Analysis of DAAD Student Survey 2021

**Studying abroad during Covid-19:**
Experiences of physical and virtual study visits and recognition of academic achievements

(Study period: Summer Semester 2020 to Summer Semester 2021)
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Introduction

The most recent DAAD survey of internationally mobile students at German higher education institutions took place in 2021 under the exceptional circumstances of the global Covid-19 pandemic. From spring 2020 onwards, the pandemic had a marked effect on student mobility and almost all of the world’s higher education institutions. International borders were temporarily closed, many countries imposed entry restrictions and physical teaching was transferred to virtual formats.

Many students already abroad when the pandemic broke out were faced with a choice for summer semester 2020 (SS 2020): to remain in the host country and continue their studies virtually, or to leave the host country and then either abandon their stay or continue it virtually from home.

In addition to the pandemic situation, funding modalities were a critical factor in students’ decisions. For the majority of students who responded to this survey, this meant the Erasmus+ and PROMOS programmes. From SS 2020 onwards, both programmes allowed students to undertake hybrid study visits. This gave them the option of completing their stay abroad digitally from their home countries if they had to return early from abroad.

Students from German higher education institutions who wanted to spend time abroad in subsequent semesters therefore had a choice: they could commence their stay abroad digitally from home and continue it later in the host country in person, in hybrid form or solely digitally. The Erasmus+ programme also offered mobility subsidies to help students return home. There was also the option to complete an Erasmus visit in digital-only form from home without a scholarship. With the start of the winter semester 2020/2021 (WS 2020/2021), the PROMOS programmes also offered similar rules for hybrid study visits beginning at home with subsequent physical stays at host institutions abroad. These included the opportunity to receive funding for both the initial digital phase and the subsequent physical phase abroad. The PROMOS programme also offered funding for purely virtual visits of less than three months. Some students felt compelled to postpone their stays abroad. In other cases, such as where students were soon to graduate, students cancelled their stays entirely.

Some students saw the hybrid and virtual formats for stays abroad as a stopgap measure that allowed them to realise international mobility initially planned to take place physically, albeit in a different format. For others, however, these formats represented a welcome opportunity to experience being abroad from within their own four walls. At the same time, students were also able to save time and money and remain protected from Covid-19.

The pandemic not only presented higher education institutions and students with new challenges, but also offered them an opportunity for the large-scale implementation of new digital formats for teaching and mobility. The DAAD’s 2021 survey therefore aimed at taking a closer look at the mobility behaviour of students at German higher education institutions during the first three ‘Covid semesters’ of SS 2020, WS 2021 and SS 2021. In this, hybrid and virtual forms of mobility were of particular significance alongside physical international mobility, which remained the dominant form. In addition to quantifying the benefits of these forms of mobility, it is also interesting to understand the circumstances that prompted students to choose new forms of mobility, and to examine their assessments of and satisfaction with these new experiences. Another point of interest in this connection concerns the changes evident in patterns of mobility and how students assessed those changes during the first three semesters of the pandemic.

As in the previous seven student surveys, the recognition of students’ academic achievements at host institutions abroad remains a key focus of the investigation. Here, too, the question arises if and to what extent the exceptional circumstances affected levels of recognition. Recognition of academic achievements is also a decisive factor in students’ overall assessments of their study visits.

The survey results represent a snapshot of testing new forms of mobility that can be seen as a contribution to the further development of international student mobility. This includes the future value of hybrid and virtual forms of mobility, not least with regard to issues of inclusion, social participation and sustainability.

For a quick overview, please see our Fact Sheets (German).
Definitions of key terms

The following definitions applied to terms used in the online questionnaire for the survey:

Study visit:
- physical study visit: the whole period of the study visit is spent in person at the host institution.
- hybrid study visit: the study visit is spent partly in person at the host institution and partly in the home country.
- virtual study visit: no physical stay at the host institution.

Teaching courses:
- physical courses: courses taught at the host institution with no or minimal virtual elements.
- hybrid courses: a combination of physical and virtual classes at the host institution.
- virtual courses: courses delivered only in virtual form at the host institution without any physical elements.
1. General information

Just under 3,300 students took part in the survey, with slightly more students from universities and students on master's degree programmes than matches their respective shares of total international student mobility.

Fig. 1.1

When measured as a proportion of all internationally mobile students at German higher education institutions, university students in the survey are slightly over-represented compared to students from universities of applied sciences (HAW), which are correspondingly represented at a lower rate.¹ This may be due to the fact that the survey exclusively concerned study visits but not internships abroad, for example, where HAW students tend to be represented more strongly.² Taken overall, participation from the various types of higher education institutions is therefore representative.

¹Data from Wissenschaft Weltoffen (wissenschaft-weltoffen.de). The share of internationally mobile students from German higher education institutions were calculated based on the data reported for 2016.
²NA DAAD: Anerkennung – (klein Problem 2017, p. 68.
The number of students on bachelor’s and master’s degree courses represented in the survey broadly aligns with their share of internationally mobile students at German higher education institutions. The proportion for bachelor’s degree students is 4% higher, and 9% higher for master’s degree students. Other types of degree are represented at lower rates. Their share is 13% lower than their share of internationally mobile students at German higher education institutions. Taken overall, participation from the various types of degree is therefore representative.³

As was the case in previous surveys, economics and business administration is the dominant subject area, having represented around a quarter of respondents for several years. Engineering comes in second, significantly more strongly

³ Data from Wissenschaft Weltoffen (wissenschaft-weltoffen.de). Download of all image data from wwo 2022 kompakt_14.png. Shares for the various types of degrees were calculated on the basis of the data reported for 2016.
represented than in previous surveys (16% vs. ca. 10%). Legal studies also saw an increase of 3%. Languages and social sciences were slightly less strongly represented than usual, showing declines of 4% and 2% respectively. Differences between subjects may be due to the exceptional circumstances for study caused by the pandemic at host higher education institutions providing high proportions of digital teaching and leisure services and the new hybrid and virtual forms for stays. For some subjects, such as technical and scientific disciplines, these circumstances may be more conducive than for others which depend strongly on direct personal contact, such as languages.

As in the past, funding for the international mobility that took place during the reporting period (SS 2020 to SS 2021) came from a range of sources. However, the significant increase in the share of the Erasmus+ programme is striking. This may primarily be due to the choice of host countries for visits, the majority of which are part of the Erasmus+ programme (cf. Fig. 1.6).
86% of respondents (more than ever before) completed their international mobility at a host institution within the European Higher Education Area (EHEA). By contrast, the proportion of study visits undertaken outside the EHEA was, at 14%, significantly lower than in 2017 (29%) and 2019 (27%).

Almost all the students who completed a study visit to an EHEA country did so in a country where funding was available through the Erasmus+ programme (98%). Alongside the 27 countries of the EU, this includes Iceland, North Macedonia, Liechtenstein, Norway, Serbia, Turkey and the United Kingdom (cf. Chapter 2, fig. 2.3). Very few students opted for countries that are not part of the Erasmus+ programme (2%).

In addition to the 27 EU countries, the European Higher Education Area includes the following 22 countries: Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Iceland, Kazakhstan, Liechtenstein, Moldova, Montenegro, North Macedonia, Norway, Russia, San Marino, Switzerland, Serbia, Turkey, Ukraine, Vatican City, United Kingdom.
The lower shares of respondents from SS 2020 and SS 2021 are due to the overall reductions in international mobility during the summer semesters. However, against the background of otherwise high levels of international mobility in the winter semesters, the low level of mobility for WS 2020/2021 is striking. Participant numbers from the Erasmus+ programme confirm the massive reduction in study visits abroad, which collapsed in WS 2020/2021 compared to the previous year, falling 57%. The 2020 and 2021 summer semesters saw reductions of 34% and 35% respectively. The cause is likely to be students postponing or cancelling study visits due to entry restrictions, border closures and suspensions of higher education admissions by various host countries, which were more pronounced during the winter months than the summer due to the pandemic.

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Wissenschaft weltoffen 2021. Facts and Figures on the International Nature of Studies and Research in Germany and Worldwide
2. Type of study visit

Due to the global Covid-19 pandemic, study visits were no longer undertaken solely in the form of physical international mobility. Rather, for the first time, such visits were also completed in the form of hybrid and virtual mobility on a large scale.

The global Covid-19 pandemic also had a profound effect on international mobility for students at German higher education institutions. Before the outbreak of the pandemic in the spring of 2020, student mobility was primarily a matter of physical stays at foreign host institutions. However, during the semesters considered here, mobility for the first time also involved hybrid and virtual forms of international mobility on a large scale.

Fig. 2.1

While physical study visits continue to dominate, just under a third of respondents completed their mobility in hybrid (24%) or virtual (7%) form.
Fig. 2.2

Shifts in favour of physical and purely virtual forms of mobility are evident across all three semesters. By contrast, the share of hybrid stays fell from 47% in SS 2020 to 17% in SS 2021.

The very high share of hybrid study visits in the first semester of the pandemic (SS 2020) was in part due to the confusing situation caused by global travel warnings and restrictions, along with the switch from physical to virtual teaching at foreign host institutions. Due to these circumstances, many students who had already commenced their stays abroad in person returned home early. However, there was a significant incentive not to completely stop studying abroad and rather to continue it virtually from home; this came from the funding provided by the Erasmus+ programme, which also covered the virtual phase of students’ studies. By contrast, in the subsequent semesters during the pandemic, funding was only available for the physical phases of study at host institutions for hybrid study visits. This may have contributed to the fact that the number of hybrid stays dropped off during this period. The PROMOS programme also provided funding for hybrid study visits. Unlike Erasmus+, it provided funding for the virtual study phases during 2021 as well as 2020. More students accessed this funding in 2020 (20%) than in 2021 (6%).

The increase in virtual study visits may be due to funding for this form of mobility being available from the Erasmus+ programme. Since WS 2021, the opportunity has been available to around 1,000 students to access virtual mobility to a foreign host institution from home. While no scholarships were available for this form of mobility, tuition fees at host institutions abroad were waived and there was the prospect of recognition for what students achieved virtually. During WS 2021 these virtual stays accounted for 1% of students undertaking international mobility through Erasmus+. The figure for the following SS 2021 was 14%. By contrast, virtually mobile students on the PROMOS programme did receive funding. The share of this type of mobility was 7% for both funding years (2020 and 2021).
A sizeable majority of students who opted for physical or hybrid study visits chose the EHEA as their host region (87% and 88% respectively). One reason behind this choice appears to be that immigration restrictions were dropped for students in EHEA member states after SS 2020 as long as they complied with the relevant infection control measures. In other regions such as the US and Australia, however, entry remained impossible for a long time. Choosing a host country within the EHEA also offered the advantage of being able to travel home more quickly to recover from a Covid-19 infection.

Entry restrictions outside the EHEA also appear to have influenced students’ decision to undertake stays in these regions virtually rather than in person as originally planned. Hence 33% of students still chose to complete their stays virtually at a host institution outside the EHEA.

Another distinctive characteristic of purely virtual stays is that an above-average share of these were obligatory stays abroad. Their share was 26%, higher than the average share of 16% (hybrid forms accounted for 18%). This could be due to students enrolled on study programmes that included an obligatory stay abroad being less highly motivated to spend part of their studies abroad. For students such as these, hybrid or virtual visits provided a way of reconciling their obligations in their home country with the required international experience. This would be an indicator that hybrid or
virtual forms of mobility could help to open up opportunities to experience being at host institutions abroad for less or non-mobile students.

When asked about their original plans for their stays abroad, the students who undertook hybrid or virtual visits confirmed that many had initially intended to do a physical study visit. The shares for these students were 85% (hybrid) and 75% (virtual). Of those students who completed a virtual stay, just under a quarter (23%) had planned this type of mobility from the outset due to Covid-19. By contrast, among students who undertook hybrid stays, the share was only 9%. Given that before the pandemic only 1% of students wanted to complete hybrid or virtual study visit, the final share of 31% makes it plain how much potential there is in these forms of mobility. They offer a future alternative to physical visits.

Fig. 2.5

My study visit was planned to be hybrid or virtual due to Covid-19, and was completed in that form.

My study visit was planned to be hybrid or virtual regardless of Covid-19, and was completed in that form.
As time went on, hybrid and virtual study visits were increasingly planned in and of themselves. For example, only around 4% of respondents reported deliberately planning and undertaking one of these two forms of stay in SS 2020. In the following two semesters, that proportion rose to 17% and 25% respectively. This trend is a sign that some students deliberately arranged to participate in virtual forms of teaching and mobility that were initially prompted by the pandemic.

Data on the motivations behind students’ decisions to choose hybrid or virtual stays shows the main prompts were constraints affecting the general situation during the Covid-19 pandemic and the timeframes stipulated by an individual’s study programme. Positive incentives such as gaining international experience and skills and virtual and wholly exceptional circumstances also factored into students’ decisions. These incentives were less pronounced among students who took hybrid stays than among those on virtual stays. Another positive incentive was the prospect of gaining international experience at lower cost in terms of time and money. This could be an incentive for students who have previously not been mobile or only to a limited extent to encourage them to undertake virtual or hybrid study visits abroad and thereby gain international learning experience.
The subjects most often represented in the survey were: economics (24%), engineering (16%), social sciences (8%), natural sciences (8%), legal studies (6%) and languages (6%). These shares were matched among students who undertook hybrid and virtual stays abroad. One point that stands out here is the above-average representation of virtual stays among economics and business administration students (36%). This is likely due to the support offered by the Erasmus+ programme, which made it possible to undertake virtual study visits from WS 2020/21 onwards (cf. Chapter 2, fig. 2.2). Economics and business administration students make up an above-average proportion of this form of mobility supported by Erasmus+. This was also the case for the PROMOS programme. Social sciences (12%) and languages (8%) were also represented at an above-average level. This may be due to certain subjects being more suited to virtual stays than others (cf. Chapter 5, fig. 5.6). In other subjects, by contrast, hybrid visits were represented at average or slightly below-average levels.
3. Teaching courses and leisure and support services at host higher education institutions

Due to the pandemic, the majority of classes at host higher education institutions were delivered in virtual or hybrid form. Even some leisure and support services were offered digitally.

3.1 Teaching courses

One consequence of the Covid-19 pandemic was that the majority of courses attended by respondents at host institutions took place virtually or in hybrid form, with some elements physical and some virtual. These accounted for just under 80%. This means that it was not only the case for hybrid and virtual stays that the overwhelming majority of teaching took place virtually, but also for physical study visits as well, such that students took part in classes from their accommodation despite being in the host country.
According to students’ responses, the most common format (58%) for digital teaching was synchronous (i.e. live) and included interactive elements such as chat functions and polls. This allowed teachers and learners to communicate with one another, which fulfilled the need for social interaction. Live teaching without interactive elements took place in just under 13% of cases. This high proportion is likely attributable to the fact that this type of teaching was less technically complex and time-consuming for teachers.

The proportion of asynchronous (i.e. recorded) classes such as lectures or videos that could be accessed by individual students amounted to around 20%. Just under half of these included interactive elements. This form of teaching offers the advantage of individual flexibility, as it can be accessed at any time and facilitates self-directed learning.

Students reported high levels of satisfaction both with physical and virtual teaching at their host institutions. That said, satisfaction with physical teaching was slightly higher than for virtual teaching for some of the criteria surveyed, such as interactiveness, quality, support services and structures for communication and feedback.
However, among those students who took part in a hybrid stay, only 57% were satisfied with their virtual classes. By contrast, the proportion of satisfied students from virtual stays was 67% and 69% from physical stays. The lower levels of satisfaction among students who completed a hybrid stay may be seen in the context of their overall lower levels of motivation to choose this form of visit. The high proportion of virtual teaching in this form of visit probably ran counter to their original desire for more substantial elements of physical learning (cf. Chapter 2, fig. 2.6).

The time factor also influenced satisfaction with virtual teaching. For instance, the students surveyed become gradually more satisfied with each passing semester (SS 2020: 63%, WS 2020/2021: 70%). The reasons behind this may be increasing levels of experience among students and teachers in using virtual teaching formats and the development of such formats at host institutions. Overall, the results show that virtual teaching formats gained broad acceptance among the majority of students surveyed within a short space of time and have developed into an almost equivalent alternative to physical teaching.

When asked about the significance of digital teaching at higher education institutions abroad, around 60% of respondents stated that such opportunities were important or very important to them. These include live and recorded classes along with the opportunity to take examinations online. These assessments make it clear that the students surveyed in no way
see digital classes as a stopgap for a crisis, but rather as a long-term option when it comes to gaining international experience.

### 3.2 Leisure and support services

![Leisure and support services accessed](chart)

Students accessed leisure and support services at their host institutions to varying degrees. Almost half the students surveyed accessed one of the following either in person or digitally: a language course, an introductory event, social meet-ups and leisure services, or consulted a buddy or mentor. The digital versions of some services saw lower levels of uptake. This may be due to the fact that the majority of these students were present in person at their host institution, where there may have been more physical leisure services than digital services, for example. Given the superior number of virtual classes, there will also have been a substantial incentive for students to spend their free time in contact with their fellow students and getting to know the country and its people.
Satisfaction with the virtual and physical leisure and support services provided by host institutions was about as high as for teaching. A significant majority of students reported being satisfied or very satisfied with most activities. That said, physical services such as meet-ups, opportunities to get to know the host country and other services come out noticeably better than virtual services. The differences here are probably due to the fact that meeting fellow students in person and encountering a host country and its people at first hand is a more intensive and longer-lasting experience than virtual experiences. By contrast, there were no differences in satisfaction with language courses at host institution or buddies and mentors, which were rated equally highly for the virtual domain.

Looking at satisfaction with physical and virtual leisure and support services by semester, hardly any significant differences are evident. With the exception of minor changes around other digital leisure services and opportunities to get to know the host country, satisfaction levels remained largely the same across the period covered by this survey.

![Satisfaction with physical and virtual leisure and support services at the host higher education institution, comparison](image)

**Fig. 3.7**

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3.3 Foreign language learning

According to students’ assessment of their own progress, physical and hybrid visits were most helpful in improving skills in speaking the language of the host country. For these two visit types, 60% and 54% respectively reported major improvements in their language skills. This was only the case for 35% of students on purely virtual stays. With regard to physical stays and some elements of hybrid stays, the day-to-day direct contact with a country and its people may be the decisive factor in more positive assessments of language learning.

Students on physical stays also recorded the most significant improvements when it came to learning other foreign languages. In such cases, spending time in-country with students from other countries and with other languages is certainly an advantage.
The support that face-to-face communication gives to language learning is also evident in the fact that students identified informal physical contact opportunities as being particularly helpful in promoting learning. These include physical social meet-ups, language courses at the host institution and other physical leisure services. Teaching courses provided by host institutions were also assessed as significant for foreign language learning across all types of stay.

Success in foreign language learning is affected by a range of factors, one of which is the type of stay. As such, students on virtual study visits attribute greater importance to language courses than students on physical and hybrid stays do.
may be attributable to the fact that on virtual stays, there were no opportunities for face-to-face contact whatsoever, with the consequence that language courses were assigned a much greater significance for language learning.

The importance attributed to buddies and mentors in foreign language learning varied according to the type of stay undertaken. These were least important for students on virtual stays, but for physical and hybrid stays they were slightly more important, probably due to higher levels of face-to-face contact.
4. Recognition of academic achievements

Despite the switch to virtual forms of teaching and examinations, a high proportion of ECTS credits were recognised for the majority of the students.

Recognition of academic achievements is a key aspect of a stay abroad. As in previous DAAD student surveys, one key focus of this questionnaire was the level of recognition for ECTS credits. In the light of the exceptional context of a global Covid-19 pandemic and its impact on student mobility, this raises the question of if and to what extent these circumstances affected levels of recognition.

Calculating levels of recognition from the recognition rate: methodology

Recognition can be considered and calculated from various perspectives, each of which will produce different results. The various perspectives on recognition are captured by applying the parameters of a given recognition rate. A quotient is then derived from the number of recognised ECTS credits and other variables such as the number of ECTS credits achieved: the recognition rate.

4.1 Recognition: intentions vs. outcomes

In the latest survey, recognition again comes out higher than in the previous survey (2019). Of all the ECTS credits achieved at host higher education institutions, 85% were recognised by students’ home institutions. This puts the recognition rate at 85%, 4% higher than in 2019.
There was also an increase compared to 2019 for ECTS credits for which respondents intended to gain recognition, rising from 92% to 96%. This means that the overwhelming majority of those ECTS credits valued by students were recognised. As such, any courses that students completed but which were not recognisable for a study programme were not included in this calculation.

The increase in these two recognition rates makes it plain that neither the challenging conditions of the pandemic nor the change to academic achievements being accomplished virtually had any negative impacts on recognition. On the contrary, the rates actually went up.

High recognition rates may be observed for all three forms of mobility. Hence it appears that there are no problems on the part of the home higher education institutions when it comes to recognising academic achievements from purely virtual or hybrid study visits.
4.2 Factors influencing recognition

Fig. 4.4

The recognition rate is influenced by several factors, which were confirmed with regression analysis. These factors include the type of higher education institution, for example. The recognition rate for ECTS credits at universities of applied sciences is over 16% higher than for universities, for instance. This difference is likely due to the fact that study planning at universities of applied science is more targeted with regard to courses abroad, which leaves less room for manoeuvre than is the case at universities. The consequence of this is that universities of applied science recognise ECTS credits at a much higher rate due to these credits being more eligible for recognition. At universities, on the other hand, the lack of advance planning to ensure the recognition of ECTS credits achieved abroad could mean that they are recognised at a lower rate. This conjecture is also supported by the fact that both types of higher education institution achieved similarly high rates of recognition for ECTS credits where students had planned for these credits to be recognised.

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Another factor directly connected to the type of higher education institution is the occasion of a study visit. In cases of compulsory stays, the recognition rate of 93% is significantly higher than for voluntary stays (75%). The rate of compulsory stays is markedly higher at universities of applied sciences than at other universities (28% vs. 13% respectively), which has a positive effect on the recognition rate. This again appears to show that structures which promote mobility have a positive effect on recognition rate. Such structures include curricula that require or support study visits, which are generally agreed in cooperation with partner institutions abroad.
Recognition rates also varied depending on the subject concerned. As in previous surveys, larger subjects such as economics and business administration occupy the top places. By contrast, geographical sciences and education record the lowest recognition rates. Yet law, which for many years has brought up the rear in this area, has made a substantial leap forward, with a 20% increase in recognition rates (2019: 59.3%).

When considering the various subjects, it again becomes clear that there is a substantial difference between the recognition rates of achieved and planned ECTS credits. The recognition rate is lower for the former, as it covers all credits, including those that were either unnecessary or ineligible for recognition. This recognition rate is likely to have less serious individual consequences for students, as the calculation includes achievements not required for their degrees. However, the recognition rate for planned ECTS credits is of great importance, as it is an indicator of those achievements that students actually need. As the findings show, almost all planned ECTS credits were recognised in the majority of subjects. In a few cases, more credits were recognised than had been planned. Here, the recognition rate for all ECTS credits (i.e. those that were achieved and which students intended to have recognised) could even exceed 100%, as more were recognised than were planned. Overall, this is a very good outcome which is reflected in the high levels of satisfaction among students.
A range of recognition rates may also be observed across the various host countries. Given the very high number of cases, the recognition rate for ECTS credits achieved within the European Higher Education Area (EHEA) is exactly in line with the average for the study (82%). Recognition rates are higher for the Africa, Sub-Saharan Africa, Latin America, and Asia and Pacific regions, where student numbers were very low.

Recognition rates in host regions were also influenced by other factors such as the type of home higher education institution. Here, for example, university students made up a larger share in the EHEA (82%), North America (81%) and North Africa and the Middle East (79%) regions. By contrast, they were represented less strongly in the Asia and Pacific (63%), Sub-Saharan Africa (63%) and Latin America (53%) regions. The lower recognition rates for ECTS credit points achieved at universities (cf. Chapter 4, fig. 4.4) influence the recognition rates for the regions to which the students travel. Hence there are lower rates for ECTS credits achieved in the EHEA and North America regions where the share of students from universities is high, than in the Latin America, and Asia and Pacific regions, which are visited by fewer university students. In terms of planned recognition, the average recognition rate converge at a high level of 96% and 98%. This means that (with the exception of some individual countries) there are no regions anywhere in the world where a study visit will prove disadvantageous to the recognition of academic achievements.

With regard to the EHEA, it is clear that many students take advantage of the flexibility around planning their studies afforded by their home universities. The consequence of this was that some of the ECTS credits achieved at host institutions were not fully eligible for recognition and hence the overall recognition rate of 82% for ECTS credits is slightly lower than for students who visited other regions such as Sub-Saharan Africa, Latin America, and Asia and Pacific.
On an intra-European level, comparing recognition rates for students who stayed in an EHEA state and rates of those for students who stayed in an Erasmus+ programme country or an EU state shows little or at most minimal differences.

### 4.3 Satisfaction with level of recognition

Satisfaction with scope of recognition

<table>
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<th>2019</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>very satisfied</td>
<td>very satisfied</td>
</tr>
<tr>
<td>satisfied</td>
<td>satisfied</td>
</tr>
<tr>
<td>partly satisfied, partly dissatisfied</td>
<td>partly satisfied, partly dissatisfied</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>dissatisfied</td>
</tr>
<tr>
<td>not at all satisfied</td>
<td>not at all satisfied</td>
</tr>
<tr>
<td>2019</td>
<td>2021</td>
</tr>
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<td>very satisfied</td>
<td>53%</td>
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</table>

Satisfaction with rates of recognition has risen further compared to the previous survey. While 76% of respondents in 2019 were satisfied or very satisfied, the proportion in the current survey is 81% (+5%). The share of dissatisfied students has fallen correspondingly from 12% to 8%. The increased levels of satisfaction can be attributed to the positive trends in recognition rates.

High levels of satisfaction are recorded for all three types of stay with only marginal differences between them. Satisfied students make up shares of between 81% and 84%, with dissatisfied students accounting for between 6% and 8%.
5. Overall assessment of the stay abroad

In spite of challenging conditions and new forms of teaching and mobility, the students’ overall assessment of their experiences abroad is positive.

5.1 Satisfaction with the study visit overall

As the analysis thus far has shown, the students surveyed here give positive assessments of the individual aspects of their stays abroad, such as courses, leisure services, progress in learning foreign languages and recognition of academic achievements. However, in the final overall assessment of their study visit, the share of satisfied students (83%) is worse than in previous surveys, where the share of satisfied students regularly exceeded 90%.
Looking more closely at the three different types of visit sheds light on the factors that may have influenced levels of overall satisfaction. Here it becomes clear on the one hand that levels of satisfaction among students who undertook physical stays are roughly in line with those of the 2019 survey, at 91%. However, levels are much lower for students on hybrid (70%) and virtual (54%) stays.

On this point it should be noted that hybrid and virtual study visits were faced with several organisational challenges at the beginning of the pandemic in SS 2020, due to their being set up at short notice. Over the course of the period under review, levels of satisfaction rose as the various study structures became more firmly established.
5.2 Hybrid and virtual study visits in direct comparison with physical stays

The higher levels of overall satisfaction with physical study visits are also confirmed by a smaller group of students who had completed a physical study visit prior to their hybrid or virtual visit. In a direct comparison between these types of stay, teaching courses, leisure and support services and foreign language learning come out significantly worse for hybrid and virtual stays than for the physical stays undertaken in the past.

In what is likely to be the most serious disadvantage to purely virtual study visits, around 90% of respondents identified the lack of opportunities to get to know the host country and its people for themselves and to cultivate person-to-person contacts themselves.
On the other hand, virtual stays also chalk up some positives. For example, when asked about the prospects of purely virtual international mobility, two-thirds of respondents identified lower costs and the ease of reconciling virtual study abroad with their domestic and professional obligations as benefits. Those students who have already completed a virtual study visit rate these aspects even more positively than their fellow students from the other two types of stay.
Some subjects may be better suited to virtual stays than others. For instance, positive overall assessments of the study visit were particularly evident among students of the natural sciences, architecture, economics and business administration, computer science, medicine and engineering. In these subjects, between 87% and 90% of students were satisfied. Regression analyses make it possible to show that, for these subjects, levels of satisfaction among students of these subjects are higher for virtual stays than for other students. Notably, the subjects with lower levels of satisfaction tend to fall within the domains of cultural studies or languages. It seems possible that the high proportion of virtual courses for these subjects or purely virtual study visits were perceived less positively than in technical or scientific subjects.
Conclusions

Virtual teaching was met with approval among many students. New forms of wholly or partly virtual international mobility appear well suited to the life and study situations of certain students.

Despite the challenging conditions caused by the pandemic, the students surveyed here dared to undertake a study visit to a host institution abroad. This entailed a series of significant changes. The majority of students had to learn how to handle new virtual formats at their host institutions. In addition, just under a third of students had to give up their original intention to carry out a physical visit to a foreign country and adjust to largely untested hybrid or purely virtual visit formats.

The following points can be identified as the key findings from this survey.

- Even though many students continue to prefer physical teaching, their attitudes to participating in virtual teaching formats are overall positive. On this point, the Erasmus+ and PROMOS funding programmes may have made a supportive impact, as hybrid and virtual study visits were funded alongside physical stays.

- A similar trend was evident for the leisure and support services provided by higher education institutions, where students again preferred physical services for a range of reasons, presumably not least due to being able to gain intercultural experiences. Nevertheless, there was acceptance for and uptake of virtual services. In the same way, learning foreign languages virtually appears to be possible with moderate progress possible.

- As regards the major issue of recognition of ECTS credits gained at a host institution, the result is very positive indeed: the recognition rate again rose overall and left the majority of students very satisfied, regardless of the type of stay they undertook.

- Compared to previous surveys, there has been a downturn in students’ overall satisfaction with their study visits; the 83% satisfaction rate for the 2021 survey falls short of the previous survey, which recorded over 90%. This decline is primarily due to the less positive assessments made by students who undertook a hybrid or a virtual study visit. Nevertheless, it should be noted on this point that the majority of this group had originally planned to stay abroad physically but now had to accept the loss of face-to-face contact with fellow students and the chance to get to know the host country and its people. Against this backdrop, a 70% and 54% satisfaction rate among students in these groups respectively is still a reasonable outcome. It should also be borne in mind that some hybrid and virtual stays had to be started following very limited lead-up times, and there is certainly room for improvement in these types of stay.

This potential needs to be analysed and put into practice in future. The view that forms of hybrid and virtual international mobility will become increasingly significant in future is supported by recent international studies, such as a study from the EUA that surveyed 368 higher education institutions in the European Higher Education Area and identified that the practice of virtual mobility continued to account for 25% of cases. The authors of the study conclude that hybrid and virtual forms of mobility hold special potential during crises or in situations where physical mobility is difficult or impossible. Virtual mobility is also believed to prompt further physical mobility following a stay completed virtually. It is also argued that it promotes competencies in students such as intercultural skills and attitudes, networked learning, active self-directed learning skills, and media and digital skills.

The early stages of this practice as examined in the present DAAD survey of virtual and hybrid forms of mobility under pandemic conditions among students at German higher education institutions can, in part at least, be considered successful. Without wishing to deny the benefits of physical international mobility, it nevertheless appears worthwhile to continue investigating opportunities from hybrid and virtual mobility as alternative forms of mobility for previously non-mobile students, not least with an eye to the issues of social participation, environmental protection and sustainability.

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7 Digitally enhanced learning and teaching in European higher education institutions. European University Association, p. 24.