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Participant evaluation of InsSciDE events: Warsaw Science Diplomacy School 2020 & 2021

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Summary

The Warsaw Science Diplomacy School (WSDS) was conducted online for one week in June 2020 and again in 2021. This deliverable report is one in a series evaluating public events organized by H2020 InsSciDE, and integrates student evaluations of WSDS 2020 and WSDS 2021 as well as information on course content to present a holistic portrait of the school¹. Through the analysis of anonymous participant survey data, student reflections shared in plenary, and social media posts, we report continued high levels of satisfaction with the school and its conduct (in online format, necessitated by the COVID-19 pandemic). In particular, participants appreciated the interdisciplinary nature of both teaching content and team dynamics. The program schedule, evaluation survey questions, critique of methodology, and list of faculty/organizers are appended.

¹ The present deliverable D1.5a updates and revises the previous D1.2c, adding new data from the 2021 participants' evaluation of Warsaw Science Diplomacy School.





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Participant Evaluation of InsSciDE Event: Warsaw Science Diplomacy Schools, 2020-21

I. Aims of Deliverable

1. To understand the strengths and shortcomings of the Warsaw Science Diplomacy School as outlined by participants' opinions.
2. To verify the efficacy of the remote webinar format.
3. To review modifications that were made to the 2021 school format following participant feedback from the 2020 edition.
4. To assess our interdisciplinary approach to science diplomacy education through "combining history and strategy".
5. To report on the future perspectives for the network formed among alumni and InsSciDE instructors.



II. Introduction

A. Organization of the School

In June 2020, Horizon 2020 InsSciDE conducted the first of two planned 5-day pilot training programs. The **Warsaw Science Diplomacy School (WSDS)** was originally designed as a face-to-face event. The COVID-19 pandemic and lockdown necessitated transformation of the school to a purely online format. Fortunately, the InsSciDE researchers and partners had a well-established practice of online collaboration, and the period between the start of lockdown (mid-March 2020) and the chosen week of 22-26 June 2020 was ample to revise planning². The school took place via Zoom video call at the previously reserved dates.

In June 2021, the second iteration of the 5-day pilot training program took place. Given the success of WSDS 2020's online format and the restrictions on face-to-face events imposed by the COVID-19 pandemic, WSDS 2021 also took place via Zoom (21-25 June 2021).

For efficiency, the 2020 edition of WSDS will henceforth be designated as **WSDS20** and the 2021 edition **WSDS21**.

An important feature of WSDS is the assignment of participants into teams. For both editions of the school, four “**case study teams**” centered their work on distinct InsSciDE historical case research taught by its author. As can be seen in the **program schedules (Appendix 1)**, the proceedings were generally structured around plenary lectures alternating with breakout discussions (both guided and unguided) within which the teams prepared deliverables that were subsequently presented in plenary. These deliverables sought to synthesize the in-depth knowledge gained by the team from the Case Study Author with the lessons learned from WSDS political science faculty on present-day policy and strategy-building, in order to generate interdisciplinary knowledge combining history and strategy.

The membership of the four teams was varied for certain tasks, to allow participants to meet and work intensively with more persons. At WSDS20 for instance, case study teams were mixed in order to create a “Risk, Safety, Security” deliverable, and then participants were resorted into four diversified groups to perform the Day 5 evaluation. At WSDS21, by contrast, four “disciplinary groups”, composed according to shared interests, met on Day 1 to discuss expectations and again on Day 5 to conduct evaluations.

² Moreover, lead partner European Academy of Diplomacy had quickly gained experience that served WSDS well: in March 2020, EAD transformed their large planned or ongoing face-to-face training programs to online events within mere days.



B. Online Information about the School

Publicly available information about the school, its program and instructors can be found on the project website at the following links:

- https://www.insscide.eu/IMG/pdf/wds-20_brochure_case_studies_student_diversity_final-8june20.pdf (direct download for brochure - indicating the highly diverse **composition of the 2020 student body**, and the **four case studies** around which four student “teams” were formed)
- <https://insscide.diplomats.pl/event/summer-school-2020/>;
<https://insscide.diplomats.pl/event/summer-school-2021/> (archived pages indicating the competitive application process on the basis of which candidates were selected)
- Public news articles providing overviews of WSDS – including links to articles published elsewhere by students and more detailed InsSciDE articles:

WSDS20: <https://www.insscide.eu/news-media/articles/article/wds20-chronicles-week-s-overview>;

WSDS21: <https://www.insscide.eu/results/warsaw-science-diplomacy-school/article/wds21-recordings-overview-of-the-week>

- <https://www.insscide.eu/news-media/interviews/wds-student-takes-of-2020/> (WSDS20 Student Takes articles, including student testimonials about the school; the WSDS21 student articles are still being written at the time of submitting the present deliverable)

as well as in the confidential InsSciDE deliverables **D1.4** and **D1.7 ‘Detailed Teachers’ Notes’**.

Appendix 4 of the present report names the principal organizers and instructors of both editions and provides links to the InsSciDE [Team](#) web section where individual profiles can be found. Guest lecturers and experts are thanked in footnotes.



III. Methodology and Data Sources

The diverse methods of collecting evaluation data and feedback from Warsaw Science Diplomacy School participants are detailed in this section, before presenting results in subsequent sections.

A. Surveys: Individual and Anonymous Evaluations

WSDS participants were asked, as part of their required engagement, to provide structured feedback. This feedback was provided through five distinct daily questionnaire surveys, filled out individually and anonymously using Google Forms. The surveys included a mix of numeric ratings on a scale from 1 to 5 (five being excellent) and text-based input. To foster full representation, diplomas were withheld until all data entries had been received (finally obtaining 257 out of 260 expected individual day evaluations).

The questions asked in each survey can be found in **Appendix 2** to this report. The first four daily surveys required about 5-10 minutes to fill out. They focused on evaluation of the days' activities, with Day One's survey also asking students to state their expectations for the summer school, and Days Two through Four also asking for constructive feedback to improve the program. Day Five's survey was somewhat longer, requiring approximately 10-15 minutes to give more comprehensive feedback.

B. Flipped Learning Evaluation

A major pedagogical element of WSDS was “flipped learning”. This approach first initiates students to material outside of the classroom, before having them take an active role in elaborating the material within the classroom. On the final day of the program, students engaged in a “flipped learning evaluation” exercise for the purpose of generating feedback and articulating key knowledge gained in the program. This exercise was so named in that not only the pedagogy itself was evaluated, but also the exercise was another instance of bottom-up activity by the students towards the instructors.

During this flipped evaluation exercise, students were split into four groups whose composition did not match the primary four “case study teams”, thereby giving them the opportunity to elaborate with a different set of participants. Students were given a list of questions and were invited to focus on three of them of their choice for a fifty minute discussion. The list of questions for WSDS20 was:



1. What did you learn about combining history and strategy? Is it useful?
2. What did you learn about using basic research to address strategic challenges? Is it useful?
3. What did you learn from your fellow students?
4. How will you stay in touch with your fellow students?
5. How can you collaborate in the future with your fellow students? Will that be useful?
6. On Monday's form you said what you were looking for in the school. Did you find it during this week?

WSDS21 used the same list with the addition of one question:

7. What was particularly useful from the perspective of your field/discipline? What was missing?

Upon returning from breakout to plenary, representatives from each team gave a five minute feedback presentation. As with other plenary presentations, this assignment was treated as a public speaking training module; individuals who had not taken the plenary floor in preceding days were invited to present. The assignment was to deliver an evaluative *message* to the school and organizers, rather than a linear account of the team discussion.

Following the four presentations, the floor was opened to discussion and input by attendees which included instructors and other InsSciDE researchers as well as invited experts from the EU Science Diplomacy Cluster. The session concluded by re-opening the floor to students to provide an opportunity for inter-group feedback.

Detailed notes were taken in these sessions in order to review and capture the evaluative results. These are to be considered as data generated in a collective setting, whose source and symbolic meaning may thus distinguish them from individual and anonymous Evaluation Survey data.

C. Social Media

Participants also showed what they thought of the school through personal posts to their social media. Throughout the program, students were encouraged to post on Twitter about their experience using the hashtag “#WSDS20” and “#WSDS21”.

Tweets that employed this hashtag or were tweeted by students directly at @inssci_eu were considered for this report. Similarly, relevant LinkedIn posts and other web content were taken into account.



Email texts received from students provide another window onto features of WSDS that particularly struck individual participants. Because these messages typically mixed direct personal thanks and evaluative remarks, most are not cited in the report; however some examples from WSDS20 are in Appendix 4.



IV. Survey Responses

A. Participants' Expectations

In the Day One survey, participants were asked to convey their expectations of the program. In both 2020 and 2021, their responses to the question “*What do you want to gain from this week of WSDS?*” could be sorted into the following three categories:

- Gain further general knowledge of Science Diplomacy.
- Network with science diplomats.
- Assess the state of international science cooperation, considering a European perspective.

A further category emerged in the WSDS21 feedback:

- Develop a toolbox to include in their everyday practice of Science Diplomacy.

These expectations are well aligned with the objectives of the school as presented in our various communication tools, which reasonably contributed to creating such outlooks. Moreover, achievements on these dimensions were highlighted in the social media posts as well as web articles published in the aftermath of the first edition by WSDS20 alumni and therefore shaped expectations among applicants in 2021.

The majority of students in both years expressed that their expectations were met across the five days -- with many stating moreover that their **expectations were in fact exceeded**. The feeling of gaining a fuller view of Science Diplomacy, and a sense of inspiration for the future, can be seen in comments like these:

- I definitely expanded my knowledge about SD this week. I loved the historical perspective. (WSDS20)
- I knew going in that history would play an important role in WSDS but the week actually exceeded my expectations. I am so grateful for the opportunity to hear in particular from the experience of [panelists]. It was very humbling and a reminder that there is a lot for Science Diplomacy to do. (WSDS20)
- The best moment was sharing our impressions and how everyone lived this great experience with the hope of staying connected in the future. (WSDS21)



- Today was a really inspiring day. I enjoyed everything a lot, but I really liked exchanging ideas about the school into the split groups. Thank you for all your hard work. It was a great experience and I feel privileged for having been part of it. (WSDS21)
- I am now fully convinced that science diplomacy is an area I would like to explore more in my future career. (WSDS20)
- [The course] exceeded expectations, especially considering it was virtual -- but still the organizing team did an amazing job. (WSDS20)

B. Delivery of Core Mission

Individual “modules” included in the program, that is, distinct activities throughout the day (lectures, discussion breakouts, etc.; see Appendix 1) were individually evaluated on a five-point scale (see survey questionnaire, Appendix 2). The numeric ratings by students uniformly designated the activities as “very good” or “excellent”. Qualitative (text) feedback regarding **delivery of WSDS’ core teaching mission** (program structure, content, etc.) included both positive comments and constructive criticism of the program.

Topical Content

Participants responded very positively to the **diverse topical areas** addressed by WSDS. Many participants were satisfied to find that their own specific field of interest was addressed through at least one of the WSDS elements, be that a lecture, a discussion, or the selected case studies. Participants entered the school with various levels of expertise (ranging from ‘new to science diplomacy’ to actual practitioners), but across this spectrum, participants stated that they came away learning new dimensions of the field.

Lecture and workshop modules received high ratings and positive freestyle feedback, with particular appreciation for:

1. Case studies presenting examples of Science Diplomacy in practice (e.g. detailed studies of particular models of collaboration in the case of the 35 countries building the ITER fusion device, or Soviet-US space relations, or relations between botanists from France and the Intertropical zone);
2. Sharing of practitioners’ personal field experience and/or expertise;
3. Interdisciplinary topics and approach;
4. Relevance within a COVID-19 context (e.g., health diplomacy cases and debate) or vis-à-vis other highly topical discussions (e.g., the links between de/colonization and science diplomacy).



Each daily survey included the question “**Which idea or concept really stood out to you today?**”. While responses showed great variety it is still possible to distinguish a family of concepts that stands out across the two editions. The participants’ surveys (particularly in 2021) tend to emphasize the relationship between power, knowledge and history as revealed by the practice of science diplomacy. This could be summarized in comments from WSDS21:

- What stood out to me today was the idea of compromise and reciprocity in negotiations. This was particularly apparent in the ITER case study, but also in the Space case. Learning about historical compromises and the situations in which they were made can help us with negotiations today.
- Reciprocity, compromise, geopolitics, the difficulty of finding common ground with countries with which relations are not optimal.
- In my group discussion, we talked about the impartial nature of science vs. the political process of diplomacy. I found that conversation very stimulating.

In response to the question “*What was the funniest or best moment today*”, a vast majority of responses evoked the “**fun**” physical dance and yoga activities. The relaxation offered by these modules was viewed as essential relief from the dense schedule and content (different in nature from the 5, 10 or 15-minute “away from your screen” breaks offered throughout the day). Of note, two after-hours “Pub nights”- a pub quiz and a series of “Glacier Breakers”³ - were implemented in WSDS21 in reply to comments from WSDS20, serving as a way of socializing online in a different setting than the course.

Teamwork Under Diversity

Many participants praised the time spent in **breakout discussions and small group work**. Dozens of comments highlighted the value of unstructured discussion time to delve into the case studies (with and without the guiding presence of the Case Study Author). The collaborative mindset was praised. The diversity of team compositions was largely appreciated, with participants’ survey replies frequently highlighting the interdisciplinary and international nature of the WSDS cohorts.

Many responses evoked the pleasure of interacting with teammates as peers. The ability to establish such social connections in the pandemic context was given prime importance. Both diversity and shared topical or career interests were valued.

- I really enjoyed being able to share my impressions of the week with the others from this [shared interest:”disciplinary”] group – you created an excellent group of people with similar desires/needs/perspectives, etc., that allowed us to really talk together. (WSDS21)

³ A series of thought-provoking games so that the participants could learn more about each other. See Appendix 5.



IV. Flipped Learning Evaluation Results

As with the survey data, flipped learning evaluation messages included a variety of highly positive feedback - as well as constructive criticism. The below discussion draws on the notes and transcription from the Day 5 plenary session in both 2020 and 2021.

A. High-Value Features of WSDS

Many topics addressed in survey comments were echoed by the flipped evaluation. The features grouped in Table 2 below emerged as fundamental to the very positive view formed of the school by participants. These were seconded by instructors and organizers as high-value deliveries by WSDS.

Table 2. High-value features of WSDS identified by flipped evaluations

High-value Feature	Content put forward by participants	Indicative quotes
Multidisciplinarity	Multidisciplinarity was identified at several levels: in the WSDS curriculum, across the instructors, and within the student teams. Multidisciplinarity stood out as a rare experience and the strongest point of the summer school.	“The variety of case studies was brilliant and really suited the variety of interested displayed by the 24 participants” (WSDS21) “It was amazing to see all these different cases but also see similarities among them. Truly interdisciplinary”(WSDS21) “When you put all these people together with very specialized knowledge and a common interest, that’s when the magic happens. That was the best part of this course by far.” (WSDS20)



<p>Diversity</p>	<p>Diversity in the profile of the participants and experts, as well as in the topics touched on by cases, was highly appreciated by the students and presented as one of the defining features of WSDS.</p>	<p>“ In terms of learning from our fellow students, [it] has been a really great learning [experience] from all of us. It has been really interesting to see what everyone else thinks and what everyone is doing. What we have heard from a lot of people from different nations and different universities has been precious. Putting on our European hat [during the strategy development exercise] was a really revealing experience for all non-European members of the group”. (WSDS21)</p> <p>“It was very useful to hear about all the cases and strategy and we all felt that we learned a lot from the variety of these cases” (WSDS21)</p> <p>“The diversity of the group was much appreciated in terms of geographical diversity, area of expertise and also the mix of academia and practitioners”. (WSDS21)</p>
<p>Complex vision of Science Diplomacy</p>	<p>Many facets of science diplomacy were acknowledged by the curriculum – not just that it is desirable, powerful or necessary, but that it can also be dangerous and competitive.</p>	<p>“There are hard aspects to carrying out research and we saw the risks and security aspects of it – the competitive nature of science diplomacy. That was a great reminder because sometimes we tend to only think about the positive aspects of science diplomacy. That was really important for us to realize”. (WSDS20)</p> <p>“There is no room for being naive in science diplomacy. Too many interests in play...” (WSDS21)</p>
<p>Teamwork</p>	<p>Members succeeded in building friendship through and around their intensive, goal-driven collaboration.</p>	<p>“It was very different to have potential collaborations knowing your faces and your backgrounds as opposed to strangers. (...) I offered to host everyone as visitors [to] crash on the couch and hopefully continue learning from each other.” (WSDS20)</p>



Potential for Future Collaboration	Significant potential for continued post Summer School activity is seen, with ideas ranging from social networks to an alumni association to a 'women in science' development, to co-authoring articles and implementing a shared resources platform. The prospect of participating in an ongoing EU SD Alliance is embraced.	Women for Science Development "Another opportunity we have is trying to work to breach/close the gender gap in the participation of women in science". (WSDS20) Meet in person "If this [online] modality saved some money it would be amazing to have a future event." (WSDS20) "The first point that is most important for us is staying in touch: we proposed that you as the organizers facilitate a follow-up meeting maybe in-person in Warsaw or somewhere else". (WSDS21)
Organization	The excellent management and program design vastly exceeded expectations for what an online Summer School course could provide.	"We would really like to acknowledge the organization and how well the time was managed as well as all the icebreakers and the yoga because it really made us feel that we were being taken care of." (WSDS20)

B. Challenges

Constructive criticism voiced during the flipped evaluation addressed changes or adjustments that could be made to WSDS. Participants in the first pilot in 2020 reflected on what could be improved for the following year, whereas the second and final pilot training in 2021 gave rise also to suggestions of new ventures to prolong the experience outside of the online workshop.

Learning to link history and strategy

The main area identified for improvement was clarifying the link between strategy and history.

"We understood pretty much what history was all about, and what strategy was all about. But the linkage was somehow hard to make by ourselves. And we all agreed based on the team presentations that most people had a hard time [with this]". (WSDS20)



Curriculum adjustments for the WSDS21 edition were well received. InsSciDE's First Draft of European Science Diplomacy Strategy (ESD-Strategy)⁴ was made available some weeks before the school, and the WSDS21 student deliverable instructions were carefully rooted in the approach and vocabulary of that essay. Operational objectives for developing European SD were identified and case study instructors introduced early on the selected objectives that could be most fruitfully enlightened by their particular historical area. Nonetheless, WSDS21 participants still found it difficult to create grounded strategic action points to help Europe develop its science diplomacy.

“Some of us felt that they had some difficulty in linking the two aspects, history and strategy, and perhaps rooted in their interest in both: they wish to learn more about the strategic part as well perhaps earlier within the discussion or with more time dedicated to practical tools or readings on some of the diplomatic practices as we did for the historical cases”. (WSDS21)

- “We found that the balance of time between case study and discussion on the strategy could be improved. Maybe more time to think and discuss how to go beyond the historical case study would be useful. The focus on the deliverable was mostly placed on Day 4, and for some of us it was difficult to go beyond the historical case and think strategically even though of course we had the strategy discussion paper before the school”. (WSDS21)

Discussion with instructors at the flipped evaluation session in 2020 had already highlighted that making the link between history and strategy is an inherent intellectual and disciplinary challenge.

- “I do understand the students who said that the link between history and strategy was probably not enough explained or analyzed or studied. And I suppose that is because of the way that we approach the two disciplines. Maybe [the instructor-researchers] were too focused on our specificities and not enough on the way that we are all working together. I'd like to stress that the way I practice history is unthinkable without cooperation with my colleagues. Of course I'm a historian, but I cannot be a contemporary historian without the help of [political scientists'] work, or anthropological work. You have to keep in mind that it is not because we have a sort of [disciplinary] stamp on our forehead that we are narrow-minded. The way that we use other disciplines could be a way for you to think about what you are going to do for your future employer”. (Instructor, WSDS20)

- “As a historian it's very difficult to get my colleagues to think about the future or the present. The future is just a nonstarter; the present is almost impossible, because historians tend to like to deal with people who are, well, dead and won't argue with them. It can be difficult for us to look a bit forward and think strategically. So you have been around a group of historians that are pushing their disciplinary expectations in terms of

⁴ InsSciDE Deliverable D2.3 by Björn Fågersten, UI. The finished deliverable will be available in Fall 2021.



what historians should or shouldn't be doing and so it is a little bit tense – (...) you all have been very kind to us and listened and I think we've learned as much from you as you've learned from us, so thank you.” (Instructor, WSDS20)

The full set of comments suggest that WSDS hands-on exercises to engage historical reflection in strategy-building are innovative. Moreover the linkages do not exist ready-made, but must be actively created.

Despite the difficulties experienced, overall the oral feedback emphasized that these components of the school were perceived as valuable:

“Many of us expressed that we wanted to better understand some of the mechanisms of science diplomacy and how the learning from historical cases would help us develop constructive strategy. Making this connection proved very valuable for us” (WSDS21)

This emphasis is reinforced by replies to the Day 5 survey question “*Among the things that you learned, what do you think will be the **most useful or relevant in your future endeavors?***” where replies focused largely on history and strategy (as well as on collaboration in a context of diversity, discussed in “high value features” above).

Enshrining diversity

WSDS achieved broad diversity on several levels: participants' disciplines, backgrounds, geographical origin, etc., and women were a majority among the participants. While diversity was one of the highest-value features identified by WSDS20 and 21 evaluations, nonetheless constructive criticism was heard. Participants encouraged organizers to lend even more attention to achieving diversity and gender balance among invited experts, and also to effectively take differences into account:

“[You have mentioned] the efforts that you put into making the panels gender-balanced, and explained that sometimes that couldn't happen because of external reasons. I want to thank you for making that clear because sometimes we just assume that there was no effort put into that. I just want to point out that all the specialists yesterday were male, and that did catch my eye”.

“[The invited experts and the panel] are not the only place but are a very visceral place [for gender-balance]. I would like to think that for a broader panel, that at least the gender representation would be similar or proportional to the applicants to be true to the interest of the course. You're not going to be half and half just to be half and half but it could be proportional to the participation”.

“Not everyone likes to come forward to speak in public and that should not be a criterion for success here. It is possible to achieve and to play an important role without taking the



stage. This is also a cultural issue, for instance among indigenous peoples, and it needs to be respected.”

“I found it very interesting that I am the only participant from Africa and in saying that it is challenging for me also to be able to replicate what I’ve learned within my immediate environment as a continent and country. I’m also looking at the possibility of one or two more opportunities that could be given to increase the number of participants from this continent. The concept of science diplomacy as it is fairly new and a whole lot of things have been designed and defined within the European Union but I think it would be nice for other developing countries to be able to take part and follow through and understand the processus from the beginning, to be able to help us, to advice properly the various governmental levels that we have. [...] Among the discussants it would be nice to also have somebody from this part of the world to also share the experience of how diffuse this idea of science diplomacy. I think having these diverse ideas, diverse opinions will also help us shape the practice of science diplomacy across the world”.



V. Social media

Twitter proved an extremely rich domain of student interaction and communication in the lead up to, during and following the Summer School. We also report positive interaction between students and InsSciDE team members as well as external observers. **Image 1** below displays typically enthusiastic and thoughtful posts.



Image 1: Compilation of tweets by participants, instructors and outside observers of WSDS20

Posts explored a wealth of topics, with students reflecting on the material, sharing what they learned and their joy in the experience, and promoting the program to their peers for participation in future editions.

Diversity and multidisciplinary were celebrated. WSDS's success in maximizing **human relations and a positive classroom dynamic**, despite the online format, was put forward as a model:



- WSDS20 Day Five: “Doing online course and **no networking is possible? Not at all!** @insscide_eu course on #scienceDiplomacy not just found (sea) space for us to beautifully gather but also appointed us to further mentoring after the course! I mean, **why don’t you do it too?!?** It’s wonderful!”

Post-program tweets focus on **debriefs, reflection and contextual connections** made by students or instructors, as well as content developed from the school.

Students were encouraged by InsSciDE organizers to jointly create **articles** for our website or the EU SD Cluster website science-diplomacy.eu, a suggestion met with enthusiasm. In 2020, we were gratified to see that several students charged ahead to debrief their experience in articles rapidly published by their own institutions⁵. As the present evaluation report is completed, WSDS21 students are creating web articles for publication. These may include reports on the “Ally” talks, a post-school bonus placing alumni in contact with practitioners and experts.

While all posts unfortunately did not employ the designated hashtags, tweets that did use #WSDS20 and #WSDS21 can be consulted directly on Twitter:

- https://twitter.com/search?q=%23wsds20&src=typed_query.
- https://twitter.com/hashtag/WSDS21?src=hashtag_click

Some of the WSDS20 students expressed spontaneous feedback via email, presented in **Appendix 4**.

LinkedIn was also a place of spontaneous and public expression of feedback, mostly for WSDS21, under the “#WSDS21” hashtag. Most of the posts date from after the end of the summer school to signal participation in the school and what this experience meant, as well as to thank the organizers. Similarly to Twitter interactions, the LinkedIn content is positive:

Last month I was fortunate enough be able to attend the 2021 online edition of the Warsaw [#ScienceDiplomacy](http://science-diplomacy.eu) School. The [#WSDS21](https://twitter.com/hashtag/WSDS21) offered us the historical comparative perspective on topics ranging from archeology to space exploration, which helped to broaden our vision/experience of the theory and practice of [#ScienceDiplomacy](http://science-diplomacy.eu). The topics were interesting, challenging and in some cases really eye-opening. The opportunities for learning, collaborative activities and networking were fantastic! Thank you to everyone I met there for your engagement and ideas and for making the whole WSDS experience so enjoyable! [#InsSciDE](https://twitter.com/insscide_eu) @insscide_eu [#networking](https://twitter.com/hashtag/networking)

All in all, social media proved to play an important role in the public perception of WSDS, as a positive and inspiring experience.

⁵ Find links to these individuals’ articles at the bottom of our webpage: <https://www.insscide.eu/news-media/articles/article/wsds20-chronicles-week-s-overview>



VI. Comparison Between WSDS20 and WSDS21

This section relies on both survey and flipped learning evaluation data. It offers information on how the school was experienced in two different contexts, and how the organizers adjusted the school to feedback on the first pilot edition.

Reception of the Online Delivery Format

Feedback regarding the online format differed slightly between WSDS20 and WSDS21, with a sense of novelty expressed in 2020 whereas WSDS21 participants had a year's experience with Zoom innovation and made few comments on this delivery as such.

WSDS20 participants were enthusiastic about participating not only in the very first InsSciDE pilot training, but also in one that had been transformed “overnight” in spring 2020 from a face-to-face format to an online program. Students did miss aspects of **socializing** and freeform discussion that would have happened face-to-face in Warsaw, but noted that the organizers did an above-and-beyond job in facilitating networking online, through both various modules and documents (e.g. the Participants' Booklet of biographies and headshot photos) and the use of social media instruments (Facebook group, etc.). Concrete suggestions were gathered to enable the organizers to perfect the online socializing. Many 2020 students expressed surprise at the **success of the online format** - initial skepticism was overturned due to the intensive planning and preparatory offerings, the interweaving during the school of discussions and lectures, and the ‘seamless’ technical delivery in real time (due to a tightly coordinated team of facilitators⁶).

Both WSDS20 and WSDS21 students saluted the fact that the remote online delivery format **enabled the participation** of students who might otherwise have experienced significant difficulty or expense travelling, or who might have barred themselves from applying to attend⁷.

⁶ The ‘seamless delivery’ to which organizers had committed was achieved by a tightly coordinated ‘backstage’ team of three InsSciDE facilitators. They carefully foresaw and formalized the needs of each module, and prepared timed-run documents (e.g. lists of team members to guide the digital distribution of participants into breakout rooms numerous times across each day). This team of three moreover remained in constant backstage communication via WhatsApp during the conduct of all modules, which facilitated e.g. their role as moderators of formal plenary or Day One public webinar debates. This practice was kept for WSDS21.

⁷ Of note, prior to the March 2020 transformation of the planned school to an online format, student applications had nonetheless already been received from persons situated far from Europe. One person applying from Brazil had already been accepted in the rolling process before the format announcement was made and the application deadline extended.



The Day 5 Survey of WSDS21 highlighted the importance of the reinforced online bonding activities as a critical component of the school's success.

- How much everyone managed to connect despite the virtual setting [stood out for me].

As much as this online format seems to have been appreciated, most members of both WSDS20 and 21 expressed a desire to transform this online experience into an in-person meeting, to consolidate the bond that they created online.

Course Timing and Rhythm

The WSDS20 participants advised that the day-to-day schedule and timing be adjusted in later editions. In this subsection we first present their views as conveyed by survey, then review the changes that organizers made for WSDS21. (Of note, in March 2021 the organizers convened a group of 2020 alumni to discuss and prioritize needed design improvements.)

2020 Feedback

The **length of plenary lectures** (45-90 minutes with time for questions included) was described as “just right”.

Many 2020 participants asked for increased **time to work on team presentations** (while nonetheless recognizing that the tight deadlines also fostered group focus and creativity). Some stated that increased time would allow for more voices to be heard within the group (especially in the online context) and allow for better exchange of ideas. More time was also requested for the analysis of deliverables, to enjoy more interaction with both the expert “jury” and with other teams following group presentations.

“Away from screen” breaks (ranging from 5 to 15 minutes between lectures or discussion) were sometimes considered to be too short. The two “**working lunch**” sessions in the context of an online Summer School drew mixed feedback - while some appreciated having more time to interact with fellow team members to discuss and prepare a deliverable, others claimed that these supplementary periods spent on Zoom were taxing. (Interestingly, we received firm suggestions to both increase and diminish the number of working lunches.)

Among the diverse suggestions received for maximizing WSDS's recognized success in creating **interpersonal exchange and networking**, several focused on aspects of timing (e.g. inserting more informal sessions, or advance planning for an evening party).

Constructive criticism was received related to the teamwork experience, which could be considered by organizers when composing future teams, instructions and program items. It appeared that participants must be helped sometimes to respect an egalitarian **distribution of talk-time**. It was noted also that if a team member doggedly pursues their own train of thought,



this can actually discourage other members from sharing their own contributions. Elsewhere, responses pinpointed an unanticipated effect of permuting teams (4 familiar members + 3 “visitors”) for the Risk, Safety & Security (RSS) group exercise of WSDS20 Day Four. Some visitors were disappointed to make limited contributions because they had less detailed knowledge of the case new to them. This feedback suggests more positively that the first three days of WSDS20 had created strong case study team identity and topical competence.

2021 Adjustments

All the 2020 feedback was introduced into the making of WSDS21.

Case Study Teams continued to be the major organizing principle. In 2021, in order to vary the teams, there was no permutation of “visitors” for the strategy exercise. Students were given the opportunity to meet and work in a sustained manner with a different assortment of peers through the “shared interest/disciplinary” groups that discussed their expectations on Day 1 and performed the Flipped Learning Evaluation on Day 5.

The number of (optional) working lunches was reduced to one, and was held on Day 4, in order to give participants more time to work on their deliverable while still maintaining some time pressure on this group task as an explicit element of the training. The number and length of breaks were adjusted to give more time between sessions, and extra-curricular socializing activities were formally planned and announced as two Pub Nights. These adjustments seem to have been well received because there is little mention of timing in WSDS21 evaluation surveys and the timing was praised in the Flipped Learning Evaluation.

Strategy Exercise

An innovation of the WSDS was to create links between an understanding of the past (historical material) and the production of present-day strategic advice for European policy makers, through a simulation exercise⁸. The test of the approach in 2020, with evaluative feedback from participants, led to fine-tuning the strategy exercise arrangements in 2021.

In feedback on WSDS20, several groups reported difficulty understanding their Day Two assignment, asking them to engage the case-based historical knowledge in strategic scenario forecasting. The task was unclear for both students and Case Study Authors (CSAs) who were present as resource persons for the student team discussions. Concrete suggestions for improvement included: rearranging the order of sessions; providing assignment documents prior

⁸ For WSDS20, the student policy advice deliverables were targeted (in simulation) towards the Group for External Coordination (EXCO). EXCO is an institution bringing together all EC cabinets to prepare the external aspects of the Commission’s work on a weekly basis and ensure full political coordination and coherence on external action matters.



to the school (alongside the theoretical readings that were circulated in good time); ensuring a tight link between the lecture and the assignment.

Of note, students of WSDS20 highly appreciated the expert strategist lectures, and the valuable insights received from seasoned practitioners forming a jury to evaluate each team's deliverable on Day Three. Two members of InsSciDE Advisory board (Gabiella Lazzoni and Dieter Schlenker) attended the presentations of student strategy deliverables on Day Three and provided cogent feedback and advice.

Building on these observations the strategy exercise of WSDS21 was based on the lectures provided on Days 3 and 4 by Björn Fägersten entitled "Linking the Past, Present and Future in Science Diplomacy Strategy". This InsSciDE expert had also provided in the run-up to the school a short paper setting out six objectives in science diplomacy strategy. Case Study Authors selected two objectives of particular relevance to their case, and these were attributed to each Case Study team. The task was thus to develop a set of recommendations for Europe to achieve these objectives. Each team developed a presentation which was presented the same day to a selected external expert.⁹¹⁰

Participants in WSDS21 demonstrated a firmer grasp on the goal of the strategy exercise, although there were still some lingering questions seeking clarity on the strength of links between knowledge of history and developing forward-looking strategy. The Day 4 strategy exercise and everything surrounding it stand out in replies to "*What was the funniest or best moment of the day?*":

- Coaching [of each team by the political science instructors]
- I think the best part of today was getting to receive feedback from experts and to simulate a scenario where we had to act under pressure and with little time and not so much information as we would have liked.
- One of the best moments today was getting to hear feedback from the experts in the case study field and discuss our proposed strategies with them further.
- Seeing the four very different attempts at delivering policy objectives and trying to work out where those ideas and experiences had come from was really revealing!

All in all, while the conceptual link between history and strategy remains an intrinsically challenging topic, the 2021 adjustments to the strategy exercise based on WSDS20 feedback appeared to be successful.

⁹ For WSDS21, each team benefited from an expert reply to the deliverable presentation (Marc Poumadère, Steve Eisenhart, Tim Kerig and Gabor Porzse). Grateful thanks are due to these experts.

¹⁰ Summaries of students' deliverables are available on the WSDS21 Day 4 news article: <https://www.insscide.eu/results/warsaw-science-diplomacy-school/article/wsds21-day-4-strategy-and-deliverable-presentations>.



VII. Review and Conclusions

We have presented above three different modalities of assessment data provided by our participants; these modalities consisted of structured, intentional assessment (surveys, flipped learning evaluation) and further spontaneous assessment through social media. Analysis of these sources indicates that each edition of the Warsaw Science Diplomacy School was a resounding success. We also reported the constructive criticism and concrete suggestions given by our students.

We have placed in Appendix 3 a critical reflection on our methodology of assessment and ways in which it might be improved. The present section of the report briefly reviews some outstanding features that help to characterize the WSDS experience. It concludes by considering what the participants learned about science diplomacy, history and strategy - and through this, how InsSciDE performed in its educational mission. This section uses new quotes from surveys and the flipped learning evaluation session to let these accounts be given in the students' own voices.

The section ends by looking forward to the new activities and achievements by the network of WSDS participants.

A. Quality of Warsaw Science Diplomacy School

WSDS met the challenge of organizing an online event. Participants acknowledged its quality as the fruit of organizers' intensive planning, relationship building, varied program scheduling including the immensely popular "fun" interludes as well as the graduation ceremony, and the "seamless" technical delivery in real time. The dematerialization of the meeting was lauded as a unique opportunity for worldwide participation.

- "I would like to thank you for one of the best learning experiences in my entire career!" (WSDS20)

Study teams became the basic unit of relationship in this virtual week together.

- "The best moment today was when we were put in the disciplinary groups to discuss why we came to WSDS. Right away I connected with the other people in my group and we had similar motivations and stories to share, which made me feel like I fit in". (WSDS21)
- "I love my case study group, we're such a good team and we had each other's backs". (WSDS21)



- “We considered that the most rich point is having different backgrounds by trainings, but also origins; this allowed us to debate on our different views on international challenges and strategies.” (WSDS20)
- “All together, this contributes to a larger approach in science diplomacy and gets the **opportunity to have an actionable science diplomacy based on cooperation in the future.**” (WSDS20)

While participants longed for face-to-face socializing, they nonetheless created bonds, a group practice, and a network whose future potential appears strong:

- “I appreciated that all group discussions had led to somewhat similar desires/plans for future cooperation. That goes to show how events such as this summer school can boost the collaborative spirit.” (WSDS21)
- “If you, at the individual level, want to keep connected, then you’ll be able to proactively go out to that group or person and propose to do something even if it’s low threshold (i.e. a blog post, podcast, whatever). That’s the individual level, but it also applies for the group.” (WSDS20)
- “It would be really nice to create an alumni association that will always be there. And that in the future years, the people that do the course can join and we can create a pool of global talent. And it can be an area where we can post opportunities for science diplomacy. An area for organizing webinars. But it can also be an area where we could generate external deliverables. Maybe writing papers or maybe some sort of proposal that can be beneficial for not just our group. And the other thing that we would like to do maybe is have a meeting sometime in the future, a meeting where we can actually meet each other in person.” (WSDS20)

The flipped evaluation dialogue of Day 5 also illuminated how instructors felt that they too gained knowledge from students. Instructors emphasized how rare it can be at the heart of their institutions to have such a multidisciplinary dialogue around their case study topics. As stated in 2020 by an organizer and a Case Study Author:

- “You asked great questions throughout from the very beginning of the pre-teaching with your case study authors. Your questions always showed that there’s a great deal of reflection going on. And of course we saw the variety of that reflection and how you represented different outlooks and goals.” (WSDS20)
- “You all have been very kind to us and listened and I think we’ve learned as much from you as you’ve learned from us, so thank you.”(WSDS20)

Doubtless inspired by the quality of interactions with the student body, faculty took the time to go above and beyond their specific lecturing duties in order to answer students’ questions and facilitate further dialogue around their topics. They hoped to meet participants face-to-face one day and encouraged the students to stay in touch and contact their instructors should they need



help with future endeavors. Indeed, a major value of WSDS seems to be the promise of future collaboration and opportunities due to the network created. It is the feature of the school that was mentioned by every single group in the Flipped evaluation.

The 16th Management Board Meeting of InsSciDE on 7 July 2020 debriefed the WSDS20¹¹, and found that the learning by instructors is an important outcome of the school. The MBM16 confirmed in great detail the gains felt by instructors as well as the new directions brought to their own research: more reflection on the present-day status and consequences of histories, including action points for the EU; inclusive attention to the lack of power (rather than the abundance of power) in science diplomacy, and a need to gaze from the standpoint of less powerful actors back towards Europe; etc.

B. Learning About History, Strategy and Science Diplomacy

InsSciDE's Warsaw Science Diplomacy School intended to pilot an approach to science diplomacy education using "**history combined with strategy**". At the outset some students were apprehensive, and they pinpointed the **inherent difficulties** of the task, if not the weaknesses in the school's design:

- "I was not sure what to expect from a historical case study, particularly to what extent we will be asked to know the current realities on the ground. It was quite a challenge to adapt what we know from the case study to the present day, particularly because we were lacking the knowledge of the current situation in the assigned area. This led us to generalize and think about the problem in more broad terms." (WSDS20)
- "I guess our strategy would be even more relevant, effective and to the point if we knew what instruments and policies the EU had already tried in our case. In this way it would be clearer for us what could make a change." (WSDS20)

By the end of the school, the student teams, on the strength of their diversity, their intelligence, and their tendency to lean into discovery, had formed a strong understanding of **how these twin tools might serve science diplomacy**:

- "Many of us in our group expressed that we wanted to learn more about the mechanism of science diplomacy and how learning from historical cases could help us

¹¹ WSDS21 will be debriefed in Fall 2021 after the submission of the present edition of the evaluation deliverable.



develop constructive strategies. [...] Making this connection proved very valuable for us.” (WSDS21)

- “We believe that combining history with strategy will help to understand the past and to better identify the current issues and set strategy goals that will lead us to find common language and cooperate for common interests. Considering history while framing the strategy is important and can enable us to better analyze the stakeholders, to create effective partnerships, and to find the right balance between competition and cooperation. Using history to understand anthropological realities and devised strategies can also help us to foster cross cultural practical science diplomacy partnerships.” (WSDS20)

- “But probably the keyword when trying to link the two would be caution. History can inform for action in the present times, but we really have to be cautious in blindly plastering from the past to the present”. (WSDS20)

So often in the world today the newly popular theme of science diplomacy is approached with naïve optimism, and training programs across the board integrate “soft skills”. InsSciDE preferred to gaze unflinchingly at “**hard skills**” – and students uniformly praised the eye-opening Risk, Safety and Security lectures and discussions with premier practitioners. Here too, the WSDS focus on interdisciplinarity bore fruit, and produced higher-level observations and conclusions by the students:

- “What struck me after these lectures was the importance of the knowledge of the context and anthropology. The critical nexus between science and politics and the role that science communication could play in policy making.” (WSDS20)

- “Basic research is very critical for addressing strategic challenges, however it should not be siloed into specific areas of expertise. It is extremely crucial to have a multidisciplinary approach and take into account the limitations and the challenges that as researchers we face while dealing with these strategic challenges.” (WSDS20)

A rich variety of disciplines and grounded content (historical case studies, theory of power and of strategy, expert response to student policy deliverables, and field practitioner accounts) was engaged for the Warsaw Science Diplomacy School. Alongside these elements we highlight once again the importance for our educational venture of the assigned activities that allowed participants to “*build friendship around collaboration*”. Learning this is the diplomatic process in action. Through communication and action, understanding and new solutions can be created. Consciousness of this process was reflected in student feedback regarding their team bonding dynamic and their production of deliverables. The critical dialogue between students and faculty – in case study breakouts and strategy coaching sessions as well as in the flipped learning evaluation plenary – were acts too of group reflection that both solidified the cohort and revealed new meanings.



C. Looking forward

All in all, the WSDS experience was enriching and successful in many ways, as the different sources of feedback from students and faculty portray. Both editions have provided insightful reflections on the endeavors of InsSciDE within and outside of the summer school. Whatever is the next step for WSDS, there is pride in what InsSciDE has been able to accomplish. As each WSDS closed, students were focused on durable relationships and as we complete this report this is currently achieved.

The InsSciDE organizers facilitated the creation of an alumni association, using a Facebook private group and issuing invitations to participate in various group activities (helping to design WSDS21, participating in bonus “Ally Talks” by Zoom with prestigious practitioners and scholars, writing articles for highly visible publication on insscide.eu and science-diplomacy.eu, etc.).

Of particular interest is the fact that three WSDS20 alumni were accepted into the highly competitive 2021 AAAS/TWAS Science Diplomacy Training Course. Two of them partnered according to the scientist/diplomat practitioner pairing required for consideration for that course. All are preparing articles for publication on insscide.eu and science-diplomacy.eu in Fall 2021.

The lasting positive assessment and value of the WSDS to its alumni are attested by the fact that participants grouped in 2021 to nominate InsSciDE for the the AAAS David and Betty Hamburg Award¹² for Science Diplomacy. The nomination letter was signed by participants of both editions.

An additional milestone event was added to the InsSciDE roster of official activities. At Easter 2022, partner European Academy of Diplomacy will offer a special edition of the Academy of Young Diplomats including Science Diplomacy teaching. This is expected to be a face-to-face event, highly anticipated following the long series of pandemic confinements. A travel budget, otherwise unspent because of travel restrictions, is earmarked to pay for transport to Warsaw. WSDS alumni will be invited to teach, to hold an internal colloquium, and to enjoy each others’ company as plans for future activities are made. Alumni will also be invited to attend, using own resources, the June 2022 InsSciDE Concluding Conference and First Meeting of the EU Science Diplomacy Alliance.

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¹² The AAAS David and Betty Hamburg Award for Science Diplomacy recognizes an individual or a limited number of individuals working together in the scientific and engineering or foreign affairs communities who are making an outstanding contribution to furthering science diplomacy.



Appendix 1: Day-by-Day Program Schedules

A. WSDS20 Day-by-Day Schedule

 Day 1 - Monday June 22 Welcome & Open Webinar on Health Diplomacy	 Day 2 - Tuesday June 23 Case Study Lectures & Future Scenarios/Strategy
<p>10:00 AM Welcome and Introduction</p> <p>11:00 AM Icebreaker</p> <p>11:20 AM - 11:30 AM <i>Break (10 minutes)</i></p> <p>11:30 AM Case Study Breakout - Team Check In</p> <p>12:00 PM - 12:45 PM <i>Lunch (45 minutes)</i></p> <p>12:45 PM Lecture - Power With Science Diplomacy</p> <p>1:35 PM - 1:45 PM <i>Break (10 minutes)</i></p> <p>1:45 PM Health Case Study - Natural Resources/Public Goods: Biodiversity Negotiations</p> <p>2:20 PM - 2:30 PM <i>Break (10 minutes)</i></p> <p>2:30 PM Health Case Study - Dealing with the Plague in Oporto 1899: A Matter of Epidemic Diplomacy</p> <p>3:05 PM - 3:15 PM <i>Break (10 minutes)</i></p> <p>3:15 PM Debate - The COVID-19 Crisis Through a Health Diplomacy Lens</p> <p>4:30 PM <i>End of Day 1</i></p>	<p>10:00 AM Science Diplomats Case Study - Barbosa du Bocage: SD During the Scramble for Africa</p> <p>10:35 AM - 10:45 AM <i>Break (10 minutes)</i></p> <p>10:45 AM Environment Case Study - UN Convention on Law of the Sea: Science/Diplomacy co-production</p> <p>11:20 AM Physical Activity</p> <p>11:30 AM - 11:45 AM <i>Break (15 minutes)</i></p> <p>11:45 AM Lecture - Linking Science Diplomacy and Strategy</p> <p>12:30 PM - 1:30 PM <i>Lunch (60 minutes)</i></p> <p>1:30 PM Lecture and Workshop - Using History to Inform Strategy for the Future</p> <p>2:30 PM - 2:45 PM <i>Break (15 minutes)</i></p> <p>2:45 PM Case Study Breakout - Statecraft and Strategy Dimensions</p> <p>3:30 PM Case Study Breakout - Future Scenarios using Global Strategic Trends</p> <p>4:30 PM <i>End of Day 2</i></p>
 Day 3 - Wednesday June 24 Future Scenario Analysis & Strategy Deliverables	 Day 4 - Thursday June 25 Risk - Safety - Security (RSS)
<p>10:00 AM Lecture: Today's Roadmap Towards Team Scenario/Strategy Deliverables</p> <p>10:30 AM Case Study Breakout - Coaching on Future Scenarios 1</p> <p>11:15 AM - 11:30 AM <i>Break (15 minutes)</i></p> <p>11:30 AM Case Study Breakout - Coaching on Future Scenarios 2</p> <p>12:15 PM Case Study Breakout - Agree Strategy Deliverable Presentation (Working Lunch)</p> <p>2:00 PM Practitioners' Panel: Science Diplomats in the Field</p> <p>2:50 PM - 3:00 PM <i>Break (10 minutes)</i></p> <p>3:00 PM Juried Presentations 1 - Case Study Teams' Future Scenario Analysis/Strategy Deliverable</p> <p>4:00 PM - 4:10 PM <i>Break (10 minutes)</i></p> <p>4:10 PM Juried Presentations 2 - Case Study Teams' Future Scenario Analysis</p> <p>5:20 PM <i>End of Day 3</i></p>	<p>10:00 AM Lecture - Polar Bears, Pandemics and the Secret Police</p> <p>10:10 AM Lecture - Science Diplomacy and Intelligence, a Historical Overview</p> <p>10:50 AM - 11:00 AM <i>Break (10 minutes)</i></p> <p>11:00 AM Lecture - Personal RSS in West African Deployment during 2014-2016 Ebola Outbreak</p> <p>11:35 AM - 11:45 AM <i>Break (10 minutes)</i></p> <p>11:45 AM Lecture - (Civil) War Archeology</p> <p>12:20 PM - 12:30 PM <i>Break (10 minutes)</i></p> <p>12:30 PM Lecture - Sensitive science diplomacy and field research in post-conflict society</p> <p>1:05 PM Case Study Breakout - Agree RSS Deliverable Presentation (Working Lunch)</p> <p>2:30 PM Workshop - Reporting RSS dimensions of SD Strategy under different futures</p> <p>3:30 PM - 3:45 PM <i>Break (15 minutes)</i></p> <p>3:45 PM Game</p> <p>4 PM Workshop - Reflecting on Risk, Safety and Security in SD Practice</p> <p>5 PM <i>End of Day 4</i></p>



Day 5 - Friday June 26

Flipped Learning Evaluations & Graduation

10:00 AM **Lecture - Introduction to the Flipped Learning Evaluation**

10:10 AM **Breakout - Flipped Learning Evaluation**

11:00 AM - 11:10 AM *Break (10 minutes)*

11:10 AM **Discussion - Flipped Learning Evaluation**

12:00 PM **Presenting the WSDS Expert Guidance Bonus**

12:10 PM **Graduation Ceremony**

1:00 PM *End of Warsaw Science Diplomacy School*



B. WSDS21 Day-by-Day Schedule

<p> Day 1 - Monday June 21 Opening Session & Open (Public) Webinar</p> <p>10:00 AM Welcome and Round Table introductions 11:00 AM Icebreaker 11:30 AM - 12:30 PM Lunch (60 minutes)</p> <p>12:30 PM OPEN SESSION Case in point: Power with science diplomacy and sowing seeds of Brexit in EU climate negotiations (use Open Session personal Zoom link)*</p> <p>2:00 PM - 2:30 PM Break (30 minutes) 2:30 PM Practitioners' Panel: Science Diplomats in the Field 3:20 PM - 3:30 PM Break (10 minutes) 3:30 PM Science Diplomats in the Field: Further Discussion 4:00 PM - 4:10 PM Break (10 minutes) 4:10 PM Disciplinary Groups Discussion: Ambitions in Science Diplomacy 5:00 PM End of Day 1</p> <p>5:30 PM - 7:00 PM Pub Night in Gather.Town (see p. 3)</p>	<p> Day 2 - Tuesday June 22 Historical Case Studies of Science Diplomacy</p> <p>10:00 AM ENERGY/SECURITY CASE Constructing ITER: Reciprocity and compromise in fusion science diplomacy 10:35 AM - 10:45 AM Break (10 minutes) 10:45 AM SPACE CASE Space diplomacy in the Cold War context: Cooperation vs. competition 11:20 AM - 11:30 AM Break (10 minutes) 11:30 AM HERITAGE CASE The worker's strike of 1963 at the German excavation of Tell Chuera: An example of the persistence of colonial practices in Near Eastern archaeology? 12:05 PM - 12:15 PM Break (10 minutes) 12:15 PM HEALTH CASE The role of data in global vaccination governance: A matter for health diplomacy 1:00 PM - 2:00 PM Lunch (60 minutes) 2:00 PM The Chacha Slide 2:30 PM Case Study Team Discussion 3:50 PM - 4:00 PM Break (10 minutes) 4:00 PM Introducing the EU SD Alliance and the NO-EU SD Network 5:00 PM End of Day 2</p>
<p> Day 3 - Wednesday June 23 Actors, Interests, and Power Risk - Safety - Security (RSS)</p> <p>10:00 AM Introduction to a Day of Strategy and Risk, Safety, Security Discussions 10:15 AM Power, Actors and Interests in European Science Diplomacy 10:55 AM - 11:10 AM Break (15 minutes) 11:10 AM Case Study Team Discussion: Actors, Interests, Power 12:40 PM Meditation 1:00 PM - 2:00 PM Lunch (60 minutes) 2:00 PM Risk, Safety, Security Panel: Offense and Defense in Research Cooperation 2:50 PM - 3:15 PM Break (25 minutes) 3:15 PM Summit Discussion: Science in High Level Decision-Making and Negotiations 5:00 PM - 5:05 PM Break (5 minutes) 5:05 PM Debrief and Reflections 5:30 PM End of Day 3</p> <p>6:30 PM - 7:30 PM Pub Night in Gather.Town (see p. 3)</p>	<p> Day 4 - Thursday June 24 Linking History and Strategy</p> <p>10:00 AM Linking the Past, Present and Future in Science Diplomacy Strategy 10:50 AM - 11:00 AM Break (10 minutes) 11:00 AM Coaching - Part 1 11:45 AM - 12:00 PM Break (15 minutes) 12:00 PM Coaching - Part 2 12:45 PM Case Study Team Discussion 1:15 PM - 1:45 PM Short Lunch (30 minutes) 1:45 PM Team Deliverable Preparation 3:15 PM Pre-Presentation Stretching 3:25 PM - 3:30 PM Break (5 minutes) 3:30 PM Strategy Exercise: Case Team Deliverables and Specialist Feedback 5:30 PM End of Day 4</p>
<p> Day 5 - Friday June 25 Flipped Learning Evaluations & Graduation</p> <p>10:00 AM Flipped Learning Evaluation: Introduction and Instructions 10:30 AM Flipped Learning Evaluation: Disciplinary Groups 11:20 AM - 11:30 AM Break (10 minutes) 11:30 AM Flipped Learning Evaluation: Presentations and Discussion 12:30 PM Graduation Ceremony 1:30 PM End of Warsaw Science Diplomacy School 2021</p>	



Appendix 2: Daily Evaluation Survey Questions

Participants were required to complete a Google Survey each day to assess the school. For both WSDS20 and 21, **core questions** asked each day were:

- A. To what extent do you agree with the following statement: "I learned something today that I think I will use in the future."
- B. Which idea or concept really stood out to you today?
- C. What was the funniest or best moment today?

Specific questions asked per day were:

Day One

- How would you rate the meetings [modules] during Day 1 (Monday)?
 - [opportunity to rate each particular module or activity conducted throughout the day]
- [3 CORE QUESTIONS]
- What do you want to gain from this week of WSDS?

Day Two

- How would you rate the meetings during Day 2 (Tuesday)?
[opportunity to rate each particular module or activity conducted throughout the day]
- [3 CORE QUESTIONS]
- What can we improve in the things you didn't like?

Day Three

- How would you rate the meetings during Day 3 (Wednesday)?
[opportunity to rate each particular module or activity conducted throughout the day]
- [3 CORE QUESTIONS]



- What can we improve in the things you didn't like?
- As a mid-week evaluation, we would like you to give us constructive feedback for the previous three days of WSDS.
 - Please tell us anything that could have been improved for Day One - Monday.
 - Please tell us anything that could have been improved for Day Two - Tuesday.
 - Please tell us anything that could have been improved for Day Three - Wednesday.
- Which of these do you find useful for helping you engage with your #WSDS peers?
(Select all that apply)
 - Moderating posts in the Facebook group (article recommendations and prompts by us)
 - Evening session open on Zoom
 - Keeping the Zoom open for 30 min after plenary to allow for coordinating your own meetings
 - Creating a poll to coordinate 2-3 meetings after WSDS ends
 - We don't need help, we've figured out our own means for connecting and engaging!
 - Other:
- Please let us know if you have any other comments.

Day Four

- How would you rate the meetings during Day 4 (Thursday)?
 - [opportunity to rate each particular module or activity conducted throughout the day]
- [3 CORE QUESTIONS]
- Your constructive feedback helps us. Please let us know if you have any other comments

Day Five





Daily Survey

- How would you rate the meetings during Day 5 (Friday)?

[opportunity to rate each particular module or activity conducted throughout the day]

- [3 CORE QUESTIONS]

- What can we improve in the things you didn't like today?

Looking back and looking forward

- How do you rate the overall value provided by your experience in WSDS?
- How much would you say you have learned?
- What are your general impressions of the Summer School? Please share any changes that you would make to the program overall.
- What was the best moment of the week? Why?
- How can we make a virtual school better in terms of socializing?
- How was your experience of drilling down into your assigned case study?
- If you could attend WSDS again, which case study would you choose? (if you would choose the same, let us know which it is!)
- Do you feel that your expectations of WSDS were met?
- Did your view on what you could gain, or what you wanted to know about Science Diplomacy, change this week?
- Please rate the value provided to your WSDS experience by each of these elements:
 - [Pre-study provided by the S4D4C Online Course]
 - [Pre-study reading material provided by case study authors]
 - [Pre-teaching with case study authors prior to WSDS start]
 - [Plenary presentations by case study authors (Day 1 and 2)]
 - [Frequent small group discussions]



- [Strategy deliverable exercise]
- [Connections made with your case study breakout group]
- [Connections made with entire group of WSDS peers]
- [Interdisciplinary and international makeup of the WSDS Cohort]
- [Ice breakers, yoga exercises, games]
- [Timing and length of breaks]
- Was the team size of 7 persons good?
- What will be your primary form of engagement with your WSDS alumni group? Twitter, Direct Contact, LinkedIn, WSDS Group Message, Facebook Group
- Among the things that you learned, what do you think will be the most useful or relevant in your future endeavors?



Appendix 3: Critical Reflection on Our Methodology of Assessment

The approach chosen for student assessments is aligned with the methodology laid out by InsSciDE Deliverable D1.2a 'Participant Evaluation Criteria' and indeed enriches it. We feel this complex and multi-form methodology provided substantive feedback and opportunity for reflection. Nonetheless this appendix reflects on some limitations of our methodology and presents solutions to improve our feedback collection process.

The current methodology was designed to generate program-focused feedback rather than to chart the evolution of individual satisfaction and learning growth. Because the surveys were anonymous in order to encourage candor, it is not possible to establish a personal link between text comments made across days. This produced two outcomes: individual evolutions cannot be measured, and, frequencies of particular remarks cannot be fully interpreted (e.g. did a single person repeatedly refer across days to a particular aspect, or was this a generally distributed perception?). To address this, the collection process could attribute ID tags to individual respondents while continuing to mask their personal identity. (It was decided not to add this to the WSDS21 questionnaires)

As stated in section III-Methodology, students were given the links to all surveys prior to the program, and were actively encouraged to fill out their survey at the end of each day. While the majority (~80%) of students filled in their survey within 48 hours of the day's program for the first four days, it is important to note that a substantial minority still waited. Additionally, in WSDS20 over half the Day Five evaluations were filled out one week (or more) following the program. This delay may have influenced the assessments (e.g., persons may have forgotten some details of the experience) and it certainly produced an unfortunate knock-on delay in the release of diplomas to all students, as well as in the performance of the present analysis. One potential solution to encourage more timely participation would be to build written evaluation time into the daily program schedule. In practice, for WSDS21 the organizers frequently urged participants to fulfill the requirement. During the final Day 5 session the number of missing surveys per day was highlighted, with encouragement to return to the survey and verify that the "submit" button had been effectively pressed.

The current methodology lacks a full pre-assessment; the question "What do you want to gain from this week of WSDS?" was included in our Day One survey, meaning participants had already engaged in a pre-teaching session as well as Day One of the program. Such a question could be posed significantly earlier in the process, enabling assessment a range of features: student objectives in attending the training, image created by our marketing and communications, etc. Of note, the application form filled out by each successful (and unsuccessful) candidate did include a statement of motivation, but this free-form input did not precisely target expectations for the school itself, as an explicit survey question could do.



Organizers envisioned an option to conduct a three-month post school assessment. As evoked in the WSDS20 Flipped Learning Evaluation Session, one of our students reported securing a job offer due to their participation in the summer school. It would be interesting to chart the mid-term impact on other students as well. This was achieved informally by convening several WSDS20 Alumni meetings to get their input on creating an alumni association and their advice on features of the planned WSDS21.

Finally, we emphasize the statistical limitations of numerical evaluations on the academic offerings of the summer school gathered from the small population of assessors ($n=28$ and $n=25$). Thus the numerical analysis provided in section IV-Survey Responses should be taken with a grain of salt. For example, lecture modules are rated within a .71-point range (min 4.25 max 4.96). This variation across just 14% of the one-to-five scale is hardly a basis for differentiation, condemnation or praise of any particular lecture. In other cases, larger differences between average ratings could be ascribed to outliers (e.g. a single negative assessment will drag down an average, making a particular module stand out as ill-rated -- although the 27 other opinions average to a typically positive assessment). Better perspective can be gained from the qualitative, text-based replies to the daily question “Which idea or concept really stood out to you today?”. These responses demonstrated a wide and idiosyncratic variety, indicating that there was no singular module that individuals universally agreed as “the best”, “the strongest”, or the source of “most ideas”. While it is probably useful to allow assessors to make a quick check-box assessment of each module, the WSDS21 evaluation report focussed again on this text-based response format to draw specific feedback and analysis.



Appendix 4: WSDS20 Post Program emails

Many students chose to thank the organizers personally for the WSDS experience via email. In several cases WSDS20 alumni referred to the “bonus” of being paired with an expert science diplomat for a two-way conversation, casting this as a successful interactive and personal experience for networking and post-school impact.

This spontaneous feedback has been rendered anonymous and slightly edited for length.

“Thanks again for an amazing summer school. I am deeply moved by everything we learned and everyone we met and still find myself debriefing the experience. You are the most amazing team!”

“Thank you so much for this amazing event and your organization. In many ways, the school truly surpassed my expectations. I was pleasantly surprised to see that you managed to bring together so many distinguished speakers. I am also very thankful for the bonus – the meeting with an expert.”

“Thank you very much for organizing such an interesting summer school!! Even if it was online, you well created a good and fun atmosphere by highlighting the teamwork!! I am missing all the classmates, and InsSciDE team members.”

“Thank you very much for all the team's time and efforts :) It was an amazing experience, very well conducted in such new circumstances. Regarding the expert guidance bonus, thanks a lot for this initiative, it's great and of a lot of value. I really appreciate it.”

“Thank you so much for everything! I am really very impressed with how everything turned out and very grateful to have been part of this school.”

“I am still celebrating, it was an amazing experience. The surprise from the communications team was amazing, Twitter awards were great. Thank you.”

“I am deeply honoured, enriched but also sad it is already over. You have given me more than I had expected from this venue



Appendix 5: Presentation of WSDS 21 Pub Night

MONDAY 21 JUNE
17:30 PM - 19:00 CEST
(HOSTED PUB QUIZ)

WEDNESDAY 23 JUNE
18:30 PM - 19:30 CEST
(GLACIER BREAKERS)

WSDS21 PUB NIGHT

Grab your drink of choice (be it tea or a pint) and join up at the virtual pub to get to know each other in a casual context, in fact, in another world.

WSDS21 students + WSDS20 alumni are invited to join activities or simply socialize on the platform Gather!

Join the WSDS21 Pub Night space:
<https://gather.town/i/dTzjOBMm>

The platform stays open 24/7 - join anytime to get familiar with the space or coordinate a meet-up with others

5 easy commands to know:

- Use keyboard **arrows** to walk around
- Walk up to others to **start a conversation** - your cameras and mics will automatically connect
- **Click X** to interact with objects (read signs, play multiplayer games)
- Write messages in the **chat** on left
- Take the **stage** to broadcast to everyone in the room at once

For optimal performance, use Gather on your computer in a browser or download the desktop app (rather than phone or tablet):
<https://gather.town/download>





Appendix 6: Faculty and organizers of the Warsaw Science Diplomacy School

A. WSDS20 Faculty and Organizers



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B. WSDS21 Faculty and Organizers



InsSciDE Coordinators: <https://www.inssci.de/team/coordinators/>

InsSciDE Management board: <https://www.inssci.de/team/management-board/>

InsSciDE Case Study Authors and Experts: <https://www.inssci.de/team/case-study-authors-and-experts/>

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