mind for Health Sciences and Criminology. For Medicine, we could not find any factors that significantly influence ABM participation.

Figure 8: Average score for ABM participants and non-participants with 95% confidence intervals. Source: VU Analytics.

Within Health Sciences, students who participate in the ABM course have more difficulty with setting study goals (Figure 8).

Figure 9: Percentage for ABM participants and non-participants with 95% confidence intervals.
Source: VU Analytics.

In the matching survey student interest is measured by presenting them statements related to the study they signed up for and to four closely related study programs. For Health Sciences students, the share of students who had the highest interest score for Health Sciences (the study they signed up for), is significantly lower among the ABM participants (Figure 9). It is important to note that among all Health Sciences students, only 42% had the highest interest score. Many students in this study program actually prefer to study Medicine.

Figure 10: Average score for ABM participants and non-participants with 95% confidence intervals.
Source: VU Analytics.

Criminology students who have more self-discipline are less likely to participate in the A Broader Mind course (Figure 10).

Figure 11: Percentage of students that agrees for ABM-participants and non-participants with 95% confidence intervals.
Source: VU Analytics.

Criminology students who are curious about what they will learn during their studies are more likely to participate in ABM. The opposite is true for criminology students who read and talk a lot about study program topics. They are less likely to participate in ABM.

Discussion

Our analyses show that females and students who previously followed Higher Vocational Education (hbo) are more likely to participate in A Broader Mind. Most characteristics of ABM participants are clustered within study programs: students in Sociology, Health sciences and Criminology share certain characteristics which makes them more likely to participate in the ABM program, but within these programs, the difference between ABM participants and non-participants is much smaller. This suggests that participation strongly depends on the study program in which students are recruited, with some programs having a student population that is more likely to participate than others. In other words, self-selection into A Broader Mind is largely similar to self-selection into study programs. This is a highly relevant insight. Future interdisciplinary courses based on voluntary participation will probably not attract an equal proportion of students in each Bachelor program, even when the appeal and incentives to participate are the same for everyone.

Only a few characteristics do vary within studies. Within Health Sciences, students who participate in the ABM course have more difficulty setting study goals. Criminology students who are curious about what they will learn during their studies are more likely to participate in ABM, while Criminology students who read and talk a lot about study program topics are less likely to participate in ABM.

There could be other factors that explain differences in ABM participation across students and study programs, which we were not able to measure. Those who filled in the survey seem to stand out in

personality traits like agreeableness (see next section), but we do not have such information from VU students who are not in ABM. Future waves of the ABMLS could also target students who are not in the ABM Course in order to compare groups of students on their survey answers.

The Survey: How representative are the answers?

One of the goals of the A Broader Mind Longitudinal Survey is to be able to make inferences about attitudes and behaviors of the broader population of VU students. To get an idea of the representativeness of the survey sample, we compare the answers provided by ABMLS participants with answers provided by participants in a pre-test version of the survey. In the pre-test, we surveyed participants on the online platform Prolific, where participants receive a reward which equals at least the minimum wage in the UK.

Participants at Prolific were selected to be university students. They had to fill in the name of their institute, which served as an extra check. The average age in the Prolific sample is higher, ranging from 18 to 66. To make the samples more comparable, we selected only participants aged 24 or younger.

Even though we compare two samples of young students, the Prolific participants differ in some important respects from our VU students. The Prolific group comes from different countries in Western-Europe, with most participants residing in the United Kingdom (73%). They come from all different study backgrounds, while our sample is restricted to the five programs that were part of the ABM pilot.

Still, a comparison gives an impression of the differences between the selective ABMLS participants compared with a broader sample of university students who are not taking an extra course on societal issues and who are getting paid for the survey.

In general, the standard deviations of survey answers are larger in the Prolific sample. This means that there is more variance in the Prolific sample, while the answers in ABMLS sample are closer to each other.

Personality and attitudes

Figure 12 shows the average scores on a number of scales and items, the blue bars representing the ABMLS group and the red bars representing the Prolific group. In terms of personality, ABMLS participants are more agreeable and conscientious, which are two domains of the Big-5 Personality Index. Furthermore, ABMLS participants score lower on the Greed Scale.

Compared with Prolific participants, ABMLS students are in better physical health and feel less pressured by the obligations of everyday life. They are relatively proud to belong to VU Amsterdam.

Regarding civic attitudes, ABMLS students feel that they are able to contribute to solving social problems (civic efficacy) and find it important to serve society through their work (service motivation). These are attitudes that are very close to the goals of A Broader Mind, suggesting that students who voluntarily enter the program are already relatively sensitive to their role in society.

In Figure 12 we only showed the items that are significant at $p=0.1$ or lower. There are more items that are not statistically significant, but almost all differences point in the same direction: the ABMLS

participants are relatively open and empathic, are in good (mental) health and go along well with fellow students.

Part of the differences in Figure 12 may be confounded by variables like gender (the ABMLS contains a relatively large share of female participants) and country of residence (the Prolific group is largely based in the UK). In OLS regression models that control for female, age and country of residence (not shown), most differences become even more pronounced. This holds for civic efficacy, service motivation, university belonging, physical health and conscientiousness. Students in the UK are generally more civic-minded, healthy and conscientious than students in the Netherlands, but the ABMLS group is an exception.

With regard to agreeableness, greed and perceived pressure, the differences between ABMLS and Prolific disappear when controlled for background characteristics.

Figure 12: Average score on survey scales or items with 95% confidence intervals.

Civic behavior

Figure 13 shows the percentages of students who were active in different forms of civic participation during the last 12 months.

Only two of the differences are statistically significant. ABMLS participants are less likely to have voted for student board elections, which may be due to the fact that the student board elections at VU Amsterdam were held after the survey was taken. Sharing, liking or commenting on a post about political or social issues is more common for the Prolific group.

This difference is no longer significant when controlled for country of residence in multiple regression, suggesting that the Dutch students in the sample are generally less likely to engage with social issues online.

The Prolific group scores higher on most other types of civic behavior as well, except for sharing belongings and talking with others about social or political issues, but those differences are not significant.

Figure 13: Percentage of respondents who participated in civic behavior during the last 12 months with 95% confidence intervals.

Discussion

Overall, the survey answers from ABMLS participants do not substantially differ from survey answers provided by a broader group of students who were recruited online. In terms of civic participation and social interactions with teachers and peer students, for example, the differences between both groups are negligible.

Yet, the ABMLS sample differs in some important respects. Controlling for age, female and country of residence, ABMLS participants score higher on university belonging, physical health, conscientiousness, civic efficacy and service motivation. These indicators are to some extent connected with the goals of A Broader Mind, reflecting the type of student that is attracted by the program. Students who feel connected with VU University and who are motivated to contribute to social problems are more likely to join the ABMLS.

We have to be careful to infer strong conclusions from these analyses. We are mostly interested in inferring conclusions about the population of VU students, but the online sample contains students

from all kinds of universities that differ in many respects. More generally, there is a substantial academic literature on the issues with samples that are surveyed through online platforms like MTurk or Prolific (see Hauser, Paolacci & Chandler, 2018). Although our Prolific sample seems to have taken the survey seriously, we cannot rule out the possibility that the data contains non-serious answers and that certain categories of students self-selected into the sample. This further complicates sensible analyses on the representativeness of either of the two samples.

Conclusion

Our analyses showed that selection in the A Broader Mind Course is similar to selection into study programs. This is the case for the five study programs that were selected for the 2019 pilot of A Broader Mind. It would be interesting to see if the same conclusions apply if more and other study programs at VU Amsterdam participate in A Broader Mind in the following years. To gain further insights into self-selection on attitudes and characteristics that the A Broader Mind program aims to foster, future waves of the ABMLS should also target students who are not in the ABM Course.

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Appendix: Tables corresponding to Figure 1, 2, 3, 6

Table 1: Participation in ABM and ABMLS by study program (Figure 1)

	Not in ABM	In ABM	In ABMLS
Medicine	328	18	5
Health Sciences	68	48	9
IBA	335	3	4
Criminology	99	23	5
Sociology	1	26	5
Total	831	118	28

Table 2: Previous education by participation in ABM and ABMLS (Figure 2)

	Not in ABM	In ABM	In ABMLS
VO	699	91	21
HBO	42	18	6
WO	11	2	0
Abroad	79	6	1
Total	831	117	28

Table 3: Share of men and women in ABM and ABMLS (Figure 3)

	Not in ABM	In ABM	In ABMLS
Male	332	31	6
Female	449	87	22
Total	831	118	28

Table 4: Share of women in ABM-participants and non-participants per study program (Figure 6)

		Not in ABM	In ABM
Sociology	Male	0	11
	Female	1	20
Criminology	Male	14	4
	Female	85	24
IBA	Male	222	4
	Female	113	3
Health Sciences	Male	10	12
	Female	58	45
Medicine	Male	86	6
	Female	242	17
Total		831	146

4. The Broader Mind of Students at Vrije Universiteit Amsterdam

Although the sample size was limited in this pilot phase of the A Broader Mind Longitudinal Survey, the data provide preliminary insights in the values, attitudes and behaviors of VU students. In this chapter we show some descriptive results from the survey, providing a first glance of the possibilities that the ABMLS has for future research.

ABMLS Sample

21 students started with the A Broader Mind Longitudinal Survey. The average age of this group is 19 years old and three quarters of the ABMLS participants are female.

The majority of the participants in the ABMLS are students from Health Sciences (see Figure 1). Only a few Sociology students filled out the survey. If we compare this with the distribution of study programs in the A Broader Mind Course, quite some IBA students filled out the survey, while the share of Sociology students that filled out the survey is low.

A large majority looks forward to the ABM Course. 37% of the students who filled out the survey is somewhat excited to participate in the ABM Course, while 32% is very excited and 16% is extremely excited to participate. 21% considers the A Broader Mind Course as slightly important and 26% considers the course as somewhat important. Almost half of the sample (47%) considers the A Broader Mind Course as very important.

Source: ABMLS, February 2019

Figure 1: Distribution of study programs in the ABMLS

Civic Mindedness

To measure how civic-minded students at VU Amsterdam are, the ABMLS contains questions on civic attitudes as well as actual civic behavior. Below we present a selection of the results.

The concept of 'civic efficacy' refers to your belief in your ability to have an impact on problems in society. To measure civic efficacy in the ABMLS we used the Self-Efficacy Towards Service Scale developed by Weber et al. (2004) and added a negatively phrased item (Astin et al., 1999). A sample item is 'I have confidence in my ability to help others'. 'Service motivation' refers to the idea that you want to contribute to a better world through your career. We used five items to construct a Service Motivation Scale. The items for this scale are selected from three instruments: the Public Service Motivation Scale (Bringle et al. 2004), the Civic Minded Graduate Scale (Steinberg et al. 2011) and the Civic Minded Professional Scale (Hatcher, 2008). A sample item is: 'The education and knowledge that I gain should be used to serve others'.

Figure 2 shows the average scores on the Civic Efficacy Scale and the Service Motivation Scale for men and women. There are no substantial differences between men and women.

Figure 2: Average scores on civic efficacy and Service motivation by gender.

Almost all students in the ABMLS talk to others about political and social issues and follow the news online (Figure 3). Civic activities that are more time consuming like volunteering and participating in an event to raise money are less popular. Only 15% of the sample voted for the student board elections, which has to do with the fact that the student board elections at VU Amsterdam were held after the survey was conducted.

Figure 3: Share of students participating in different civic activities

The majority separates glass and paper and half of the sample separates electronics and textile (Figure 4). If we ask students how environmentally aware they consider themselves, 20% considers themselves as 'somewhat aware' while 75% considers themselves as 'aware'.

Source: ABMLS, February 2019

Figure 4: Share of students separating different types of waste

Student engagement

The measures in the student engagement module try to capture to what extent and in what way students are engaged with their study program and VU Amsterdam. For 37% of the students it is 'absolutely true' that they feel proud of belonging to VU Amsterdam, while this is 'mostly true' for 47%.

Figure 5 shows the level of interest of the two groups in several study activities. There are no big differences between study activities and between study programs. For both groups, presentations are less popular compared to lectures.

Figure 5: Average scores on interest in study activities by study program.

Source: ABMLS, February 2019

Figure 6: Average scores on Academic and Social Interaction by study program

Figure 6 shows average scores on Academic and Social Interaction at VU Amsterdam by study program. Students from IBA, Criminology and Sociology score somewhat higher on involvement with peers. Students from Medicine and Health Sciences score higher on the statement that teachers have time to answer questions compared to the students from the other study programs.

Professional orientation

How do students see their future career? This may be a difficult question for some first-year students and the ABMLS allows us to analyze how their attitudes change during their time at VU Amsterdam and when they enter the labor market.

Table 1 shows which characteristics students find most important and which on the least important in their future job. Column 1 shows results for the full sample. An interesting job, a job that is useful to society and a secure job are considered the most important. For Medicine and Health Sciences students good relations with your colleagues is more important than a secure job. Good opportunities for advancement are more important for Criminology, IBA and Sociology students compared to Medicine and Health Sciences students.

Table 1: Ranking of most important characteristics of future job, by study program

Full sample	Medicine, Health Sciences	Criminology, IBA, Sociology
1. Interesting job	1. Interesting job	1. Interesting job
2. A job that is useful to society	2. A job that is useful to society	2. Secure job
3. Secure job	3. Good relations with your colleagues	3. A job that is useful to society
4. Good relations with your colleagues	4. Secure job	4. Good relations with your colleagues
5. A job that allows you to work independently	5. A job that allows you to work independently	5. Good opportunities for advancement
6. Good opportunities for advancement	6. Good opportunities for advancement	6. A job that allows you to work independently
7. High income	7. High income	7. High income
8. Easy work load	8. Easy work load	8. Easy work load

To measure entrepreneur intentions, we included the question: *‘Do you expect to start up a new firm or take over an existing firm within the next fifteen years?’* 58% of the sample indicated this is probably not the case and only 26% answered ‘possibly’. Working abroad seems more popular for this group of students; 42% considers this as possible, 16% indicates they will probably work abroad and 26% indicates they definitely consider to work abroad.

Are students satisfied with how VU Amsterdam prepares them for the labor market? 58% of the students agrees with the statement that their education at VU Amsterdam is a good preparation for the labor market, while 26% neither agrees or disagrees. Students indicate that practical knowledge and the opportunities for extra activities and courses at VU Amsterdam benefit their preparation for the labor market. According to the students, internships could be a way to improve their preparation for the labor market.

Personality characteristics

Most students consider their mental and physical health as good. On mental health, females score lower than male students. To the question: 'How often do you have the feeling you cannot cope with all the things that you have to do?' 21% of the women answered 'often' or 'very often', while this was 0% among men.

If we look at the time use of this group (Figure 8), students spend most hours per week on preparing for class, being in class and on social media. Medicine and Health Sciences students spend less time on preparing for class and social media compared to Criminology, IBA and Sociology students. However, they spend more time *in* the classroom. There also is a considerable difference between the two groups in how much time they spend on caring responsibilities. We should be cautious with these results as the sample size is very small and outliers can distort the results.

Figure 7: Average health by gender.

Time use

On average, about how many hours do you spend in a typical 7-day week doing the following?

Source: ABMLS, February 2019

Figure 8: Average number of hours spent on different activities, by study program.

Figure 9: Scatterplot of preparing for class vs social media use in hours. The grey arear represents 95% confidence intervals for predictions from a linear model.

Figure 10: Scatterplot of preparing for class vs paid work in hours. The grey arear represents 95% confidence intervals for predictions from a linear model.

With a larger sample size it would be interesting to analyze the relationships between different variables. We could, for example, analyze how social media use relates to preparing for class. Figure 9 shows this relationship. There seems to be a negative relationship between preparing for class and social media use. The more you prepare for class, the less hours you are on social media. Figure 10 shows that the more hours you spend on paid work, the less hours you prepare for class. However, from these scatterplots it becomes clear that outliers, respondents with extreme scores on one of the variables, have a big impact on the results. Based on this sample we cannot draw any conclusions.

Figure 11 shows to what extent students feel they belong to a certain place. Students feel the strongest belonging to the world, followed by Europe and the Netherlands. Students feel less belonging to the VU Campus and their neighborhood, but the differences are small.

Figure 11: Average scores on sense of place.

42% of the sample is not considering him-or herself as belonging to a particular religion, 16% feels as belonging to the Protestant religion and 11% to the Islam.

5. Working Paper: *Too busy to volunteer? Time use and civic participation among university students*

In this paper we map students time use patterns and perceived time pressure in relation to civic participation. Do students who spend more time on studying, work, or have caring responsibilities engage less in student activities and volunteer work? Do students who feel they have to cope with too many things also spend more time on studying, paid work and social media? Are the 'stressed' students the ones who refrain from civic activities and volunteer work? Overall, the findings suggest that civic participation is not hindered by time constraints. Although different activities compete with each other, like working and studying, students are often able to be active in multiple areas. Providing care for a family member is most strongly associated with negative health outcomes.

Key findings

- Time pressure does not hamper civic participation among university students
- Students with a paid job spend less time on their studies, but are more likely to volunteer and to provide informal care
- Social media use does not hinder time spent on studying, nor is it related with stress
- Caring for a family member gives a lot of time pressure and is related to negative health, but it does not withhold students from studying, working and volunteering
- Students who volunteer are also likely to contribute online and to work

Motivation

University students can participate in different civic activities, including student boards, editorial boards, student associations and voluntary organizations outside the university campus. However, not all students participate in such activities and there is even a debate on a generational decline in civic engagement (Hustinx et al. 2012) Why do we not engage in civic activities? Time demands is often mentioned by people to refrain from participating in civic activities or to quit with volunteer work (Barraza, 2011; Hustinx, 2010). In addition, burn-out and stress among university students is receiving increasing attention. This could have negative effects on many areas, like mental and physical health and academic performance. It also creates a barrier for students to participate in extra-curricular activities (Lisa O' Heary, 2012).

How do time use patterns of students actually look like? And what are the consequences for civic participation? In 2010, 145 students participated in a diary study at a Dutch university (Meeuwisse et al., 2011). During a regular week students spend a bit more than 3 hours per day on their study (being in class and preparing for class) compared to 5,6 hours in an exam week. Most time is spend on relaxing activities (4,5 hours) and students spent only 1 hour on work. Fosnacht et al (2018) studied time expenditure of a sample of 3000 first-year students from bachelor's degree granting U.S. institutions in 2014/2015. On average, most time was spend on preparing for class (13,8 hours per week) and relaxing and socializing (12,3 hours per week), followed by co-curricular activities/community service (7 hours per week) and working for pay (6,3 hours per week).

Research on volunteering among students is primarily on student motives to participate in volunteering. Examples of such motives are the development of new skills, the possibility to live according to personal values and career benefits (Gage & Thapa, 2012). Less attention has been paid to what keeps students from being active (Hyde & Knowles 2013). Scholars find that time demands is often the most important reason for students to refrain from or quit with volunteer work (Barbarza,

2011; Hustinx, 2010; Hyde & Knowles, 2013; Lisa O’Heary, 2012; Gage & Thapa, 2012, Simha et al., 2011). Paid work and study leaves little time for civic participation. In addition, commitments to social life or caring responsibilities contributed to this lack of time (Hyde & Knowles, 2013; Simha et al., 2011).

Economic theory predicts that discretionary time is limited and that time spent on work and studies would displace time contributed to voluntary organizations. In line with such substitution theories, recent longitudinal research shows that part-time workers volunteer most hours, while working overtime is associated with reduced volunteering (Qvist, 2018).

With most research in the nonprofit literature is focusing on formal volunteering, it is the question to what extent the same mechanisms hold for new forms of volunteering. Online volunteering is more popular among people in their 20s and 30s and may attract volunteers who otherwise would not participate (Ackermann & Manatschal, 2018; Liu et al., 2016). In a study among Dutch and Belgian university students, Hustinx et al. (2012) describe how the younger generation may not be less engaged but rather participates in more diverse ways, both online and in person. Online participation is more flexible than traditional formal volunteering and it is unsure how this is influenced by time constraints.

The goal of this paper is to gain insights in the relation between time use patterns of and time pressure on students and how this relates to different types of civic participation. If you spend more hours on studying, paid work and social media, do you participate less in student activities and volunteer work? Do students who indicate to experience stress also participate less in civic activities? These insights will help us to understand why students decide or refrain from spending their time on civic participation.

This study

The first group of participants were recruited from Prolific, an online platform where researchers can recruit participants in a quick and reliable way in exchange for financial compensation. The second group of participants are first-year’s studying at VU Amsterdam, recruited from a group of students who voluntarily participate in a pilot of an interdisciplinary and mainly online-based course ‘A Broader Mind’. The total sample consists of 219 students, of which the majority resides in the UK (66%) and the Netherlands (18%).

Participants filled out a survey with questions on personality traits, academic belonging, civic-mindedness and professional orientation. To measure time use patterns we included the question ‘*About how many hours do you spend in a typical 7-day week doing the following? (If you don’t know the number of hours exactly, please provide a reasonable estimate)*’, which was followed by a list of activities (e.g. being in class, volunteer work). The responses, in hours per week, are Winsorized at the 99th percentile to prevent outliers from having a disproportionally large influence on the results.

To measure civic participation we included the question ‘*In the last **12 months**, did you participate in any of the following activities outside of your education?*’ which was followed by list of civic activities. Participants could tick boxes with ‘Yes’, ‘No’ or ‘Not applicable’.

Time use

How do students spend their time? Figure 1 shows the number of hours per week that students spend on different activities. The study requires most time. Students spend on average more than 24 hours per week on average on being in class and preparing for class. The average time in paid labor, including the 56% who do not have a job besides their studies, is 8 hours per week. More than a fifth of respondents provide care for a family member, which (including the zeros) requires 2.6 hours on average, with outliers up to tens of hours a week.

Figure 5: Violin plots of the number of hours that students spend per week on different activities

Participation

Figure 6 shows the percentage of respondents who engaged in different forms of participation. Most students sometimes talk to others about social or political issues (85%), signed an (online) petition (74%) and donate to charitable causes (65%). Online participation is relatively popular, too, with 63% who likes or shares online messages about a social or political issue and 53% posting a recommendation, suggestion or rating on an online platform so others can benefit from it. With regard to campus activities, 50% participates in student or study associations, 35% reads campus magazines and 31% votes for student board elections.

Three forms of volunteering are used in further analyses: participation in a student or study association; volunteering for an organization; and posting a recommendation, suggestion or rating on an online platform. Figure 7 shows that these three forms are strongly interrelated: most students who are active in one way, also participate in another way. There is a core of 11% that participates in three ways. This is a group of students that Hustinx et al. (2012) have labeled 'civic omnivores' in the sense that they participate

Figure 6: Percentage of respondents who engaged in different types of participation during the last 12 months

in multiple ways, both conventional and unconventional. 23% is not active in either of the three forms of participation under study, a group that may be the ‘disengaged’ (Hustinx et al., 2012).

Figure 7: Venn Diagram of three forms of participation

Do time constraints hinder civic participation?

The correlation matrix in Table 3 shows bivariate correlations between different measures of time use, participation, perceived pressure and well-being. All three forms of civic participation correlate positively with each other.

An active study life does not go well together with a large paid job on the side. Those who work more hours spend less time on their study. Yet, working does not substitute all other activities: students who have a paid job are more likely to volunteer and to provide informal care. Working more hours is positively correlated with time pressure, measured by the feeling of having too little time for all the things you have to do.

Social media use is positively correlated with time spent on the study and is not related to stress and well-being, which is contrary to expectations about the supposed threats that social media present for serious studying.

Interestingly, online participation is also positively correlated with time pressure. Those who volunteer online are more likely to be offline volunteers and spend more time on social media.

Those who care for a family member experience more time pressure and report significantly lower mental health, physical health and life satisfaction. Yet, such a relatively stressful life does not withhold these students from studying, working and volunteering.

In sum, a busy life does not hamper civic participation. Spending more time on studying, working, social media and informal care is not clearly related to different forms of participation. Students who experience more time pressure are not less likely to participate; instead, time pressure is *positively* related to online volunteering.

Table 3: Correlation matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Participation: Study or student association no/yes	1	0.13	0.11	0.12	0.08	0.04	-0.11	0.01	0.11	0.13	0.09	0.07	0.01	0.05	-0.03
2	Participation: Volunteering no/yes	0.13	1	0.19	0.08	-0.01	0.16	0.07	0.09	0.02	0.09	0.1	0.12	0.03	-0.06	0.05
3	Participation: Online volunteering no/yes	0.11	0.19	1	0.05	-0.03	0.07	0.06	0.13	0.2	0.07	0.07	0.14	0.02	-0.01	-0.07
4	Time: Studying no/yes	0.12	0.08	0.05	1	0.22	-0.05	-0.18	-0.04	-0.04	0.06	0.04	0.07	-0.08	-0.1	-0.11
5	Time: Studying h/wk	0.08	-0.01	-0.03	0.22	1	-0.15	-0.31	0.12	0.16	0.13	0.08	0.13	-0.04	0.01	0.13
6	Time: Paid work no/yes	0.04	0.16	0.07	-0.05	-0.15	1	0.72	0.02	-0.01	0.09	0.12	0.11	0.08	0.07	-0.05
7	Time: Paid work h/wk	-0.11	0.07	0.06	-0.18	-0.31	0.72	1	0.04	-0.13	0.01	0.02	0.17	0.12	0.05	-0.06
8	Time: Social media no/yes	0.01	0.09	0.13	-0.04	0.12	0.02	0.04	1	0.32	-0.03	-0.09	-0.07	-0.07	0.1	-0.01
9	Time: Social media h/wk	0.11	0.02	0.2	-0.04	0.16	-0.01	-0.13	0.32	1	-0.06	0.05	-0.06	-0.07	0.01	-0.09
10	Time: Caring for family no/yes	0.13	0.09	0.07	0.06	0.13	0.09	0.01	-0.03	-0.06	1	0.54	0.19	0.03	-0.12	-0.1
11	Time: Caring for family h/wk	0.09	0.1	0.07	0.04	0.08	0.12	0.02	-0.09	0.05	0.54	1	0.25	-0.16	-0.26	-0.23
12	Pressure (1-5)	0.07	0.12	0.14	0.07	0.13	0.11	0.17	-0.07	-0.06	0.19	0.25	1	-0.13	-0.15	-0.13
13	Mental health (1-5)	0.01	0.03	0.02	-0.08	-0.04	0.08	0.12	-0.07	-0.07	0.03	-0.16	-0.13	1	0.44	0.53
14	Physical health (1-5)	0.05	-0.06	-0.01	-0.1	0.01	0.07	0.05	0.1	0.01	-0.12	-0.26	-0.15	0.44	1	0.35
15	Life satisfaction (1-11)	-0.03	0.05	-0.07	-0.11	0.13	-0.05	-0.06	-0.01	-0.09	-0.1	-0.23	-0.13	0.53	0.35	1
Coefficients in bold are significant at $p < 0.05$																

Discussion

In contemporary academic and public debates, much attention is paid to supposed time pressure on university students. With obligations ranging from preparing for exams and following lectures to earning money on the side and maintaining an active in social life, students are said to be too busy to participate in civic activities.

Our results challenge this view. Overall, voluntary participation inside and outside university is not reduced by the time students spend on studying, working, social media and providing informal care. Instead, many students seem to be able to volunteer in different ways besides their other activities.

Some activities cause pressure. Providing a lot of informal care for family members is related to more stress and lower mental and physical health, and students who work more hours experience more time pressure in their lives. Yet, this generally does not prevent them from contributing their time to student clubs, voluntary organizations and online platforms.

Limitations and gaps

The results are preliminary and there is reason to be cautious about their implications. The sample size under study is small, and random variation can easily lead to false positives or negatives. Although we Winsorized the time use variables, outliers can easily distort the results.

The aim of this paper is to study how time pressure affects civic activities, but causality can also be the other way around. Rather than time pressure to be a barrier for participation, it can be that participation *causes* stress. Students who volunteer besides their study, work and social life have another obligation to deal with, which leads to more time pressure.

More research with larger samples and preferably longitudinal data can test the validity of the conclusions.

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6. Master Thesis: *Contact and trust: A qualitative study among ABM participants.*

During the pilot phase, Sociology student Naresh Mathoera did qualitative research on the A Broader Mind program for his Master Thesis. A Broader Mind is an interesting case for research on social trust in different groups. Usually, social groups are relatively homogenous: 'Birds of a feather flock together'. But in A Broader Mind, students from different backgrounds are randomly mixed. How does this affect trust in other students? This chapter provides a summary of Mathoera's research design and empirical findings.

Over the past three years, the population of the Netherlands increased with 280.000 inhabitants, three quarters of which stemmed from international migration (Central Bureau of Statistics, 2018). An empirical study shows that people with a migration background often have less or no contact with people from the native majority group (De Vroome et al., 2013). In addition, several studies (both quantitative and qualitative) indicate that there is a relationship between contact between different groups and trust in others (Krishna, 2002; Warren, 2001; Svendsen, 2006; Putnam, 2007; Lancee & Dronkers, 2008; Uslaner, 2010; Savelkoul et al., 2017). Before we discuss the societal relevance of this research, we first briefly look at what 'trust in others' means.

Trust in others is described as the belief that others will not act against the interests of the individual and that it is not necessary to monitor the behavior of the other to ensure trust in the other (Uslaner, 2018). For this research, 'trust in others' is divided into different forms of trust. First and foremost there is institutional trust, or trust in institutions, laws and regulations. Secondly, there is trust in disposition, which is based on trust in the goodness of the other. The third form of trust is interpersonal trust, or trust in others we know personally. Finally, there is 'particularized trust', which describes trust in others who are similar to us (Uslaner, 2018; Mcknight & Chervany, 2001). For this research, we look at 'trust in others' among VU students and how the degree and quality of contact play a role in this. The research question is: *"How do VU students who belong to minority groups with a migrant background or the majority group experience trust in others and how does (inter-ethnic) contact play a role in this?"*

To answer this research question, the A Broader Mind program is used as a case study. The A Broader Mind program brings first-year bachelor's students together. By discussing current social themes in the A Broader Mind program, VU Amsterdam aims to stimulate the personal and social skills of students. Students from different (disciplinary) backgrounds are placed together in groups on the basis of chance. This makes the program a good case to study if mutual contact leads to change in the trust of others.

With the A Broader Mind program, VU Amsterdam wants to improve the quality of education by using the diverse community to learn from each other. According to Nikolas Rosie (in Delanty, 2009, p.68), government institutions (such as VU Amsterdam) are able to develop new programs (such as the A Broader Mind program) by encouraging and controlling the formation of identity, including personal ethics and collective trust. This research focuses on the experiences and perceptions of trust in others among VU students, both with and without a migrant background. It also examines to

what extent VU Amsterdam succeeds in promoting trust in others through the A Broader Mind program, which should ultimately lead to inclusion and social equality within society.

This thesis applied a mixed-method approach. The quantitative data of the A Broader Mind Longitudinal Survey are used to describe the levels of generalized trust among students. The most important part of the thesis is based on ten semi-structured interviews with first-year students participating in the A Broader Mind program. To include more students with a migrant background in the study, three first-year students not participating in the A Broader Mind program were interviewed.

For this research a distinction was made between people with or without a migration background. This categorization is based on the self-identification of the respondent. An interesting finding of this research is that individual self-identification depends on the social system in which the individual finds himself. Persons who feel involved in the majority group within all social systems are categorized as persons without a migrant background in this study. People who in one or more social systems identify with the ethnic minority group are categorized as people with a migrant background.

The most important finding is that among VU students, both with and without a migration background, the degree and quality of contact seems to promote trust in others, if this contact is frequent and close. In addition, institutional trust, or trust in the group guides (which were senior students), appears to lead to a higher degree of trust in others (generalized trust). However, institutional trust is closely related to an equal status between the student and the group guide.

The A Broader Mind course is a blended-learning course that combines online and offline assignments and activities. For VU students physical contact in daily life with people with and without a migrant background seems to be more important in guaranteeing interpersonal trust in the other than contact in an online environment.

A more diverse environment leads to more interethnic contact which leads to more trust in others. Another research finding is that if an individual experiences an increase in trust in others, this also affects the trust level of the other group members. This is because the individual passes on his or her perspectives of 'the other' with a different (ethnic) background, to people within his or her group.

Although this research has led to interesting findings at the micro level, it also has some limitations. The A Broader Mind program started this year with a pilot in which student participation was not compulsory. This has led to a low turnout which makes generalization of the quantitative results to the student population very difficult. Making the program mandatory would lead to a higher turnout. However, making the program compulsory could lead to participation of less motivated students, which in turn can be important in mechanisms that affect trust in others. A recommendation is therefore to award credits to the A Broader Mind program, which will make students more motivated to participate in the program.

In addition, the results of the in-depth interviews show that in contact with others the personality of the other is experienced as a more important factor than the ethnic background, which in turn affects trust in others. A follow-up study could look at personality, using the Big Five model (McCrae & Costa in Jackson & Poulsen, 2005, p. 669), among all VU students participating in the A Broader Mind program. This can be used to determine whether the personality of the individual actually has an effect on the degree and quality of contact and also changes the degree of trust in others.

Finally, it is important that quantitative research will be done within the program in the coming years. With a higher participation of VU students, the quantitative results can be a valuable addition to the results of this study.

In addition, it is recommended to set-up qualitative studies to gain more insights into how students experience institutional trust, interpersonal trust, trust in disposition and 'particularized trust'. This is important for VU Amsterdam in order to be able to contribute as an institution to a higher degree of trust in others among VU students, which ultimately results in a higher degree of trust in others throughout society.

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7. Appendix: Questionnaire

A Broader Mind Longitudinal Survey - Questionnaire

20 February 2019

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A BROADER MIND

Thank you for your interest in this survey. Answering the questions will take about 15-20 minutes.

This survey is part of the A Broader Mind program, alongside the Course you are currently participating in. The A Broader Mind Longitudinal Survey (ABMLS) aims to follow the development of students at VU Amsterdam. The survey consists of questions regarding your attitudes towards social issues, your experiences at the university, your ideas about your future career, and your life and personality.

Several times during your study career, we will ask you to participate in this survey. Your responses provide important insights in how different aspects of your studies contribute to your development.

CONSENT TO PARTICIPATE IN THE SURVEY

The information provided by you in this survey will only be used for scientific research purposes. The aim of this research is to describe and understand the 'Broader Mind' of students. How do students differ in their beliefs towards life and society and how do students develop over time?

Some of the questions are of a personal nature, such as questions on your housing situation, religious beliefs and religious participation. If you are not comfortable answering a specific question, you can always skip the question or choose the option that you do not want to answer.

In the analysis, the survey data will be combined with data archived at VU Amsterdam, including your age, sex and information on your study program and results. By agreeing to participate in this survey, you also agree that your responses will be matched to individual information that has been archived at VU Amsterdam. Your data will not be used for individual evaluations or profiling, and none of your personal data will be disclosed to third parties.

The survey does not collect information on your IP address and geographic location. Information will not be used in any manner which would allow identification of your individual responses. The ['Reglement bescherming persoonsgegevens studenten VU Amsterdam'](#) ['Student personal data processing regulations Vrije Universiteit Amsterdam'](#) applies to this research and contains the most important regulations concerning the usage of personal information at VU Amsterdam.

The data that is collected in this survey will be saved in Qualtrics, a US-based corporation. Qualtrics follows the technical and privacy related regulations set by VU Amsterdam and the European Union. However, we would like to inform you that the US government may request access to data collected by US corporations.

You can exit the survey at any time without consequences. After you have finished the survey you can still decide that you want to withdraw from the research. If you would like to withdraw, please write an email to abmls@vu.nl and mention the personal ID number you received in the e-mail so that we can remove your data from the dataset.

I have read the information and agree to participate in this study.

- ☐ Yes
- ☐ No

CONSENT LINKING SURVEY DATA TO CBS DATA

Statistics Netherlands (CBS) collects data from citizens in the Netherlands. By combining survey data with CBS data, we can link your responses to information on, for example, your labor participation and income of yourself and your family. CBS is legally bound to strict regulations that protect the privacy of citizens. Researchers can only access CBS data at an aggregated level, not on the individual level. The data will not be used in any manner which would allow identification of your individual responses.

I agree that the data collected through this survey will be linked to data from Statistics Netherlands (CBS).

- ☐ Yes
- ☐ No

CONSENT LINKING SURVEY DATA TO BROADER MIND COURSE MATERIAL

During the A Broader Mind Course you will be asked to answer questions about the themes in the Canvas environment. The researchers will use these answers for analyses that do not reveal your personal identity.

The personal reflections that you submit through Canvas will **not** be used for research purposes.

I agree that my answers about the themes in the Broader Mind Course in Canvas will be used and linked to the data collected through this survey.

- ☐ Yes
- ☐ No

A. CIVIC-MINDEDNESS

The survey will start with a number of questions about your views towards society.

Issues in society

According to you, what are the most important issues facing society? Write down a minimum of **three** issues. Please, write your answers in English.

Thematic knowledge

How would you rate your knowledge in the following areas?

	Very poor	Below average	Average	Above average	Excellent
1. The definitions and individual consequences of poverty	☐	☐	☐	☐	☐
2. The developments in bio-technology and the related ethical issues	☐	☐	☐	☐	☐
3. The development of digital innovations and it's ethical consequences for society	☐	☐	☐	☐	☐
4. Current environmental problems and its implications	☐	☐	☐	☐	☐

Civic efficacy

Please indicate whether you agree or disagree with the following statements.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I can have a positive impact on social problems	☐	☐	☐	☐	☐
2. Realistically, I can do little to bring about changes in our society	☐	☐	☐	☐	☐
3. I have confidence in my ability to help others	☐	☐	☐	☐	☐
4. I can make a difference in my community	☐	☐	☐	☐	☐
5. None of us can make a difference in the lives of the less fortunate	☐	☐	☐	☐	☐

Thematic efficacy

In my own life, I think I can make a contribution to...

	No contribution							A large contribution			
	0	1	2	3	4	5	6	7	8	9	10
1. Solutions to reduce poverty	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. The debate on ethical questions concerning bio-technology	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Societal challenges through the application of digital innovations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Solutions to environmental problems	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Civic behavior

In the last 12 months, did you participate in any of the following activities outside of your education?

	Yes	No
1. Talk to others about your views on political or social issues	☐	☐
2. Sharing, Liking or commenting on another person's online post regarding a political or social issue (e.g. on Facebook, Twitter, YouTube or news websites)		
3. Following news channels on social media or using a news app on your phone	☐	☐
4. Posted a recommendation, suggestion or rating on an online platform so others can benefit from it	☐	☐
5. Sign an (online) petition	☐	☐
6. Take part in a peaceful march or rally, a sit-in or an occupation	☐	☐
7. Be a member of an organization for a social, political, cultural or environmental cause	☐	☐
8. Volunteer for a social, political, cultural or environmental cause	☐	☐
9. Donate money to charities (e.g. cash giving, bank transfer, online donations, crowdfunding)	☐	☐
10. Donate any of your belongings to charities (e.g. clothes, shoes, furniture).	☐	☐
11. Participate in an event to raise money for charities (e.g. running, cycling, swimming for a good cause)	☐	☐
12. Share or lend any of your belongings to help someone you don't know personally	☐	☐
13. Participate in a student association	☐	☐
14. Vote for student board elections	☐	☐
15. Read campus magazines (e.g. AdValvas)	☐	☐
16. Participate in university activities outside class (e.g. debates, film festivals, international trips)	☐	☐

Environmental-friendly attitude

How environmentally aware do you consider yourself?

- ☐ Not aware at all
- ☐ Not so aware
- ☐ Somewhat aware
- ☐ Aware
- ☐ Very aware

Environmental-friendly consumption

How often do you eat meat or fish each week?

- ☐ Every day meat or fish
- ☐ Flex - 2 or 3 times a week
- ☐ Vegetarian – never
- ☐ Vegan - never and I don't eat dairy or eggs

Environmental-friendly behavior

What kind of waste do you separate?

- ☐ Plastic
- ☐ Paper
- ☐ Glass
- ☐ Organic waste
- ☐ Batteries
- ☐ Electronics
- ☐ Textiles
- ☐ None

Life goals 1

Four individual goals are mentioned below. If you have to choose from those four, which goal do you find most important and which one the least important? And which goals are second and third? You can select the answers in the order of importance. Please first select the answer of the goal you find most important.

1. Creating artistic work (writing, painting, music, decorating, etc.)
2. Being able to afford the things I like
3. Having a large income
4. Developing a meaningful philosophy of life

Life goals 2

Another set four individual goals are mentioned below. Again, if you have to choose from those four, which goal do you find most important and which one the least important? And which goals are second and third? You can select the answers in the order of importance. Please first select the answer of the goal you find most important.

1. Being able to find steady work
2. Having leisure time to enjoy my own interests
3. Possessing high-quality and nice goods (clothes, car, house, furniture etc.)
4. Discovering new ways to experience things

Social trust

Generally speaking, would you say that you can't be too careful in dealing with people, or that most people can be trusted? Please give your answer on a scale from 1 (can't be too careful) to 10 (most people can be trusted).

- ☐ Can't be too careful
- ☐ Most people can be trusted

Social distance

Various groups of people are listed below. Please indicate on a scale from 1 to 10 to what extent it is acceptable to you to have that kind of people as your neighbors.

	Not acceptable								Acceptable	
	1	2	3	4	5	6	7	8	9	10
1. High-class business people	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. People of a different religion	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. People with a different ethnic background	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Low-class people	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. People who speak a different language	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. Heavy drinkers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. Drug addicts	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Diversity scale

Would you like to indicate whether you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I am able to understand why people think differently than I do	☐	☐	☐	☐	☐
2. I find it more difficult to work in group with diverse people than in a group with people who are like me	☐	☐	☐	☐	☐
3. I find it easy to discuss controversial issues	☐	☐	☐	☐	☐
4. It's hard for me to make friends with people who have different beliefs than me	☐	☐	☐	☐	☐
5. I don't like it when someone disagrees with me	☐	☐	☐	☐	☐
6. I like to learn how others think about social and ethical issues, even if their views are very different from mine	☐	☐	☐	☐	☐
7. I like to participate in a diverse class because it helps me to develop new skills and approaches	☐	☐	☐	☐	☐

B. ACADEMIC ENGAGEMENT

The following questions concern your studies and study environment at VU Amsterdam.

Sense of university belonging

I feel proud of belonging to VU Amsterdam.

- ☐ Absolutely untrue
- ☐ Mostly untrue
- ☐ Can't say true or false
- ☐ Mostly true
- ☐ Absolutely true

Interest in study activities

How much do each of the following study activities and assignments interest you?

	Not interesting at all	Slightly interesting	Moderately interesting	Very interesting	Extremely interesting	Not applicable
1. teacher lectures	☐	☐	☐	☐	☐	☐
2. discussions and debates (for example during seminars)	☐	☐	☐	☐	☐	☐
3. individual readings	☐	☐	☐	☐	☐	☐
4. individual writing assignments	☐	☐	☐	☐	☐	☐
5. research projects	☐	☐	☐	☐	☐	☐
6. lab assignments	☐	☐	☐	☐	☐	☐
7. group projects	☐	☐	☐	☐	☐	☐
8. giving presentations and speeches	☐	☐	☐	☐	☐	☐
9. internship or traineeships	☐	☐	☐	☐	☐	☐

Time use

About how many hours do you spend in a typical 7-day week doing the following? (If you don't know the number of hours exactly, please provide a reasonable estimate)

	Hours
1. Being in class (lectures, seminars, practicums etc.)	___
2. Following online lectures	___
3. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	___
4. Participating in student activities outside of your study like study associations, campus publications, student board etc.	___
5. Internship or traineeship	___
6. Paid work	___
7. Volunteer work	___
8. Caring for a family member or friend who is physically or mentally ill or disabled. Examples are helping with household chores and keeping someone company.	___
9. Following the news offline (newspaper, TV news)	___
10. Social media (Facebook, Instagram, Twitter etc.)	___

Care

Please indicate whether you provide care for the following persons.

- ☐ Father
- ☐ Father in law
- ☐ Mother
- ☐ Mother (in law)
- ☐ Brother
- ☐ Sister
- ☐ Grandfather
- ☐ Grandmother
- ☐ Friend or acquaintance
- ☐ Roommate
- ☐ Other person

ABM excitement

How excited are you to participate in the A Broader Mind Course?

- ☐ Not excited at all
- ☐ Slightly excited
- ☐ Somewhat excited
- ☐ Very excited
- ☐ Extremely excited

ABM importance

How important do you consider the A Broader Mind Course as a part of your personal development?

- ☐ Not important at all
- ☐ Slightly important
- ☐ Somewhat important
- ☐ Very important
- ☐ Extremely important

Academic and Social Interaction

Please indicate to what extent you agree with the following statements regarding VU Amsterdam.

	Absolutely untrue	Mostly untrue	Can't say true or false	Mostly true	Absolutely true
1. Fellow students invite me to work together on study tasks	☐	☐	☐	☐	☐
2. Peer students are involved with me					
3. Fellow students are interested in me	☐	☐	☐	☐	☐
4. It is difficult to find a group of students to collaborate with	☐	☐	☐	☐	☐
5. I talk about my personal situation with teachers	☐	☐	☐	☐	☐
6. Teachers are not interested in my personal situation	☐	☐	☐	☐	☐
7. Teachers know my name	☐	☐	☐	☐	☐
8. Teachers tell me about themselves	☐	☐	☐	☐	☐
9. I learn a lot from the teachers at this institution	☐	☐	☐	☐	☐
10. Teachers have time to answer questions	☐	☐	☐	☐	☐
11. Teachers are never available for their students	☐	☐	☐	☐	☐
12. My contacts with teachers have a positive influence on my academic performance	☐	☐	☐	☐	☐

C. PROFESSIONAL ORIENTATION

Now, we would like to ask a few questions about how you see your professional career after your studies.

Type of organization

For what type of organization would you like to work after your studies? You may select more than one answer.

- ☐ Government
- ☐ Non-profit
- ☐ Profit
- ☐ Social enterprise (a for-profit firm with a social, environmental purpose, like Fairphone or Tony's Chocolonely)

Entrepreneur intentions

Do you expect to start up a new firm or to take over an existing firm within the next fifteen years?

- ☐ Definitely not
- ☐ Probably not
- ☐ Possibly
- ☐ Probably
- ☐ Definitely

Work abroad

Do you consider to work abroad?

- ☐ Definitely not
- ☐ Probably not
- ☐ Possibly
- ☐ Probably
- ☐ Definitely

Future job

What kind of job do you expect to have when you are about 30 years old? Please, write the job title.

Job preferences

Some job characteristics that you may find in a paid job are mentioned below. Which characteristics do you find most important and which ones the least important in your future job? Please, rank the job characteristics in order of importance, where the first characteristic is the most important to you.

1. Secure job
2. Good opportunities for advancement
3. Job that is useful to society
4. Job that allows you to work independently
5. High income
6. Good relations with your colleagues
7. Easy work load
8. Interesting job

Labor Market Preparation

Please, indicate whether you agree or disagree with the following statement. My education at VU Amsterdam is a good preparation for the labor market.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Agree nor disagree
- ☐ Agree
- ☐ Strongly agree

Labor Market Preparation – Good

What aspects of your education at VU Amsterdam benefit your preparation for the labor market?

Labor Market Preparation – Bad

And what aspects of your education at VU Amsterdam could be improved to better prepare you for the labor market?

Service Motivation

Would you like to indicate whether you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Doing well financially is definitely more important to me than doing good deeds.	☐	☐	☐	☐	☐
2. I would say that the main purposes of work are to improve society through my career.	☐	☐	☐	☐	☐
3. The education and knowledge that I gain should be used to serve others.	☐	☐	☐	☐	☐
4. It is important that my personal values and beliefs will be well integrated and aligned with my work and career.	☐	☐	☐	☐	☐
5. I feel a deep conviction in my career goals to achieve purposes that are beyond my own self-interest.	☐	☐	☐	☐	☐

Responsible employer

How important is it for you to work for an employer who is socially and environmentally responsible?

- ☐ Not important at all
- ☐ Not so important
- ☐ Moderately important
- ☐ Quite important
- ☐ Very important

D. PERSONALITY

The following questions concern your personality and your meaning in life.

Life satisfaction

In general, how satisfied are you with your life? Please rate your life satisfaction on a scale from 0 (completely dissatisfied) to 10 (completely satisfied).

- ☐ 0 Completely dissatisfied
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10 Completely satisfied

Subjective physical health status

How is your **physical** health in general? Would you say it is very good, good, fair, bad or very bad?

- ☐ very good
- ☐ good
- ☐ fair
- ☐ bad
- ☐ very bad

Subjective mental health status

How is your **mental** health in general? Would you say it is very good, good, fair, bad or very bad?

- ☐ very good
- ☐ good
- ☐ fair
- ☐ bad
- ☐ very bad

Perceived pressure

How often do you have the feeling you cannot cope with all the things that you have to do?

- ☐ Never
- ☐ Seldom
- ☐ Sometimes
- ☐ Often
- ☐ Very Often

Big Five Personality Domains

Now you see a number of statements about how you see yourself. For each statement, select the answer option that fits best.

I see myself as someone who:

	Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
1. Worries a lot	☐	☐	☐	☐	☐	☐	☐
2. Gets nervous easily	☐	☐	☐	☐	☐	☐	☐
3. Is relaxed, handles stress well	☐	☐	☐	☐	☐	☐	☐
4. Is talkative	☐	☐	☐	☐	☐	☐	☐
5. Is outgoing, sociable	☐	☐	☐	☐	☐	☐	☐
6. Is reserved	☐	☐	☐	☐	☐	☐	☐
7. Is original, comes up with new ideas	☐	☐	☐	☐	☐	☐	☐
8. Values artistic, aesthetic experiences	☐	☐	☐	☐	☐	☐	☐
9. Has an active imagination	☐	☐	☐	☐	☐	☐	☐
10. Is sometimes rude to others	☐	☐	☐	☐	☐	☐	☐
11. Has a forgiving nature	☐	☐	☐	☐	☐	☐	☐
12. Is considerate and kind to almost everyone	☐	☐	☐	☐	☐	☐	☐
13. Does a thorough job	☐	☐	☐	☐	☐	☐	☐
14. Tends to be lazy	☐	☐	☐	☐	☐	☐	☐
15. Does things efficiently	☐	☐	☐	☐	☐	☐	☐

Meaning in life

Please take a moment to think about what makes your life feel important to you. Respond to the following statements as truthfully and accurately as you can, and please remember that there are no right or wrong answers. Please answer according to the scale below.

	Absolutely untrue	Mostly untrue	Somewhat untrue	Can't say true or false	Somewhat true	Mostly true	Absolutely true
1. I understand my life's meaning.	☐	☐	☐	☐	☐	☐	☐
2. I am searching for meaning in my life.	☐	☐	☐	☐	☐	☐	☐

Sense of place

To what extent do you feel yourself as belonging to:

	Very weak										Very strong	
	0	1	2	3	4	5	6	7	8	9	10	
1. The VU campus	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
2. The neighborhood I live in	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
3. The town I live in	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
4. Another town, namely _____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
5. The Netherlands	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
6. Europe	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
7. The world	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

General self-efficacy

To what extent do the following statements apply to you?

	Absolutely untrue	Mostly untrue	Can't say true or false	Mostly true	Absolutely true
1. It is easy for me to stick to my aims and accomplish my goals.	☐	☐	☐	☐	☐
2. I am confident that I could deal efficiently with unexpected events.	☐	☐	☐	☐	☐
3. I know how to handle unforeseen situations.	☐	☐	☐	☐	☐
4. I can remain calm when facing difficulties because I can rely on my coping abilities.	☐	☐	☐	☐	☐
5. No matter what comes my way, I'm usually able to handle it.	☐	☐	☐	☐	☐

Dispositional Greed

Would you like to indicate whether you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I always want more.	☐	☐	☐	☐	☐
2. Actually, I'm kind of greedy.	☐	☐	☐	☐	☐
3. As soon as I have acquired something, I start to think about the next thing I want.	☐	☐	☐	☐	☐
4. My life motto is "more is better"	☐	☐	☐	☐	☐
5. I can't imagine having too many things.	☐	☐	☐	☐	☐

Empathic concern

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate option on a scale from 1 (Does not describe me well) to 5 (Describes me well).

	Does not describe me well				Describes me well
	1	2	3	4	5
1. I often have tender, concerned feelings for people less fortunate than me.	☐	☐	☐	☐	☐
2. When I see someone being taken advantage of, I feel kind of protective toward them.	☐	☐	☐	☐	☐
3. When I see someone being treated unfairly, I feel very much pity for them.	☐	☐	☐	☐	☐
4. I would describe myself as a pretty soft-hearted person.	☐	☐	☐	☐	☐

E. BACKGROUND

Finally, we would like to ask some background questions about you. Please note that you can always refuse to answer specific questions.

Housing

What is your current housing situation?

- ☐ I live with (one of) my parents and/or caregivers
- ☐ I live in a student house at Uilenstede
- ☐ I live in a shared (student) house at a different place
- ☐ I live on my own
- ☐ I live together with my partner
- ☐ Other, namely _____
- ☐ Do not want to say

Mother's educational level

What is the highest level of education your mother successfully completed? If this were abroad, please select the most similar level of education.

- ☐ No education
- ☐ Primary education
- ☐ Lower vocational education (LBO, VBO)
- ☐ Secondary vocational education (MAVO, ULO, MULO)
- ☐ Senior secondary vocational education (MBO)
- ☐ Higher secondary education (HAVO, MMS)
- ☐ Higher secondary preparatory scholarly education (VWO, HBS, atheneum, gymnasium)
- ☐ Higher professional and university education (HBO, kandidaats, bachelor)
- ☐ University education (doctoraal, master)
- ☐ Postdoctoral education
- ☐ I don't know

Father's educational level

What is the highest level of education your father successfully completed? If this were abroad, please select the most similar level of education.

- ☐ No education
- ☐ Primary education
- ☐ Lower vocational education (LBO, VBO)
- ☐ Secondary vocational education (MAVO, ULO, MULO)
- ☐ Senior secondary vocational education (MBO)
- ☐ Higher secondary education (HAVO, MMS)
- ☐ Higher secondary preparatory scholarly education (VWO, HBS, atheneum, gymnasium)
- ☐ Higher professional and university education (HBO, kandidaats, bachelor)
- ☐ University education (doctoraal, master)
- ☐ Postdoctoral education
- ☐ I don't know

Sense of place

To what extent do you feel yourself as belonging to:

	Very weak										Very strong	
	0	1	2	3	4	5	6	7	8	9	10	
1. The Netherlands	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
2. Belgium	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
3. Germany	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
4. Morocco	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
5. Turkey	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
6. Surinam	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
7. Netherlands Antilles	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
8. Another country, namely _____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Religious affiliation

To which religion do you consider yourself as belonging to?

- ☐ Roman Catholic
- ☐ Protestant
- ☐ Islam
- ☐ Judaism
- ☐ Hinduism
- ☐ Buddhism
- ☐ Other, namely _____
- ☐ No particular religion
- ☐ I am not sure whether I belong to a religion / I am agnostic
- ☐ I prefer not to answer this question

Religious participation

How often do you attend religious services, for example in a mosque, church, synagogue or temple?

- ☐ (Almost) never
- ☐ Once or a few times a year
- ☐ Once a month
- ☐ Twice or three times a month
- ☐ Once a week
- ☐ More often than once a week
- ☐ I prefer not to answer this question

Future

We would like to ask you one final question.

If you think about yourself when you are retired, when would you be satisfied? Elaborate on several aspects of your life. Please, describe this in a minimum of four lines.

COMMENTS

You have reached the end of the questionnaire. This survey is part of the A Broader Mind program, alongside the Course you are currently participating in. At the end of the A Broader Mind Course in May, we will again ask you to participate in this survey. In this way, it becomes clear how the attitudes, values, skills and behaviors have changed among students who participate in A Broader Mind.

We would like to hear your suggestions about this survey. Did you find things unclear, or did you miss certain aspects that you find important when thinking about 'A Broader Mind'?

If you have any remarks or suggestions about this survey, please enter them below.

THANK YOU

Thank you for your participation in the A Broader Mind Longitudinal Survey. If you have any questions about this study, you can get in touch by sending an email to abmls@vu.nl.