OfLA Project
2018-1-UK01-KA203-048090

O9 – Evaluation of the second cycle of studies

Interventions at Arteveldehogeschool

RESPONSIBLE PARTNER:
ARTEVELDE UNIVERSITY OF APPLIED SCIENCES

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Output 9 – Evaluation of the second cycle of studies

These reports will map the process of data-informed advice in the second year of the study.

A1. We will confirm with the new study subjects how we will work alongside them. This time however, we will have selected a new group of courses or degree programs to work with, or will be testing a new approach to using institutional data/ learning analytics in the advising and supporting process. This may include group tutorials, different types of alert or early warning, or advising using a particular pedagogical methodology.

A2. We will monitor and project manage the operation of the learning analytics resources.

A3. We will map how data (on each course and/or centralized) is used to firstly spot students at risk, how students are communicated to and how they are supported. Importantly, this year the reports will also include a summary of how we communicated with staff to set up the new round of interventions and challenges associated with the new cycle of interventions. The reports will also include recommendations for conducting the final cycle or research in 2020-2021.

A4. We will publish the resources to the website. AHS will take the overall responsibility for editing together the reports.

This output is a result of the European Erasmus+ project OfLA (2018-1-UK01-KA203-048090)

Co-funded by the Erasmus+ Programme of the European Union

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1. Executive Summary

Through this year's two interventions we wanted to examine how to communicate with students at risk in the most efficient and effective way. We detected students at risk through the FIT test and attendance monitoring within the course English for Business. Through the first, we spotted those students who were having more difficulty adapting to higher education – both socially and academically –, through the second those students who were absent at intermediate test moments. The two groups are linked to poorer study success, lower examination marks and early withdrawal. In order to see which communication strategy would yield the best results, we communicated the concerns based on the observations to the students in different ways. We divided the students into groups and then sent them emails of which the content slightly differed: with or without personal approach, reference to predictive learning analytics and links to very concrete hints and tips that could help students improve their situation. Subsequently, we gave them an online and a written questionnaire, asked how they perceived the communication and statistically examined its effectiveness.

We found out that communication on being at risk was generally appreciated by the students – they were motivated by it and experienced positive and activating feelings. In addition, they preferred email over communication through the more impersonal student tracking system – a platform that until then communicated the results of the FIT test –, and individual communication over group communication. Clear references to concrete guidance services or hints and tips were not always seen as an added value or an incentive for more action. References to data, on the other hand, which provided additional evidence that the student was at risk, did work, but only in group communication.The needs of students regarding communication varied according to their programme. It is therefore adviced to keep the students' background and personal experiences in mind when contacting them about their precarious study behavior and its consequences.

2. Introduction

2.1 Needs

Artevelde University of Applied Sciences not only has an extensive range of well-developed and highly appreciated guidance services for students, the institute has also begun to use data to detect those students who would benefit most from these services. However, not every student in need of help ends up well.

Last year's interviews with staff members (cf. O6/4.3-4.5) show that students still experience a high treshold to seek help. They do not always find their way in the extensive range of services and often take action too late. Staff members try to respond to this problem by actively reaching out to students. They are well aware that some students find themselves in a precarious situation, they even attempt to contact them to start a conversation about their concerns or try to refer them to the appropriate support systems.

Nevertheless, some staff members remain uncertain about their approach. They want to know which communication strategy yields the best results and would like their conversation to be underpinned by objective data on study success. Students, on the other hand, indicate that they have a strong desire for clear, straightforward and timely communication, something that they believe is currently (in some cases) lacking (cf. O6/5.2).

2.2 Objectives

This year's interventions aim to respond to these needs of staff members and students to strengthen the link between early warning and action. We want to examine:

Objective 1 how the institution and its staff members can **actively reach out to students**, especially those at risk, in order to support them better.

Objective 2 which conditions **communication** with students must meet to ensure that students are made sufficiently aware of their situation, that they are stimulated to take action to improve and that they understand the importance of their actions.

Objective 3 how **data and learning analytics** can be used in communication with students.

2.3 'Onwards' from Learning Analytics

There a several groups of students who are defined as 'students at risk' by experts in the field (cf. O6/4.2). This year's interventions focus on two of these: (1) students whose adaptation to higher education is less successful and (2) students who are absent during class. Research shows that both poorer academic and social integration and absenteeism have a negative effect on study success and are linked to early withdrawal (see further; Tinto 1993).

The first group can be detected by the FIT test, an instrument designed in collaboration with the University of Antwerp. First-year students – from all study programmes except one (cf. O6/3) – complete an online questionnaire a few weeks after the start of the academic year (November or February) about their experiences in higher education. The FIT test measures their study effort, their social adaptation, their adjustment to new ways of teaching and their academic self-image. Subsequently, students can use their personal page on the student tracking system ('studentenvolgsysteem' or 'SVS'; cf. 06/2 & appendix 1) to find out how they have scored on each component, what that actually means, how their scores compare to those of other first-year students and which hints and tips can help them to improve their performance. A few weeks later, the results are discussed with a study coach, who monitors students' study progress and provides academic support by fostering study skills, reflection skills, study motivation and study commitment. The sessions take place individually, in group or in a combination of both. One programme, that also has an individual conversation on the results, even adds a second individual conversation to discuss the student's attitudes.

For the second group, the group of students who attended less, we worked with the course English for Business. English for Business is a semester course of the first year within the programme Bachelor in Business Management (BEM). The course is organized in each semester. 771 students were enrolled during the first semester (September-January), the final data set however contains 700 students. In this course, students are offered four 'integration classes' which consist of a digital vocabulary test and a group presentation. There is a mock integration class after two weeks to prepare students. The classes are in the course to help students to prepare for the examination and to encourage them to study regularly. With the tests and presentations, students can earn up to 20% of their credit. The digital vocabulary tests allowed us to identify who was present during the integration classes and whow as not.

3. Methodology

3.1 Interventions

The interventions aim to examine how staff members, when noticing or consulting risk alerts, can intervene in a timely, active and effective manner (Obj. A) and to determine which communication format is best used in order to provide the best possible guidance (Obj. B & C).

To achieve this, 500 first-year students of three programmes who completed the FIT test and 771 first-year students who followed the course English for Business were contacted by email, within 48 hours after the observation (the completion of the FIT test or the attendance in the mock and first real integration class). They were informed on the alert (the score of the FIT test or the attendance), the interpretation and the intention, respecting the criteria that emerged from the literature review (cf. O4/4-6).

The FIT results were previously only shared through the student tracking system ('studentenvolgsysteem' or SVS), a platform students are not very familiar with. Up to now students did not receive an alert when the results became available. In the English for Business course, this communication took place for the first time. In order to find out which communication format has the most effect, students received different versions of the FIT and the attendance email.

3.2 Communication FIT results

1) Conditions

For the FIT study, the students came from three programmes – 137 from the Bachelor of Young Child Pedagogy programme ('Pedagogie van het Jonge Kind' or PJK), 170 from the Bachelor of Occupational Therapy programme ('Ergotherapie' or ERG) and 193 from the Bachelor of Primary Education programme ('Bachelor in Onderwijs, Lager Onderwijs' or OLO). All students are part of a class group of around 40 students and have their own study coach. The class groups were randomly divided into three groups. Students of all groups have access to their results and the hints and tips through the student tracking system (SVS).

Diagram 1: Conditions FIT communication

- The first group received an additional email with the results: their personal scores, the interpretation of these scores and the comparison with their peers (see appendix 3.1; further 'basic mail').
- The second group received an additional email with some hints and tips, besides the results, their personal scores, the interpretation of these scores and the comparison with their peers (see appendix 3.2; further: 'tips mail').
- The third group was used as a control group and did not receive an email (see appendix 1; futher: 'SVS communication'). The students of this group could consult their results through the student tracking system, as before. The other two groups also had access to the platform. That means the students of the three groups received the same information but in different stages and in different ways.

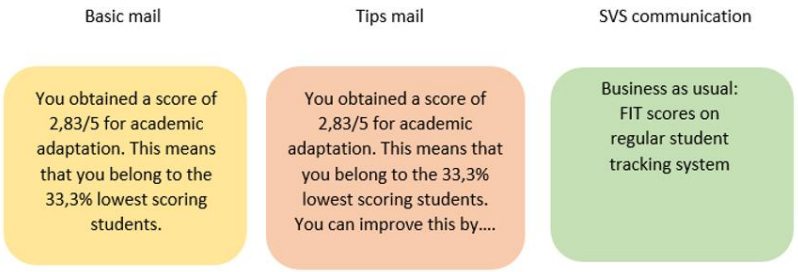

Diagram 2: Conditions FIT communication, example

2) Research data & analysis

One week after the communication of the results and before the conversation with the study coach, which in the three programmes takes place in group (see appendix 2.1), the students received a written questionnaire. This questionnaire consisted of three parts, arranged randomly.

- [F1.1] In the first part, questions were asked about the students' opinion regarding the FIT communication, i.e. the added value of the FIT test, the way in which the results were communicated (plain, clear, extensive...) and the extent to which this information prepared them for the conversation with the study coach.
- [F1.2] In the second part, questions were asked about perception of and how they deal with the hints and tips.
- [F1.3] The third part – based on the questionnaire of Lot Fonteyne (2017; based on Donche e.a. 2012, Haratsis e.a. 2015) – examined whether students were inclined to adjust their behaviour as a result of the FIT scores.

Students answered the questions by means of a five-point Likert scale: strongly disagree - disagree - neutral - agree - strongly agree. The questionnaire was completed anonymously, only referencing the class groups to determine the condition the students were in.

Initial analysis of the answers from the PJK students, the first group, showed the first part of the questionnaire (cf. F1.1, above) did not have a good factor structure, allowing only an analysis at item level. In order to achieve better results, the first part of the questionnaire was extended for the OLO and ERG students (cf. appendices 5.1 & 5.2) and – as a compensation – fewer questions were included in the third part (cf. F1.3, above).

[F1.1] For the first part of the questionnaire, the analysis of the PJK results was done at item level only, as noted above. An ANOVA analysis checked whether the differences between the conditions were statistically significant. Additional post hoc analyses were carried out to see which conditions had specific differences. For ERG and OLO it was possible to carry out an exploratory factor analysis (EFA), because of the good factor structure. EFA is used to identify the structure of the relationship between the variable and the respondent. We used a maximum likelihood method, rotation with promax kappa 4 and subsequently performed ANOVA and post hoc analyses to take a close look at the conditions.

[F1.2] For the second part of the questionnaire, we first checked whether there was a difference in how often students from the three groups had read the hints and tips. We used crosstabs to calculate the descriptive results and the Pearsons' chi square to see if the differences were significant. Afterwards, ANOVA analyses were performed to see if there were significant differences between the conditions regarding the students' experiences of the hints and tips and post hoc analyses to gain more insight into the specific differences.

[F1.3] From the third part of the questionnaire, only the questions answered by all the students were analysed. Consequently, the additional PJK questions were not taken into account (see appendix 5.3, red). An EFA analysis was performed using a maximum likelihood method, rotation with promax kappa 4, ANOVA analyses were conducted to determine whether there was a significant difference between the conditions and post hoc analyses were carried out to see which conditions had specific differences.

3) Communication with staff members

The FIT intervention study was first announced in a meeting with the study coaches of all programs. An overview of the intervention was provided via mail after the meeting. The study coaches of the three participating programs were further briefed individually by a member of the project team, who is also an expert on study coaching and on the FIT test. Questions could be asked at any time by email or in person to the member of the project team.

3.3 Communication attendance English for Business

1) Conditions

For the attendance survey, we worked with the course English for Business. The students are divided into 22 class groups, each between 35 and 45 students (775 students from the programme BEM). The class groups were randomly divided into four conditions. Each student, absent or present, was emailed twice: a first time after the mock integration class and a second time after the first, real integration class (see appendix 2.2). The emails were sent to boost attendance and consequently performance on the course.

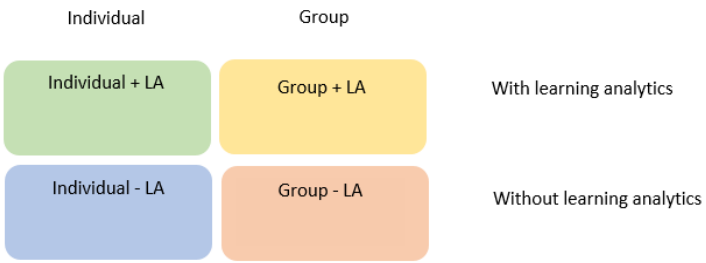

Diagram 3: Conditions attendance communication

The four conditions were based on two dimensions.

- The first dimension is ‘individual’ versus ‘group’. 'Individual' means that the students who received the email were addressed with their first name (see appendices 4.1 & 4.2). ‘Group’ means that the students were addressed generally ('dear student') (see appendices 4.3 & 4.4). In the individual conditions, students were informed about their own presence or absence, in the group condition about how many students from their class group were present or absent.
- The second dimension is ‘with learning analytics’ versus ‘without learning analytics’. ‘Learning analytics’ refers to the data that were included as additional, statistical evidence how absenteeism negatively correlated with examination results (see appendices 4.2 & 4.4).

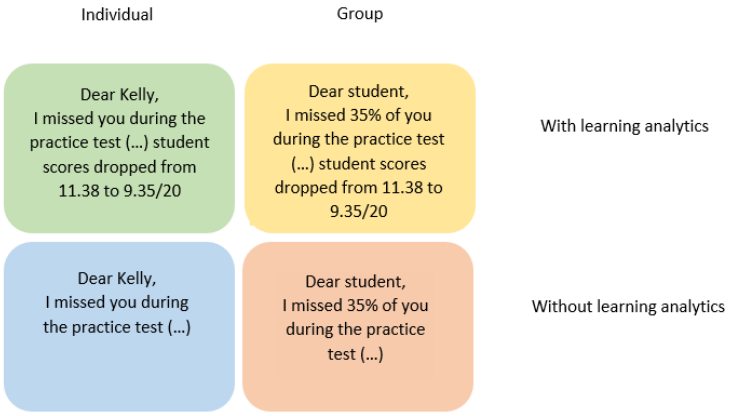

Diagram 4: Conditions attendance communication, example

Research of the 2018-2019 results showed that examination marks decreased with on average 1 point per missed integration class. Average scores for students who attended all classes was 11.38/20. Students who missed more than one class score below the pass/fail grade. Attendance explains about 15.5% in the variance of the grades (R^2 = 0.155). In this year, the first integration was not a practice run, but already included a scored test and a presentation.

Overall average	10.17/20
Average score with attendance at all integration	11.38/20
Average score with attendance at all but 1 integration classes	10.37/20
Average score with attendance at all but 2 integration classes	9.35/20
Average score with attendance at all but 3 integration classes	8.34/20
Average score with attendance at all but 4 integration classes	7.26/20
Average score with attendance at no integration classes	6.24/20

Diagram 5: Examination marks - attendance 2018-2019

2) Research data & analysis

Once the course was completed, we linked the four conditions (the different email versions) to the total attendance and to the examination marks in order to measure their effect.

[F2.1] We performed a One-way ANOVA analysis to see whether there was a difference in how often students from the different conditions were present during the integration classes (total presence = dependent variable; conditions = factor).

[F2.2] Subsequently, we checked whether there was a significant difference in the students' examination marks based on the condition to which they belonged. We did this by means of an ANCOVA analysis (examination marks = dependent variable; conditions = factor; totale presence = covariate).

[F2.3] Via a regression analysis (univeriate regression), we checked whether there was a relationship between attendance and examination results for this academic year as well (examination marks = dependent variable; totale presence = independent variable).

[F2.4] Finally, at the end of the semester the students were presented a short questionnaire in which they were asked about their perception of the emails. This questionnaire was part of a more general (online) teacher evaluation and was completed by 389 students (anonymously, per class group). The students were asked to score on a Likert scale (strongly disagree - disagree - agree - strongly agree) to what extent the emails:

- [Q1] made them feel personally addressed,
- [Q2] motivated them to come to class,
- [Q3] put more pressure on them to come to class,
- [Q4] made them feel more aware of the positive effect their presence could have on their chances of succeeding.

In addition, [Q5] the students were asked to indicate which feeling(s) the email evoked. Eight emotions were offered as options. Each emotion can be categorized along two dimensions: activating/passive and positive/negative.

	Positive	Negative
Activating	motivated energized	annoyed concerned
Passive	reassured relaxed	confused demotivated

Diagram 6: Emotions grid

ANOVA analyses were performed to see if there were significant differences in how the different conditions experienced the emails and post hoc analyses were carried out to see what differences there were.

3) Communication with staff members

The lecturer group of English for Business consisted of nine staff of which one staff is also part of the project team. The lecturer groups communicates on a regular basis via meetings and email. This intervention was first communicated at the beginning of the semester during the kick-off meeting and an overview of the intervention was provided via mail after the meeting. Questions could be asked via email or in person to the member of the project team. Replies by students to the lecturers on the emails were forwarded to the member of the project team if the lecturer did not know the answer. During each subsequent meeting, a progress report was given and reactions from the teaching staff were gathered.

4. Results

4.1 Findings FIT intervention

1) Findings 1.1: FIT communication

We begin by discussing the results of **the PJK students**. Regarding the first part of the questionnaire, only an analysis on item level was possible and only for a number of questions (see 'Q' below) the differences between the conditions were significant:

- [Q4] *The feedback on my FIT results could be more extensive.*
  ANOVA results show that there is a significant difference between the groups for this item ($F(2,97) = 6.56$, $p = .002$). Through post hoc Least Significant Difference analysis (LSD) we know that students who received the tips email score significantly lower than students who received the basic email ($p = .04$) or the SVS communication ($p = .001$). There was no significant difference between the SVS communication and the basic email ($p = .23$).
- [Q5] *I was given clear information on how to deal with my points of improvement that emerged in the FIT test.*
  ANOVA results again show a significant difference for this item ($F(2.97) = 5.98$, $p = .004$). Students in the tips email condition ($p = .002$) and basic email ($p = .005$)

condition score significantly higher on this question than students in the SVS communication condition. However there is no significant difference between the tips email students and the basic email students (p = .91).

- [Q8] *The feedback I received on my FIT results gives me a clear picture of my strengths and points of improvement.*
  ANOVA results again show a significant difference (F(2.99) = 4.67, p = .01). Students in the tips email condition (p = .004) and basic email condition (p = .02) score significantly higher on this question than students in the SVS communication condition. However, there is again no significant difference between the tips email students and the basic email students (p = .76).
- [Q9] *I have received sufficient feedback on my FIT results to feel prepared for the conversation with the study coach.*
  ANOVA results again show a significant difference (F(2.99) = 4.03, p = .02). Students in the tips email condition score significantly higher on this question than students in the SVS condition (p = .008).
- [Q10] *The communication about my FIT results could be more extensive to make me feel better prepared for the conversation with the study coach.*
  ANOVA results again show a significant difference (F(2.99) = 10.52 , p < .001). Students in the basic email condition score significantly higher on this question than students in the tips email condition (p = .001). In addition, students in the SVS communication condition score significantly higher than students in the tips mail condition (p < .001). This means that students who received the SVS communication or the basic mail more often feel that the communication about the FIT test should be more extensive. Students who received an email with hints and tips experience this feeling less.

As a result of extending the questionnaire, **the ERG & OLO questionnaire** had a good factor structure. EFA results consequently reveal the presence of a 4-factor structure for the first part of the questionnaire ('scale' ('SC') below; cf. appendix 5.4). It was possible to distinguish:

- [SC1] a scale regarding the 'structure' of the FIT report, consisting of 3 items with an acceptable Cronbach's Alpha (ERG α = .60/OLO α = .63);
- [SC2] a scale indicating the 'added value' of the FIT test in general, consisting of 7 items with a high reliability (ERG α = .84/OLO α = .82);
- [SC3] a two-item scale that measures the extent to which students find the communication about the FIT extensive enough, with a good reliability for ERG and an acceptable for OLO (ERG α = .75/OLO α = .59);
- [SC4] and finally a four-item scale that measures the degree to which students felt that the FIT communication prepared them well for their conversation with the study coach, with a good reliability (ERG α = .71/OLO α = .82).

For **the ERG questionnaire**, the ANOVA analyses show one significant difference:

- [SC4] This is a difference between the conditions in terms of the degree to which students feel prepared for the conversation with the study coach (F(2,127) = 4.65, p = .01). The post hoc LSD analyses show that students from the tips email condition feel significantly better prepared than students from the basic email condition (p = .003). However, there was no significant difference between the tips email condition and SVS communication condition (p = .19).

For **the OLO questionnaire**, the ANOVA analyses showed four significant differences:

- [SC1] Regarding the structure of the results-reporting, ANOVA analyses show significant differences between the conditions (with $F(2,145) = 9.75$, $p < .001$). More specifically, post hoc LSD analyses indicate that students who received an email (with tips or without) are significantly more satisfied with the communication than students who could only access their results through SVS (respectively $p < .001$ and $p = .001$). These students indicate more often that they experienced the communication as clear, unambiguous and structured.
- [SC2] Regarding the perceived added value of the FIT, the ANOVA analyses again show significant differences between the conditions ($F(2,145) = 5.79$, $p = .004$). Post hoc analyses demonstrate that students who received a basic email attach significantly more added value to the FIT test than students who could only consult their results through SVS ($p = .001$). Surprisingly, they also appeared to score significantly higher than students who received a tips mail ($p = .007$). The addition of tips in the email does not seem to have a positive influence on the perceived added value of completing the FIT questionnaire.
- [SC3] Concerning the questions on the extensiveness of the FIT results-reporting, ANOVA analyses again show significant differences between the groups ($F(2,145) = 11.54$, $p < .001$). Post hoc analyses indicate that students who could only consult their results through SVS scored significantly lower than students who received an email (with or without tips), respectively $p = .001$, $p < .001$. Thus, students in the SVS communication condition are less satisfied and want more extensive reporting on their FIT score.
- [SC4] In terms of the degree to which students feel prepared for the conversation with the study coach, ANOVA analyses again indicate a significant difference between the three groups ($F(2,145) = 3.88$, $p = .02$). Post hoc LSD analyses more specifically show that students who received the basic mail feel significantly better prepared than students who received the tips mail ($p = .007$). This is again surprising and questions the added value of the hints and tips.

2) Findings 1.2: Hints & tips

For the second part of the questionnaire – the part which was the same for all students – the factor analysis shows one scale, where the items 'yes, I have looked at the tips' load positively and the items 'no, I have not looked at the tips' load negatively. Further analyses, however, were performed at item level.

We start with the results of **the PJK students**. First, we checked whether the tips were read more often if students received them by email, which turns out to be the case. Of the students who received the tips through SVS, only a small minority indicated to have read them, whereas for the students who received the tips by email that was about two-thirds (see appendix 5.5). These results are statistically significant (Pearsons' $\chi^2(2) = 17.08$, $p < .001$).

In addition, there are also significant differences in how the tips were experienced within the different conditions:

- Question 1: *Read the tips - I considered the tips to be sufficiently concrete.*

ANOVA results show significant differences between the conditions, with F(2,60) = 8.38, p <.001. Post hoc LSD analyses show more specifically that students in the tips email condition score significantly higher on this question than students in the basic mail condition (p <.001).

- Question 2: *Read the tips - The tips made me feel better prepared for the conversation with the study coach.*
  ANOVA results show significant differences between the conditions, with F(2,60) = 9.20, p <.001. Students in the tips email condition score significantly higher on this question than students in the basic email condition (p <.001) and the SVS communication condition (p = .04). There is no significant difference between the basic mail condition and the SVS condition (p = .45).

For **the ERG questionnaire** on the other hand, the crosstab (see appendix 5.6) and Pearsons' chi-square test show no significant differences. This means that the tips were not read significantly more often by students who received them through email than by the other two groups. Also in terms of experience, the ANOVA analyses show no significant differences between the three conditions.

For **the OLO questionnaire**, there are again significant differences. Here, the descriptive results show that in the SVS communication condition only a very small minority reads the tips – as was the case with the PJK students – while in the tips mail condition, this is almost half (cf. appendix 5.7). These results also appear to be statistically significant, based on Pearsons' chi-square test ($\chi^2(2) = 9.06$, p = .011).

However, the experience of the OLO students is different from that of the PJK students (cf. above Q2):

- Question 2: *Read the tips - The tips made me feel better prepared for the conversation with the study coach.*
  ANOVA results show significant differences between the groups (F(2,38) = 11.68, p < .001), but here it appears that students from the SVS communication group who read the tips felt more prepared for the conversation than students who consulted the tips through email. A possible explanation is that students who received the tips through email experienced reading the tips as rather 'normal/ self-evident', while students who searched in SVS felt that they were very specially preparing themselves for the conversation.
- Question 3: *Didn't read the tips - ...because I couldn't find them.*
  Students in the SVS communication condition indicate not reading the tips significantly more often than students in the tips mail condition, because they did not know where to find the tips (F(2,102) = 18.30, p <.001).
- Question 4: *Didn't read the tips - ... because I don't need them.*
  Students who received the tips by email stated significantly more often that they did not read the tips because they did not need them than students in the SVS communication condition (p <.001) or students who received the basic mail (p = .001), with F(2,102) = 9.01, p <.001.
- Question 5: *Didn't read the tips - ... because I'm not interested.*
  Students who received the tips by email indicated significantly more often not to have read the tips because they were not interested than students in the SVS communication condition (p <.001) or students who received the basic mail (p <.001), with F(2,102) = 14.43, p <.001.

3) Findings 1.3: Adaptation

For the third part of the questionnaire, the EFA results show a two-factor structure for the questions regarding willingness to adapt behaviour. The results indicated the presence of a scale 'willingness to

adapt one's own behaviour' and 'willingness to receive external support'. Both scales appear to be very reliable:

- scale 1 PJK α = .82, ERG α = .83 & OLO α = .88
- scale 2 PJK α = .85, ERG α = .86 & OLO α = .93

Further ANOVA analyses of **the PJK questionnaire** indicate the absence of significant differences in willingness to adapt one's own behaviour ($F(2.99) = 1.12$, $p = .33$) and willingness to receive external support ($F(2.99) = 2.52$, $p = .08$). However, post hoc LSD analyses indicate significant differences between specific subgroups. Students who received the tips mail indicate to be significantly more willing to participate in external guidance initiatives than students who could only access their results through SVS ($p = .041$).

For **the ERG and OLO questionnaires**, it is not only the ANOVA analyses that show no significant differences, but also the post hoc analyses. For these students, therefore, the form of communication (SVS versus email) has no influence on their willingness to adapt their own behaviour or to seek support.

4.2 Findings English for Business intervention

1) Findings 2.1: Effect on presence

Results of the one-way ANOVA show a significant difference in the presence of students depending on their condition, with $F (3.699) = 4.98$, $p = .002$. Post hoc analyses show, more specifically, that students in the individual condition without learning analytics (further 'LA') were significantly more present than students in the group condition with LA ($p = .002$). In addition, the results show that students in the individual condition with LA were significantly more present than students in the group condition with LA ($p = .005$) and that students in the group condition without LA were more present than students in the group condition with LA ($p = .001$). Finally, students in the individual condition with LA appear to score significantly lower than students in the individual condition without LA ($p = .002$).

Overall attendance rose remarkably after the first communication, but dropped again after the second (see appendix 6.1). During the mock integration test, more than one third of the students was absent. This was the highest number for all classes considered. For the first real integration class, absenteeism dropped to 13.7%. Overall absence doubled for the second integration class to 27.9% and eventually stabled out at around 80%. In other words, students who received emails without learning analytics turned out to attend classes significantly more than students who did receive the learning analytics information, both for the individual and the group condition. Sending personalized emails appears to be related to attendance. In the non-LA condition, students that were addressed personally score significantly better than students that were addressed as a group. Furthermore, the first communication seems to be the most valuable.

2) Findings 2.2: Effect on examination mark

ANCOVA analyses were carried out to determine whether there are significant differences in the examination results of the various conditions. The results show that there are indeed differences in the results of the four groups.

These differences can be attributed to presence, the difference between total integration classes attended ($F(1,699) = 510.05$, $p <.001$), rather than to other differences between the conditions ($F(3,699) = 2.21$, $p = .086$; cf. appendix 6.2). In other words, there are significant differences in the examination marks of the students but these can be explained by a difference in attendance in the integration classes.

The descriptive analyses show that students attended on average 3.82/5 sessions (SD = 1.32). The average examination score is 10.08/20, with a standard deviation of 3.50. Univeriate regression – with $F(1.699) = 535.28$, $p < .001$ – shows a significant relationship between the presence of students and their examination marks. The explained variance is $R^2 = .434$, which means that 43.4% of the variance in examination marks can be explained by differences in attendance. The students' scores increased on average by 1.75 for each attendance.

Compared to last year, average attendance, final score and percentage of failed students all dropped slightly. The importance of the integration classes seems to have increased. The average drop in score per missed integration classes has risen. This is probably linked to the fact that one graded integration class in 2018-2019 was changed into a mock test in 2019-2020. Yet, explained variance has increased strongly from 15.5% to 43.4%.

Effect attendance 2018-2019	Effect attendance 2019-2020
Average attendance 3.88/5	Average attendance 3.82/5
Average final score 10.17/20	Average final score 10.08/20
Average drop per missed IC of -1 point	Average drop per missed IC of -1.75
$R^2 = 15.5\%$	$R^2 = 43.4\%$
Failed 31%	Failed 33.5%

Diagram 7: Effect on examination mark, comparison 2018-2019 and 2019-2020

3) Findings 2.3: Perception email

ANOVA analyses were conducted to determine whether there are significant differences in how students from different conditions experienced the emails. In general there appears to be only a significant difference in the extent to which students felt personally addressed by the emails (cf. Q1 & appendix 6.3; $F(3.346) = 3.96$, $p = .009$), where students from the individual conditions ($\bar{x} = 3.55$ for individual without LA, $\bar{x}$ for individual with LA) score significantly higher than students from the group conditions ($\bar{x} = 3.01$ group without LA, $\bar{x} = 3.15$ group with LA).

However, post hoc comparison also shows small, significant differences between specific conditions:

- Students in the individual condition without LA feel more personally addressed than students in the group condition with or without LA.
- Students in the individual condition with LA feel more personally addressed than students in the group condition without LA.
- Students in the individual condition without LA feel more motivated to attend classes than students in the group condition without LA (cf. Q2).
- Students in the group condition with LA feel significantly more motivated to attend classes than students in the group condition without LA (cf. Q2).
- Students in the individual condition without LA feel significantly less pressure to be present in class than students in the group condition with LA (cf. Q3).

The feelings evoked by the communication are mostly positive. When ranked, three out of the four most marked feelings are positive. ‘Motivation' is the feeling that is most frequently marked with overall 34.4% of students at least marking motivation. 'Demotivation' is least frequently marked overall (3.7%). The two most marked feelings are both active, one positive (motivated) and one negative (concerned). The feelings to be avoided, both passive and negative, are at the lowest side of the spectrum.

These emails made me feel...

Motivated	Energized	Reassured	Relaxed	Concerned	Confused	Annoyed	Demotivated
34,4%	7,4%	9,6%	13,5%	17,0%	7,2%	7,4%	3,7%
Active	Active	Passive	Passive	Active	Passive	Active	Passive
Positive	Positive	Positive	Positive	Negative	Negative	Negative	Negative
168/489	36/489	47/489	66/489	83/489	35/489	36/489	18/489

Diagram 8: Perception email: feelings overview

These emails made me feel...

Motivated	Concerned	Relaxed	Reassured	Energized	Annoyed	Confused	Demotivated
34,4%	17,0%	13,5%	9,6%	7,4%	7,4%	7,2%	3,7%
Active	Active	Passive	Passive	Active	Active	Passive	Passive
Positive	Negative	Positive	Positive	Positive	Negative	Negative	Negative

Diagram 9: Perception email: feelings order

In addition, there also appeared to be significant differences between the conditions regarding the feelings evoked by the emails (cf. Q5 & appendix 6.4).

Concerning **'motivation'**, the numbers confirm the above-mentioned conclusions (cf. Q2): 35.09% of the students in the individual condition without LA and 40.22% in the group condition with LA at least marked that they felt motivated compared to 23.81% of the students in the group condition without LA. 34.07% of the individual condition with LA at least marked they felt motivated by the emails. Motivation is also the feeling experienced the most in each condition.

However, **'concerned'** (active-negative) comes in second place. The group condition without LA indicates this feeling most often (20%). This is also the group that marked the least 'motivation' (23.81%). Of all groups, the students in the individual condition without LA indicated the least feeling 'concerned' (14.91%).

Of all groups, the students in the individual condition without LA and in the group condition with LA experience the most positive feelings (74.6% and 67.6%) and are also activated by them (68.4% and 70.9% of feelings marked). In both groups nearly half of the feelings marked are active/positive (47.4% and 48%). The group condition without LA indicates marked the least positive (56.19%) and active (27.6%) feelings in general.

5. Summarising conclusion

5.1 Objective 1 – How can an institution actively reach out to students to support them better?

Our intervention started from two data points that **identify students at risk in our context**: the institution-wide FIT test and surveying attendance in the course English for Business. The FIT test measures the academic and social integration of students in higher education, the second measures the attendance of students at intermediate test moments, so-called integration classes. Both factors have been shown to influence study succes. Regarding the FIT value, this work builds on Tinto (1993) who demonstrated in detail the importance of a good academic and social adaption. Regarding the attendance in English for Business, results for the academic year 2018-2019 showed that the examination results for English for Business are related to the attendance at the integration class. Scores declined with on average 1 point per missed integration class. Students pass the fail mark at two missed integration classes as scores average 9.35/20. The new intervention confirms this finding.

The rise in predictiveness of attendance at the conversation test might be linked to the effort invested in illustrating their importance and in boosting attendance.

Knowing that students are at risk is of course not enough. Institutions also have to act and go 'onwards from learning analytics'. Students must be made aware of their status, know what that means for their study careers and be given the opportunity to act on it. **Communicating** with students, and thus actively reaching out to them, is a first good step. The English for Business intervention shows that this is appreciated. Students very often indicated that they feel motivated by the approach, regardless of how the communication was designed [F2.4]. However, extensive feedback on the student's status is valued, as demonstrated by the FIT intervention [F1.1].

5.2 Objective 2 – What conditions must communication with students meet in order to achieve the desired effect?

1) Medium

The medium trialed in both approaches was **email**. Communicating through email is perceived as an added value compared to communicating through the student tracking system (SVS), as the FIT results show. According to the OLO students the communication is more clear, more transparent and more structured [F4.1/1]. By saying this, the OLO students state that email communication meets the students' general needs regarding communication as expressed in the student satisfaction survey (cf. O6/5.2). Furthermore, the FIT test is generally valued higher by the students who received an email [F4.1/1; OLO/PJK]. They indicate that they have a better understanding of their strengths and weaknesses and also know how to deal with them [F4.1/1; OLO/PJK].

Whether adding **hints and tips** to the email adds value is unclear. The hints and tips are read more often if they are given by email than if students have to look for them at a platform like SVS, at least as far as the OLO students (1/2 of the students) and PJK students (2/3 of the students) are concerned [F4.1/2]. OLO students who could only access the hints and tips through SVS, clearly state that they find them harder to find [F4.1/2].

Yet, the hints and tips do not always achieve the desired **effect**. For example, OLO and ERG students not necessarily feel willing to adjust their own study behaviour or to seek external help [F4.1/3]. PJK students do feel this willingness, but only as far as external guidance is concerned [F4.1/3]. The tips also do not make students feel better prepared for the conversation with the study coach. For PJK students the tips email added value, while OLO students felt better prepared through accessing the SVS [F4.1/2]. The latter group had to look for the information themselves. Doing so might have given them the feeling that they had prepared themselves in a more specific way. In addition, OLO students who received the tips through email more often indicated that they have no need or interest in the tips than students who did not automatically receive them in their mailbox [F4.1/2]. Once again, the obviousness of the tips – this group had the specific choice of reading them or not, the other groups had to make an effort themselves – may be the explanatory factor.

2) Content

Personal communication is effective. Students of the course English for Business who were in the individual condition, felt addressed more personally, which makes sense. They were also more willing to change their behaviour and (continue to) participate in the integration classes.

However, the contents of the email also induces sentiment in students. A reference to the data as an argument to illustrate the effectiveness of presence during the integration classes on study success in a personal email seems to scare students. In a group email this is not the case. Students in the group

condition with learning analytics feel more motivated. This mirrors the individual condition without learning analytics. Futhermore, in the group condition students feel more positive and activated due to the communications. Yet, in this context the preference still goes out to an **individual email without learning analytics**. Compared to the group condition, students feel more energy, less pressure and less concern. Furthermore, students from this group showed significantly more attendance in the integration classes.

Emailing students in group without learning analytics is not recommended to inform students about the effects of absence or presence in class. Students from this condition were not alerted by the message and showed mostly negative emotions linked to the communication. Probably the communication comes across as too impersonal and vague as students are not addressed personally or convinced with arguments why their behaviour is good or bad.

5.3 Objective 3 – How can data and learning analytics be used in communication with students?

Learning analytics not only help to identify students at risk. They also provide the perfect opportunity for staff members to **communicate** with those students and motivate them to adapt their behaviour. Adding data as an argument seems to be more effective if they are expressed in a communication that is aimed at **the entire group** and thus – perhaps – trigger a healthy dose of peer pressure, rather than a feeling of being singled out.

Two elements that need to be balanced seem to be at play here: feeling addressed personally and comparing to peers through learning analytics. Overall, the personal approach seems to stand out. Approaching someone individually leads to the best results, regardless of the arguments used in that communication. Expressing concern about how you specifically are doing as a student seems to motivate the first-years enough to change their behaviour. The combination of group and learning analytics seems to work as well. Students are not singled out and confronted too directly. If a student is addressed individually, the extra learning analytics seem to add not that much. The simple personal alert might suffice. A general group email with no reference to the performance of the group is least effective as neither element is at play.

5.3 Remarks and future

Regarding the FIT results, it is important to note that the answers to the questions concerning the FIT communication, the hints and tips and the willingness to adapt the behavior, were highly dependent on the **program** to which the students belonged which might link to different types of students. Further research should be conducted to see how and when hints and tips can add value in the communication to students. It would also be interesting to examine whether the students' perception of the FIT test and the reporting of the results in general changes after their conversation with the study coach and whether students who received the tips by email felt, in retrospect, better prepared than the other students. In the current surveys, this group of OLO students in fact indicated that they were less prepared than the group who received the regular email. In the case of the PJK and ERG students, it was the other way round [F4.1/1]. It would be interesting to determine whether a second questionnaire, completed by the students after the conversation with the study coach, would reveal different results and what that would mean for the overall conclusion.

Also for the student tracking system, more research can be done. Even though the system is intended for both students and staff members, students do not often consult it. They are not very familiar with the tracking platform and they find it difficult to find the information they need there [F4.1/1-2]. Therefore, it would be interesting to look at how the system can be optimized in order to meet the

students' needs, make the tracking system and its information – on study success and the FIT results – more easiily accessible to them and turn it into an interesting tool. We could examine which needs students have: which data they would like to consult through the tracking system, whether they would like to receive alerts if those data are unfavorable, what the system should look like according to them and which data they would like to hide from staff members.

6. Recommendations regarding communication

- **Absence at intermediate test moments can function as early warnings for students at risk.** Institutions and/or staff members can consider registering absence – automatically or not – and taking concrete and timely action based on the results.
- **Talking to students about warnings based on data is essential and effective.** Students primarily feel motivated by the fact that someone informs them of their precarious situation, indicates what it exactly means and provides them with tools to do something about it. Knowing that someone is reaching out to them personally mainly leads to positive and activating feelings. Communication should therefore be an automatic first step. As soon as a staff member is aware that a student can be at risk, he or she should contact the student and let him or her know somebody cares and is willing to help.
- **Mail is preferred over communication through a student tracking system.** Often email is the more familiar tool for students rather than other institutional platforms to which finding access and retrieving information is not always obvious. In addition, some students perceive the information as less clear, less meaningful and less comprehensible, only because it is communicated through the platform. So if a staff member contacts the student, he or she is best advised to do that by email instead of using an administrative platform or informing students that information is available on that platform.
- **Emails that are sufficiently personalized work best**, i.e. emails in which the student is addressed by name, the reason for the communication is well stated and the student gets an interpretation of his or her personal situation. Staff members must take this into account.
- **It helps to make the communication as complete as possible and show students something can be done about their situation.** However, this does not mean that the email should contain every detail about the aids and tools. They do not always arouse more interest or need, nor do they encourage students to take more action. Further research is therefore needed to reveal more about why certain details are missing their effect and which can or cannot be included in communication with students. Until then, staff members are free to restrict communication regarding the aids and tools.
- **Consider how to communicate to students with the data showing they are at risk.** In initial communication to a group of first-year students, this has a positive effect and can stimulate a healthy dose of peer pressure. In initial personal communication to first-year students, however, additional, statistical arguments don't seem to add much. Staff members must be aware of that distinction.
- **The needs of students regarding communication might vary according to the type of student or the programme to which they belong.** It is therefore important staf members keep the students' background and their personal experiences with them in mind when talking to them about their behavior and its possible consequences.

7. Literature

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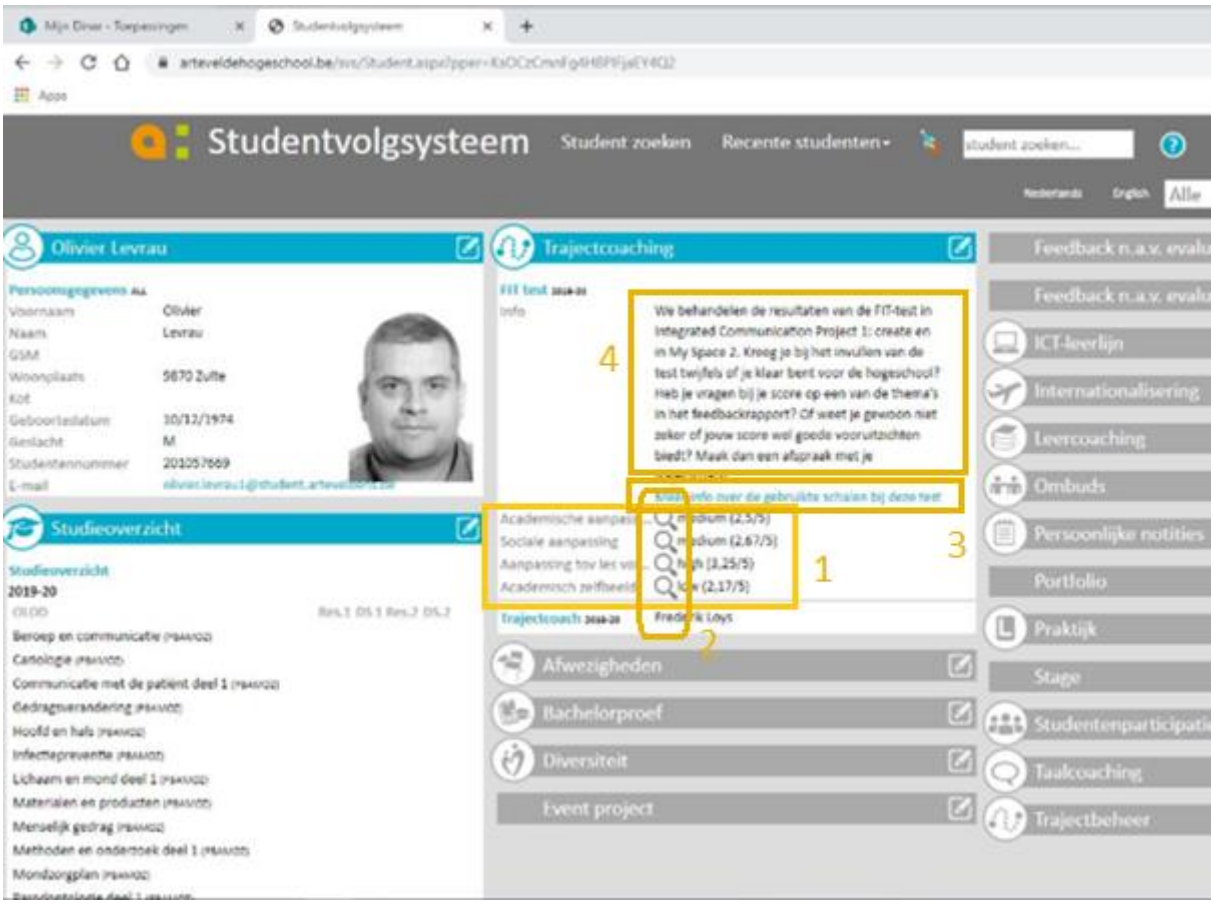
8. Appendices

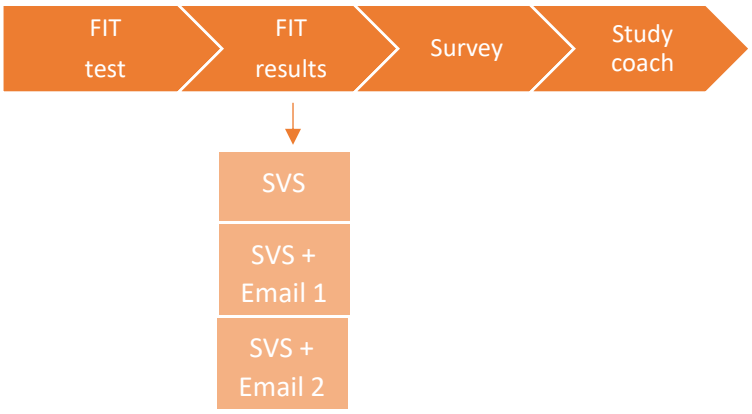
Appendix 1: Communication FIT results: Student tracking system (SVS)



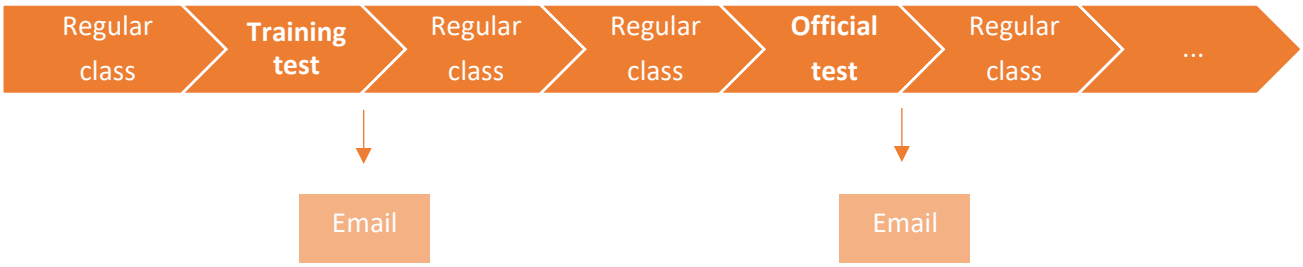
1. Personal FIT-score and comparison with the peers
2. Explanation of the scores and of the comparison with the peers
3. Information on the scales and reference to hints and tips that can improve performance
4. Reference to the contact moment with the study coach at which the results will be discussed individually or in group

Appendix 2: Timeline interventions

2.1 Timeline communication FIT results



2.2 Timeline communication English for Business



Appendix 3: Communication FIT results: Email

3.1 Communication Group 1

Beste student,

Je vulde onlangs de FIT-test in, die nagaat in welke mate je aangepast bent aan het leven en studeren op de hogeschool. Graag geven we je via deze weg nog bijkomende informatie over jouw resultaten:

1. Academische aanpassing

Je beantwoordde verschillende vragen die peilen naar de mate waarin je aangepast bent aan het studeren op de hogeschool. Hieruit bleek dat je op vlak van academische aanpassing 3,33/5 scoort. Dit wil zeggen dat je gemiddeld scoort op vlak van academische aanpassing in vergelijking met je medestudenten. Je gaf aan dat je het gevoel hebt dat je je toelegt op je studietaken. Je bent gemotiveerd om te studeren en/of je vindt van jezelf dat je efficiënt hebt gewerkt de laatste periode. De inspanningen die je levert zijn nodig om goede resultaten te kunnen behalen. Je kan hier nog in groeien.

2. Sociale aanpassing

In de FIT-vragenlijst peilden we ook naar de mate waarin je al contacten kon leggen met medestudenten aan de hogeschool. Heb jij al vrienden of kennissen waarop je kan terugvallen op de hogeschool?

Je score op vlak van sociale aanpassing betreft 3,67/5. Dat wil zeggen dat je jezelf gemiddeld inschat op vlak van sociale aanpassing. Je gaf aan dat je al nieuwe sociale contacten hebt gelegd binnen de hogeschool. Het is belangrijk dat je je goed voelt en omringd wordt door mensen waar je je goed bij voelt en die je kunnen helpen tijdens je studies, ook in moeilijkere periodes. Probeer hier dus zeker verder oog voor te hebben en goede relaties verder te onderhouden. Deze medestudenten kunnen je tips geven bij het studeren en kunnen je helpen in moeilijkere periodes.

3. Aanpassing t.o.v. les volgen

We bevroegen ook of je problemen ondervindt met het volgen van lessen aan de hogeschool, in vergelijking met de secundaire school.

Je score op dit vlak bedraagt 2,50/5. Dat houdt in dat je gemiddeld scoort in vergelijking met je medestudenten op vlak van aanpassing aan de nieuwe manier van les volgen. Je gaf aan dat je je behoorlijk hebt kunnen aanpassen aan de nieuwe lesomgeving en dat je daar in mindere mate problemen mee ervaart. Het is goed dat je gewoon raakt aan het hogere tempo van lesgeven en aan de grotere hoeveelheid leerstof die tijdens één les wordt meegegeven.

4. Academisch zelfbeeld

Tot slot vulde je ook vragen in die peilden naar hoe zeker jij je voelt over het studeren aan de hogeschool. Je gaf jezelf een score van 3,83/5. Dit toont aan dat je, in vergelijking met je medestudenten, niet echt onzeker bent, maar ook niet helemaal zeker van je eigen capaciteiten binnen je huidige opleiding. Je gaf aan dat je tevreden bent met je prestaties in je

huidige opleiding, maar dat er nog ruimte is voor verbetering. Kijk zeker eens naar onze tips via SVS als je benieuwd bent hoe je hieraan kan werken.

We hopen dat je via deze e-mail een duidelijker beeld kreeg van je FIT-resultaten en hoe je je verder kan aanpassen aan het leren en studeren aan de hogeschool. Zit je toch nog met vragen? Benut dan zeker het gesprek met de trajectcoach omtrent de FIT-resultaten.

Vriendelijke groeten,
Dienst Studieadvies

3.2 Communication Group 2

Beste student,
Je vulde onlangs de FIT-test in, die nagaat in welke mate je aangepast bent aan het leven en studeren op de hogeschool. Graag geven we je via deze weg nog bijkomende informatie over jouw resultaten:

1. Academische aanpassing

Je beantwoordde verschillende vragen die peilen naar de mate waarin je aangepast bent aan het studeren op de hogeschool. Hieruit bleek dat je op vlak van academische aanpassing 2,00/5 scoort. Dit wil zeggen dat je, in vergelijking met je medestudenten, niet echt zeker bent over je aanpassing op academisch vlak. Je gaf aan dat je het gevoel hebt dat je je te weinig toelegt op je studietaken. Mogelijk ben je minder gemotiveerd om te studeren en/of heb je minder efficiënt gewerkt de afgelopen periode. Probeer eens na te denken hoe dat komt en wat hier mogelijks de oorzaken van zijn. Het is belangrijk om te beseffen dat inspanningen nodig zijn op het vlak van studeren om goede resultaten te behalen. Besef ook dat het jouw inspanningen zijn die tot die resultaten leiden. Je kan hier zeker nog in groeien.
Tip: Als het studeren minder goed loopt dan verwacht, besef dan goed dat dit niet meteen betekent dat je niet geschikt bent voor de hogeschool: het is mogelijk louter een gevolg van de tijd die je nodig hebt om je aan te passen. Het is waarschijnlijk dat je resultaten zullen verbeteren door hard te werken, goed te plannen en verschillende andere studievaardigheden aan te leren. Het is belangrijk om te leren om op tijd aan opdrachten te beginnen, om rustig te plannen en je te houden aan de afspraken die je bij de start van het academiejaar met jezelf maakte.
Wanneer je het gevoel hebt niet over de juiste studiemethode te beschikken, kan je een kijkje nemen op www.stopmetblokken.be. Hier vind je een eenvoudig 5-stappenplan dat je op weg kan helpen. Last van faalangst, onzekerheid of uitstelgedrag? Maak een account aan op www.studerenzonderblokkeren.be. Dit is een handig onlinezelfhulpprogramma waarmee je zelf gaat werken aan de door jou ervaren moeilijkheden.
Heb je nood aan een individueel gesprek? Neem voor een gesprek rond je studiemethode contact op met de leercoach van je opleiding. Met vragen rond je motivatie over je studierichting kan je bij je trajectcoach terecht. Wil je veranderen van studies omdat je merkt dat je fout gekozen hebt, dan kan je terecht op de dienst studieadvies.

2. Sociale aanpassing

In de FIT-vragenlijst peilden we ook naar de mate waarin je al contacten kon leggen met medestudenten aan de hogeschool. Heb jij al vrienden of kennissen waarop je kan terugvallen op de hogeschool?
Je score op vlak van sociale aanpassing betreft 3,00/5. Dat wil zeggen dat je jezelf lager inschat op vlak van sociale aanpassing dan je medestudenten. Je gaf aan dat je tot nu toe nog niet zo veel sociale contacten hebt gelegd binnen de hogeschool. Mogelijk zijn er momenten dat je je daar wat alleen voelt. Wees gerust, heel wat studenten hebben moeilijkheden om zich meteen thuis te voelen in deze nieuwe omgeving, en je kan hier zeker nog in groeien. Het kan ook zijn

dat je minder kans krijgt om veel contacten op te bouwen omdat je vaak bijvoorbeeld onderweg bent tussen thuis en de hogeschool. Het is wel goed om je er bewust van te zijn dat deze sociale contacten je kunnen helpen bij jouw studietaken, ook in moeilijkere periodes. Medestudenten kunnen je bijvoorbeeld tips geven bij het studeren en kunnen je helpen in moeilijke periodes.

Tip: Om je sociaal netwerk uit te breiden, kan het nuttig zijn om wat vroeger naar de lessen te gaan of blijf wat langer te blijven, in de leslokalen steeds naast iemand te gaan zitten en geen lege plaatsen te laten, je open te stellen voor het delen van lesmateriaal en actief mee te werken aan voorbereidingen van groepsopdrachten. Je kan ook aansluiten bij een studenten- of sportvereniging, je kunt vrijwilligerswerk of een studentenjob doen, of in een studentenhuis op kot gaan. Meer activiteiten vind je op www.arteveldehogeschool.be/stuvo.

Eerder nood aan een discreet 1-op-1 gesprek? Dat kan ook! Je kan hiervoor een afspraak maken met jouw trajectcoach of de stuvomedewerker van je opleiding die je een luisterend oor kan bieden.

Onthoud vooral dat je eigen plek vinden een geleidelijk proces is, dus geef jezelf genoeg tijd om aan te passen. Als je opmerkt dat je tegen jezelf zegt dat andere mensen beter omgaan met hun eerstejaarservaring dan jij, onthoud dan dat jij niet weet hoe zij zich binnenin voelen. Vergelijk jouw binnenkant niet met de buitenkant van anderen. Onthoud dat je niet alleen bent! Er zijn duizenden studenten in hun eerste jaar hoger onderwijs die dezelfde uitdagingen ervaren als jij.

Je gaf aan dat je tot nu toe nog niet zo veel sociale contacten hebt gelegd binnen de hogeschool. Mogelijk zijn er momenten dat je je daar wat alleen voelt. Wees gerust, heel wat studenten hebben moeilijkheden om zich meteen thuis te voelen in deze nieuwe omgeving, en je kan hier zeker nog in groeien. Het kan ook zijn dat je minder kans krijgt om veel contacten op te bouwen omdat je vaak bijvoorbeeld onderweg bent tussen thuis en de hogeschool. Het is wel goed om je er bewust van te zijn dat deze sociale contacten je kunnen helpen bij jouw studietaken, ook in moeilijkere periodes. Medestudenten kunnen je bijvoorbeeld tips geven bij het studeren en kunnen je helpen in moeilijke periodes.

3. Aanpassing t.o.v. les volgen

We bevroegen ook of je problemen ondervindt met het volgen van lessen aan de hogeschool, in vergelijking met de secundaire school.

Je score op dit vlak bedraagt 3,75/5. Dat houdt in dat je, in vergelijking met je medestudenten, hoog scoort op vlak van aanpassing aan de manier van les volgen. Je gaf aan dat je weinig tot geen problemen ervaart met de nieuwe lesomgeving en dat je je hieraan al goed hebt aangepast.

Ook al scoor je goed op dit vlak, het is toch belangrijk om naar elke les te gaan. Zo leer je de manier van lesgeven van iedere docent kennen. Daarnaast kan het ook interessant zijn om je manier van noteren tijdens de les nog verder te verbeteren. Tips over hoe je best noteert vind je onder andere op www.stopmetblokken.be. Er is ook een tool waarin je je vaardigheden om een hoorcollege te volgen kan trainen:
https://studentarteveldehsbe.sharepoint.com/sites/dinar/Diensten/ADISAD/OnderwijsEnStudenten/Pages/taaltools.aspx

Voor meer tips op jouw maat kan je altijd langslopen bij de leercoach, die expert is in het aanleren van lessen volgen.

4. Academisch zelfbeeld

Tot slot vulde je ook vragen in die peilden naar hoe zeker jij je voelt over het studeren aan de hogeschool. Je gaf jezelf een score van 3,17/5. Dit toont aan dat je je eigen competenties lager inschat dan de meerderheid van je medestudenten. Je gaf immers aan dat je in mindere mate vertrouwen hebt in je eigen capaciteiten binnen je huidige opleiding. Je hebt wellicht nog wat tijd nodig om je aan te passen aan de omgeving van de hogeschool, de nieuwe manier van les volgen en om je studie-aanpak hierop af te stemmen. Wanneer studenten weinig vertrouwen

hebben in de eigen capaciteiten kan dit een negatieve invloed hebben op toekomstige studieprestaties. Maar vertrouw er ook op dat je deze opvattingen over jezelf actief kan veranderen. Beschouw tegenvallende ervaringen en resultaten daarom als een waarschuwing, maar zeker ook als mogelijkheid om je functioneren verder te verbeteren.
Tip: Wees je ervan bewust dat de perceptie van hoe je het als student doet, jouw resultaten effectief kan gaan beïnvloeden. Onderzoek wees uit dat studenten die sterker het gevoel hebben hun opleiding in het eerste jaar hoger onderwijs aan te kunnen, doorgaans betere examenresultaten hebben. Als je academisch zelfbeeld laag zou zijn dan is het belangrijk te onderzoeken waarom dit zo is.
Je leercoach en je trajectcoach kunnen je helpen bij deze zoektocht. Ze kunnen je ook op weg helpen om te werken aan de studievaardigheden waarvan jij ervaart dat het goed zou zijn er beter in te worden. Maak een afspraak met je trajectcoach of bij de dienst studieadvies wanneer je niet meer zeker bent van je studiekeuze. Tenslotte kan het ook helpen om met je medestudenten te spreken over hun gevoel en hoe zij hiermee omgaan. Je kan dan praktische tips uitwisselen.

We hopen dat je via deze e-mail een duidelijker beeld kreeg van je FIT-resultaten en hoe je je verder kan aanpassen aan het leren en studeren aan de hogeschool. Zit je toch nog met vragen? Benut dan zeker het gesprek met de trajectcoach omtrent de FIT-resultaten.

Vriendelijke groeten,
Dienst Studieadvies

Appendix 4: Communication English for Business: Email

4.1 Communication individual

Dear <First Name>

I was happy that you attended the class Business Basics 2/I missed you during the class Business Basics 2. In this class we practiced the integration classes in which you can earn up to 4 of the 20 final points.

Per topic, we have two regular classes (where we practice vocabulary and skills) and one integration class. The (integration) classes are there to help you prepare for the exam and to support you in studying during the year and understanding what works best to study vocabulary.

I look forward to working with you in the following (integration) class.

Kind regards

<Researcher First and Last Name> for <Lecturer First and Last Name>, your lecturer of English for Business

4.2 Communication individual, with learning analytics

Dear <First Name>

I missed you during the class Business Basics 2/I was happy that you attended the class Business Basics 2. In this class we practiced the integration classes in which you can earn up to 4 of the 20 final points. Last year, students who missed more than one integration class were significantly more at risk of failing the course. Average scores dropped from 11.38/20 to 9.35/20.

Per topic, we have two regular classes (where we practice vocabulary and skills) and one integration class. The (integration) classes are there to help you prepare for the exam and to support you in studying during the year and understanding what works best to study vocabulary.

I look forward to seeing you again in the following (integration) class.

Kind regards

<Researcher First and Last Name> for <Lecturer First and Last Name>, your lecturer of English for Business

4.3 Communication group

Dear student

I missed about half of the students during the class Business Basics 2. In this class we practiced the integration classes in which up to 4 of the 20 final points can be earned.

Per topic, we have two regular classes (where we practice vocabulary and skills) and one integration class. The (integration) classes are there to help you prepare for the exam and to support you in studying during the year and understanding what works best to study vocabulary.

I look forward to working with the group in the following (integration) class.

Kind regards

<Researcher First and Last Name> for <Lecturer First and Last Name>, your lecturer of English for Business

4.4 Communication group, with learning analytics

Dear student

I missed about half of the students during the class Business Basics 2. In this class we practiced the integration classes in which up to 4 of the 20 final points can be earned. Last year, students who missed more than one integration class were significantly more at risk of failing the course. Average scores dropped from 11.38/20 to 9.35/20.

Per topic, we have two regular classes (where we practice vocabulary and skills) and one integration class. The (integration) classes are there to help you prepare for the exam and to support you in studying during the year and understanding what works best to study vocabulary.

I look forward to working with the group in the following (integration) class.

Kind regards

<Researcher First and Last Name> for <Lecturer First and Last Name>, your lecturer of English for Business

Appendix 5: Findings FIT intervention

5.1 Questionnaire, series of questions 1, PJK

1) De communicatie van mijn FIT-resultaten gebeurde op een duidelijke en overzichtelijke manier.
2) Door het invullen van de FIT-test, weet ik beter wat mijn sterktes en werkpunten zijn.
3) Ik vind dat mijn FIT-resultaten een correct beeld geven van hoe goed ik aangepast ben aan het hoger onderwijs.
4) De feedback omtrent mijn FIT-resultaten mocht uitgebreider zijn.
5) Ik kreeg duidelijke informatie over de manier waarop ik mijn werkpunten, die naar voren kwamen binnen de FIT-test, kan aanpakken.
6) Ik ga akkoord met de feedback die ik heb gekregen op mijn FIT-test.
7) De feedback die ik ontving over mijn FIT-test laat me toe om in te schatten hoe goed ik scoor in vergelijking met mijn medestudenten.
8) De communicatie over mijn FIT-resultaten geeft me een duidelijk beeld van mijn sterktes en werkpunten (d.w.z. op vlak van sociale en academische aanpassing, les volgen, zelfconcept).
9) Ik heb voldoende feedback ontvangen op mijn FIT-resultaten om me voorbereid te voelen op het gesprek met de trajectcoach.
10) De communicatie omtrent mijn FIT-resultaten mocht uitgebreider zijn, zodat ik me beter voorbereid zou voelen op het gesprek met de trajectcoach.

5.2 Questionnaire, series of questions 1, OLO & ERG

1) Er werd duidelijk gecommuniceerd waar ik mijn FIT-resultaten kon raadplegen.
2) De rapportering van mijn FIT-resultaten was helder en gestructureerd.
3) Ik vind dat mijn FIT-resultaten een correct beeld geven van hoe goed ik aangepast ben aan het hoger onderwijs.
4) De feedback omtrent mijn FIT-resultaten mocht uitgebreider zijn.
5) Ik vind dat mijn FIT-resultaten goed mijn sociale en academische aanpassing aan de hogeschool reflecteren.
6) De communicatie omtrent de FIT-test was voldoende informatief.
7) Mijn FIT-resultaten werden overzichtelijk gepresenteerd.
8) Door het invullen van de FIT-test heb ik een goed beeld gekregen van mijn sterktes en werkpunten.
9) Ik ga akkoord met de feedback die ik heb gekregen op mijn FIT-test.
10) Ik weet waarover ik wil praten tijdens het (groeps)gesprek met de trajectcoach.
11) Ik vind de FIT-test een waardevol instrument.
12) De informatie die ik kreeg omtrent mijn FIT-resultaten was te oppervlakkig.
13) Ik heb een voldoende uitgebreid beeld van mijn sterktes en werkpunten om dit gesprek met de trajectcoach goed te kunnen benutten.
14) Ik kan me vinden in mijn FIT-resultaten.
15) Ik voel me voorbereid op het gesprek met de trajectcoach.
16) Ik kreeg voldoende informatie om me voorbereid te voelen op het gesprek met de trajectcoach.
17) Door het invullen van de FIT-test weet ik goed of ik voldoende aangepast ben aan het hoger onderwijs.

5.3 Questionnaire, series of questions 3, PJK

Door het krijg van de FIT-resultaten…

1) wil ik mijn manier van studeren en les volgen veranderen (bv. andere studie-aanpak, vaker aanwezig zijn, meer noteren).
2) heb ik het gevoel dat ik extra ondersteuning nodig heb (bv. studie-coaching, begeleiding voor het omgaan met faalangst, initiatieven voor het uitbouwen van een sociaal netwerk).
3) voel ik me zekerder over mijn slaagkansen in het hoger onderwijs.
4) ben ik meer vastberaden om mijn kennis en vaardigheden te gebruiken om te slagen voor deze opleiding.
5) blijf ik streven om te slagen voor deze opleiding.
6) zal ik een andere aanpak of strategie gebruiken om te slagen voor deze opleiding.
7) voel ik me zekerder over mijn slaagkansen in het hoger onderwijs.
8) ben ik meer vastberaden om mijn kennis en vaardigheden te gebruiken om te slagen voor deze opleiding.
9) blijf ik streven om te slagen voor deze opleiding.
10) zal ik meer tijd en energie investering om te slagen.
11) denk ik na over strategieën om mogelijke problemen tijdens mijn studies te vermijden.

5.4 Findings 1.1: Scales, series of questions 1, OLO & ERG

Scale 1: Structure	Q1	Er werd duidelijk gecommuniceerd waar ik mijn FIT-resultaten kon raadplegen.
	Q2	De rapportering van mijn FIT-resultaten was helder en gestructureerd
	Q6	De communicatie omtrent de FIT-test was voldoende informatief.
Scale 2: Added value	Q3	Ik vind dat mijn FIT-resultaten een correct beeld geven van hoe goed ik aangepast ben aan het hoger onderwijs.
	Q5	Ik vind dat mijn FIT-resultaten goed mijn sociale en academische aanpassing aan de hogeschool reflecteren.
	Q8	Door het invullen van de FIT-test heb ik een goed beeld gekregen van mijn sterktes en werkpunten.
	Q9	Ik ga akkoord met de feedback die ik heb gekregen op mijn FIT-test.
	Q11	Ik vind de FIT-test een waardevol instrument.
	Q14	Ik kan me vinden in mijn FIT-resultaten.
	Q17	Door het invullen van de FIT-test weet ik goed of ik voldoende aangepast ben aan het hoger onderwijs.
Scale 3: Extensive	Q4	[reversed] De feedback omtrent mijn FIT-resultaten mocht uitgebreider zijn.
	Q12	[reversed] De informatie die ik kreeg omtrent mijn FIT-resultaten was te oppervlakkig.
Scale 4: Preparation	Q10	Ik weet waarover ik wil praten tijdens het (groeps)gesprek met de trajectcoach.
	Q13	Ik heb een voldoende uitgebreid beeld van mijn sterktes en werkpunten om dit gesprek met de trajectcoach goed te kunnen benutten.
	Q15	Ik voel me voorbereid op het gesprek met de trajectcoach.
	Q16	Ik kreeg voldoende informatie om me voorbereid te voelen op het gesprek met de trajectcoach.
Deleted item	Q7	Mijn FIT-resultaten werden overzichtelijk gepresenteerd.

5.5 Findings 1.2: Crosstab, PJK

Conditie VOOR__tipsgelezen Crosstabulation

Count

		VOOR__tipsgelezen		
		1,00 nee	2,00 ja	Total
Conditie	1 SVS	18	9	27
	2 SVS+groupreference	3	19	22
	3 SVS+groupreference+tricks	10	27	37
Total		31	55	86

5.6 Findings 1.2: Crosstab, ERG

conditie VOOR_tipsgelezen Crosstabulation

Count

		VOOR_tipsgelezen		
		1 nee	2 ja	Total
conditie	1 SVS	39	13	52
	2 SVS+groupreference	30	9	39
	3 SVS+groupreference+tips	23	11	34
Total		92	33	125

5.7 Findings 1.2: Crosstab, OLO

Conditie VOOR_tipsgelezen Crosstabulation

Count

		VOOR_tipsgelezen		
		1,00 nee	2,00 ja	Total
Conditie	1 SVS	41	8	49
	2 SVS+groupreference	28	8	36
	3 SVS+groupreference+tips	34	24	58
Total		103	40	143

Appendix 6: Findings English for Business intervention

6.1 Finding 2.1: Attendance

Mock integration test

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	255	36,4	36,4	36,4
	1	445	63,6	63,6	100,0
	Total	700	100,0	100,0	

Integration test 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	96	13,7	13,7	13,7
	1	604	86,3	86,3	100,0

	Total	700	100,0	100,0	

Integration test 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	195	27,9	27,9	27,9
	1	505	72,1	72,1	100,0
	Total	700	100,0	100,0	

Integration test 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	129	18,4	18,4	18,4
	1	571	81,6	81,6	100,0
	Total	700	100,0	100,0	

Integration test 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	153	21,9	21,9	21,9
	1	547	78,1	78,1	100,0
	Total	700	100,0	100,0	

6.2 Finding 2.2: Tests of Between-Subjetcs Effects

Tests of Between-Subjects Effects

Dependent Variable: Examination mark

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3761,004[a]	4	940,251	136,168	,000
Intercept	897,029	1	897,029	129,909	,000
totaleaanwezigheid	3521,641	1	3521,641	510,008	,000
conditieinterventie	45,685	3	15,228	2,205	,086
Error	4799,023	695	6,905		
Total	79745,000	700			
Corrected Total	8560,027	699			

a. R Squared = ,439 (Adjusted R Squared = ,436)

6.3 Finding 2.4, Question 1: ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	12,575	3	4,192	3,959	,009

I felt personally addressed through the emails.	Within Groups	363,108	343	1,059		
	Total	375,683	346			
The emails motived me to come to class.	Between Groups	7,382	3	2,461	2,201	,088
	Within Groups	376,689	337	1,118		
	Total	384,070	340			
The emails caused me to feel more pressure to be present during class.	Between Groups	8,152	3	2,717	2,306	,076
	Within Groups	405,285	344	1,178		
	Total	413,437	347			
These emails made me more aware of the importance of the integration classes to pass the course.	Between Groups	1,493	3	,498	,698	,554
	Within Groups	249,546	350	,713		
	Total	251,040	353			

6.4 Finding 2.4, Question 5: Crosstabulation

		Question 5: These emails made me feel ...; percentages.								
		Motivated	Energized	Reassured	Relaxed	Concerned	Confused	Annoyed	Demotivated	Total
group	individueel, geen LA	35.09	12.28	11.40	15.79	14.91	2.63	6.14	1.75	100.00
	individueel, LA	34.07	4.40	5.49	13.19	16.48	14.29	8.79	3.30	100.00
	groep, geen LA	23.81	3.81	12.38	16.19	20.00	9.52	9.52	4.76	100.00
	groep, LA	40.22	7.82	8.94	10.61	16.76	5.03	6.15	4.47	100.00

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	32,803[a]	21	,048
Likelihood Ratio	33,119	21	,045
Linear-by-Linear Association	,087	1	,769
N of Valid Cases	489		

a. 3 cells (9,4%) have expected count less than 5. The minimum expected count is 3,35.