Idea Factory 2021 evaluation

Introduction

This report evaluates the 2021 Idea Factory held from 10-12 November. The event was held online

Survey questions were developed to measure how effective the 2021 Idea Factory achieved its stated objectives.

The stated objectives of the Idea Factory were the following:

- To improve grant writing skills / improve confidence in writing grants for different funding bodies.
- To effectively distil key messages/ideas about your research for target audiences
- Communicate effectively the value of your research to target audiences

Survey Monkey was used to distribute the survey that comprised 14 questions: 12 Likert-like quantitative questions or statements that required participants to rank different aspects of the event and two open-ended, qualitative questions. Two of the quantitative questions/statements were not analyzed for this report because they were not directly relevant to the event's objectives. The single relevant response to the second qualitative question was integrated into the responses for the first qualitative question (Q.11.).

Questions/statements analyzed for this report

1. I found attending the 2021 Idea Factory a valuable experience.
2. I would recommend attending the Idea Factory to a colleague.
3. The Idea Factory has improved my level of confidence in writing grant applications.
4. The Idea Factory has given me a good understanding of how to improve my skills to effectively communicate and present research to the intended audiences.
5. The Idea Factory has improved my ability to distil key research messages relevant to my intended audience.
6. How useful did you find the research grant writing presentation from Gerard Milburn?
7. How useful did you find the research grant writing presentation from Merryn McKinnon?
8. How useful did you find the team grant writing and presentation activities?
9. How useful did you find the mentoring sessions from FLEET/EQUS investigators?
10. How useful was the written feedback you received for your proposal?
11. Do you have any suggestions about how we could improve this event in the future?

Questions not analysed for this report

- How would you rate your experience of the Kumospace platform?
- How enjoyable was the speed networking event?
- Do you have any other comments?

Results

The number of responses to the survey was 22 from a total of 36 participants in the Idea Factory event.

Quantitative (Questions 1-10)

There was relative consistency in the responses to each of the Likert-like statements/questions analyzed for this report. The exception was in the response to the question 9, How useful did you find the mentoring sessions from FLEET/EQUS investigators?

For questions 1-8 and question 10, 86% of respondents to the survey either strongly agreed or agreed with the statement or in their ranking of the specific aspect of the event. See Table 1 and Figure 1 in Appendix 1. Collectively, this indicates that nearly all respondents found the experience valuable and gained confidence in their ability to write a grant application and an understanding of how to effectively distil and communicate their research to varied audiences. Only one participant strongly disagreed that the event had this outcome for them.

Question 9 was a minor divergence from the responses to the other Likert-like questions. The number of respondents who strongly agreed or agreed that the mentoring sessions were useful was 64%. A significant proportion (27%) were neutral on this outcome. See Table 1 and Figure 1 in Appendix 1. While still indicative that the mentoring sessions were of some value, there is scope to better understand how this feature of the Idea Factory could be refined and improved.

Qualitative question (Question 11, Do you have any suggestions about how we could improve this event in the future?)

There were 11 responses to the qualitative question. The following core themes emerged from the responses:

1. Mentoring: help and timing
2. Topic: clarity, inequity, time

There were only three responses applicable to each of the themes, but there was sufficient depth in the responses for them to be considered a theme and have some rigour toward understanding the value and effectiveness of the Idea Factory event. See Appendix 2 for responses and coding.

1. Mentoring: help and timing.

Two respondents considered the intervention or assistance of mentors early in the process of minimal value. They considered the mentor's help would have been of greater value toward the end of the grant writing proposal process, or even after the assessment of the proposal. More time with the mentors was also required, though as noted, this would be more effective toward the end of the writing process.

> "Rather than having short sessions throughout the preparation, I would find it more useful to have a longer mentor session after our proposals have been assessed."

2. Topic: clarity, inequity, time.

One respondent struggled to match the instructions with the example grant provided and this caused some confusion and there was some concern that not enough time was allowed for effective analysis and selection of a topic to align with the team skill set. Although linked with the time constraint concern, the majority of concern in this theme was around the perceived inequity that arose through the mixed skill sets within the team and the topics themselves that meant some team members felt their knowledge and skill set was inadequate to contribute effectively to the grant proposal.

There was a suggestion to level the playing field by ensuring each team write a proposal for a known research phenomenon, for example a proposal based on Maxwell's Laws. Another suggestion included allowing teams access to the topic to enable a proper analysis of a topic before selection of one to enable effective contribution from all team members.

> "In a group where everyone had different backgrounds, it seemed that most teams just went with one person's expertise, which meant that the rest of the team was at a disadvantage. 2. Alternatively, I liked the idea Gerard mentioned of imagining it is the late 1800s and coming up with a proposal based on Maxwell's newly published laws. An approach along these lines would also put all team members on an equal footing."

> "Not sure if it would be better but maybe want to normalize the playing field by having every team write a proposal about well know research phenomena. That way most of the time is spent on practising the skills of selling an idea and writing the proposal as opposed to coming up with a research idea that every team member can contribute to."
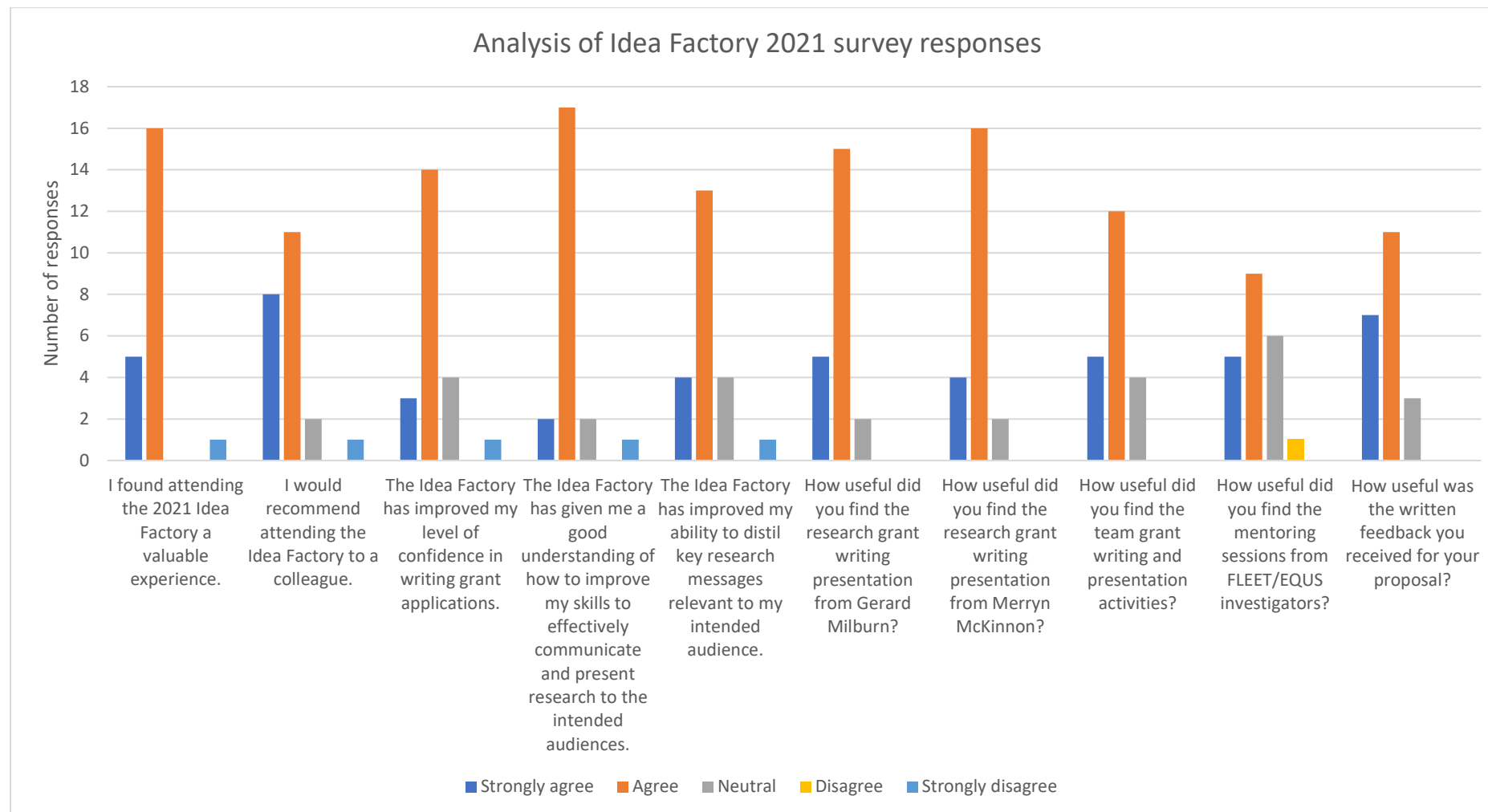
Appendix 1. Quantitative data analysis – questions 1-10

Table 1. Idea Factory participants' survey responses to question 1-10

	I found attending the 2021 Idea Factory a valuable experience.	I would recommend attending the Idea Factory to a colleague.	The Idea Factory has improved my level of confidence in writing grant applications.	The Idea Factory has given me a good understanding of how to improve my skills to effectively communicate and present research to the intended audiences.	The Idea Factory has improved my ability to distil key research messages relevant to my intended audience.	How useful did you find the research grant writing presentation from Gerard Milburn?	How useful did you find the research grant writing presentation from Merryn McKinnon?	How useful did you find the team grant writing and presentation activities?	How useful did you find the mentoring sessions from FLEET/EQUS investigators?	How useful was the written feedback you received for your proposal?
Strongly agree	5	8	3	2	4	5	4	5	5	7
Agree	16	11	14	17	13	15	16	12	9	11
Neutral	0	2	4	2	4	2	2	4	6	3
Disagree	0	0	0	0	0	0	0	0	1	0
Strongly disagree	1	1	1	1	1	0	0	0	0	0

Figure 1. Idea Factory participants' survey responses to question 1-10

Appendix 2 Qualitative data analysis

Table 1 Responses and themes emerging from the question, Do you have any suggestions about how we could improve this event in the future?

Participant responses	Coding – [themes]
It was a great chance to learn about writing research grant. Most of programs were very useful, but network event was not such active as I expected.	Appreciating the opportunity to learn to write grants Finding most of the programs useful
The check ins from the mentors for assistance writing the grant proposal were not sufficient and also too early. It would have been more helpful for them to check in nearer to the deadline to assist with final improvements. Just generally more check ins (even though this is a demand on the mentors' time) would be useful imo.	Perceiving mentor check ins to assist grant writing were insufficient and too early (badly timed?) **[Mentor help and timing]** Considering more mentor check-ins and more timely check-ins required
I found we didn't have much to talk to the mentors about at the start of the proposal preparation. Rather than having short sessions throughout the preparation, I would find it more useful to have a longer mentor session after our proposals have been assessed. I found the science communication session quite long and the time travel role playing part made me feel a bit uncomfortable. I found the overall message of the session valuable, but think it could be presented in a more concise way and with less role playing. Discussing our research in shorter and shorter times was useful.	Getting minimal value out of early mentor help **[Mentor help and timing]** Considering a longer mentor session after proposal assessment would be useful Finding value in the sci comm session Feeling uncomfortable with the role playing part of sci comm session Seeing the value in the sci comm message Perceiving the sci comm message could be delivered more concisely Finding value in the activity of distilling your research into shorter time frames

I think something that would help is a bit more clarity in to the task the teams worked on. The outline had a few errors in it, and the example grant given didn't really have the same structure as the outline. As someone who hasn't written a grant before, this left me a bit lost as what needed to be done. On that note, it could also be useful to have an extra optional session that's just a proper crash course in writing grants for people who haven't done it before. I feel that the presentations given weren't as effective as they could have been, given that they targeted both people who had written grants, and people who haven't even seen a grant before.

in person workshop might be more active for all. | Wanting more clarity on what to do in the grant writing task.

Finding errors in the task **[Task clarity]**

Finding lack of consistency between task instructions and example grant [Finding the task instructions did not match the example application]

Being confused

Perceiving value in an extra grant writing session for participants who have not written grants before.

Perceiving the broad participant skill set reduced the effectiveness of the presentation – ie unable to target needs of all. **[Skill mismatch]**

Considering an in-person workshop would be more effective. **[in-person]** |
| No. Everything is great | Perceiving the event requires no changes |
| 1. Could groups be formed from people in similar research areas? That way some "real" ideas might actually come out, and everyone in the team could contribute fairly equally. In a group where everyone had different backgrounds, it seemed that most teams just went with one person's expertise, which meant that the rest of the team was at a disadvantage. 2. Alternatively, I liked the idea Gerard mentioned of imagining its the late 1800s and coming up with a proposal based on Maxwell's newly published laws. An approach along these lines would also put all team members on an equal footing. 3. I found that, given the very limited time we had, my team only spent ~15 minutes choosing a research topic for the proposal, | Wanting teams with people from similar research areas [does this represent reality though – ie where we work in multi-disciplinary teams?]

Finding multi-disciplinary teams deferred to the expert in the area of the project

Liking the idea of developing proposal based on Maxwell's laws to put teams on an equal footing. |

which meant that it wasn't very well thought through. By the time we realised some of its shortcomings, we had no choice but to push on with it. It felt a bit artificial, because if I was really writing a proposal, I obviously would have spent more than 15 minutes choosing the project! Unsurprisingly, our referees then picked up on these shortcomings. In future years, could you get people to think of a research proposal before the workshop that they can bring along with them? That way they can actually think things over before committing to a project, and it might even end up being a realistic idea. 4. I found that the mentoring sessions were a bit short. I think 20-30 minutes would be more useful than 15.	Suggesting there was insufficient time to analyze and select a proposal **[Struggle with topic**] **[Topic inequity]** Being unable to do proper due diligence/analysis on topics Finding time constraints meant they could not manage proposal shortcomings Suggesting teams spend proper amount of time before the event selecting a proposal topic. Wanting time to conduct proper analysis on topics. **[Topic time constraints**] Believing a more realistic proposal will emerge with time to analyze and select the topic before the event Finding the mentoring sessions too short **[Mentor help and timing]** Wanting longer mentoring sessions
Not sure if it would be better but maybe want to normalize the playing field by having every team write a proposal about well know research phenomena. That way most of the time is spent on practising the skills of selling an idea and writing the proposal as opposed to coming up with a research idea that every team member can contribute to. Although I might be wrong considering the hardest part of writing a grant is coming up with the right research topic.	Wanting to level the playing field for topic selection **[Topic inequity]** Suggesting all teams write a proposal for a known research phenomenon **[Topic time constraints]** Spending too long on a research idea every team member is comfortable with **[Topic inequity]** Needing to spend more time on grant writing skills **[Topic time constraints]**
I think in person would be better. If not, get rid of kumospace, zoom and breakout rooms is better. We had a heap of technical problems in our team with communication. I think we also didn't put as much time into the team work as we were all busy with our normal day-to-day lives. So it felt super rushed. But I guess more people will try and attend if it remote though....	
Perhaps there could be more 'in person' nodes, linked up via zoom/kumospace	Preferring in-person event **[in-person]**

Following on from point 1 above, I found the feedback about our shortcomings describing what the CIs would contribute to the project a bit too artificial - obviously in a real proposal I wouldn't be a CI on a project I know nothing about! I thought the emphasis on this section in the feedback was a little unfair/unrealistic.	Preferring zoom and breakout rooms to Kumospace
	Feeling there was insufficient time to complete tasks
	Perceiving the online environment allowed personal lives and work to interfere with dedication to event [?] **[Time constraints]**
	Wanting more in-person opportunities – streamed via zoom/Kumospace **[in-person]**
	Finding the feedback unfair/unrealistic
	Finding the scenario for the grant writing to unrealistic **[Scenario artificial]**