

Support and guidance for students who fall behind

1. Study and career counseling at EU partner universities

a. Study and career guidance at Karlstad University, Sweden

Guidance is a process-oriented activity. The process is divided into four different phases: Guidance before the choice of education, during the study period, at the end of the studies and after the studies have been completed. The process is based on the professional conversation between supervisor and student, regardless of in which phase the contact is initiated, in order to strengthen the individual in their choice of education at university level and future profession and career.

The process-oriented activity is led by a study and career counselor and leads to the student being able to:

- Search for information and knowledge as well as orientate on education, internships and the labor market.
- Identify and formulate their needs, interests and conditions
- Expand their views and take responsibility for their own career process.
- Develop an action plan based on the student's conditions

The professional conversation is characterized by:

- That it rests on ethical grounds and mutual respect between the parties
- The expectations and role distribution between student and study and career counselors are clarified
- The frames and structure of the call are clear
- That the legal rules that apply to the call are observed and followed, e.g. secrecy
- That the call is based on the applicant's needs
- That the study and career counselor listens actively

The study and career guidance at Karlstad University towards the student includes:

- Study and career-guiding discussions, individually and in groups
- Information and answers to questions about university studies, individually and in groups
- Supporting students with study planning such as:

- o Motivational conversation
- o Structuring study credits
- o Study

The main tasks of the study and career counselors:

Higher Education Ordinance, Chapter 6 Section 3:

Students should be given access to study guidance and professional orientation. The university must ensure that anyone who intends to start an education has access to the information about the education that is needed.

Study and career guidance at Karlstad University includes:

- General information on eligibility issues and the admission process to both prospective and existing students within courses and programs at Karlstad University
- Introduction to new students regarding the parts related to study and career guidance
- Guidance on options within courses regarding choice of orientation and elective and elective courses
- General guidance on foreign studies
- Study planning with students who are in need of guidance on their studies. This is done when needed in collaboration with the program leader, the course coordinator and responsible for the practice planning
- Study technique for students both individually and in groups
- General information on study aid and study social issues
- Guidance on credit transfer cases and replacement of course
- Receive applications for admission to the later part of the program
- General information about degree requirements
- Decisions regarding study breaks and handling of study breaks
- Participates in educational fairs, study visits, information days
- Global monitoring of higher education, labor market, regulations and other social changes
- Career guidance based on the university's educational offering

Cooperation

Study and career counselors cooperate actively with the university's various functions, such as central support functions, the university's faculties and the surrounding society. Quality work is done through participation in planning meetings, committees and councils at Karlstad University in order to be able to carry out a qualitative guidance and contribute to the development of courses and programs.

Useful resources:

<https://karlstadstudentkar.se/english/>

<https://www.kau.se/en/student/current-student/services-students/successful-studies>

<https://www.kau.se/en/student/current-student/services-students/successful-studies/students-special-needs>

<https://www.kau.se/en/student/new-student/help-and-support/services-students/about-student-health-services>

<https://www.kau.se/en/education/support-while-studying/services-students/activity-calendar>

b. Study counseling at Aalborg University, Denmark

Aalborg University, Denmark provides different services in order to guide students who are challenged either by their studies or by personal matters. First, the university offers online resources on study technique (e.g. time management, preparation for exams), which students can read and get advice on how to improve their experience as students. The university also offers a support system organized by graduate students, where other students (undergraduate and graduate) act as student counsellors for the younger students at their programs. In case students are in need of professional support by counselors, AAU does not offer such a service, since the Danish state offers this service for free to all university students in a centralized institution called the Student Counseling Service. In the following, the three services are presented in more detail.

Online resources on study technique

These online resources are categorized under six themes:

- Good study habits
- Good techniques
- Study life in balance
- Get a good start
- Exercises
- Mindset

Figure 1. shows the sub themes of each category

(<https://www.en.aau.dk/education/student-guidance/guidance/study-technique/>).

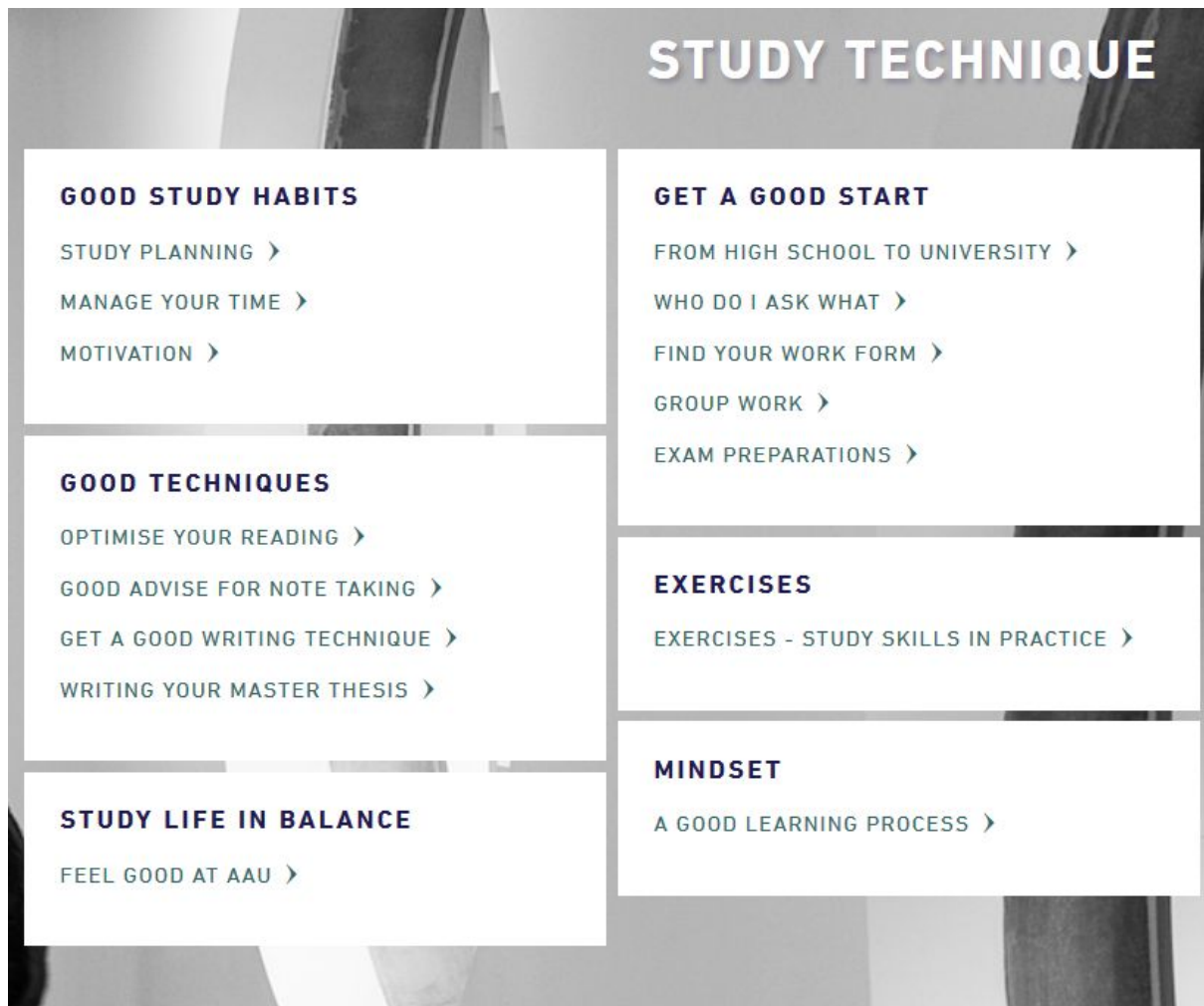


Figure 1. Online resources at AAU website for student support

Student coaching

AAU-Copenhagen Campus has partnered with Copenhagen Coaching Center, so that students can get free coaching sessions. The coaches are students at the Master's programme in Business Coaching, and is a part of their training. Sessions are based on student needs and terms, and are available to all students who need help reaching personal development goals, whether it is personal or study related.

Student counsellors at each program

Apart from the student coaching program, each programme at AAU has its own student counsellor(s) (<https://www.en.aau.dk/education/student-guidance/programme-counsellors/>), who can help students with specific questions, such as:

- academic content of the programme
- study environment
- examination rules
- exemptions, for instance regarding examinations
- programme curriculum

- possibilities for internship or studying abroad
- job opportunities

It is worth mentioning here that the student counsellors are not professional counsellors, so they are not allowed to offer concrete advice to students who are challenged. Moreover, they are not allowed to offer support or help to students who are in need of professional psychological, social or medical help.

Student counseling

If students would like to get advice from professional counselors, they have to send a request to the national Student Counselling Service (<https://www.srg.dk/en>). The national Student Counselling Service is an independent institution that offers study-related, social and psychological counselling for free. The Student Counselling Service helps students in full-time higher education programmes, and it is an institution under the Danish Ministry of Higher Education and Science.

The main objective of this institution is to provide social, psychological and psychiatric counselling and treatment to students at bachelor, professional bachelor and master's level, so they can complete their studies without unnecessary extension, and without unnecessary drop-outs. The institution employs psychologists, social workers with psychotherapeutic training, and psychiatric specialist physicians. All employees have a duty of secrecy and students are able to contact them anonymously.

Since 2014, the student counseling service has been cooperating with The Office of special educational support (SPS) and the Board of Education and Quality on developing and providing special educational support for students with physical or mental impairments and skill development of those who support the students in their daily life. The aim of the support is to ensure that students with physical or mental impairments can complete education similarly to students who do not experience such impairments.

A mental disability refers to diagnoses such as anxiety (e.g. OCD, PTSD), affective mental disorders (e.g. depression and bipolar), schizophrenia and other psychoses, personality disorders, eating disorder, and mental developmental disorders (e.g. ADHD and autism).

2. Possible scenario for iTEM

Based on the information presented above and the current services offered at the universities in EU program countries participating in the project, we propose that the iTEM universities from partner countries focus on providing online resources with advice on challenging topics and that they implement a local network of student volunteers, who can act as study guides (we explicitly avoid the term counselors, since fellow university students should not act as professional counselors). Our proposal is based on the assumption that it should not require extra resources in the form of staff or infrastructure. We believe that the suggestions that follow are easy to implement with the resources available at each institution or at least with minimal investment on the institutions' side.

a. Online resources

One way to support students who struggle in their studies is to provide advice via online resources. Such resources will act as self-help material for challenged students. The partner universities could exploit the existing resources at AAU (see section 1.b) or the resources available at the Danish Study Counseling Service site (https://www.srg.dk/en-gb/get_help/leaflets.aspx). On this site, the partner universities can find documents that provide advice in relation to stress, examination fear, other psychological conditions (e.g. depression, melancholy, etc). More topics are covered by the self-help leaflets published by the University of Birmingham (<http://www.selfhelpguides.ntw.nhs.uk/birmingham/>). Figure 2 shows some of the extended topics covered by these leaflets.



Figure 2. Self-help leaflets published by the University of Birmingham.

The partner institutions will have most probably to translate these resources to their native languages in order to better reach their students. Moreover, partner universities are reminded to always acknowledge the source and producers of such resources in their translated/adapted versions.

b. Local networks of student volunteers

Another service that the partner universities may wish to adapt from the EU universities is the network of study guides that is based on the contribution of volunteer students. The partner universities should invite students at higher semesters to be part of the network of study guides and help other university students, who face difficulties in their studies. It would be best if the universities could attract students from different study programs so the advice of the study guides can be based on personal experience with the study at hand. The study

guides should be able to help other students with tips on exam preparation, course selection, approach to study, etc.

In order to attract volunteers, the universities can officially recognize the work of students who act as study guides by issuing certificates or diplomas at the end of their service. Moreover, they could recognize this effort by organizing social events or trips for all student volunteers.

Student guides should be offered some training before embarking in their task to support other students. The aforementioned resources may also be used to inform student volunteers on the different conditions or challenges. It would be however more beneficial if the partner universities could organize workshops with professionals, who will offer some training to student guides. We would like to highlight here that during this training the professionals should offer general advice to students on how to support others but at the same time letting them to take their own decisions. The study guides, even if they get some training through workshops, are not going to be professional counselors, so their role would be to support but not to suggest solutions or courses of action to fellow students.

c. Using learning analytics to support students with personalized feedback (proposed by UMIT, Austria)

Since partner universities will employ learning analytics to identify students at risk in the context of the iTEM project, we explain in the following how teachers can give feedback to such students.

Identification of students at risk

Learning Analytics (LA) makes use to analyze learners' digital traces to understand and optimize learning processes. To identify students at risk, some indicators to track and analyze their performance can be used. Within the iTEM-Project, the indicator completion and success of test (quiz) will be recorded to track students. All students have to complete all mandatory Mini Test online on Moodle. The grade to distinguish between passed and fail (cut off) and the level of mark have to be set of each institute individual.

Information process to students at risk in the iTEM Project

When using the method learning analytics to identify students at risk it is imported to clarify the process who they get informed of their risk. One way to inform students about their current performance is to give them personal feedback. A personal feedback via e-Mail is one of the proposed theoretical models of how feedback can be provided to the students (Pardo, 2019). This guideline for the iTEM Project should support teachers in providing meaningful and personal feedback to students.

Each student gets an individual text message of the performance of the test in the field of linear algebra and calculus I. Teachers can prepare in advance a set of feedback message for different levels/ categories of learning outcomes. Each student gets an appropriate text message regarding his/her performance. The categories can be built e.g. according to the

numbers of incorrect questions or grades. The following examples from Pardor et al. (2019) are text messages they used in their study.

Condition	Message
incorrect>22	“Make sure you practice again the exercises. Make sure you understand two concepts: memory operations, and memory size. See if you can go through the entire sequence without errors”
Incorrect <=22 and incorrect >11	“Good initial work. However, you should try again and make sure you fully understand how memory works. Choose those answers that you don’t understand why they are correct, and post them in the forum”
Incorrect <= 11 and incorrect >6	“Good work with the exercises. You may want to review the answers again in a few days to make sure the concept of how memory works is fully understood”
Incorrect <=6	“Excellent work with the exercises. You may want to keep the link handy to give it a final review before the exam”

(Padro et al. 2019)

Providing effective feedback can help students to reflect their work compared to the expectation of learning outcomes.