

## Progress Report

### Grant details

#### PROGRESS REPORT

Congratulations on making it to this point in your grant! We are interested to learn how your grant is going--both the successes and the challenges. This progress report (and financial statement) is required as part of your grant conditions, but it is also an opportunity for us to communicate. Your honesty is very much appreciated.

**Payment of each grant instalment is contingent upon receipt of this information.**

Please refer to the [online grant reporting guidance](#) to help you to more easily complete your report.

As we encourage excellence but also seek to support innovation, we do not expect success in every aspect of every project, and appreciate your honesty and transparency in reporting.

Reference	Progress report due date
20150545	February 03, 2017

**Organisation name**  
XXXXXX

Please confirm whether or not the organisation address has changed since the grant was awarded.  
The organisation address has not changed / changed to:

**Name of the person completing the progress report.**  
XXXXXXXXXX

**If the primary contact for the project has changed since the grant was awarded please include**

- the new contact's name
- position title
- telephone
- email

The primary contact for the project has not changed / has changed to:

**Grant amount**  
20000

**Project title**  
Project XX: Empowering and Engaging Mighty Girls in the Early Education STEM

**Project description**  
This grant will enable the applicant to develop science, technology, engineering, and mathematics (STEM) workshops for young girls and their parents. The workshops aim to improve the girls' school readiness, interest, and engagement in STEM education, and to encourage parents to maintain their daughters' enthusiasm and skill/knowledge development in formal and informal educational settings.

## Project progress and outcomes

### Project goals

Here are the project goals outlined in your application :

#### Goal 1

The first goal is to empower girls in STEM education. We aim to do this by encouraging girls to develop interests, skills, knowledge and a sense of self-efficacy in through ### fun, educational, and innovative workshops designed especially for girls and their parents.

#### KPI/Timeline 1

An anticipated outcome is that the workshops lead to clear educational benefits. If we are successful, following the workshops: (1) families should report being significantly more engaged, and have a greater sense of self-efficacy and enthusiasm for STEM; (2) girls will demonstrate acquired skills and knowledge in solving STEM puzzles.

#### Goal 2

The second goal is to develop these workshops into a manualised program so that they can be delivered by other educators beyond the current team of researchers, and disseminated nationally and internationally.

#### KPI/Timeline 2

Our measure for success will be the final product of the manualised program at the end of the workshops and subsequent sale of the program to other educators. Success will also include a peer-reviewed publication of our program description and associated data in a high-impact and prestigious educational journal.

#### Goal 3

The final goal is to use these workshops as a vehicle for research-activities with families that will inform the improvement of STEM early education for girls.

#### KPI/Timeline 3

Indicators of success are ### peer-reviewed publications of our program and associated benefits, and novel findings on the gender gap in STEM education that will contribute to better educational frameworks for girls in STEM.

#### Goal 4

#### KPI/Timeline 4

#### Goal 5

#### KPI/Timeline 5

## 1. Please describe how the project is progressing against the above goals.

Note: If you have revised your goals with your program manager, the new goals should be listed above. If not, please do not begin and email/ring the Foundation and we will update the form.

Goal 1: To date, we have held 10 workshops and ## children have participated.

A key goal of these workshops was to develop children's confidence, enthusiasm/interest, and skills/knowledge in STEM. We measured this using a quantitative approach with pre- and post-workshop surveys administered to caregivers/parents and children.

Our survey results showed that 100% of the caregivers/parents (N=22) reported that the workshops were useful in developing their child's confidence, interest/enthusiasm, skills and knowledge in STEM. A substantial majority of the children (80.64%) also reported feeling more excited about STEM after the workshops. We also saw an increase in children's aspirations to become 'scientists', rising from 58% before the workshops to 74% after the workshops. When children were asked elements of the workshops that they enjoyed most, every component of the workshop was mentioned by at least one child (e.g., robotics, super-absorbent polymers, role models, construction).

A major goal of our workshop was to bring parents and children together in sustained shared STEM activities. We not only do engaged parents in the workshops, but we have also developed take-home 'gift-bags' with STEM activities (materials and science instruction) as well as a Parent Information Booklet with STEM activities they can do with their children. Our survey results showed that over 80% of our families used these activities a fortnight later. In summary, we are successfully meeting Goal 1.

Goal 2: Our manual is in progress. We have been shaping and improving the workshops across iterations and we are on-track to complete the manual in early 2017.

Goal 3: Data collection is also still in progress. We intend to submit a number of papers in 2017/2018 that will focus on what we've learned about pedagogical and socio-cultural factors in early childhood STEM.

## 2. If there have been any changes to the project (including the timeframe, budget, staffing), please describe these changes, and explain the reasons for them.

### (1) Girls-only recruitment challenges

To date, we have not hosted girls-only workshops because we have been unable to recruit enough girls into one workshops to make it financially and pedagogically feasible (e.g., ~3 girls per workshop). Therefore, we have been hosting mixed gendered workshops. However, we modified our research approach so that we could investigate how boys and girls interacted differently with STEM activities within a classroom setting. We endeavoured to maintain a focus on girls.

Therefore, several strategies were put in place:

(a) We integrated a female role-model component into our workshop where older girls (e.g., in Year 4/5) would visit the workshop and provide a science demonstration. This strategy was drawn from research evidence showing that children were more likely to aspire to certain vocations when the role model is slightly older. Moreover, girls benefit most from seeing female role models in STEM. Preliminary data suggest that this strategy has been effective with 80% of the children (including boys!) reporting that they were inspired by the role models to become future scientists.

(b) Future plans include running free workshops in regional NSW at early childhood learning centres. This approach allows us to recruit entire cohorts at that preschool, which makes it far easier to divide into single-gender workshops. This approach also has the added bonus of delivering workshops to the children who will benefit most from these workshops (lower SES, reduced access to extracurricular activities). Therefore, travel cost and portable teaching equipment such as a projector has been factored into the budget forecast.

(2) Workshop sizes. We discovered that 10 children per workshop was not feasible because it was too large for this age group. They were not able to sustain their attention and this impeded learning. We have reduced our workshops to 6 children per workshop.

### **3. What has been surprising?**

#### **(1) Additional funding and support**

We hired teaching staff for all 10 workshops and paid for advertising through other grant funding. These are not included in our financial statement report because expenditure occurred through other grant accounts and explains zero expenditure for items like teaching staff and advertising. We were also able to borrow audio equipment from the university. Moreover, the XXX Foundation granted us \$5,000 as they were impressed by our mission. Therefore, we have been able to use excess funds for vital equipment like an iPad Air to administer online surveys to families at the workshops, and a mobile phone for research assistants to quickly return calls from families interested in the workshops.

#### **(2) Group Dynamics: Differences and Commonalities**

We have discovered that each workshop is different given the children's knowledge of each other. For instance, we recently delivered a free workshop to an early childhood centre. The children in these workshops did not disperse during free play but approached tables in groups. This contrasted with other fee-paying workshops with children who did not know each other. Children gravitated towards activities with an adult educator. This suggests that in unfamiliar situations, the adult educator may be critical. In familiar social settings, optimal STEM learning may occur when through co-operative work.

#### **(3) Dissemination of STEM professional development training to early childhood educators**

One of the major highlights of our free workshop in Goulburn was that the centre's educators also benefited from these workshops. CIB Kate Highfield was able to develop the educators understanding of STEM pedagogical processes during early childhood as they observed the workshops. That is, we disseminated STEM professional development (PD) to early childhood educators who otherwise would have very little access to this type of training.

### **4. Please outline future plans/actions for your grant project.**

Please include any challenges (reduced funding, difficulty recruiting) that your project or organisation are currently facing. Please also let us know how we can help you thrive.

#### **(1) More free workshops in regional/disadvantaged communities**

One of the most rewarding aspect of our work to date are the FREE workshops we delivered in Goulburn to a high-risk cohort (i.e., high number of foster children). As noted above, we not only provided STEM education to children who had the least access to extracurricular educational activities, but we were able to train educators who also had the least access to professional development. Our careful budgeting of IPF's funding, contribution from other funding sources, and the income generated mean that we are in the position to leverage funding for more free workshops in regional or disadvantaged communities. We are aiming to deliver another 4 regional trips and this has been forecasted in the 2017 budget.

#### **2) Consumable Costs**

We have observed that children love STEM activities that involve mess, with ingredients they can purchase online or at their local supermarket. For instance, the children spent the most time with super-absorbent polymers and oobleck (cornflour mixed with water, a non-Newtonian matter). Therefore, given that we have budgeted carefully, and have used other funding resources to pay for teaching costs, we request increasing our consumable budget to make these workshops more engaging and accessible for children and families. We will also need to budget for incidentals such

as laundry costs as we are using lab coats to protect the children's clothing (whilst encouraging socio-dramatic play in STEM!).

### (3) More research and teaching hours

We are on track to complete our target of 10 workshops. In addition, given that we are generating income and attracting more sponsorship, we will have funding left over and would like to deliver more free workshops to disadvantaged communities. Therefore, remaining funds will be used for more teaching and research hours.

## Financial statement

### PROGRESS REPORT

Please attach a statement of project income and expenditure to date, and include comment(s) on any significant changes in the budget items from the original budget proposed. It **must** be signed and dated by the relevant authorised person (e.g. CEO, CFO, Research/Grants Management Accountant) with itemisation of:

- the amount received from The Ian Potter Foundation
- the cash financial contribution received from your organisation
- other funding sources and amounts received from them
- amounts expended to date
- the balance (if any) remaining at date of this report
- and a forecast of upcoming costs.

In order for us to get a complete understanding of how your project is going, we need a financial report in the same format as the budget you submitted in your application. Please include in the income and expenditure sections columns titled "*estimated*" and "*actual*" (as in the report template).

If you used your own budget template when you applied, please use the same cost headings, adding additional headings and rows to account for unanticipated costs.

If you used the Foundation's budget template when you applied you may like to use the [IPF FINANCIAL REPORT TEMPLATE](#). You should add additional headings and rows where necessary in order to provide as complete an itemised financial report as possible.

Print a copy of the completed financial statement and arrange for it to be **signed and dated** by the relevant authorised person (see above). Then scan it and upload it as an attachment.

Financial Report attachment

[PocketRockets\\_IPF-Report-financial-report January 2017 final\\_Ref20150545.pdf](#)