



The Orientation Program at the TUD Dresden – Survey Results on the Concept

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The increasing diversification of study programs is one of many challenges when choosing the right degree program. An orientation program enables participants to explore various degree programs over the course of up to two semesters and to take a closer look at their individual interests and abilities. The orientation program at the TUD Dresden University of Technology acts as a preparatory program prior to regular studies and offers a wide range of events as well as mentoring and coaching support to facilitate an informed and motivated study decision. Before the start of the first cohort, 2043 people were asked about the current status of the concept by means of an online survey. The results were used to further develop the concept and to research the reasons and backgrounds for interest in an orientation program. Around 90 per cent of participants consider it to be a useful offer and agree or tend to agree with the statement that the orientation program can be helpful in deciding for or against a degree course. The article picks up on these and other results after introducing the concept of the orientation program.

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1. The situation of prospective students

The number of courses on offer is constantly increasing [1]. Prospective students today also encounter an almost unmanageable abundance of study programs with sometimes misleading designations, which makes it difficult to choose the right degree program and often leads to wrong study decisions [2]. This situation is accompanied by increasing heterogeneity among prospective students, which creates difficulties for universities and first-year students alike [3]. Social background, migration background, age (a larger proportion younger than 19 years and older than 25 years) and educational background prior to admission play a role here. As a result, the motivations of students also diversify [3]. The greatest problems and difficulties when it comes to choosing what to do after leaving school are a difficult to manage number of options and a lack of clarity about their own interests, aptitude and abilities [4]. This lack of self-knowledge and study orientation, misconceptions about studying, subject content and career paths as well as the various motivations and deficits in study preparation are current challenges for prospective students and therefore reasons for an orientation program (german abbreviation OSM for Orientierungsstudium).

Studying involves much more than simply acquiring complex subject content. It requires a redefinition of one's own everyday life, the continuous development of learning techniques, an understanding of the normative foundations of the respective subject and the exploration of new forms of self-organization. At the same time, it means gradually immersing yourself in the multifaceted campus life. However, the promotion of study skills and an understanding of the structures and culture of the university often remain in the background. Successful integration into everyday student life plays a decisive role in student satisfaction and ultimately success. The ability to study as an overarching competence for successful study also includes familiarity with the processes, structures and traditions of the university as well as the perception of the campus as a familiar place. There is undoubtedly a wide range of support services for students in vari-

ous life situations, sometimes even in precarious situations. However, the question arises as to whether students are aware of these services at the beginning of their studies so that they can access them if necessary. The OSM consists of analog and digital modules that include or refer to the services described from the outset and in some cases provide them as mandatory elements. It is a study success project of TUD Dresden University of Technology (TUD) that integrates previous offers of various study success projects, such as the digital study assistance system gOPAL for the onboarding of first-year students [5].

2. The orientation program

The OSM is one of around 50 OSM programs nationwide, which are constantly growing in number and are mostly located in the fields of mathematics, computer science, natural sciences and technology (STEM).

What should I study? Which degree course really suits me? Do I want to study at all? The OSM of the TUD aims to provide answers to these questions that prospective students ask themselves. The OSM gives prospective students the opportunity to get a taste of various degree courses at TUD for up to two semesters. They can attend lectures, take part in workshops and excursions, take exams, go to the canteen and get to know student life. In the course of the OSM, the participants take a close look at their own ideas, abilities and goals so that they can make an informed and motivated decision for the future. The OSM is an orientation program that can be taken before the regular degree courses at TUD. An extensive range of events helps prospective students to find the right degree program and to start their subsequent studies optimally prepared. Successfully completed examinations can be credited towards a subsequent degree course on application. Furthermore, trying out different courses enables students to immerse themselves in the respective subject cultures and faculty structures. This makes it easier to assess a fit and a sense of belonging, which should not be underestimated in terms of perseverance and also leads to fewer changes and drop-outs in the first semesters and subse-

quently to a successful degree. In addition, there is the opportunity to get to know student life with all its advantages: the semester ticket, the offers of the university sports center, the student university groups and much more. During the OSM, participants are advised and supported with the help of a mentoring and coaching program.

The OSM at TUD is made up of the following four components:

- Study orientation: support in choosing a course of study, imparting knowledge about university structures, working techniques and subject cultures
- Qualification in natural sciences and engineering: teaching of (possibly missing) technical skills
- Key skills/career exploration: teaching key skills, insights into research and business practice as an orientation aid, language courses
- Project work: teaching interdisciplinary skills, time and project management, teamwork skills

The OSM is designed to enable high school graduates and other prospective students A) to make an informed choice of study program and B) to successfully start a STEM degree program at TUD.

The target groups of the OSM are as follows:

- Prospective students who know that they want to study STEM, but do not yet know exactly which STEM degree program
- Prospective students who want to find out whether a degree course is for them and if so, which one
- Prospective students with knowledge gaps
- Prospective students from non-academic families
- female prospective students
- International prospective students
- Student dropouts/changers
- Professionally qualified persons

Prospective students have the following advantages from OSM:

- They know whether they want to study.

- They know WHAT they want to study.
- They know WHY they want to study

The feedback from the survey will be used to better address the needs of future participants.

3. Survey and results

Before the start of the first cohort, 2043 people were asked about the current status of the OSM concept in an online survey in the second half of 2022. The results were used to further develop the concept and to research the reasons and background for interest in an OSM. Several status groups were distinguished, which were quantitatively distributed as follows: 129 pupils (SuS) (6.3 percent), 1230 students (60.2 percent), 602 employees of TUD (29.5 percent), 41 employees outside TUD (2 percent) as well as 25 responses that indicated the answer "other" (1.2 percent) and 16 times no answer (0.8 percent).

The need for an OSM at TUD is predominantly assessed as high or very high (62.8 percent). Only 6.2 percent rated the need as low or very low. There were no relevant differences in the assessment between the status groups (n = 1927).

Only around 7 percent of students (n = 96) could not imagine participating in the OSM themselves, while 92.7 percent said the exact opposite. 62.5 percent of students answered yes to the desire to participate in the OSM and a further 30.2 percent answered yes if the offer were also available for other departments. Even among current students, there is an approval rate of around 74% (see Fig. 1).

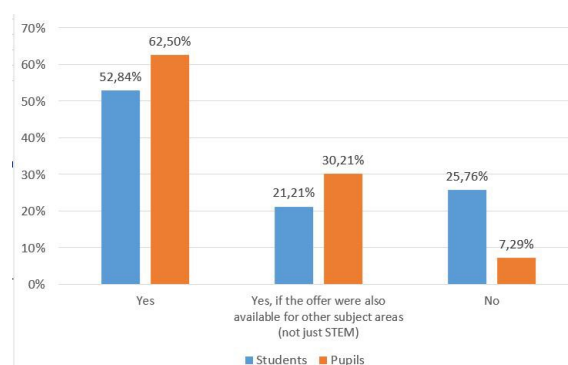


Fig. 1: Could you imagine participating in the OSM? (Status groups: pupils and students, n = 132).

The question of whether students (n = 87) felt well informed about their options after leaving school revealed a mixed picture (Fig. 2). Around 47% answered partly, 25% good to very good and around 27% bad to very bad.

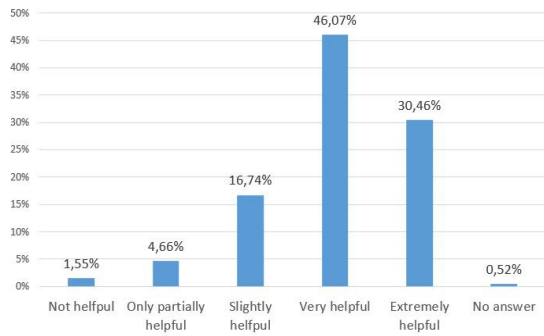


Fig. 3: How helpful do you find the individual modules? - Study orientation? (Status groups: All, n = 1159)

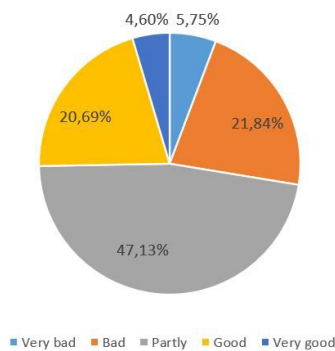


Fig. 2: How well informed do you feel about your options after leaving school? (Status group: pupils, n = 87).

Over 64 percent of pupils (n = 87) want to start a degree course after leaving school, almost 61 percent (n = 56) in the STEM field, while around 21 percent do not yet know.

Almost 60 percent of students (n = 87) have stomach pains when planning their future after leaving school, in particular due to the following points (responses with over 50 percent agreement):

- The difficulty of assessing which qualifications and skills will be important (77 percent).
- Lack of clarity about their own aptitude/skills (73 percent).
- Unsatisfactory preparation for university by the school (64 percent).

- The difficulty of obtaining helpful information (63 percent).
- The difficult-to-manage number of options (54 percent).
- Lack of clarity about their own interests (52 percent).

There are hardly any differences between the status groups in terms of how helpful the individual OSM modules are perceived to be. Over 75 percent rate the study orientation module as very helpful or extremely helpful, around 70 percent the natural sciences and engineering qualification module, around 69 percent the key skills/career exploration module and around 54 percent the project work module.

At around 88 percent, a high proportion agree or agree with the statement that the OSM could be helpful in deciding whether or not to study (n = 1533). Around 89 percent consider it to be a useful service.

The responses to the qualitative question as to which other aspects of content should be included in the OSM were divided into six clusters. These clusters are listed below according to the number of responses with some examples.

- *Meta and practical skills* (n = 169), e.g. social skills, scientific work
- *Outlook in industry/practice* (n = 139) (also profession of the researchers), e.g. getting a taste of it in the form of internships, as these often play a major role in STEM degree programs, cooperation with companies for e.g. construction sites/plant experience
- *Integrate general information about the main study program, provide insights into the study program, comparison between departments/study programs* (n = 105), e.g. show study schedules to make students aware of courses to be completed, taster courses in various module subjects e.g. technical mechanics, electrical engineering, thermodynamics
- *Experience and contact with existing students* (n = 75), e.g. talks with/lectures by graduates to get to know future prospects, 1:1 coaching/meetings between prospective

students and working graduates of the degree program (possibly with a questionnaire to help)

- *University issues and student life* (n = 69), e.g. student financing, university structure
- *Special content requests* (n = 67), e.g. mostly basic courses or preparatory courses: practical work in the laboratory, programming
- Other unclustered multiple mentions also include: women in STEM studies, psychological counseling program, highlighting differences between school and university, networking between OSM participants, discussing the social relevance of degree programs, sports

The answers to the qualitative question as to which other offers (for study orientation) should be integrated into the OSM could also be divided into the six clusters. These clusters are also listed below according to the number of responses with some examples.

- *Special content requests (mostly foundation courses or preparatory courses)* (n = 53), e.g. preparatory courses in natural sciences, course in chemistry/biology
- *University matters and student life* (n = 25), e.g. campus life, university groups
- *Meta and practical skills* (n = 22), e.g. language courses, self-analysis ability
- *Integrate general information about the main study program, provide insights into the study program, comparison between departments/study programs* (n = 19), e.g. mobility and stays abroad, internship week in desired subject areas at TUD, during the vacations
- *Experience and contact with existing students* (n = 17), e.g. discussions with students from the respective study institutions, personal counseling/conversation/coaching offers, as these are best suited to reflect on individual learning and development processes. if necessary, additional reflection tools such as portfolios, podcasts or similar.
- *Prospects in industry/practice (also profession of the researchers)* (n = 17), e.g. present contact points for internships, not only get a taste of study programs, but also contact with everyday working life (research, company visits, lectures)

- Other unclustered multiple mentions include: consultation with Erasmus, lecture series and colloquia of the faculties, research support and psychological counseling program

4. Implications

It is clear that the concerns of the prospective students surveyed coincide with those in the literature. The OSM targets some of these concerns and tries to address and counteract them with the combined modular offers. For example, the following OSM offers address the reasons for the students' concerns about planning their future: The difficulty in assessing their own qualifications and skills as well as the lack of clarity about their own abilities is countered by the OSM with offers to teach key skills, support in choosing a course of study by attending regular lectures and the teaching of subject-specific skills. The OSM responds to the students' statement that they have difficulties obtaining helpful information by offering a wide range of services. It can also be stated that there is interest beyond the STEM field and that the concept, originally planned as a STEM orientation program, has opened up to an orientation program covering all subjects. This interest is also reflected in the results of the participants who come from subject areas other than STEM disciplines.

Literature

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