

Short study 2022

STEM EDUCATION.

WHAT YOUNG WOMEN THINK ABOUT IT.

ANYONE FOR STEM? INTEREST EXISTS.

The good news: today's female school students find STEM anything but boring: 70.0 per cent of the respondents have a personal interest in Science, Technology, Engineering or Mathematics topics. This was the result of a survey conducted by the IU International University of Applied Sciences.

The bad news: many young women still have reservations about studying a STEM subject or taking a STEM apprenticeship. Over 40 per cent feel overchallenged by these topics or find STEM disciplines too difficult.

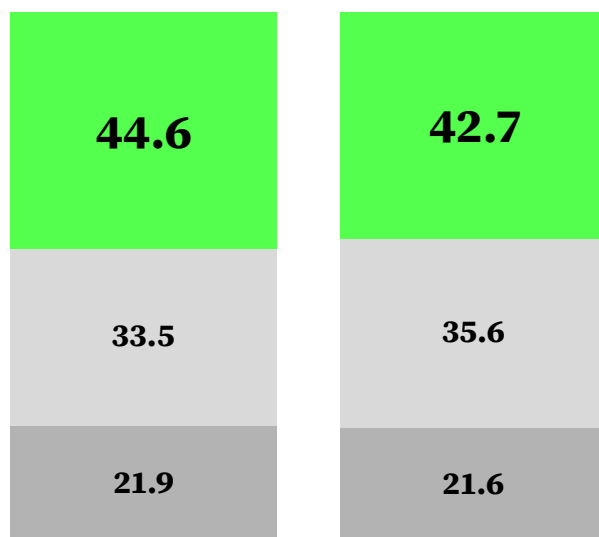
70.0%

of female school students surveyed are interested in STEM topics.¹

¹ Question: Do you generally have a personal interest in Science, Technology, Engineering or Mathematics (=STEM) topics?

Please rate to what extent the following points would prevent you taking an apprenticeship or a degree course in Science, Technology, Engineering or Mathematics (=STEM). In %

■ Completely agree / agree
■ Partly
■ Disagree / strongly disagree



These subjects are too difficult for me.

I feel overchallenged by STEM topics.

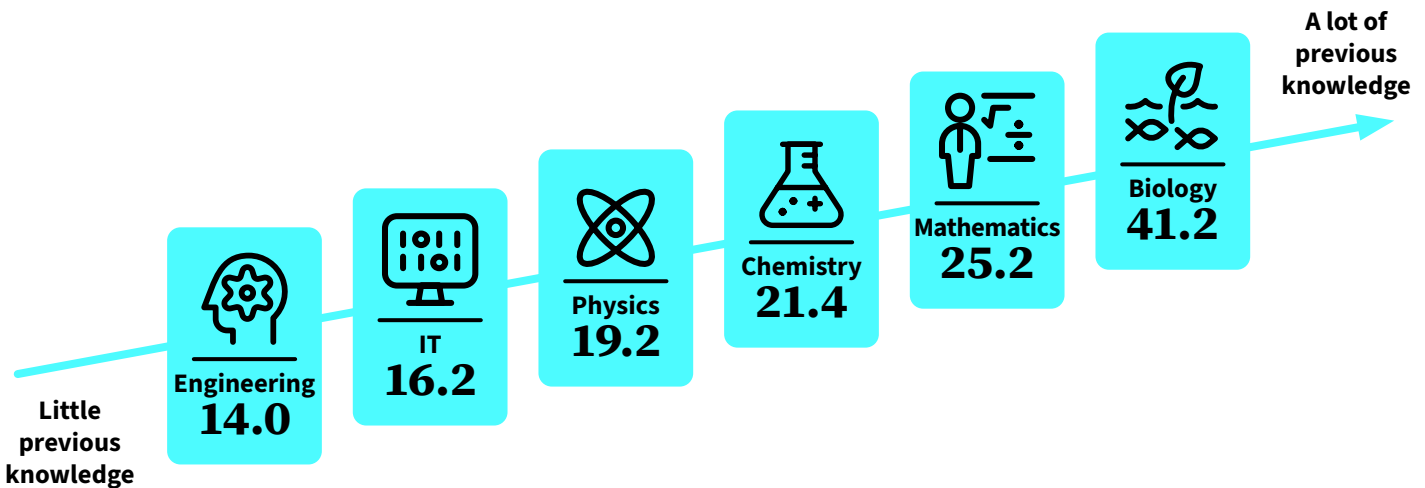
iu

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ADDITIONAL OBSTACLES TO A STEM EDUCATION: OFTEN A LACK OF QUALIFICATIONS.

Many of the respondents state that they lack the previous knowledge and the skills for special STEM subjects. And that they therefore feel underequipped for a university course or apprenticeship. **Only when it comes to biology do female school students have a more positive feeling.**

On a scale of 1 to 5, please rate to what extent you agree with the following statement: "With my previous knowledge and my skills, I feel equipped to start a university course or an apprenticeship in the following subject." In %; top 2 box on scale of 1 to 5 (completely agree / agree)



BOREDOM IS ON THE CURRICULUM.

In schools, STEM subjects and the people teaching them are felt to be boring. So say almost half of the female school students surveyed. For just over a third of the respondents, the teaching content is too complicated.

At school, I often find STEM subjects dry and boring.

44.9

To what extent do you agree with the following statements?

In %; top 2 box on scale of 1 to 5 (completely agree / agree)

The teaching content of STEM subjects is too complicated for me.

34.8

My teachers teach STEM content in a boring and unappealing way.

42.4



STEM EDUCATION – WHAT OR WHO SPEAKS AGAINST IT?

What do other people think? Hardly a cause for concern amongst the female school students surveyed. **Instead, financial obstacles are what affects STEM education:** A quarter of the respondents say that a STEM apprenticeship or a STEM degree course is incompatible with having an often immensely important side job.

Please rate to what extent the following points would prevent you taking an apprenticeship or a degree course in Science, Technology, Engineering or Mathematics (=STEM). In %; top 2 box on scale of 1 to 5 (completely agree/agree)

81.8% of the female school students surveyed are generally interested in studying at university.²

²Question: Are you generally interested in studying at university?

24.3

Studying in the STEM field is too expensive, because I couldn't take on a side job due to the high workload.

16.1

My friends would not understand this choice.

11.5

Other people might mock my choice of course.

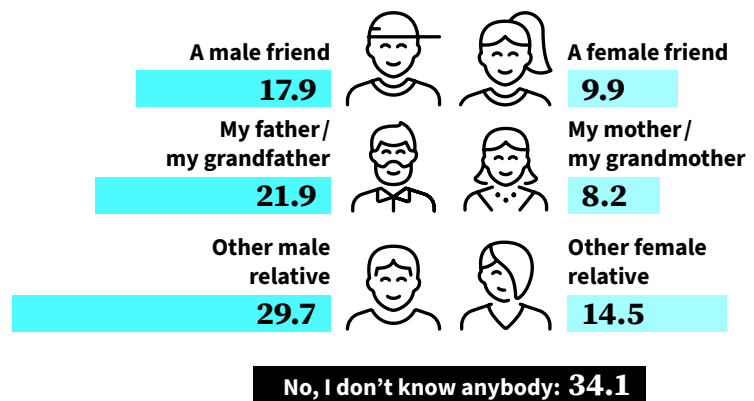
8.4

My parents would not approve of this field of study.

FEMALES IN STEM? FEW AND FAR BETWEEN.

Just a few respondents have female friends or relatives who work in STEM professions. Over a third don't know anybody who works in STEM.

Do you know anybody who works in the field of Science, Technology, Engineering or Mathematics (e.g. software developer, biologist, engineer)?³ In %



³Although gender requires more than a binary classification into female and male, the data currently available for such an analysis is limited. In general, the numbers are too small to allow a statistically significant breakdown by additional variables. Therefore, for the purposes of this study, gender is considered in a binary system.

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WOMEN ENROL IN STEM COURSES MORE RARELY THAN MEN (4). TO DO SOMETHING ABOUT THIS, YOU HAVE TO START EARLY AT SCHOOL – FOR EXAMPLE, THROUGH GENDER-SENSITIVE LESSONS THAT APPEAL EQUALLY TO GIRLS AND BOYS, SHOW DIVERSE ROLE MODELS, ARE MINDFUL OF IMAGERY AND CREATE A POSITIVE LEARNING ENVIRONMENT. ABOVE ALL, MORE FEMALE ROLE MODELS IN STEM FIELDS ARE URGENTLY REQUIRED, SO THEY CAN ENCOURAGE YOUNG WOMEN WITH THEIR OWN EXPERIENCE. BECAUSE ROLE MODELS IN A YOUNG WOMAN'S DIRECT SOCIAL ENVIRONMENT, SUCH AS TEACHERS AND FAMILY MEMBERS, BUT ALSO IN THE WORLD OF BUSINESS, HAVE A MAJOR INFLUENCE ON THEIR CHOICE OF DEGREE LATER ON.”



Prof. Dr. Alexandra Wuttig
Chancellor of the
IU International
University of Applied
Sciences

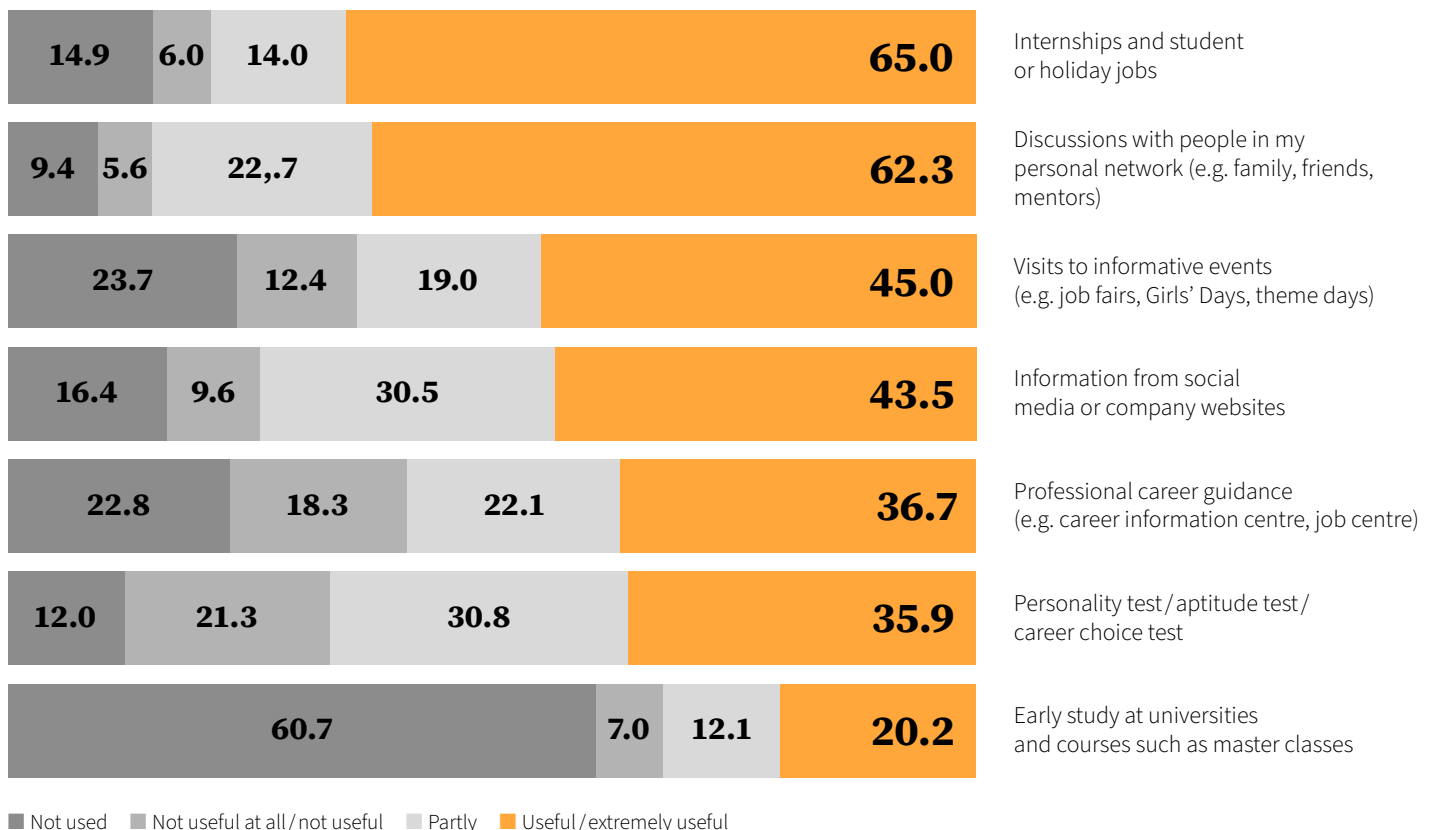
⁴ Source: Bildung und Kultur – Studierende an Hochschulen, Wintersemester 2020/2021, Fachserie 11, Reihe 4.1, Chart 7, Page 29, Statistisches Bundesamt (Destatis), 2021

THE KEY FACTOR WHEN CHOOSING AN EDUCATIONAL PATH: THE RIGHT SOURCES OF INFORMATION.

The winners are internships and holiday jobs that provide a good insight into possible career or course choices later in life. Followed by personal sources of information such as friends, family members or mentors. But digital information channels – predominantly social media such as Instagram, Facebook and TikTok – and company websites are also a popular choice.

Have you ever made use of any guidance services to help you choose your career/degree? If you have, please rate how useful these services were to you on a scale of 1 to 5. If not, please tick “not used”.

In %



Contact us

If you have any questions or comments, please contact us: research@iu.org

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The Ministry of Economics, Science and Digital Society of the State of Thuringia is responsible for the IU International University of Applied Sciences at all study locations in matters relating to higher education law.

Target group:

777 female school students³

Panel: Gapfish
Survey period: 09.05.2022 – 12.05.2022