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STEP 1 - ASSESS

Dartington and the University of Cambridge PEDAL Centre have joined forces to apply Dartington's rapid-cycle design and testing approach to the Murray and Cooper book-sharing intervention 'Playtime With Books'.

For the PEDAL Centre, the pandemic's impact of being unable to deliver face-to-face gave the team an opportunity to explore delivery of interventions differently - in a way that was really responsive to the priorities, values and aspirations that families and services have.

In Rapid-cycle design and testing, the Assess step is for organisations to understand the context in which their service is, or will be, delivered – via research and reflection.

Specifically, the PEDAL team looked at which target demographic would be best to try and engage with through this new delivery format. Families facing socio-economic disadvantages were chosen as in the past these are the families that haven't always been reachable with traditional face to face formats as it can be challenging for parents to find time and resources to engage with or be able to access such programmes within their local community.

The team also wanted to know whether virtual platforms, phone calls and video calls could function as an acceptable form of delivery, given this had never been trialed during face-to-face delivery.

"We wanted to know whether we could provide a meaningful intervention to this population and have them engage and benefit from the programme."



STEP 2 - DESIGN

The Design phase allows organisations to translate the decisions made in the previous step into more detailed guidance and tools for staff and delivery partners.

Having assessed the context - and without being able to deliver face to face - the PEDAL team were able to consider new possibilities in terms of the book-sharing intervention and its platform of delivery.

Some of the research questions were designed in response to this:

- Which parents participated in Playtime with Books and were they the expected target population?
- Did parents participate in Playtime with Books as expected (including duration)?
- Were Playtime with Books video-feedback sessions delivered as expected? Why? Why not?
- Was Playtime with Books acceptable to the parents? Why?
- Why not?

It was hoped that the learning from these questions would support the team to be able to overcome some of the barriers that affect face to face delivery formats and feed into data for subsequent cycles.

The team designed the recruitment to ensure that a wide range of parents and carers would be informed about the process by practitioners in various early years sites across the country. The process ensured only those who expressed an interest would be referred (either by self-referral or via a practitioner).



STEP 2 - DESIGN

The contact form was also intentionally designed to ensure the PEDAL team were targeting their priority group (those from a lower socio-economic background). Once selected, a supporting three forms had to be filled out; a contact a demographics form and a pre-questionnaire form.

Alongside this, the PEDAL team designed a supportive process to underpin the 'onboarding' including support calls for parents to complete this paperwork if required.

Once the parent was successfully enrolled they were sent out the books which would be used to accompany the programme. Four books were provided, each in a separate envelope which clearly states the programme week in which the book would correspond. Along with the books five 'skill recap cards' were also included which summarised the online session content. Once the parents had received these resources they could start the programme.

Thought was also put into how the programme experience would be recreated in this new and remote way - this would be by parents completing book-sharing skills sessions online in their own time, recording themselves book-sharing with their child and having video calls with facilitators. To accompany this process, the team designed a helpful set of guides to ensure parents knew how to send in videos to facilitators, how to use Zoom and how to use the online platform 'Moodle'.



STEP 3 - IMPLEMENT & OBSERVE (WEEK 1)

After the research, decision-making and preparation of the previous steps, this is the moment where staff put the design into practice, and the project team provides support on implementation with data collection.

As part of the implementation, enrolled parents would receive a 'welcome call' from the programme facilitator (during cycle one, this was a member of the PEDAL team). This call consisted of introducing the parent to the programme structure, the online platform (Moodle), instructions on how to send the book-sharing video clips using WeTransfer and an introduction to the 3 video chats that would take place. This welcome call was done via Zoom which allowed face to face conversation and step-by-step instructions via screen sharing if needed. By conducting this first call via video it also meant that the facilitator was able to gauge whether there was likely to be any problems with the parents' internet connection or camera which would be required at later stages of the programme for uploading videos and having video-feedback calls of the parents book-sharing.

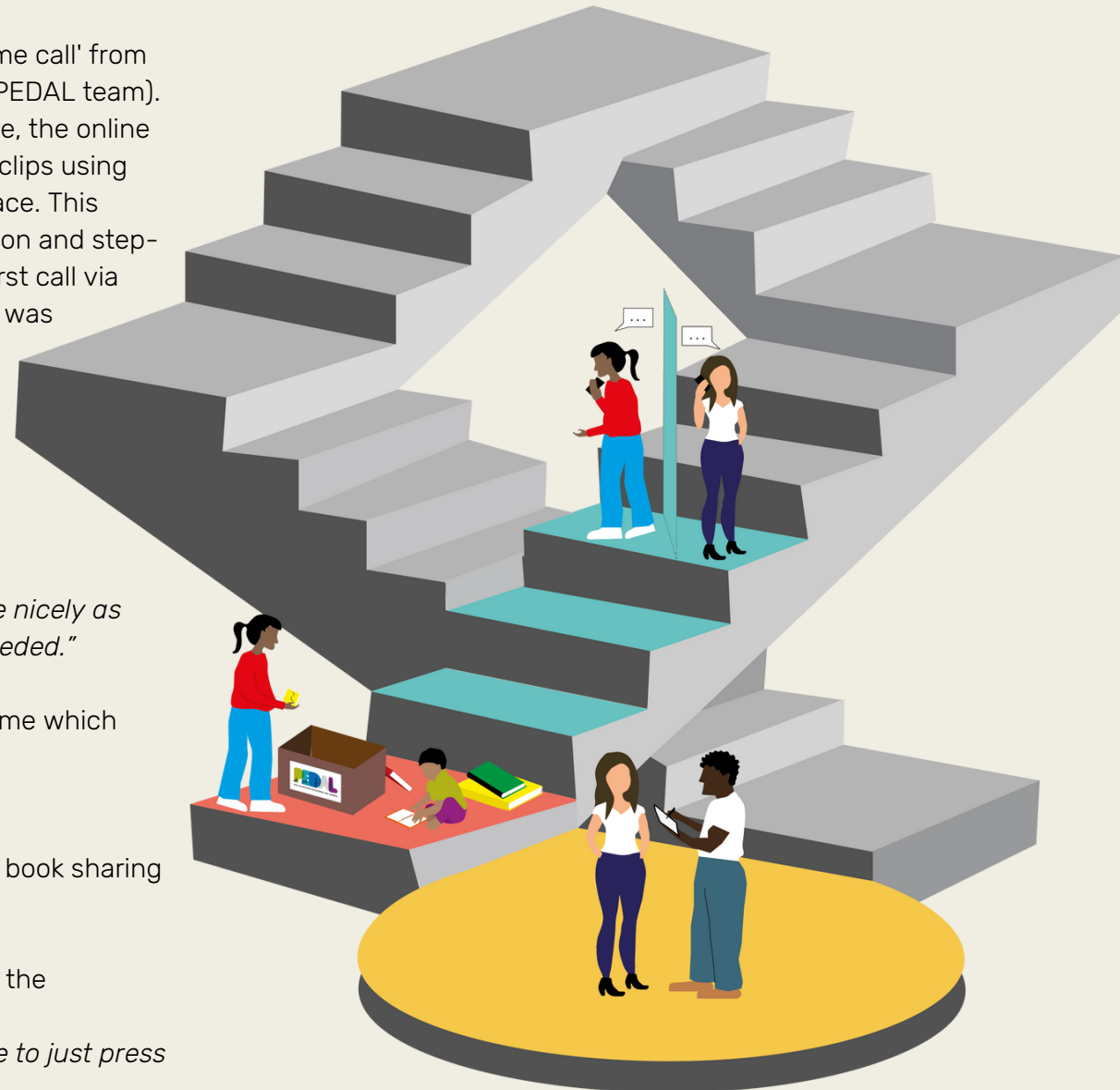
This welcome call was received well by parents citing how *"It wasn't too formal, you were able to just talk, and it was welcoming. It was nice."* The clarity of information provided was *"broken down quite nicely as well. So, you were able to stop and take things, then repeat things if needed."*

Following the Welcome Call, parents could begin week 1 of the programme which consisted of:

1. Enrolment into the first Moodle online session
2. Receiving their log in details from a programme facilitator
3. Completing the Week 1 online session within a week and to practice book sharing daily.

The PEDAL team found that parents were able to complete the tasks in the timescale and navigate Moodle with ease :

"I just used it as a PowerPoint, and it would just flick through. I was able to just press the button to go through, which made it quite easy."



STEP 3 - IMPLEMENT & OBSERVE (WEEK 2)

In Week 2, on top of completing the second session and doing book-sharing daily, parents were asked to record a video clip of them book sharing with their child and send the clip to the PEDAL team. The first video chat with the facilitator was also scheduled at the end of this week.

PEDAL team found that parents managed to send the video feedback with ease and were able to complete the second session within the agreed timescale. Parents even said it was *"a lot easier than I thought it was going to be"*.

An additional finding was that parents valued being able to have a video of their book-sharing interaction with their child: *"It was nice to have the recording. Even if it wasn't the most perfect thing in the world. The recordings that I still have on my phone of me and [child] sharing a book, it is nice to have."*

Beyond this, parents also began to see the benefit of being able to track the progress and impact the programme was having on themselves through the video recordings. This created a shared-value between parents and PEDAL staff in collecting the video data.

"The first one was a bit daunting because again, you don't know what to expect when you're watching yourself on a video. So, the first was a bit daunting, but after that it was just enjoyable. It was enjoyable to see the differences and how things have changed over the course of the three videos"



STEP 3 - IMPLEMENT & OBSERVE (4)

During week 4 of the programme, parents were asked to complete the fourth book-sharing skills session and encouraged to book-share daily with their child. An additional requirement of week 4 was for parents to record a second video clip of them book-sharing with their child and send this to their programme facilitator. Once sent, the second video chat with their programme facilitator could be scheduled (at the end of week 4).

Parents successfully completed both. From this week the PEDAL team found the following:

The linking skills (the ability for parents to show their children 'links' between what they are seeing happening in the book with their own experiences in their day-to-day life i.e. 'look the boy in the book is going to the park, do you remember we went to the park yesterday?') taught through the programme may be more challenging to use with younger children.

"Linking the here and now and doing the things about his past experiences was a bit difficult because he's barely a year, he's not even a year old. He hasn't got many past experiences because of it like being in the lockdown he hasn't got many experiences but trying to link it into things wasn't that easy"

However they did feel they that it would be a transferrable/beneficial book sharing skill to utilise as their child got older:

"But it is something that will get easier as he gets older. So it wasn't that difficult to do. Instead, it was difficult to do with his age"



STEP 3 - IMPLEMENT & OBSERVE (5)

During the penultimate week of the programme, parents had to complete their fifth online book-sharing skills session and were again encouraged to share with their child. Parents were successfully able to do this, and were additionally asked whether they would recommend the programme to other parents.

As with almost all the parents, the PEDAL team was told by one: *"[This programme is] a fantastic way to teach parents how to have fun learning how to explore books with their children. It is a guide to helping your child learn to look at more than just the words in the book."*



STEP 4 - ANALYSE & LEARN

The fourth step begins when all the data collected before a pre-agreed date is analysed to understand what it tells us about the research questions developed in the Design step. Unlike most RCDT processes, the PEDAL team were able to make minor adjustments during the data collection points at week 2, 4 and 6 of the programme to reflect immediate need. However, the final interview and subsequent team meeting provided rich feedback both on feasibility of the programme (as related to the research questions) for both staff and stakeholders.

What did PEDAL learn?

What they learnt about the families was that, on the whole, they are reaching the right demographic and that the delivery was acceptable to parents - the fact that parents did not have to pay for transport, arrange childcare or travel to an appointment made this programme feasible to the parents.

In terms of sample size, the team were grateful to have started small. The team found that they could gain a deeper understanding of the families they were targeting, all the while being able to implement possible solutions straight away when something was not working.

"It's a nicer experience for the parent, the service user. It was a big difference between RCT and RCDT."

It was also found that the experience helped draw parallels between the book-sharing and the everyday interactions parents had with their children.



STEP 4 - ANALYSE & LEARN

For the team themselves, they learnt about using the Rapid-cycle design and testing method and what it means to have a shared language about what is being tested. In the beginning, there was a struggle to grasp concepts such as "flexible components" and how to retrofit a Rapid-cycle design and testing method to a programme delivered in a completely different way. In doing the reflections however, the team decided that it was still a worthwhile method for the kind of programme being tested due to its flexibility, and ability to create "a two way communication between the research team and those who are at the centre of the work - either those who benefit from the programme or those who deliver it."

Speaking about the Rapid-cycle design and testing, the team said:

"Sometimes with science you're made to feel the most systematic approach and rigorous approach is unchangeable - that approach can be frustrating because you can see opportunities to improve things. Now it's highlighted the dichotomy of why different approaches are useful. This process is a development of a programme that works. It's refreshing and eye opening that traditional approaches aren't the only way. You can still be rigorous but be able to adapt with emergent learning and tailoring it to meet the needs of the service users which often gets overlooked."

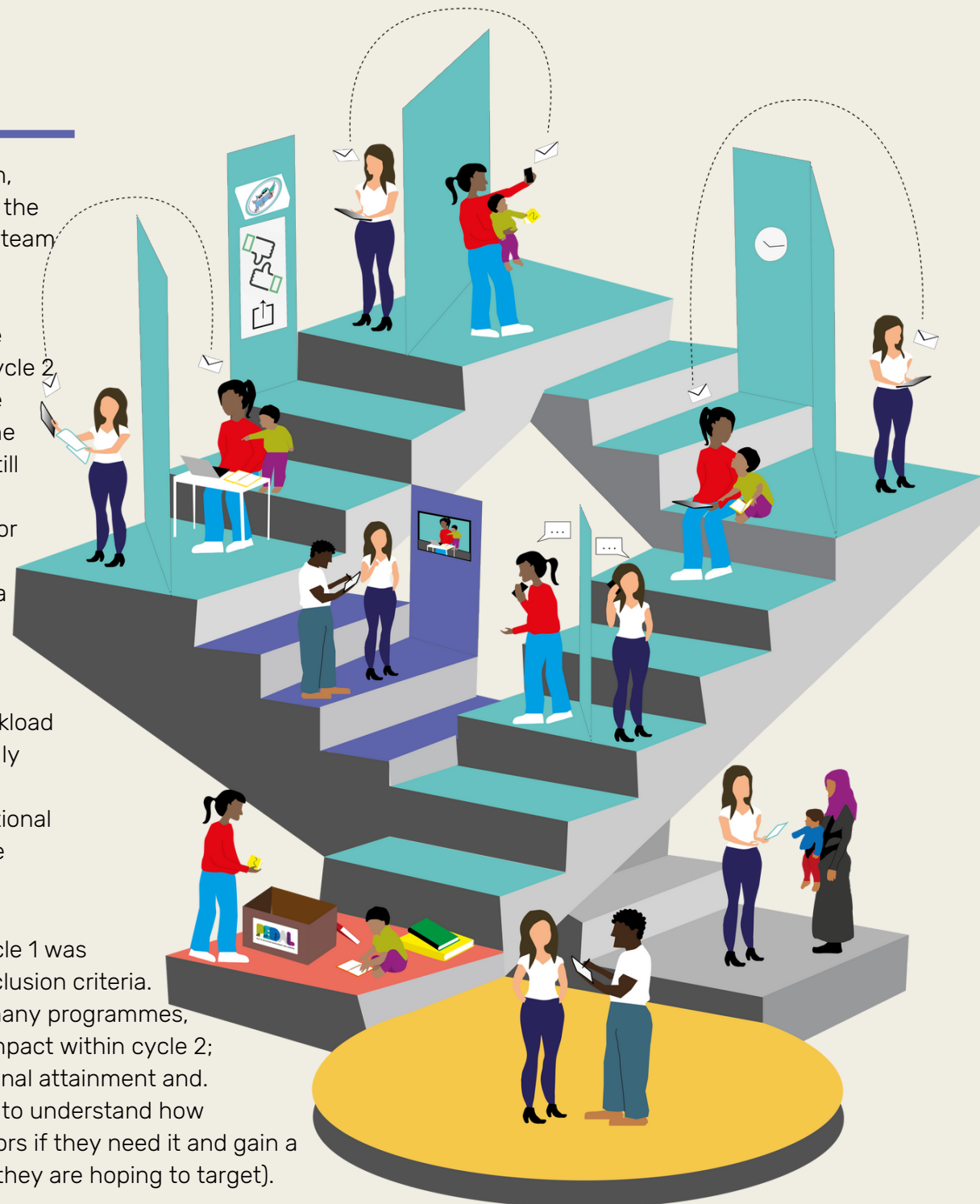


STEP 5 - PAUSE & DECIDE

"At the end of the first cycle of this online programme, the PEDAL team, along with Dartington held the 'Pause and Decide' meeting to consider the key learning. This step is about making decisions: it's when the project team must review the data and decide what they do next.

From the discussion and reflection between PEDAL and Dartington the following three elements of the programme are going to be flexed in cycle 2

- **Relax timing of video feedback calls** to make the programme more acceptable to both parents and facilitators. During the first cycle the video calls were set on weeks 2, 4 and 6. By relaxing this slightly, still encouraging the three calls (and recommending them for the set weeks) but allowing these to also be flexed would hopefully allow for greater programme engagement
- **Explore acceptability for newly recruited facilitators:** Cycle 2 has a greater focus on facilitation, as unlike cycle 1, the programme will be facilitated by recruited and trained practitioners from the recruitment sites, rather than being delivered by members of the PEDAL team. As these are practitioners with an already heavy workload it was concluded that there would be a need in cycle 2 to specifically explore acceptability of delivery alongside their existing work commitments. In light of this it was decided that in cycle 2 an additional question would be included in the facilitator questionnaire as to the feasibility for practitioners within early years settings to deliver a programme on top of their daily workload
- **Change recruitment and relax criteria:** A challenge throughout cycle 1 was participant recruitment and finding parents who met the target inclusion criteria. The PEDAL team reflected that this is a universal challenge with many programmes, but decided to put some measures in place to try and reduce its impact within cycle 2; relaxation of the inclusion criteria (allow for higher parent educational attainment and household income), recruitment site visits by the PEDAL team (try to understand how facilitators are recruiting, offer additional support to those facilitators if they need it and gain a better understanding of how to approach and engage the families they are hoping to target).



STEP 5 - PAUSE & DECIDE

For the PEDAL team using Rapid-cycle design and testing was a new and exciting prospect but they were able to identify some of the key challenges they did find, especially early on in the cycle when they were trying to get familiarised with the process. The challenges they identified were in:

- **Language, terminology and understanding of Rapid-cycle design and testing's process flexibility**
 - Some of the language and terminology used within the Rapid-cycle design and testing process took a while for the PEDAL team to fully grasp. Two particular concepts that were a challenge were the 'flexible and core components' and the programme 'cycles'.
- **Flexible and core components** - the team reflected that to begin with they found it challenging to identify what was core and what was flexible, and how this can change in reflection of the programmes process. They reflected that they "*spent a lot of time trying to fit those things in*", rather than seeing the concepts as more fluid and reflective of how the programme develops in realtime.
- **Programme cycles** -and being more familiar with traditional research methods such as RCT, the concept of having less clear cut phases and cycles without necessarily a predetermined cycle end date seemed a challenge, especially when they had concerns about recruitment and getting enough parents at the start of each cycle. In response to these concerns Dartington helped them to develop a process of 'rolling recruitment' whereby parents are able to start the programme at various points, without the need to wait for a 'sufficient' participant number. For example at the end of cycle 1, as one parent had completed the programme, another two parents were on week 3. This means learning can be collected from both sets of parents thus potentially benefiting from any changes implemented from the learning of cycle 1.



REFLECTIONS FOR OTHERS...

From these discussions the PEDAL team were able to think about what they had learned from the cycle and how this could translate into advice for other organisations that may be considering using Rapid-cycle design and testing too...

- **Make a difference to people on the ground using science**
 - "Doing this method avoids the 'voltage drop' that can sometimes occur with programmes, by helping to ensure that they are developed with the needs of the targeted recipients from the start. This is more powerful, more sustainable and has more longevity, even if it does come with some challenges."
- **Address potential problems or things that aren't working can be addressed straight away rather than having to wait till the end of the trial, as would happen with RCT.**
 - *"Often in RCT's you are able to see possible solutions to some of the issues that are arising but are unable to implement any changes- the RCDT approach allows you to be more adaptive, and flexible."*
- **Have a skilled team to guide you through the RCDT process**
 - *"Many of the concepts will be new and unusual compared to more traditional methods; It's helpful to have that expertise from programme development and sharing that expertise."*





PLAY IN EDUCATION DEVELOPMENT AND LEARNING

Illustrations and report design by Rachel Lily
on behalf of



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