

OfLA Project  
2018-1-UK01-KA203-048090

# O6 – Evaluation of First Year Studies

A summary of the current  
situation, strengths, and  
challenges at University Medical  
Centre Utrecht (UMCU)

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UMC UTRECHT  
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## Output x – School 2, University Medical Centre Utrecht

At Utrecht university Medical Centre (UMCU), learning analytics on students' progress data is not yet available. In 9 interviews we aimed to determine how students at risk are currently identified, which communication is used to contact these students, which help is required in the current process, and we asked interviewees to fantasize about the possible use of learning analytics in this process. Apart from opportunities, also possible challenges and requirements for the use of learning analytics were discussed.

The information retrieved via these interviews will be used to adapt our existing plan to make a dashboard that could provide staff and students insights in learning progress.

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## Identifying students at risk, before learning analytics

The OFLA-project at University Medical Centre Utrecht, The Netherlands (UMCU), involves staff and students related to the Biomedical Sciences Education. The programme to obtain a bachelor degree is three years, whereas the master programme takes 2 years.

Personal data and progress data of students is stored in the learning management system, Osiris. This database is able to provide overviews of student progress, but this process is not automated. Actually, all monitoring of students is currently done manually. The use of learning analytics might improve student monitoring by staff and teachers, and might provide students with insight into their progress compared to peers or students learning in previous cohorts. To understand how students at risk are currently identified, 8 interviews with staff and 1 interview with a student assessor were performed.

### 1. Methodology

We conducted 8 interviews with staff (between April and July 2019). We purposefully sampled the interviewees. We invited the bachelor programme director, the master programme director, a bachelor programme coordinator, a study advisor, a research project coordinator, a master programme coordinator and a study coach. In addition to their described role, they all have a teaching position and most of them are also a tutor (mentor) for a small group of students at our university.

We also invited to 2 programme managers (in a single interview), who are not in direct contact with student, and one interview was conducted with a student representative. All interviews were face-to-face. To maintain consistency, all interviews were conducted by the same interviewer. Each interview started with a brief introduction of the OFLA project and the aims related to this project. The interview questions were centred around four themes: detection of students at risk, communication with students at risk, support for students at risk, and opportunities for the near the future and the possible opportunities and challenges for the use of learning analytics. All interviews were conducted in Dutch, and interview notes were translated to English. In the results the different roles of interviewees are mentioned in square brackets.

### 2. Findings

#### 2.1 Detection of students at risk

In the bachelor programme there are several procedures that help to identify if students are progressing nominally (meaning that they are on track and probably are able to finish their degree within the set time frame of three years). The identification includes the following procedures:

1. It is a rule that student must have earned at least 45 out of 60 credits after one year of education. Students get an early notification (after approximately 6 months), which indicates the number of credits earned so far, and a forecast (based on students' current progress) showing the likelihood of passing the first year. This early warning is known as [provisional study advice](#), whereas at the end of the first year, students also receive a letter with their [compulsory study advice](#). This report is sent by the programme director and bachelor programme coordinator to students' home address.

2. [Study progress reports](#) can be retrieved at any given moment. This is mostly requested by study advisors, the study coach and tutors. This report shows students grades, GPA, number of credits, and number of resit-exams. This information is sometimes used to start conversations with students.
3. Students are sometimes advised to make an appointment with the study advisor. This advice provided by teachers or tutors when they notice (dramatic) [changes in student's showing sign of fatigue](#). Some teachers notice when students repeatedly fail to [meet deadlines](#), or their engagement or [attendance is reducing](#) over time. Sometimes peers talk to teachers because they worry about a friend. [bachelor programme coordinator, study coach, study advisor]
4. Some students at risk [contact the study advisor themselves](#). Often because they complain about not feeling well, or not progressing in the speed they were used to, or would like [study advisor].
5. There are numerous [evaluations](#) that could help identify when (groups of) students are not doing so well. For example, end-of-course evaluations and the outcomes of a nationwide national student surveys [programme managers, bachelor programme director]. These surveys are based self-reported perceptions for instance regarding study load.
6. In medical education, students do not get actual warning or alert, but students are already able to compare own grades with peers in a learning management system that is generally used to share hand-outs and assignments [student representative].

In master's education, the aforementioned alert systems are not in place. Only if a student [exceeds deadlines in internships](#) (are two major components of the degree, next to theoretical courses and a writing assignment) will an alert be raised by the research project coordinator. This notification is forwarded to the master programme coordinator. The master programme coordinator is also contacted by students themselves, or are informed about student struggles via a daily supervisor of internships. In addition, the study advisor does yearly check-ups to identify if student exceeds three years of masters' education (similar to students enrolling in a fourth- or fifth-year bachelor education). The study advisor checks for progress (entitled the [cohort check](#), in which students must have earned at least 45 credits per year in education), and sometime looks up additional information in Osiris.

## **2.2 Communication with students at risk**

Communication with and about students at risk is very important. All employees involved in education feel responsible for helping students at risk [programme managers]. They either offer personal help, or refer students to other sources of help such as the study advisor, personal tutor, student psychiatrist, teacher, career officer, etc. On the other hand, students enrolled in this university are themselves responsible for seeking or replying to help [master and bachelor programme director].

### *2.2.1 The study advisor*

In the introduction week for first year students, students are introduced to the study advisors. They explain their main body of work and emphasize that students can (and should) always contact them when they have doubts about their education, their progress, their well-being etcetera [research project coordinator, study advisor]. The study advisor regularly checks the progress of students identified as being at risk [study

advisor]. In addition, the study advisor sends an email to students that are actually lagging behind (students are identified in a yearly cohort check). In this email, students get a notification of this finding and are asked to indicate if they are doing okay. Students that reply, are invited to meet the study advisor and if necessary, students are referred to other sources of help, such as a student psychiatrist. In case students do not respond to this invitation, they will receive 1 reminder from the study advisor. The student should reply something, albeit that (s)he does not need or want any help [study advisor, masters' programme director].

The study advisor feels the responsibility to make students at risk aware that they matter. When these students do not respond to email, the study advisor may try contacting the student via telephone, text message or in a face-to-face conversation. He actually perceives that, in his position, all types of communication should be allowed when aiming to reach a student with urgent issues.

### *2.2.2 Tutor*

In the introduction week, bachelor students have their first appointment with their personal tutor during the introduction week. This tutor is available for consultation throughout their bachelors' education. Tutors also have regular meetings with students, both individually and during group mentoring. When tutors worry about (the progress of) students, some contact the student themselves, to ask how the student is doing, whereas in specific cases, the study advisor is first consulted to determine a suitable approach to help the student [study coach, bachelor programme coordinator, bachelor programme director].

### *2.2.3 Teachers and masters' coordinators*

Teachers might notice when student progress or engagement is (dramatically) declining [bachelor programme director]. Some teachers speak to the student, for instance after a lecture, or send them an email stating their observation and to ask how they are doing [bachelor programme director]. In case of the master's programme coordinators, they receive a notification of projects exceeding the estimated deadline from research project coordinator [masters' programme coordinator]. Sometimes students have already informed their programme coordinator about a delay. If this is not the case, the programme coordinator sends an email to the student and her daily supervisor of the internship to ask about the progress of the project [masters' programme coordinator]. Until recently, masters' programme coordinators would have regular meetings with their students, since students need approval for starting an internships and confirmation of finishing an internship. This used to be a face-to-face meeting with the masters' programme coordinator, since student need a signature as proof. However, this is about to change when approval and grade confirmation become digital procedures. This change will result in less direct communication between students and the masters' programme coordinator.

## **2.3 Actions expected of employees**

At the level of management, the organisation (directors of bachelor and masters' education) should formulate Key Performance Indicators (KPI) to monitor the progress of students. These KPI's should be discussed with educational coordinators and directors at regular intervals [programme managers].

Employees that are in direct contact with students are expected to know (at least to some extent) what sources of help are available for students [study coach, bachelor programme director]. They are expected to either personally contact the student, or inform the study advisor about their observations [bachelor programme coordinator]. An example is the observation that student is repeatedly absent, even though participation is obligatory. It is most important that employees show the student they are sincerely worried. Although it was noted that this might be difficult, because students that show repeated absence are less likely to respond to any kind of invitation [study advisor]. Tutors should monitor the progress of their students by checking and comparing progress reports [bachelor programme coordinator]. In case they observe a deviation in progress, tutors are expected to refer the student to the study advisor. Employees in direct contact with student should also advise students to sign up for workshops or tutorials provided by the university [student representative]. (These involve workshops for academic skills, but also skills like time management, coping with stress etc).

## **2.4 Opportunities for the future and use of learning analytics**

The future aim, exposed by both programme directors, is to have a clear three staged approach to help students with issue related to student well-being, including students at risk. The first stage is provided by mentors/ tutors/ (research project) coordinators. The purpose of the first degree is to signal students at risk.

The second stage involves study advisors (and in some cases the research project coordinator). This stage is expected to contact the student and offer actual help. The third and final stage depends on the severity and underlying cause of students' issue. This stage involves student psychiatrists, or other professional health care providers. Obviously, monitoring should focus on students at risk. However, automated monitoring of students could also provide the opportunity to identify students that are not performing in 'their zone of proximal development' (read: student passing courses, but have the ability to actually do (much) better when they are properly challenged) [master programme director].

### *2.4.1 Procedures to keep*

The study advisor currently plays a central role in providing care to students at risk. This prominent position should be maintained, regardless the use of alert systems and / or learning analytics [all interviewees]. All interviewees also agree on the use of manual alert systems such as progress reports and (compulsory) study advice. The interviewees underline that some of the steps could be automated to reduce workload.

### *2.4.2 Things to add to the current procedures*

- Teachers involved in multiple lectures or meetings in a course often keep track of student attendance. It would be beneficial if all teachers would monitor student attendance (and engagement), and report this information to the course coordinator. The course coordinator could share the attendance reports with for instance the study advisor [bachelor programme coordinator].
- Teachers and more specifically course coordinators, could monitor student progress at a cohort level, meaning they could compare the average grade and percentage of student passing their course over consecutive years [Master programme coordinator]. This data is mainly based on exam scores. Some course coordinators keep track of cohort scores and percentages of students passing their course. It would be beneficial to make this a standard procedure.
- The introduction of intervision\* regarding students' well-being could be included in the curriculum, for instance as part of group mentoring by tutors [programme managers].

\*Intervision is an organised conversation between peers in which sensitive issues are discussed and peers suggest solutions or first steps to solve the issue.

- Student questionnaires often focus on the content of a course and student perception of workload. Other factors, such as relatedness and ability to adapt learning strategies are known factors to influence students learning and achievements [master programme director]. It is therefore suggested to include these topics in the questionnaires.
- Management staff suggests to stimulate students' self-regulation/ self-management throughout their masters' programme [programme managers, master programme director].

#### *2.4.3 Opportunities for using LA in identifying and monitoring students at risk.*

Staff at UMCU are satisfied with the current identification process and help for students at risk. However, all of the interviewees identified one or more benefits of using learning analytics. Most importantly, they hope that using learning analytics could identify students at risk at an early state, in order to minimize the gap that these students need to compensate [study advisor, bachelor programme director, master programme director, research project coordinator].

##### *2.4.3.1 opportunities at a course level*

- the research project coordinator could look into the feedback generated with rubrics in mandatory interim assessment. Difficulty in writing, planning or other practical research skills could be identified at an early stage [student representative, research project coordinator, master programme director].
- The learning management system could be upgraded, such that students failing to meet deadlines in a course would get an automated notification. If a similar mistake is made in the same course, both student and teacher should get this notification [bachelor programme coordinator, research project coordinator, master programme director, master programme coordinator].
- Learning analytics could track the number of hours student spend studying (in the library), to get a general overview of students' actual workload [study coach].

##### *2.4.3.2 opportunities for using learning analytics in the future at programme level*

Prompts/ triggers:

- Signal when students have multiple 'not satisfactory/ did not participate' marks [master programme director].
- Signal students when they fail 2 or more theoretical courses in a row [master programme director].
- Signal when average grade is deviating negatively (for instance more than 1 standard deviation compared to previous achievements [master programme director].

Bringing datasets together:

- Visualise students' progress of perception of well-being (next to grades) [master programme director]
  - At UMCU, we are currently experimenting with a well-being questionnaire. This questionnaire should be filled out twice a year, and provides automated feedback to students (i.e. suggestion to improve for instance time management skills, or engagement, it also included recommendations for workshops and tutorials. [student representative, research project coordinator, master programme director]



- it would be most beneficial if the feedback would also automatically stimulate student to contact the study advisor [research project coordinator, study advisor, master programme director].
- To get a proper overview of students' progress, it is suggested to include data retrieved from rubrics, course grades, progress in ECTS and maybe include a questionnaire focussed on students' mental well-being [master programme coordinator, research project coordinator, study coach, bachelor programme coordinator].
- The master's programme coordinator would like to have a visual overview of the progress and perception of well-being of the students. Students should be able to see their progress compared to peers.

#### *2.4.4 Challenges of using learning analytics (LA) in identifying and monitoring students at risk.*

Most staff members are satisfied with the current procedures and activities. They mainly emphasize that they would like to keep procedures as they are. When asking about their perception regarding learning analytics in this process, they have diverse ideas about challenges we might face.

- Some wonder what LA would add, when the current process is satisfactory. With these sensitive issues, it is better to focus on personal contact, rather than on technology [bachelor programme coordinator, student representative].
- Are institutions allowed to look into student progress, how does this relate to the rules regarding GDPR? [programme managers]
- Data driven alerts might be perceived as surveillance (big brother), and students might lose autonomy [student representative, research project coordinator, bachelor programme coordinator].
- Automated alerts to student at risk could increase workload (perceived pressure). The message should be phrased very carefully, and should not frighten the students, rather students should feel welcome to discuss their progress and related issues if applicable [study advisor, student representative].
- Once automated messages are send, it might result in additional workload for teachers, students and study advisors. Especially, if the alert is raised too soon. Also, the student might not perceive themselves as being at risk, whereas the alert states otherwise. It is therefore suggested that there should be a high threshold to generating the alert, even though students with smaller issues will be flagged later, and their delay or risk may have increased in the meantime [bachelor programme director].
- Monitoring students at risk involves more than student progress, grades, presence/absence. The picture is incomplete. It would be beneficial to include questionnaires about mental health for instance [programme managers, master programme director, study coach] and supporting students at risk should include more than a report on study progress.
- Student might show preferred behaviour (modelling) in order to please the system. This window dressing might ignore students' actual wellbeing [master programme director, research project coordinator].
- Our university is involved in a project named Thermos. The project is still in the development phase, but the aim is to show a dashboard in which study progress data and student answers to a well-being questionnaire are combined. Students can look into their own data and progress and receive feedback and suggestions for different workshops to improve skills that they report are lagging behind. At this moment staff are not allowed to look into this data. On the other hand, students themselves stay in charge

of their own study progress and who is able to look into this information [student representative].

- Currently the available data is not too rich, if we want to automatically include information for instance retrieved from rubrics, it is necessary to automatically integrate this data [master programme director].

### **3. Conclusions and recommendations**

All members in direct contact with students feel responsible for students' well-being. All offer help to students at risk, either via personal expertise, or by suggesting they seek help or contact the study advisor. Identifying student at risk is currently a manual process when it comes to data analysis. Most staff member expect that learning analytics could facilitate the identification of students at risk, and might identify these students in an earlier phase of their struggles. Identification should include more than attendance rate, progress (in credits) and average grades. This should also include students' mental wellbeing or motivation. These could be measured using questionnaires. A challenge might be the restricted rules regarding GDPR. Communication occurs often in face to face conversations or via email. The study advisor might contact students at risk via telephone. In case personnel in direct contact with student have concerns about student well-being or progress, they are expected to take action. This action might deviate between a small conversation with the student at risk (ask how (s)he is doing), to the suggestion to consult the study advisor or try to offer help themselves.

Staff do see opportunities for using learning analytics in the process of identifying students at risk. They are not interested in using learning analytics in communication or interventions.

## Appendix A. Roles of at UMC Utrecht

- **bachelor programme director**  
Director of the bachelor degree BioMedical Sciences. Involved in management and responsible for the Bachelors' degree
- **bachelor programme coordinator**  
Coordinator (vice-director) of the Bachelors degree BioMedical Sciences.
- **career officer**  
The career officers are available for student to talk about all career related issues. In addition, they provide workshops and lectures about job applications and generic skills. Available for both Bachelor and Master students.
- **daily supervisor of internships**  
Master degree students generally perform two internships. These internships are supervised by an examiner, whom is a senior researcher affiliated to Utrecht University or UMC Utrecht and a daily supervisor. The daily supervisor can be a senior staff member of the research group, or a PhD student of this research group.
- **master programme director**  
Director of the Masters' degree BioMedical Sciences. Involved in management and responsible for 14 Masters' programmes, and the graduate school of Life sciences as a whole
- **program director**  
Staff, not in direct contact with students. Their role is restricted to management tasks
- **research project coordinator**  
The research project coordinator is contact person between supervisors of internships, master program coordinators and students. The research project coordinator is responsible for regular checks on student progress in internships.
- **study advisor**  
Study advisor is available for student to discuss all study related issues. For instance, study progress in general, personal circumstances, of specific advice about (planning of) the content of the program. Available for both Bachelor and Master degree students
- **student representative**  
A student representative is a member of the management team, and the role of this representative is to speak up for students in general. To voice the student perspective in all topics discussed at management level.
- **study coach**  
study coach is available for students experiencing stress or personal issues. The coach will help students to learn how to cope with stress or issues.
- **teachers**  
teachers provide content via lectures or small group learning sessions.
- **tutor**  
A tutor is not necessarily involved in teaching in the bachelor's degree. A tutor guides the student during the three years of bachelor's education, either in one-to-one conversations or via group mentoring.

## **Appendix B. Copy of letter provisional/compulsory study advice**

### **Topic**

Provisional study advice - positive

Dear student,

The first exams have been completed and the results are known. Based on these results the Board of Examiners will provide you with interim provisional advice about the continuation of your study program.

According to the information currently available in OSIRIS, we are pleased to inform you that the course of the Bachelor's degree program in Biomedical Sciences so far gives confidence in a good completion.

We advise you to continue the study in this way and wish you good luck.

Kind regards,

[Names Director Bachelor degree and chair Board of Examiners]

**Topic**

Provisional study advice - doubtful

Dear student,

The first exams have been completed and the results are known. Based on these results the Board of Examiners will provide you with interim provisional advice about the continuation of your study program.

According to the information currently available in OSIRIS, you have earned 7.5 credits and positive marks regarding interim assessment for period 2, or you have earned 15 credits and no positive marks regarding interim assessment for period 2.

It can be concluded that the Biomedical Sciences program is not (yet) going smoothly. If you continue to perform in the same way, you will probably receive a negative compulsory study advice in August. That means that you are not allowed to continue this training.

Nevertheless, we believe that with a correct approach and great commitment there is a reasonable chance that you will be able to successfully complete the degree in due course. It is therefore very important for you that you and your tutor and / or study adviser discuss which steps you need to take to achieve sufficient results.

If you experience circumstances that prevent you from studying sufficiently, for example, illness or other personal circumstances, you must report this to the study adviser as soon as possible. You can make appointments via the Study Information Point (STIP) daily between 10.45 am and 3.15 pm, or by telephone 088-7553478.

Kind regards,

[Names Director Bachelor degree and chair Board of Examiners]

In case you do not agree with the decision in this letter, you can appeal to the Examination Appeals Board of Utrecht University by submitting a digital form via [www.uu.nl/ student / complaints](http://www.uu.nl/student/complaints) within 6 weeks after sending this letter.

**Topic**

Provisional study advice - negative

Dear student,

The first exams have been completed and the results are known. Based on these results the Board of Examiners will provide you with interim provisional advice about the continuation of your study program.

The study results you have achieved so far give cause for great concern. If you continue to perform in the same way, you will probably receive a negative compulsory study advice in August. That means that you are not allowed to continue this training.

We strongly recommend that you make an appointment with the study advisor to discuss your study progress. You can also speak confidentially with the study advisor about this if there are circumstances why you cannot study or do not study sufficiently. You can make appointments via the Study Information Point (STIP) daily between 10.45 am and 3.15 pm, or by telephone 088-7553478.

Information concerning discontinuing student loans, in case you are considering discontinuing your studies, you can find on [www.studentenservice.uu.nl/uitschrijven](http://www.studentenservice.uu.nl/uitschrijven) , see "unsubscribe". You must also inform the study program at the end of the study, [bachelorBMW@umcutrecht.nl](mailto:bachelorBMW@umcutrecht.nl).

Kind regards,

Director Bachelor degree and chair Board of Examiners

In case you do not agree with the decision in this letter, you can appeal to the Examination Appeals Board of Utrecht University by submitting a digital form via [www.uu.nl/ student / complaints](http://www.uu.nl/student/complaints) within 6 weeks after sending this letter.

**Topic**

Compulsory study advice – positive / negative

Dear student,

In accordance with Article 7.4 of the Education and Examination Regulations, you receive a binding study advice at the end of your first academic year. A student who has obtained 45 credits or more in the first academic year will receive a positive recommendation.

*[positive advice]*

In view of your results, you receive positive advice about the continuation of the Bachelor's degree program in Biomedical Sciences.

We wish you good luck in the further course of your studies.

*[negative advice]*

The Board of Examiners has established that you have earned fewer than 45 credits.

Based on this, we must give you a negative study advice. This means that you cannot continue your Biomedical Sciences training at Utrecht University.

We wish you good luck in a new training.

Kind regards,

Director Bachelor degree and chair Board of Examiners

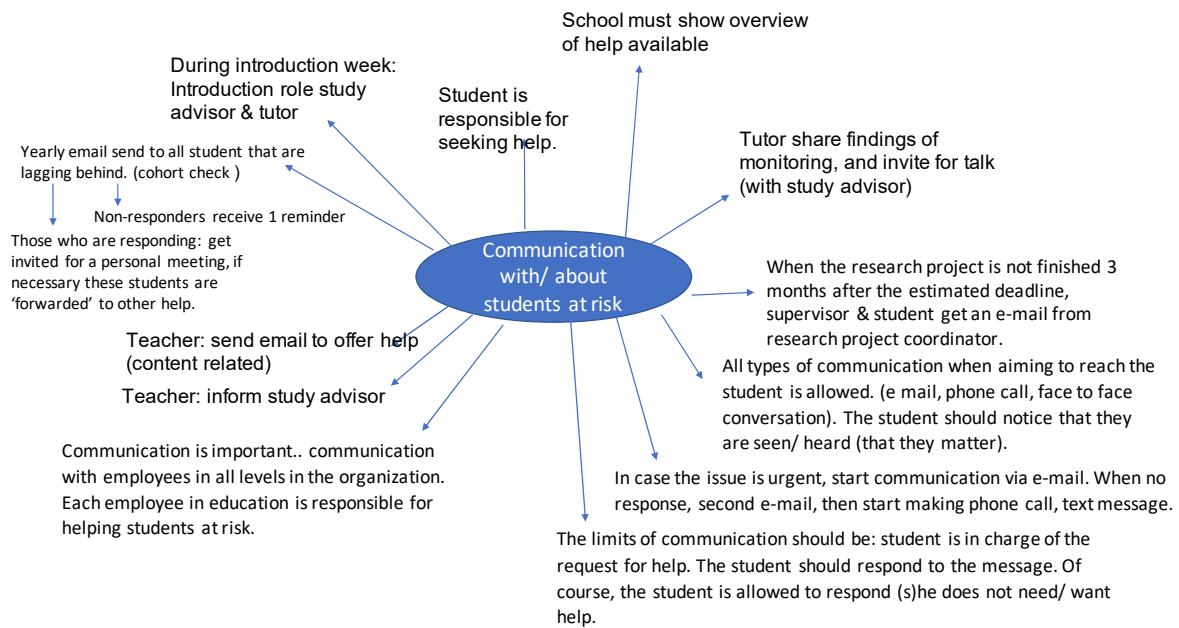
In case you do not agree with the decision in this letter, you can appeal to the Examination Appeals Board of Utrecht University by submitting a digital form via [www.uu.nl/ student / complaints](http://www.uu.nl/student/complaints) within 6 weeks after sending this letter.

## Appendix C.: Schematic overview of interview input

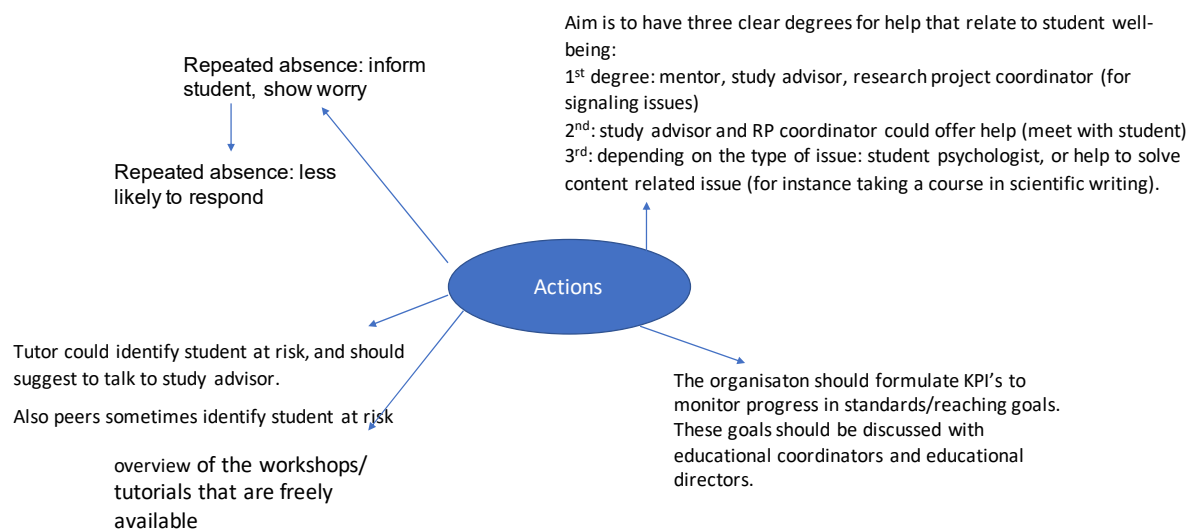
Alerts	Ba (3 years)	Ma (2 years)
<ul style="list-style-type: none"> <li>- Provisional &amp; compulsory study advice</li> <li>- Progress report / yearly check study progress (credits)</li> <li>- Physical appearance (tutor)</li> <li>- Teachers (failing deadlines, engagement)</li> <li>- Peers talk to teacher</li> <li>- Students talk to study advisor if not feeling/ doing well</li> <li>- Tutor monitors study progress (progress reports)</li> <li>- Surveys</li> <li>- Medicine: no alert only compare grade to peers.</li>   <li>- Students are invited by the study advisor When they start their 3rd, 4<sup>th</sup>, or 5<sup>th</sup> year of BSc education.               <ol style="list-style-type: none"> <li>i. When the student does not meet the threshold of 2x 45 credits at start of year 3 (Norm minimum 2x 45 credits (max 120 for start 3<sup>rd</sup> year stud).</li> <li>ii. study advisor does search in Osiris (student management system)</li> <li>iii. For MSc: when program exceeds 3 years.</li> <li>iv. SUMMA: 1x in x months study advisor discuss progress of complete cohort (= 40 students)</li> </ol> </li> </ul>		<p>No actual alerts in place in Ma Alert when duration internship is exceeded.</p>

C1: Overview of alerts in BSc and MSc education.





### C2: Overview of communication currently aimed to support students (at risk)



### C3: Overview of action of staff aimed to support students (at risk)