

My experience preparing for and presenting at the Hub Meeting

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Recently, I had the opportunity to present at the FRIS/TI-FRIS Hub meeting. I really enjoy presenting, so I was excited but apprehensive as well. My field, colloidal science, is not a common field at FRIS. I wanted to represent my field as best I could for an audience that was relatively unfamiliar with it. In this short piece, I would like to guide you through my thought process during my preparation for the Hub Meeting in the hope that it can function as inspiration for your own Hub Meeting.

Presenting for broad audiences and experiences from The Netherlands

The Hub Meeting is unique due to its extremely broad, but high-level audience. Normally, during conferences and the like, we present in front of our peers who are in similar fields. We expect that they have a certain background knowledge which is necessary to understand the presentations during the conference. On the other hand, when we engage in public outreach, we simplify our research to such an extent that it is sometimes hardly recognizable. The Hub Meeting lies somewhere in between as the faculty in the audience are all trained to think academically, but they generally miss the background we would usually assume our peers at conferences have.

The Hub Meeting's audience is very broad as people with expertise ranging from life science to engineering, and science to humanities attend the meeting. Having an audience that was so diverse was a new experience for me. The closest experience I had to the Hub Meeting were weekly 'Nano Seminars' at the Debye Institute in Utrecht University (my *alma mater*). Here, a selection of the six research groups within the institute met and listened to a speaker from one of the groups or from outside the university. While these groups were all focused on nanomaterials science in some way, their expertise varied widely: from colloidal science, to nanophotonics, to homogeneous catalysis. However, this is still much narrower than the Hub Meeting. I presented twice at this seminar, once as a Master student and once as a PhD student (on very different topics). Just like the Hub Meeting, this presentation is an hour long, which allows for a lengthy introduction. As a Master student, the necessity of a proper introduction was still unclear to me, which made it difficult for the audience to understand. When presenting as a PhD student, a proper introduction made all the difference. I guess we are students to learn! The only way to learn how to do an engaging presentation is by doing it often and education in the Netherlands provided me with ample opportunities to (fail at) presenting.

Preparing for the Hub meeting

When I prepared for the Hub Meeting, I realized that I needed at least 30 minutes to introduce my research field from scratch. I had to start all the way at the beginning with the basic concepts, some of which were discovered in the 19th or early 20th century, because these are not taught at high-school level. Even when concepts are taught in high school, I thought it was probably better to briefly remind the audience as high

school is quite long ago for most of us. From these basic concepts I slowly transitioned to a broad overview of the research field and highlighted some recent ground-breaking studies. Initially, it made me sad that this would leave me relatively little time to talk about my own research (which I really wanted to do!). However, I realized that if I didn't lay the groundwork, none of my research would be understood anyway. I suppose I found it preferable that the audience understood a small selection of my research compared to sharing many of my research projects which would only lead to blank expressions on many faces.

One of the great characteristics of the Hub Meeting is that questions can be asked during the talk. It allows people to 'hit the brakes' when there is something they do not understand. Often this knowledge is needed for the next part of the presentation. In this way, you do not lose the audience as easily. However, this only works if you start your presentation with the most basic knowledge. Otherwise, people stop understanding your talk before you even begin! This, however, means that it is likely that you will run out of time during the presentation. This also happened in my case, which meant I had to sacrifice talking about some of my own work (but I did not sacrifice the background I wanted the audience to understand!). しょうがない!

Another major concern of mine was how to keep the audience engaged for the full 60 minutes on a Friday afternoon. As an international researcher, I decided to open with a few Japanese sentences to win over the audience. After all, I have been putting in lots of work trying to learn Japanese during my time here, so why shouldn't I use it? While I knew the first few minutes were the most important to 'hook' the audience, I needed to keep their attention for the remaining hour. I designed my slides so that small 'jokes' were sprinkled throughout every 10 minutes or so to keep their interest. While I am a serious scientist, there is only so much 'dry' content I can absorb on a Friday afternoon, which I imagine is similar for the audience.

Not everyone may be comfortable with using humor in such a presentation. What I found more important was the 'flow' of such a long presentation. Compared to standard 15-minute conference presentations, it is harder to constantly bombard the audience with critical information during a 60-minute presentation. I tried to incorporate the concept of 'tension and release', which is common in storytelling, to build up to multiple important moments in the presentation. For example, the first 15-minute part of my background section contained the ingredients needed for colloidal self-assembly which built up to the point where they were all combined at the end to show what self-assembly could achieve.

Last, I would like to comment on the time it takes to prepare for the Hub Meeting. Being a faculty member in FRIS/TI-FRIS means there are always a million things to do. The reality is that we have to prioritize: apply for this grant, finish this paper, attend this symposium, update the manual for this course, etc. Another truth is that preparing for great presentations takes time. Especially with the unique length and audience of the Hub Meeting; it is not as easy as throwing a bunch of old presentations together. I ended up making almost completely new slides for the first 30 minutes to tailor the

background of my research field to the intellectual, but varied audience of the Hub Meeting.

Final thoughts

After presenting at the Hub Meeting, I reflected on what I got out of it. First, I felt I grew as a presenter due to the unique challenge of the Hub Meeting: explaining your field to a broad, but very high-level audience. Second, I realized that the 'direct feedback' I received during (and after) the Hub Meeting in the form of questions from people outside the field was very valuable. It put into perspective what really matters in my research, which is sometimes easy to lose track of when being so absorbed in it. In my case, the disproportionate interest in hollow particles (which have become a 'normal' part of my research over the years) was a wake-up call. I hadn't thought of them as 'special' in quite a while, but I have since thought of new ways to use these particles for totally different research. Third, explaining my research over a 1-hour period is a very effective way to plant seeds for future collaborations.

All in all, presenting at the Hub Meeting was a unique challenge which required unique preparation. A carefully tailored background of my research field was necessary to make the presentation understandable for this highly intelligent, but broad audience. During my presentation, not everything went exactly as planned, but I feel like this experience helped me grow as a presenter, as well as a researcher in the form of new insights. Most of all, I was delighted to share the field I have so much passion for with cutting-edge researchers from other fields to foster future collaboration.

Hub Meeting の準備と発表を通しての経験

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最近、FRIS/TI-FRIS Hub Meeting で発表する機会をいただきました。私は発表すること自体がとても好きなので、嬉しい反面、少し不安もありました。私の専門であるコロイド科学は FRIS ではあまり一般的な分野ではありません。そのため、比較的馴染みのない聴衆に対して、自分の分野をできるだけ良く伝えたいと思いました。本稿では、Hub Meeting の準備過程で私が考えたことを紹介し、皆さん自身の発表準備の参考になればと思います。

広い聴衆への発表とオランダでの経験

Hub Meeting の特徴は、聴衆が非常に幅広く、しかも高度な知的レベルを持っている点です。通常の学会では、専門分野が近い研究者を前に発表しますので、ある程度の背景知識を共有しています。一方、一般向けのアウトリーチ活動では研究を大幅に簡略化するため、研究の本質が伝わりにくくなることもあります。Hub Meeting はその中間に位置します。参加者は学術的な思考力は備えていますが、学会で想定するような専門的背景知識はありません。

参加者は生命科学から工学、人文学まで幅広い分野の専門家です。このように多様な聴衆は私にとって新しい経験でした。これに最も近い経験は、ユトレヒト大学デビー研究所で行われていた週例「ナノセミナー」でした。6つの研究グループが集まり、内部または外部の講演者の話を聞くものでした。全員がナノ材料科学に関わってはいましたが、コロイド科学、ナノフォトニクス、触媒化学など専門は大きく異なっていました。それでも Hub Meeting ほど幅広くはありませんでした。私は修士課程と博士課程でそれぞれ一度ずつ発表を経験しました。修士のときは導入の重要性を理解できておらず、聴衆が理解しにくかったように思います。博士課程での発表では、きちんとした導入が大きな違いを生みました。結局、経験を通じて学んでいくしかないので、オランダでの教育は多くの発表の機会を与えてくれ、その中で失敗を重ねて学ぶことができました。

Hub Meeting の準備

準備の段階で、研究分野を一から説明するのに少なくとも 30 分は必要だと気づきました。19 世紀や 20 世紀初頭に発見された基本概念から始めなければならなかったのです。高校で教えられる内容であっても、多くの人にとっては記憶が薄れているので復

習が必要だと考えました。そこから徐々に研究分野の全体像、さらに近年の画期的な研究事例へとつなげました。当初は、自分の研究を詳しく話す時間が減ることに少し落胆しました。しかし、基礎を伝えなければ研究そのものも理解されないことに気づいたのです。結果として、自分の研究の一部だけでも正しく理解される方が望ましいと判断しました。

Hub Meeting の良い点の一つは、発表中に質問できることです。理解が追いつかない部分でブレーキをかけられるため、その後の内容も理解しやすくなります。ただしこれは、発表を基本的な内容から始めた場合にのみ機能します。そうしないと、冒頭から聴衆を失ってしまうからです。実際、私も時間が足りなくなり、一部の研究紹介を省略しましたが、基礎部分は削りませんでした。しょうがないですね！

もう一つの懸念は、金曜の午後に **60** 分間も聴衆を集中させることでした。国際研究者として、最初に日本語のフレーズをいくつか使って聴衆の心をつかむことにしました。普段から日本語を勉強していたので、それを活かさない手はないと思ったのです。最初の数分が勝負どころですが、その後も注意を持続させる必要があります。そこで、スライドに **10** 分ごとに小さなジョークを入れて興味を保つ工夫をしました。私は真剣な研究者ですが、金曜の午後に「乾いた」内容を延々と聞き続けるのは誰にとっても辛いものです。

ユーモアは人によって得手不得手がありますが、私にとってより大切だったのは「流れ」でした。**15** 分の学会発表とは異なり、**60** 分間ずっと情報を詰め込み続けるのは不可能です。そこで物語で用いられる「緊張と解放」を取り入れ、複数の重要なポイントに向けて盛り上げるよう工夫しました。例えば、背景説明の最初の **15** 分間では、自己組織化に必要な要素を順に提示し、最後にそれらを組み合わせて何が可能かを示しました。

準備にはかなりの時間がかかります。**FRIS/TI-FRIS** の教員は常に膨大な仕事に追われていますが、質の高い発表には時間が必要です。特に **Hub Meeting** のように聴衆が多様で、発表時間が長い場合、過去のスライドを寄せ集めるだけでは不十分です。私は最初の **30** 分の背景部分をほぼ新しく作成し、知的で多様な聴衆に合わせて調整しました。

発表を終えての振り返り

Hub Meeting を終えて、自分が得たことを振り返りました。第一に、幅広く高レベルな聴衆に自分の分野を説明するというユニークな挑戦を通じて、発表者として成長できたと感じます。第二に、同分野外の人々から受けた質問という形での「直接的なフィードバック」が非常に価値あるものでした。それによって、自分の研究において何

が本当に重要なのかを再認識させられました。例えば、私にとっては既に「当たり前」になっていた中空粒子に対する聴衆の大きな関心がその一例です。改めてそれを特別なものとして捉え直し、新しい応用法を考えるきっかけになりました。第三に、1時間にわたる説明は将来の共同研究の種をまく効果的な方法でもありました。

総じて、**Hub Meeting**での発表は特別な準備を要する特別な挑戦でした。分野の基礎を丁寧に説明することは、多様で高度な聴衆に理解してもらうために不可欠でした。発表は予定通りに進まない部分もありましたが、この経験は発表者として、そして研究者としても新しい洞察を得る成長の機会となりました。何より、自分が情熱を注ぐ分野を最先端の研究者たちと共有し、将来の協力関係につながられたことを嬉しく思います。

(和訳は ChatGPT 5 を活用して作成)