Digital exchange: the barrier-free experience abroad – a project by the SRH Berlin University of Applied Sciences

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The project "Digital exchange: the barrier-free experience abroad" of the SRH Berlin University of Applied Sciences was funded by the German Federal Ministry of Education and Research (BMBF) as part of the program "International Virtual Academic Collaboration" (IVAC). With the development of virtual, international and academic collaboration formats, SRH Berlin pursued the goal of providing students with an international experience regardless of financial, physical or family conditions. Didactically, the IVAC courses were based on the CORE principle (**C**ompetence **O**riented **R**esearch and **E**ducation), which aims to best prepare students for entry into the global job market by fostering action-relevant competencies. The courses focused on intercultural and digital competencies as well as collaboration and communication skills. Integrated evaluations enabled the didactic and methodological development of the IVAC courses. This report describes the IVAC courses and events conducted at SRH Berlin, illustrates the insights gained, and derives recommendations for the implementation of Virtual Exchange formats.

Keywords: International Collaboration, Digital Learning Environment, Virtual Exchange, Teaching Evaluation, Skills Acquisition, Employability Skills

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1 Introduction

The goal of the European Commission's "European Universities Initiative", launched in 2017, is that 50% of all students in the European Union have benefited from a period of mobility during their studies. A new generation of creative students should emerge, who able to collaborate beyond geographic, linguistic, cultural, and professional boundaries to address societal challenges and qualification shortages in Europe. By developing international, virtual and academic collaboration formats (IVAC courses) and extracurricular events (IVAC events), the SRH Berlin University of Applied Sciences (SRH Berlin) contributed to the European Commission´s goal by enabling students from SRH Berlin and various partner universities to gain international and intercultural experiences regardless of financial, physical or family conditions. Within the framework of the IVAC courses and events, the students deepened their professional, social, methodological, and personal competencies acquired at SRH Berlin with the CORE principle (**C**ompetence **O**riented **R**esearch and **E**ducation) and enriched them with digital and intercultural competencies. In terms of employability, the students were thus best prepared for their entry into the German and global labor market.

Culturally mixed, geographically distributed and digitally communicating work groups - so-called "Global Virtual Teams" (GVTs; Jarvenpaa & Leidner, 1999) - are becoming increasingly important in today's digitally interconnected and knowledge-intensive working world. Even before the outbreak of the Corona pandemic, the number of virtual teams was rising sharply: According to a study of 1,620 workers from 90 countries, respondents' participation in GVTs increased from 64% in 2010 to 89% in 2018, of which 62% worked in teams with three or more cultures (CultureWizard, 2018). The study also found that while more organizations were adopting GVTs, the challenges and barriers of cross-cultural collaboration - such as difficulties in relationship-building or communication - remained when compared to the surveys conducted since 2010. The study's authors concluded that while technological advances are steadily offering new opportunities for collaboration, there is a need for targeted human development and support in digitally interconnected environments.

In addition to intercultural competencies, cooperation and problem-solving skills as well as digital and virtual competencies are key both in today's and tomorrow's world of work. Digitalization is currently the most important driver of change in the working world (Harteis, 2018). In order to survive in a volatile business environment, companies need digitally savvy employees who are able to deal with complex issues and large amounts of data and thus ensure innovation (van Laar et al., 2017). To meet these high demands of today's and tomorrow's working world, the future employees should already be prepared for such challenges during their studies. On the contrary, today there is rather a gap between needed work competencies and promoted university competencies (cf. Moore & Morton, 2017). This gap could be one reason for the high unemployment rate among university graduates, which is particularly evident in the southern countries of Europe (Destatis, 2021). It has long been known that a formal education is no longer sufficient for a successful career entry and the maintenance of employability and that there is a need to increasingly focus on the development of so-called key competencies such as intercultural communication skills (Pereira et al., 2019).

Non-virtual exchange programs such as Erasmus+ have already proven the value of intercultural exchange for students' professional and personal development. Research found that physical mobility during studies, for example, increases students' employability and language skills (Schnepf & D'Hombres, 2018; Sorrenti, 2017) and stimulates personal growth (e.g., Duffy et al., 2003). Although the number of Erasmus students has increased in recent decades (ICEF, 2013), there remains a significant number of students who are unable or unwilling to engage in physical mobility during their studies. Research indicates that students from lower socioeconomic backgrounds are less likely to study abroad than wealthier students (Schnepf & Colagrossi, 2020). The European Commission (2017) therefore calls for facilitating and widening access for members of disadvantaged and vulnerable groups within the implementation of the Erasmus+ program. In addition to socioeconomic barriers to physical mobility in higher education, there are also psychological, family, and social barriers (e.g., separation from family and friends; Sanchez et al., 2006). The digitalization offers new opportunities for overcoming these barriers: Virtual academic programs such as IVAC, through their collaborative, digital, and intercultural nature, have enormous potential not only to close the gap between the (lack) of competences taught in higher education and the necessary skills for a global job market, but also to overcome financial, family, and physical barriers. Moreover, they pave the way for physical mobilities: After taking so-called COIL (Collaborative Online International Learning) courses, students are on average more open to going abroad (Haug, 2017).

As a result of the Corona crisis, many universities were under strong pressure to digitalize teaching as quickly as possible. However, given this time urgency, the transition was often provisional and not very structured. This contrasts with academic virtual exchange programs, which are designed, strategically developed and evaluated specifically for virtual use. Numerous institutions have expanded their digital teaching and learning offerings to extend higher education collaboration beyond previous geographic, political, and social boundaries (DAAD, 2020). SRH Berlin's project "Digital exchange: the barrier-free experience abroad" focused on developing and implementing international, virtual, and academic collaboration formats (courses and events) for students to work together beyond disciplinary and cultural boundaries. A longer-term goal was to integrate the collaboration formats into courses and thus institutionalize them so that a broad target group could sustainably benefit from the offerings. Another goal was that students and teachers alike would network through participation in the international virtual collaborations and form a community of practice.

In the following section, the IVAC courses and events held at SRH Berlin are described in detail. Furthermore, the insights gained from the evaluations are reported and practical recommendations for the development of future IVAC courses are formulated.

2 IVAC at SRH Berlin

2.1 IVAC courses

Starting in the winter semester 2020/21, four IVAC courses were developed and implemented as pilot courses at two schools of the SRH Berlin. The collaborations varied in length and subject area; courses in the creative field as well as courses in the management field were conducted together with different partner universities from intercontinental or European countries. The collaborations were embedded in existing curricula; three of the four courses were mandatory for SRH students.

The courses were designed by the IVAC project team in cooperation with the lecturers of SRH Berlin and the partner universities. The course contents were defined by the lecturers, while the research associates of the IVAC project team developed the methodological and didactic concepts of the virtual courses. All organizational and administrative matters were coordinated by the IVAC project manager. This mainly involved the communication with the responsible persons of the partner universities before, during and after the courses, the communication with the students as well as the coordination of the digital platforms that were used in the collaboration. Different digital platforms were used for the courses, one of which was Microsoft Teams, used for plenary communication. The choice of alternative communication channels for group work was up to the students. General course information was shared with students via email and/or Google Site.

2.1.1 Global Classroom

The pilot course "Global Classroom" was offered for the first time in the winter semester 2020/21 at the SRH Berlin School of Management (BSM) as part of the module "Risk Management in Financing" for Master students of the International Management program. This IVAC course was created in cooperation between SRH Berlin and the Mexican Tecnológico de Monterrey (TEC). In line with the IVAC program, the overarching goal of the course was to strengthen students' intercultural and digital competencies. The objective of the course was to learn how to analyze a real case study of Covid-19-related financial problems of a large international company. Together with BSM students, students from the Mexican partner university worked in small groups to analyze possible options for reducing the resulting financing gaps. A total of 81 students participated in the Global Classroom, with 40 students from BSM and 41 students from TEC. Participation was mandatory for students from both universities. Students could independently create the working groups; the only condition was that at least two students from each university had to be represented within the group. The course spanned over five weeks and was structured in three phases:

i. Icebreaker Activity: getting to know each other and forming groups.

ii. Main Activity: evaluation of the case study in international and intercultural group work.
iii. Reflection Activity: presentation of the results and individual reflection on the collaboration.

The Icebreaker Activity was conducted in a joint synchronous session[1] in which the instructors first explained the course content and then gave the students time to get together in small groups. Within the three weeks of Main Activity, students worked together in their small groups in a self-organized synchronous and asynchronous manner. The course ended with an asynchronous Reflection Activity in which the students engaged in written reflection on their experiences in the course.

The Global Classroom course was offered again in the summer semester of 2021 with another cohort of students. The collaboration was developed by the same stakeholders as in the first course. However, this second course implemented some methodological and didactic improvements that had resulted from the evaluation of the first course. For example, in the second course the creation of students´ working groups was not left to the students but was conducted in advance by the IVAC project team. Furthermore, the online quiz platform Kahoot! was used in the Icebreaker Activity to prepare the students for the international collaboration adding a gamification approach. In addition, the Reflection Activity in this run was held in a synchronous session. Chapter 3 describes the evaluation results that led to these adaptations.

2.1.2 International Online Collaboration in Audio Design

The pilot course "International Online Collaboration in Audio Design" was based on a collaboration between the SRH Berlin School of Popular Arts (SOPA) and the British University for the Creative Arts (UCA) and took place during the winter semester 2020/21. In this interdisciplinary project, students from with different study backgrounds (B.A. Music Composition and Technology from UCA and B.A. Audio Design from SOPA) developed conceptual music albums on various given themes. The students were divided by the lecturers into university-mixed small groups; different functions were represented in each group (topliner, producer, lyricist). In plenum, a theme was presented to each group by the instructors at the beginning of the course (e.g., futurism). A concept album with at least three songs was to be created for this theme. The individual music tracks should not be composed separately but should be considered in their thematic and stylistic relationship to the other parts of the album as a complete work. The given theme was to be followed throughout the complete album; for example, it was also to be reflected in the design of the cover. The course ran for 15 weeks, and weekly meetings were held with all students and lecturers, in which the students presented the pieces they had worked on. For music production, the online digital audio workstation "Soundtrap" was provided, through which the student groups produced music

[1] Synchronous communication is a mode in which participants talk to each other in real time (e.g., via video call or live chat). Asynchronous communication, on the other hand, can be found wherever the communication partners react to each other with a time lag (e.g., e-mails).

in synchronous sessions outside of the weekly plenary sessions. A total of 30 students participated in this IVAC course, 15 students from each of the two partner universities.

2.1.3 Sustainability-oriented Brand Management

In April 2021, SOPA and the UK's University of Portsmouth (UoP) hosted a two-hour workshop on sustainability-oriented brand management as part of the modules "Research Methods and Intercultural Communication" (SOPA's B. A. Creative Industries Management) and "Market Research" (UoP). The workshop was attended by 25 students from SOPA and 14 students from UoP and was conducted by a professor from SOPA in collaboration with a lecturer from UoP. In the first part of the workshop, consumer research-based concepts and tools for cross-cultural sustainability-oriented brand communication were presented. In the second part of the workshop, students worked independently in smaller international groups to develop sustainability-oriented brand messages using a range of easily accessible online tools (e.g., Google Slides). The goal of the workshop was to provide students with a differentiated understanding of the benefits of segmenting sustainability-oriented consumption.

2.1.4 Digital Transformation I

After an intensive development phase, the pilot course "Digital Transformation I" was offered in the winter semester 2021/22 via the learning platform Canvas of the partner university The Chicago School of Professional Psychology (TCSPP). This IVAC course resulted from a cooperation between the master's programs "Digital Transformation Management" at SRH Berlin University of Applied Sciences (Campus Hamburg) and "International Psychology" at TCSPP. Faculty staff from both universities worked together with instructional designers to identify synergies between the two courses in order to create an increased academic value. The course had a total duration of seven weeks. At the beginning of the course, TCSPP introduced the "best practices" for course design. This was followed by a "technology showcase" in which participating students (nine from SRH Berlin and one from TCSPP) were able to explore their own ideas for using technology to design a course. The development of the course content took place asynchronously. By participating in the course, students were expected to gain a general understanding of the importance of disruptive and sustainable innovation. The intensive development and conception of the content led to the course being firmly anchored in the curricula of both partner universities as an elective, which weighs eight credit points for TCSPP students and 5 ECTS for SRH Berlin students.

2.2 IVAC events

Over the course of the project, various virtual cultural events were developed and implemented to provide access to intercultural experiences for a broad range of students. The online offer included events on topics of diversity, interculturality, and communication.

2.2.1 Life in the German Democratic Republic

In May 2021, an event entitled "Life in the German Democratic Republic - A Sneak Peek behind the Berlin Wall" was held to promote intercultural awareness among students from SRH Berlin and the British partner Coventry University. The online event was set within Coventry University's "Virtual World Tour 2021" event series. It included a live interview on the topic of "Life in the German Democratic Republic (GDR)" with a contemporary witness, followed by a Q&A session. Short videos created by the DDR Museum Berlin were shown beforehand, explaining historical facts and context. In the live interview during the event, the contemporary witness shared with the students his memories and experiences from his life in the GDR. Afterwards, a virtual "scavenger hunt" took place via the platform YouTube. The "scavenger hunt" served as a playful deepening of the conveyed contents according to a gamification approach. A total of 29 students took part in the event, 13 students from SRH Berlin and 16 students from Coventry University.

2.2.2 Diversity: Identity and Integration

Also in May 2021, SRH Berlin students were offered the opportunity to further develop their intercultural skills in an interactive workshop. The online workshop covered various topics of diversity research and social psychology. Exercises on forms of segregation and discrimination were conducted, strategies for integration were developed, and self-reflection on one's own values and attitudes was encouraged. By participating in the workshop, the students practiced perceiving different initial situations and needs of different people and groups and meeting them adequately. This active engagement in the context of an extracurricular offer was intended to help better prepare students for interaction in a globalized world. Seventeen students from SRH Berlin participated in this workshop.

2.2.3 Diversity in Gaming

Another event entitled "Diversity in Gaming" took place in June 2021. It included a live interview with a gaming expert and a Q&A session on the topic of diversity and gender roles in the online gaming industry, including a joint gaming phase with the 2020 video game of the year "Among Us." Topics discussed with

the expert included the gaming landscape in Germany, gender roles in video games, e-sports, and gaming communities. The online event was aimed at students of the SRH Berlin; 17 students participated.

3 Evaluation

Both quantitative and qualitative survey formats were used to evaluate and refine the curricular IVAC courses. For the quantitative surveys, validated psychological scales were used. The qualitative surveys took place as guided focus groups in which students from SRH Berlin and the respective partner universities participated. In the following, we summarize the survey methodology and results of the Global Classroom course as an example. We describe the insights gained from the evaluations and derive recommendations for action. In addition, we present the evaluation results from the second run of the Global Classroom. In this course, we were already able to implement some of the recommendations for action.

3.1 Evaluation Methods

3.1.1 Quantitative survey

The sample included 21 students (61.9 % women) from different universities (SRH Berlin n = 15, TEC n = 8). The students were between 20 and 30 years old; the average age was 24 years. All participants were informed about the procedure and anonymity of the data collection. Data collection was based on an online survey using the platform SoSci Survey (Leiner, 2019). Data were collected immediately after the last event. Demographic data included age, gender, home institution, and ethnic background. Information about the group work was also collected (e.g., group size and number of synchronous online meetings).

Scales from the questionnaire "Evaluation in Higher Education: Self-Assessed Competences (HEsaCom)" by Braun et al. (2019) were used to elicit self-assessed student competencies that resulted from course participation. The HEsaCom questionnaire includes subscales of professional competence, communication competence, cooperation competence, and intercultural competence, among others. To assess digital competence, we created an additional scale with four questions. On a five-point Likert scale, the students assessed their own competence gains (example item of the methodological competence subscale: "As a result of this course, I can organize my work better."). The scales ranged from 1 = "I do not agree at all" to 5 = "I fully agree". Open-ended questions on general satisfaction with the course offering as well as in-depth questions on communication and cooperation in relation to small group work completed the questionnaire. The questions can be found in the appendix.

3.1.2 Qualitative survey

A few days after the quantitative survey was completed, we conducted a qualitative group discussion with a small group of students. As a complementary analysis, the qualitative survey aimed to increase our understanding of the extent and quality of intercultural collaboration in the course. Two to three students from each of the two partner universities were interviewed together in a semi-structured conversation (60-90 minutes) about their international or intercultural experiences in the respective course.

3.2 Results & Recommendations

3.2.1 Results of the first Global Classroom

It should be noted that due to the small evaluation samples and the pilot character of the IVAC courses, the results cannot be generalized. They should therefore be interpreted as initial indicators. In addition, it is important to note that the data are limited to self-report (Podsakoff et al., 2012).

Analysis of the HEsaCom showed that participation in the Global Classroom course resulted in a subjectively perceived increase in competence. Figure 1 illustrates the growth in each competency area. The descriptive evaluation illustrates that an increase in competence was experienced particularly regarding communication-related competences (M = 4.00, SD = 0.86) and cooperation-specific competences (M = 4.30, SD = 0.88). It is remarkable that the increase in intercultural competence was rated lowest (M = 3.50, SD = 1.34), which was, however, still above the mean value of the five-point Likert scale used.

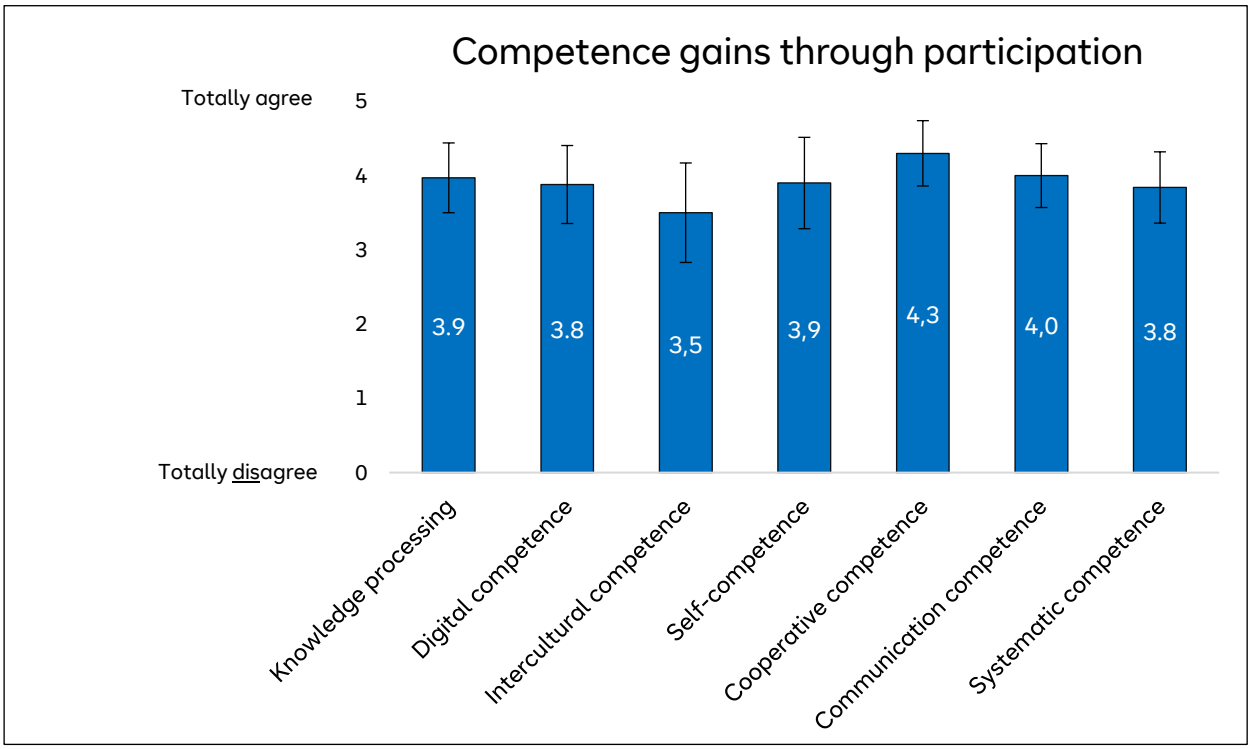

Figure 1 Competence gains through participation in the "Global Classroom" course. The bars represent the mean and the whiskers represent the standard deviation (SD). Responses were given on a scale from 1 = "I strongly disagree" to 5 = "I strongly agree".

The subsequent *qualitative* survey pointed to possible problems in intercultural cooperation and thus reasons for the lower growth in intercultural competence. Among other things, the students criticized the fact that there was a clear discrepancy in the grading of the course between the partner universities: The performance achieved in the Global Classroom was included in the overall grade of the module for the students of the TEC, while students of the SRH Berlin only had to prove successful participation in order to be able to take part in the final exam. The actual performance in the Global Classroom course was not assessed for SRH students. The individual contributions had to be submitted as a group work, but apparently achieving this goal had different priorities for the individual group members. This may have led to perceived and also actual differences in the motivation of the students and thus to difficulties in cooperation and intercultural exchange.

Another reason for the lower increase in intercultural competence could have been that it was not strictly necessary to work together in the group in order to successfully complete the task. Some students experienced the group work as an additional burden when individual group members held back in the joint work and had to be motivated and involved time and again. The statement of a student aptly underlines this circumstance:

"I expected more group interactions. In my group we divided the tasks and worked on them individually".

Task-related interdependencies between the group members should therefore be encouraged so that interactions are stimulated, and an intercultural exchange is made possible. This should be specifically controlled by the lecturers by designing interdependent group tasks. The jigsaw method[2], for example, can be used for this purpose.

The evaluations of the open comments of the questionnaire and the qualitative survey also revealed that there were discrepancies in the prior knowledge between the students of the two universities. This led to frustration for individual students. If there is a meaningful difference in knowledge between cohorts, students should be brought to a common denominator by faculty staff or encouraged to close knowledge gaps through additional readings.

The lack of interaction was also reflected in the fact that only a few groups took advantage of the opportunity to exchange ideas in synchronous online meetings. Yet the results of the quantitative survey indicate that synchronous online meetings are very valuable for competence growth: The more students met with their group members in synchronous meetings, the higher they rated their own diversity competence growth (significant positive correlation of $r = .59$, $p < .01$ between the number of synchronous team meetings and diversity competence growth). Accordingly, at the beginning of the project, it may be useful to emphasize the added value of synchronous meetings for students. This may also have a positive impact on student satisfaction, as indicated by a significant positive correlation between the number of synchronous team meetings and overall student satisfaction ($r = .50$, $p < .05$). In the first Global Classroom, it appeared that the time difference between Germany and Mexico was a barrier to communication that may have contributed to the low number of synchronous meetings. Therefore, when organizing transatlantic events, time differences and how to deal with them should be discussed early in the course.

From the qualitative survey it can also be deduced that the different teamsshould not be built by the students themselves. It was found that students tend to group with befriended fellow students. This can lead to a reduction of diversity, which can be explained by the similarity-attraction paradigm (Byrne, 1971): Individuals are more attracted to each other the more similar they perceive themselves to be. This homogeneity, however, can lead to an increase in so-called diversity faultlines in groups composed of students from different universities. Diversity faultlines are hypothetical dividing lines in teams associated with the formation of homogeneous subgroups; on the other hand, diversity faultlines (e.g., based on gender and ethnicity) tend to increase task and relationship conflicts and to decrease team

[2] The Jigsaw Technique describes a collaborative method used in group work. Each group member works on a subarea of a specific main topic. By creating interdependencies between the group members, the state of knowledge is exchanged, optimized and discussed in a structured way (Stary, 2010).

cohesion (Thatcher & Patel, 2011). As research has shown, group work presents students with a number of problems that include non-contributing group members, uneven workloads, scheduling, and personal/social conflicts among group members (Becker & Dwyer, 1998). These problems occur in both face-to-face and online environments (Piezon & Donaldson, 2005). Instructors should help minimize such problems by forming groups that are as diverse as possible.

When determining an appropriate group size for IVAC courses, the purpose of the group work should be considered (e.g., brainstorming, decision making, problem solving). For example, larger groups may be appropriate for brainstorming tasks (Dennis & Valacich, 1993; Valacich et al., 1994), whereas for other group work (e.g., problem solving), larger group sizes may be detrimental to achieving group goals (Piezon & Donaldson, 2005; Wheelan, 2009). This can be explained by social effects such as social loafing or free-riding: In larger groups, individuals generally believe they can make less of a difference, are less effective, and their individual contributions are less visible (Kerr, 1989; Kerr & Bruun, 1983). In addition, as group size increases, it becomes more difficult to evaluate individuals' contributions to the group (Kerr & Bruun, 1981). Another detrimental effect of large groups is that collaboration tends to decrease as group size increases (Kerr & Bruun, 1983; Komorita, Parks, & Hulbert, 1992) and feelings of self-efficacy decrease (Kerr, 1989). As summarized by Wheelan (2009), groups with three to eight members are significantly more productive and advanced in their development than groups with nine or more members. Thus, in the IVAC courses, groups were kept comparatively small (no more than four people). This is consistent with research findings that emphasize that groups should not be larger than necessary to achieve group goals (Piezon & Donaldson, 2005; Wheelan, 2009).

3.2.2 Results of the second Global Classroom

Although the cooperation and thus intercultural exchange between the students in the first Global Classroom was characterized by challenges, the majority of the students' feedback was positive. This led to the course being offered again in the summer semester of 2021. The lessons learned from the first Global Classroom were implemented in this second course. As mentioned earlier, in the second Global Classroom the creation of the groups was done by the IVAC project team to reduce potential diversity faultlines. The group size was also limited to a maximum of four people. In addition, the Icebreaker Activity was used to prepare students for international collaboration and to raise awareness of potential barriers (e.g., time differences). Methodologically, a quiz and different teaching/learning videos were used for this purpose, which were then discussed in the plenum. One of the videos addressed the productivity of Global Virtual Teams. To overcome possible hurdles in virtual teamwork, the students were asked to develop a team contract in their work groups by defining goals, responsibilities, and norms for the collaboration. The team contract served as an aid to facilitate group work.

The direct comparison of both evaluations indicates an improvement in the outcomes of the course (see Figure 2). However, due to the small sample size, no generalized statements can be drawn, and the results must be interpreted with caution.

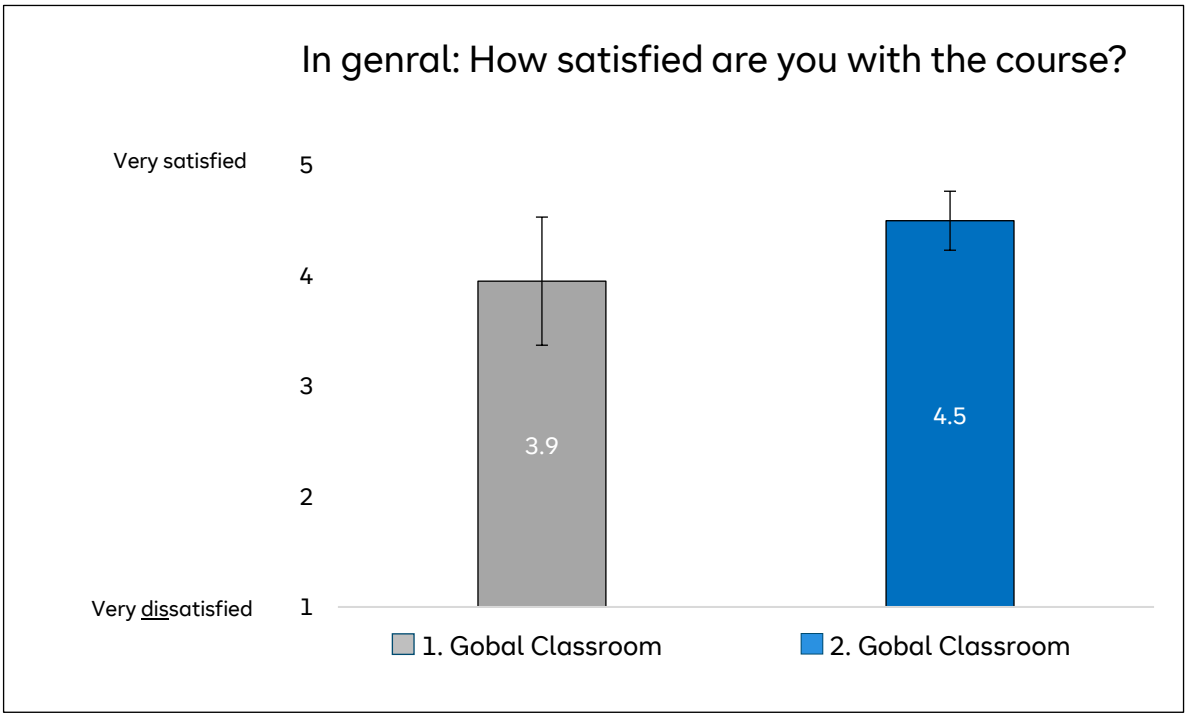

Figure 2 General satisfaction with Global Classroom 1 (n = 21) and 2 (n = 8) courses in direct comparison. The bars represent the mean and the whiskers represent the standard deviation (SD). Responses were given on a scale from 1 = "I strongly disagree" to 5 = "I strongly agree".

The results of the evaluations also indicate improvements in satisfaction with the individual activities:

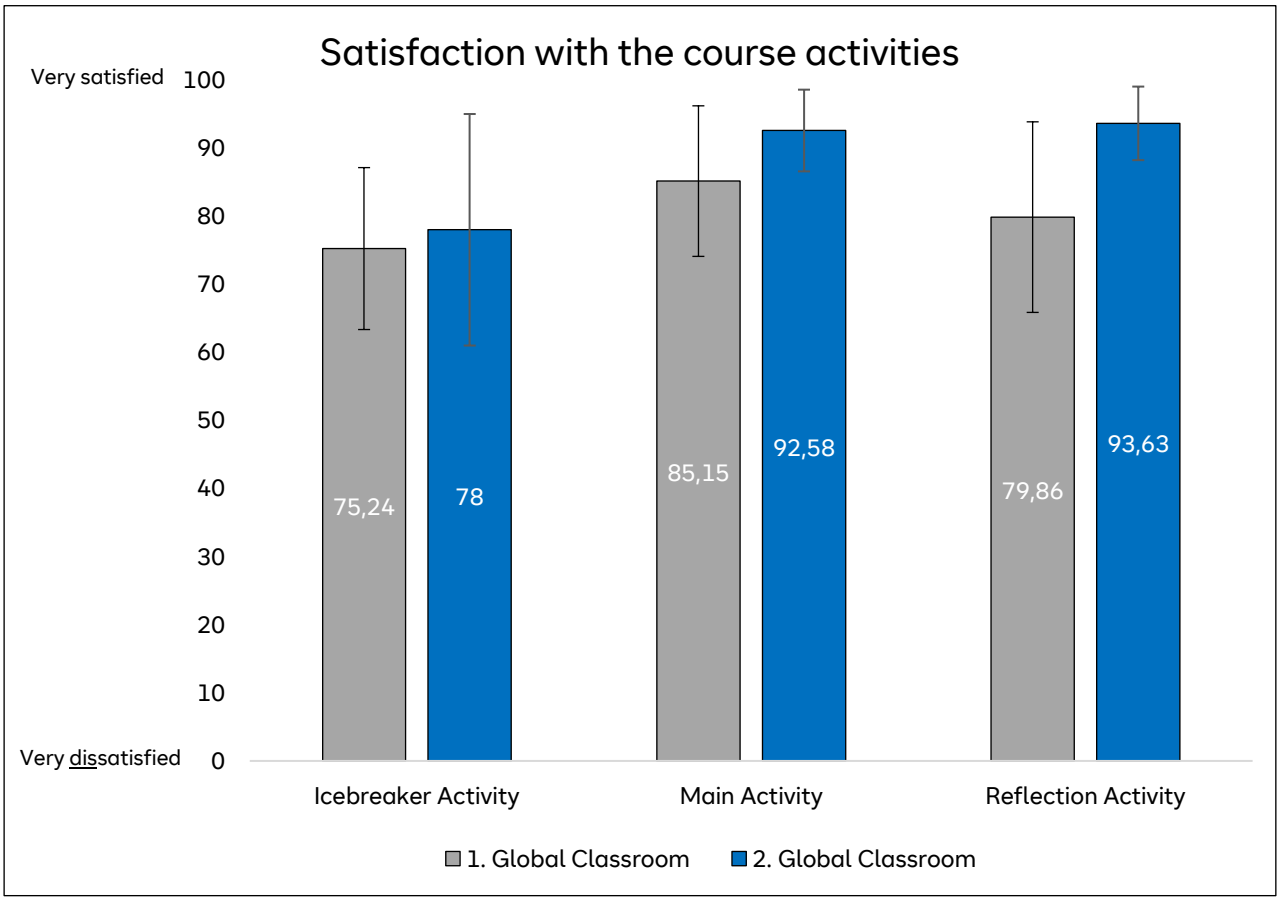

Figure 3 Student satisfaction with the individual activities of Global Classroom 1 and 2. The bars represent the mean and the whiskers represent the standard deviation (SD). Responses were given on a scale from 0 = "very dissatisfied" to 100 = "very satisfied".

It can be concluded that the students generally appreciated the concept of the "Global Classroom" course and would also like to experience more similar formats in the future:

> *"This was an innovative concept, I liked the international aspect, and the positive experience of the course being different from traditional teaching units"*

> *"I would like to see such offers in the future"*

> *"It was a very dynamic activity, since we could have done it with our respective professors and in our respective classrooms but doing it this way had a greater impact and was more enriching"*

3.2.3 Derived recommendations for Virtual Exchange

Various lessons were learned from the evaluations of the Global Classroom courses:

1. **Weighting/Grading**: Ideally the course should be equally weighted at the partner universities (in terms of the grading, etc.), as otherwise students may lose motivation. If equal weighting is not possible, students should be made aware of existing differences at the beginning of the course.
2. **Interdependencies**: The group tasks should promote interdependencies between the members of a team, so that the individual group members are encouraged to share their knowledge with each other and support each other. This should be specifically prompted by the instructors through the design of the assignments. It has also proven useful to have the students develop and sign a team contract at the beginning of their group work, in which they set goals, roles, and norms.
3. **Discrepancy in knowledge**: If there is a meaningful knowledge discrepancy between different cohorts at partner universities, students should be brought to a common denominator or encouraged to close knowledge gaps with additional readings.
4. **Synchronous meetings**: Students should be motivated to meet regularly in synchronous meetings. To this end, the advantages of synchronous meetings may be elaborated together with the students at the beginning of the course. Synchronous meetings form the basis for an intensive exchange in virtual teaching and learning environments.
5. **Group constellation**: In order to prevent the development of diversity faultlines, the group constellation should not be made by the students. Diversity faultlines increase task and relationship conflict and decrease team cohesion (Thatcher & Patel, 2011). Groups should be as diverse as possible across multiple characteristics (e.g., home university and gender). For example, in a group of four students: one student from Mexico, one student from Germany, one student from Mexico, and one student from Germany is preferable to a group of two female students from Mexico and two male students from Germany.
6. **Group size**: The appropriate group size depends on the learning objectives and the purpose of the group work. An optimal group size cannot be determined per default but should rather be considered in conjunction with other factors, such as the type of task.
7. **Sensitization**: Especially in intercultural working environments there are various barriers, e.g. language barriers, different time zones, etc., for which students should be sensitized at the beginning of the course. A good way to address possible barriers is the Icebreaker activity.

4 Conclusion

International, virtual, and academic collaboration courses have the potential to provide students with intercultural experiences regardless of family, financial, and physical circumstances, while helping them develop employability skills (e.g., intercultural, digital, and problem-solving skills). Four IVAC courses and various virtual culture offerings were conducted at SRH Berlin between September 2020 and November 2021. Quantitative and qualitative evaluations revealed competence gains and a positive response from the students. They rated the IVAC courses as unique and enriching offerings in the existing curriculum - especially in light of the fact that comparable experiences would not have been possible during the Covid 19 pandemic.

The evaluations showed that cooperation and communication skills in particular were positively influenced by the project. Opportunities for improvement (especially with regard to the IVAC courses) exist in the a priori determination of the group constellation and size, the design of tasks that promote interdependence, and in dealing with organizational differences between the partner universities (e.g., grading of courses and different semester times). In addition, possible obstacles to collaboration such as different time zones or work norms should be addressed in advance and solutions should be worked out together with the students. Overall, it can be stated that international, virtual and academic collaboration courses require particularly careful and psychologically thought-through planning in order to overcome collaboration hurdles in the virtual space and thus to be able to exploit the potential of virtual exchange formats.

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Annex: Questionnaire

A) Self-rated gains in competences (HEsaCom; Braun & Leidner, 2009; Braun et al., 2019)

Knowledge Processing	I strongly disagree				I strongly agree
	1	2	3	4	5
1. As a result of this course, I can remember most of the important terms and facts from this course.					
2. As a result of this course, I can give an overview of the course.					
3. The course has helped me improve my analysis of complex issues in this subject area.					
4. This course has helped me improve my handling of typical problems in this subject area.					
5. This course has helped me both to see the connections and to notice inconsistencies in this subject area.					
6. This course has helped me judge the quality of academic articles in this subject area.					
Systematic Competence	I strongly disagree				I strongly agree
	1	2	3	4	5
1. This course has helped me to acquire information more efficiently.					
2. This course has helped me organize my work.					
3. This course has helped me improve the way I work.					
Communication Competence	I strongly disagree				I strongly agree
	1	2	3	4	5
1. This course has helped me express my opinion.					
2. This course has helped me to ask for clarification when I have difficulty understanding.					

3. This course has helped me speak in a way that others can understand.					
4. This course has helped me speak more precisely.					
5. This course has helped me to improve the way I moderate discussions.					
Cooperation Competence	I strongly disagree				I strongly agree
	1	2	3	4	5
1. My participation in the group work made it easier for me to help delegate tasks.					
2. My participation in the work group made it easier for me to know when to hold back from contributing.					
3. My participation in the work group made it easier for me to stand up for constructive team spirit.					
4. My participation in the work group helped me take personal responsibility for my share of the work.					
5. I feel identified with our work group's accomplishment.					
Personal Competence	I strongly disagree				I strongly agree
	1	2	3	4	5
1. I have grown more interested in the subject matter as the course has progressed.					
2. The course encouraged me to continue my studies.					
3. The course has increased my joy of carrying out assigned tasks.					
4. I feel more inspired by the topics studied in this course than at the beginning.					
5. The course has inspired me to study the subject further in my own time.					
Diversity Competence	I strongly disagree				I strongly agree
	1	2	3	4	5
1. This course helped me to treat other groups (e.g., people with disabilities, people of other cultural and socioeconomic background, gender or sexual orientation) with more respect.					

2. This course improved my attitudes towards other groups (e.g., people with disabilities, people of other cultural and socioeconomic background, gender or sexual orientation).					
3. In this course, I learned more about my values regarding people with disabilities, other cultural and socioeconomic background, other genders or sexual orientation.					
4. This course helped me become aware of the consequences of my own prejudices.					

Digital Competence (scale developed by the IVAC project team)	I strongly disagree				I strongly agree
	1	2	3	4	5
1. I feel more inspired to use digital collaboration tools than at the beginning of the course.					
2. The course has helped me improve my ability to collaborate with fellow students using online software (e.g., to share files and work on them together).					
3. The course has helped me improve my ability to communicate with fellow students using online software (e.g., via email, chat or videocall).					
4. The course has encouraged me to experiment with new digital technology.					

B) Satisfaction

1. How satisfied were you with the project in general?	Totally dissatisfied				Totally satisfied
	1	2	3	4	5
2. Which were the main factors that influenced your satisfaction with the project?	free text entry				
3. Which were the main factors that influenced your dissatisfaction with the project?	free text entry				
4. How satisfied were you with ... ...the icebreaker activity? ...the main activity? ...the reflection activity?	Totally dissatisfied				Totally satisfied
	1				100

5. How likely is it that you will participate in a similar project again?	Not at all likely		Extremely likely
	0		10
6. How likely is it that you will continue to use the network you have built up during the course?	Not at all likely		Extremely likely
	0		10

C) General Questions

1. How old are you?	free entry
2. What is your gender?	drop down selection with optional free text entry
3. Which university do you study at?	drop down selection with optional free text entry
4. How would you describe your ethnic background?	drop down selection with optional free text entry
5. With how many people did you work in a team during the project?	free entry
6. With how many people of other nationalities did you work in a team during the project?	free entry
7. How often did you meet in your team for synchronous meetings?	free entry