Understanding the occupational implications of a Koori development scholarship:

A case study of the Fisheries Research and Development Corporation Indigenous Training Scholarship at the Shoalhaven Marine and Freshwater Centre

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Executive Summary

This report is the outcome of a case study which explored the occupational implications of an indigenous development program funded by the Fisheries Research and Development Corporation and hosted by the Shoalhaven Marine and Freshwater Centre. Approval for the study, undertaken by the Australasian Occupational Science Centre, was granted by the University of Wollongong’s Human Research Ethics Committee. The scholarship holder was a Koori man living in the Shoalhaven on the south coast of NSW. The development program ran from June 2009 to January 2010.

The study adopted an occupational perspective to understand the effects of the program on the scholarship holder’s personal experiences, self esteem, and future vocational plans. Entries in the scholarship holder’s journal and informal interviews between the scholarship holder and the study investigator were the narrative data used in the study. In addition, the investigator’s observations of the scholarship holder and discussions with his supervisor contributed to understanding the occupational implications of the program.

Review of the data revealed that over the course of the program the scholarship holder acquired a range of technical skills, some of which are specific to aquaculture and others are generic research skills. He also acquired written and verbal communication skills which are transferable to social and vocational contexts. By the end of the program it was apparent there was an increase in the scholarship holder’s self confidence with regard to his ability to independently undertake certain aquaculture tasks. Although he shared with the investigator a range of vocational dreams generated from his participation in the program, the scholarship holder did not gain sufficient skills or tangible resources to fulfil these dreams. However, his networks with others in the aquaculture industry, within the Shoalhaven and interstate, have increased and could be utilised in the future to realise vocational plans.

As a result of the case study, there are recommendations for FRDC and for potential hosts of and applicants for the indigenous scholarship program:

For FRDC
- Implement indigenous training programs that run for at least 12 months

For potential host institutions
- Adopt the Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islanders (ABTSI) Health Research as the foundation for the training programs in addition to any program evaluations.
- Complete and fast track all necessary financial arrangements related to the training program prior to its commencement, minimising any problems or concerns with scholarship monies.
- Maintain a relaxed learning environment with a focus on experiential learning.
- Ensure there is adequate and appropriate staff to provide supervision and instruction.
- Encourage the scholarship holder to keep some form of journal, which can be used as a record of skills acquired and a basis for reflection upon the scholarship experience.
For potential applicants

- Take every opportunity that arises.
- Enjoy the experience.
- Investigate future vocational options throughout the program.
- Record new skills and experiences in a journal, facilitating the opportunity of reflection on the program.

It is proposed that adoption of some or all of these recommendations will contribute to positive occupational outcomes from future indigenous development scholarship programs.
1 Introduction

*Our challenge for the future is to embrace a new partnership between Indigenous and non-Indigenous Australians. The core of this partnership for the future is closing the gap between Indigenous and non-Indigenous Australians on life expectancy, educational achievement and employment opportunities.*

Prime Minister Kevin Rudd, Apology to Australia’s Indigenous Peoples, 13 February 2008

Census data reveals that in Australia there is a significant gap between the labour force participation rates of the Indigenous working-age population and the non-Indigenous working-age population (AHRC, 2008). For example, in 2006, 57% of the Indigenous population aged 15-64 years was participating in the labour force compared with 76% of the non-Indigenous population (ABS, 2008a). It is also important to note that labour force participation rates for Indigenous peoples declines with remoteness, which explains the 46% participation rate in very remote areas (ABS, 2008b). There is also census data that shows that in 2006 in Australia, compared to non-Indigenous, Indigenous workers were twice as likely to be in part time employment, more likely to report working in a low skilled occupation; and one third as likely to report having a non-school qualification (ABS, 2008c). Initiatives, such as the Indigenous Training Scholarship Development Program conducted by the Fisheries Research Development Corporation, attempt to close the gap in employment levels by providing vocational training opportunities for Indigenous Australians.

The Shoalhaven Marine and Freshwater Centre hosted one of these Indigenous training scholarship programs from June 2009 to January 2010. The Australasian Occupational Science Centre conducted a case study of this program, focusing on the occupational implications. This report, an outcome of that study, begins with some brief background information as a means of contextualising the study. Next, the methods adopted for the case study are described. The body of the report pertains to the case study findings. The findings relate specifically to the occupational implications of the program and are not intended to be an evaluation of the scholarship holder. The conclusions include some recommendations for the FRDC and for institutions and people who are considering participating in future Indigenous training development programs.
2 Background

2.1 The Fisheries Research and Development Corporation Indigenous Development Scholarship Program

The Fisheries Research and Development Corporation (FRDC) Indigenous Development Scholarship is offered annually through a host organisation to provide indigenous people opportunities to undertake supported programs to develop skills and knowledge relevant to the fishing industry and to form networks to fishing businesses and industry leaders. Scholarship holders receive $10,000 through their host organisation (FRDC, 2009). For further information, refer to the Appendix A.

2.2 Shoalhaven Marine & Freshwater Centre

The Shoalhaven Marine and Freshwater Centre (SMFC) is located in Nowra, at the Shoalhaven Campus of the University of Wollongong. The mission of the Centre, which began its operations in early 2007, is to “to establish a centre which carries out world-class research and postgraduate teaching activities, based on the needs of the south eastern region of Australia.” The SMFC recognises that while coastal environmental research has been identified as a major regional concern, marine and freshwater fisheries and aquaculture have been identified as growth industries that could provide significant regional employment opportunities.

Research studies at SMFC to date include: recreational fishing in the Shoalhaven Shire; investigating estuary perch & Australian bass; chlorophyll & phytoplankton studies; seaweed culture for healthy food products; and environmentally sustainable integrated multi-trophic aquaculture (IMTA) systems for temperate Australia. (UOW, 2008). Additional information about the SMFC is available on its website: http://www.uow.edu.au/science/research/smfc/index.html.

2.3 FRDC Scholarship program at Shoalhaven Marine & Freshwater Centre

An FRDC scholarship program was undertaken at SMFC from June 2009 to January 2010. The objectives of the scholarship program, developed in conjunction with the scholarship holder, were for the scholarship holder to:

- learn water quality testing and basic fish husbandry procedures in a pilot commercial aquaculture environment
- understand about marine fish and algal culture and how to maintain experimental standards in research projects and in laboratory conditions
- work with a team of aquaculture industry stakeholders and researchers

The scholarship program incorporated the SMFC’s focus areas of seaweed culture and integrated aquaculture and was developed around the SMFC’s pilot project exploring the potential of an environmentally sustainable program of integrating multiple species in aquaculture in a land based system. Most of the scholarship program activities took place on a pilot commercial farm at Tomerong, and other tasks were completed in the laboratories of the SMFC on the Shoalhaven Campus of the University of Wollongong in Nowra.
The scholarship program involved personalised development activities designed to improve the scholarship holder's ability to contribute as a leader in his chosen field. Activities were not prescribed, and the scholarship holder worked with the host organisation and mentors to develop a personalised program of activities. The activities addressed a sector need while developing the individual's personal and professional capabilities.

The program was developed in order to achieve particular benefits, namely: the scholarship holder would learn new knowledge and skill related to aquaculture; and the scholarship holder would be able to share this knowledge and information with his community. One of the long term goals of the program is that the Koori community will be able to develop or co-develop a sustainable aquaculture industry, a goal shared by Cultural Capital Investments Pty Ltd and In-Ja-Ghoondji Lands Incorporated.

Participants in the scholarship program included the Director of the SMFC, the scholarship holder and an employee of the SMFC who was involved with the industry pilot project at Tomerong.

The scholarship holder worked on the program for approximately 20 hours per week (4 hours per day) Monday to Friday. However, his hours and work days were flexible, depending on the needs of the pilot project.

2.4 An occupational perspective

This case study involved collaboration between SMFC and the Australasian Occupational Science Centre (AOSC), which is a community education and research centre at Shoalhaven Campus. The mission of AOSC is to promote an occupational perspective of health and well being of individuals and communities through its community-based, occupation-based research and projects. An occupational perspective is derived from occupational science, a relatively new social science that generates knowledge about occupation, the things people do to occupy their time, and the socio cultural, economic, political and geographical influences that govern what people do. An occupational perspective views people of all ages as occupational beings who need to do purposeful things for their health, well being and development. Three key beliefs underlie the AOSC’s occupational perspective:

- People need to participate in a balanced range of purposeful occupations for their health and well being.
- People have a right to participate in occupations relevant to their community.
- Participation in occupation promotes healthy individuals, communities and populations. (UOW)

This case study adopted an occupational perspective of the outcomes of the FRDC scholarship program.
3 About the case study

The University of Wollongong’s Humans Research Ethics Committee granted approval for this case study. The aim of the study was to understand the effect of participation in the FRDC scholarship program at the Shoalhaven Marine and Freshwater Centre upon the scholarship holder’s personal experiences, self esteem and future vocational plans. In order to achieve this aim, it was necessary to develop a methodology to enable understanding of the effect of the program.

3.1 Case study methodology

The participants in the case study were: the indigenous scholarship holder, a Koori man living in Shoalhaven; the SMFC Director; and the study investigator.

The Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islanders (ABTSI) Health Research (NHMRC, 2003) provided the foundation for the conduct of this study. Some of the key principles of these Guidelines which the investigators adopted and were observed at each stage of the study are:

- respect for the dignity and well being of the participant takes precedence over expected benefits to knowledge.
- the study design should be developed in consultation with participant.
- the researchers appreciate and value the participant’s knowledge and experience.
- the participants and researchers are equal partners in the study.
- the study outcomes benefit the participant individually as well as his community.
- there is no harm to the participant or his community.

An online copy of these ABTSI Guidelines can be freely downloaded from http://www.nhmrc.gov.au/publications/synopses/e52syn.htm.

The case study was a qualitative study in that it used narratives as data. Narratives are the stories people tell of things they do and feel. Narratives are particularly useful for understanding human lives in culture and time and are particularly suitable for understanding people’s occupational experiences (Freeman, 1997; Grbich, 1999). The scholarship holder recorded his personal experiences, thoughts and suggestions, either by writing in a journal or by using a digital recorder. He then shared these recorded experiences with the investigator. Reviewing the content of the journal enabled understanding of the subjective experiences and reflections of the scholarship holder. In addition, the investigator digitally recorded some informal, unstructured interviews with the scholarship holder, which were transcribed and then shared with him for checking. Refer to Appendix B for a sample extract from the journal and to Appendix C for sample questions asked in the informal interviews.

Observation of the scholarship program by the investigator, who was independent to the aquaculture program, was another means by which the data for the case study were gathered. The investigator also discussed the program with the SMFC Director and the SMFC employee involved in the pilot project at The Farm.
4 Occupational implications for the Shoalhaven scholarship holder

The scholarship holder’s journal, the transcripts of the interviews between him and the investigator, the investigator’s observations and discussions with SMFC staff were the sources of data studied, from an occupational perspective, to understand the effect of participation in the program upon the scholarship holder’s personal experiences, self esteem and future vocational plans. Adopting an occupational perspective means that there was a focus on what the scholarship holder actually did to occupy his time while participating in the program, the personal meaning and outcomes of these occupations and what influenced the occupational experience.

4.1 Influences on personal experiences

The scholarship holder acquired a range of technical skills related to aquaculture during the course of the scholarship program. Importantly, the skills he acquired could be used in other aquaculture programs. As revealed by the scholarship holder’s journal, examples of these skills include:

- Measuring the pH, nutrients, temperature, salinity, oxygen and chlorine levels of the tank seawater in a rigorous and standardised manner
- Weighing fish food, calculating amount of food eaten and documenting feeding regimes
- Feeding fish and observing animal behaviour
- Administering medication to fish
- Grading and transferring fish to different tanks
- Maintaining and cleaning fish tanks
- Monitoring and maintaining seaweed cultivation experiments

In addition to aquaculture-specific technical skills, the scholarship holder acquired new skills related to generic data management. For example, he was taught how to accurately and legibly record data related to the experiments being undertaken. Furthermore, the research-specific skills for data management which he acquired, such as developing a table or spreadsheet, could be utilised in future research activities.

As the scholarship holder was required to share information with other members of the aquaculture program and visitors to the aquaculture site, he was able to practice his verbal communication skills and was required to follow both written and verbal instructions, skills he was able to refine over the course of the program. Towards the end of the program the scholarship holder accepted an invitation to be interviewed by a journalist. This was his first telephone interview.

In addition to the acquisition of new skills, the program offered the scholarship holder a range of opportunities that extended his personal experiences. For example, soon after commencing the program, the scholarship holder was given the opportunity to travel to Port Lincoln, in South Australia, with an FRDC staff member to visit a mussel farm and fish hatchery. Moreover, the scholarship holder had opportunities to meet a member of the Federal government and various international visitors and scholars, from Japan, Sweden and Spain, give them a tour of the aquaculture premises and explain the aquaculture project to them.

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4.2 Influence on self esteem

It was apparent from the observations of and discussions with the scholarship holder and his supervisors that participation in the program contributed to an increase in the scholarship holder’s self esteem. Prior to the commencement of his participation in the program, he was noticeably shy and reluctant to be photographed. Initially, he was hesitant to ask questions and to commence a conversation with the investigator. However, by the end of the program, he initiated discussions with the investigator, and was willing to be interviewed by a journalist and to be photographed. He even took a small group of researchers abalone diving, a skill he has developed over the years and something that is very relevant to him as an indigenous person living in a coastal area. He reported that he and his wife were pleased with the published newsletter article written about him by the journalist who interviewed him and he appeared proud to see his name in print and to read the story about him in the feature article.

4.3 Influence on future vocational plans

The scholarship holder revealed in discussions with the investigator that he enjoyed his participation in the training program and appreciated learning a range of skills. He also acknowledged that the program had given him insight to the potential opportunities that aquaculture offered his local indigenous community. Indeed, he shared some dreams he had for other sustainable freshwater aquaculture. However, the six month program did not provide any formal education or additional funding to implement such plans. Nevertheless, during the program the scholarship holder was exposed to a range of ideas about vocational possibilities and introduced to various people with knowledge and experience in the fishing industry.
5 Additional observations of the Shoalhaven training scholarship program

Throughout the seven months of the program, in addition to observations of the effects of the program on the scholarship holder, observations of the training program itself were made. These observations are summarised for the benefit of potential hosts and future scholars of an FRDC Indigenous Training Program, as follows:

5.1 Financial arrangements

The SMFC experienced lengthy delays in the organisation of the scholarship funds, causing some frustrations for the program supervisor and scholarship holder. This delay could have been related to the fact that it was the first time that University Wollongong’s SMFC was required to process RFDC funds and a new account had to be established. For whatever reason, the outcome was that the scholar experienced a delay in receiving funding until the SMFC organised a separate source of funds, which was reimbursed once the FRDC funding could be accessed.

5.2 Model employee

It was observed that in the indigenous training program at the SMFC, the relationship between the scholarship holder and the SMFC employee working on the pilot project in which the scholarship holder was involved was critical. In fact, by default, the SMFC employee became an important educator and support person for the scholarship holder. In the Shoalhaven experience it was apparent that the employee was a willing and enthusiastic teacher and proved to be a very good role model in relation to aquaculture processes.

5.3 Supervision

The Director of SMFC was the supervisor of the scholarship holder throughout the duration of the program as she was the most appropriate person available for this role, given the small number of people currently employed at SMFC. For various reasons, the role of supervision became more time consuming than originally expected. Such reasons include: the venue for the project was located about 20kms from the Director’s office on Campus; and a number of issues required hands on supervision more regularly than predicted as it was necessary to reduce the load of responsibility on the scholarship holder.
5.4 Journal

The scholarship holder initially decided to use a digital recorder for his journal, and a digital recorded was obtained. However, after a couple of weeks he converted to using a paper-based journal only. In this instance, writing in a journal was an activity with which the scholarship holder was more familiar and so was more comfortable with using the paper-based journal for recording purposes.

5.5 Post scholarship program

Although the scholarship holder did acquire several new skills during the training program, he was not sufficiently trained or qualified to secure a paid position at SMFC. Further training and experience would be required for a position not that securing a paid position was a specified outcome of the program. However, as the Director was aware of his range of skills acquired during the program, the scholarship holder was given the opportunity to undertake some short term contract paid activities, after the training program was completed.

5.6 Independent mentor

The investigator for the case study was not skilled in marine science so was unable to assist the scholarship holder in the training program’s education component per se. However, during the program, while making observations, having informal discussions with the scholarship holder and conducting interviews, the investigator became a mentor by default and at times was a useful ‘sounding board’ for the scholarship holder, especially in relation to his vocational plans for post training program. The independence of the investigator to some extent facilitated this mentoring situation.

5.6 Program ambience

The ambience of the training program was observed to be relaxed and friendly and it was appeared all efforts were made to make the scholarship holder feel comfortable and supported. At all times, the program participants encouraged the scholarship holder to learn more about aquaculture, but at no times did it seem there was any undue pressure on him.
6 Conclusion

This case study has found that the FRDC Indigenous Training Program conducted at the University of Wollongong’s Shoalhaven Marine and Freshwater Centre resulted in some important occupational outcomes for the scholarship holder. The scholarship holder acquired a range of technical skills related to aquaculture and the management of data. He also acquired written and oral communication skills which he can use in other work and social situations. It was also interesting and pleasing to observe the increase in the scholarship holder’s self esteem relating to his contribution to the aquaculture program at The Farm. Several factors seem to have contributed to these particular positive occupational outcomes for the scholarship holder: the scholarship holder’s willingness to participate in the program and his desire to learn about aquaculture; the relaxed yet supportive context in which the scholarship holder was working; the high quality teaching and direction he received; and the adoption of the experiential learning approach i.e. learning by doing.

In addition, the scholarship holder seemed excited that there were potentially new aquaculture industries that could be undertaken by his indigenous community. However, he realises he requires more in-depth skill and knowledge, as well as access to resources in order to personally play a role in establishing any such industries. While acknowledging that the objectives of the FRDC indigenous training program are to provide indigenous people with support, knowledge and networks relevant to the fishing industry rather than to prepare scholarship holders for the fishing industry workforce, it is important to note that the potential of a 6 month program to impact upon future vocational plans of scholarship holders is limited. The existing educational qualifications and prior experience of scholarship holders will certainly influence their vocational plans at the completion of a RFDC training program, however, a longer program could make a difference for them vocationally.

In conclusion, there are several recommendations developed from the Shoalhaven case study for consideration by FRDC in the planning and development of future indigenous training scholarships in order to enhance positive occupational outcomes for scholarship holders. There are also some recommendations for institutions considering to become hosts of an indigenous training program, and for potential applicants of the training program. These recommendations are:

a. For consideration by FRDC:
   - Implement indigenous training programs that run for at least 12 months

b. For consideration by potential host institutions:
   - Adopt the Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islanders (ABTSI) Health Research as the foundation for the training programs in addition to any program evaluations.
   - Complete and fast track all necessary financial arrangements related to the training program prior to its commencement, minimising any problems or concerns with scholarship monies.
   - Maintain a relaxed learning environment with a focus on experiential learning.
• Ensure there is adequate and appropriate staff to provide supervision and instruction.
• Encourage the scholarship holder to keep some form of journal, which can be used as a record of skills acquired and a basis for reflection upon the scholarship experience.

c. **For consideration by potential applicants:**
• Take every opportunity that arises.
• Enjoy the experience.
• Investigate future vocational options throughout the program.
• Record new skills and experiences in a journal, facilitating the opportunity of reflection on the program.
References


Relevant websites:


Appendix A  FRDC training program

The FRDC Indigenous Development Scholarship

An annual scholarship is offered by the Fisheries Research and Development Corporation (FRDC) through a scholarship host organisation to an indigenous person who seeks to help shape the social and economic future of their community and/or region through engagement with the fishing industry - fisheries management, commercial (including aquaculture) or customary use of sea resources.

The FRDC Indigenous Development Scholarship provides a unique opportunity for an individual to undertake a personalised and supported program to further develop the skills, knowledge and networks to be effective business, industry or community leaders within the fishing industry. The scholarship winner will undertake a program of development that may include mentoring, coaching, study or training, work placements, visits with Indigenous development organisations, State/Commonwealth fisheries management organisations, government departments, or commercial fishing/aquaculture businesses. Winners of the FRDC Indigenous Development Scholarship will receive up to $10,000 through a host organisation.

Host organisations
A scholarship host organisation will be an active partner, and the application is to be submitted jointly by the host organisation and applicant. The host organisation must demonstrate the capacity to manage the scholarship and support an identified individual to undertake a program of activities. Aligning the scholarship with a host organisation maximises opportunities for professional development, and achievement of personal and industry goals. Host organisations will benefit through the identification, development and retention of individuals who demonstrate capacity for making a difference; through exposure to new ideas and through strengthening organisational management, coaching and communication skills.

Scholarship program
The scholarship will involve a program of personalised development activities that will improve the scholarship holder's ability to contribute as a leader in their chosen field. Activities are not prescribed, and applicants will work with their host organisation and mentor to develop a personalised program of activities. Activities may take the form of a project that addresses a sector need while developing the individual's personal and professional capabilities. The scholarship will be for a period not exceeding two years.

Mentoring
A mentor will be identified prior to submitting the application. Mentors may be internal or external to the host organization.

Source: FRDC Indigenous Development Scholarship - 2009 Application Form
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Appendix B  Extracts from journal

12.6.2009

Woke up feeling a little tired from carrying all the pots of water back and forth, but it is a really nice day outside.

- 9am getting the first batch of hot water going on the fire pit.
- Uncovered the seaweed tanks and check the pH level, water temperature and the oxygen.
- Temperature inside/ outside the green room 6. 1ºC and 5.6ºC
- Change the warm water 22 ºC from the inside tank to the outside fish sump
- Then we are transferring that to the fish tank inside.
- The water must be trickled in these tanks, so that it doesn’t spook the fish and stress them out.
- This could cause the fish to stop eating or change their feeding patterns
- Cleaned the foam from the top of the fish tanks

At 1:45pm the temperature has risen from 19.4 ºC to 21.1 ºC, which is good. Now we will try to increase their food to 600grams. We are optimistic.

There are two different types of feed. The different sized fish are fed different and varying amounts of food. F2-F4 tank we have the smaller sized fish.

24.6.2009

Fish checks morning

Oxygen 82
pH 7.40
Temperature 22 degrees
TAN 0.25

Began the day by uncovering the seaweed tanks. All looks good no overflow during the night. Today is very cold and overcast at the farm.

I noticed that the heater had been turned off overnight, and we had no warm water. I turned the heater back on and now the water temp is back up to 30 degrees.

F6 fill with seawater and heat
F3 full/heater on
F5 full/heat tomorrow

Once we had done that we went into the greenhouse to add some more stone to the floor to create a walking path for the investors to walk on.
Seaweed checks today show that all is good.

Oxygen 91/101
pH 7.4/7.5
Temperature is 22 degrees
Seaweed was then covered back over to keep temperature up overnight.

Afternoon feed fish

<table>
<thead>
<tr>
<th>F1</th>
<th>F2</th>
<th>F4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1650 grams</td>
<td>1950 grams</td>
<td>2150 grams</td>
</tr>
</tbody>
</table>

2.9.09

Today is a little disappointing; we have had a lot of fish die during the last 12 hours. The mortalities rate is very high.

Mortalities

<table>
<thead>
<tr>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>33</td>
<td>17</td>
<td>41</td>
<td>4</td>
</tr>
</tbody>
</table>

The vet is coming once again to look the fish. The vet is trying to diagnose the problem. The supervisor has also come out to the farm today to take a look and speak to the vet. Hopefully they can find a solution before we lose more fish. Other than the fish dying all of today’s checks have been fine.

Today at least the fish ate a little. They ate around 50g to 100g of their medication. That was really the only good thing today.
Appendix C  Interview questions

Questions for informal interview with RFDC Scholarship holder conducted at the Farm - 9 September, 2009

Can you tell me what you were doing before you became part of the Aquaculture project?

What are some of the things you do for the project on a daily basis?

How do you feel about being part of the project?

What does your wife think about your involvement with the project?

What do your children think about your involvement with the project?

What does your community think about your involvement with the project?

Tell me about your long term dreams related to the project?

What is the best part about being part of the project?

What are some of the difficulties about being part of the project?

Is there anything more you would like to say about the project?

What do you see in your future?