

**Raising Attainment**

**A Guide to Collaborative Action Research**



**Dundee Educational Psychology Service**

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**1. Raising Attainment**

Raising Attainment for all is a key priority both nationally, for the Scottish Government and Education Scotland, and locally for Dundee City Council’s Children and Families Services. The aim of the Attainment Challenge, for example, is to “raise the attainment of children and young people living in deprived areas in order to close the equity gap” (Education Scotland, 2016).

In Dundee, there is a focus on improving measurable outcomes in literacy, numeracy and wellbeing. As such, frameworks are needed that support practitioners to assess, plan and implement approaches that will improve outcomes. It is important that such frameworks include a review of these activities in order that the impact they have can be measured and built upon. One such type of framework is provided by action research.

**2. What is action research?**

Action research involves individuals or groups researching some aspect of their own practice or environment in order to bring about improvement. It can facilitate progress and encourage deeper reflection and understanding at both practitioner and whole-provision levels.

Robson (2002) summarises the main aim of action research as being for practitioners to influence or change an aspect of what they are researching, which in action research is always their own practice e.g. what is the impact of targeted work on self-regulation on the behaviour of children who participate in a soft start each day. Robson explains that improvement and involvement are at the heart of action research.

There are different types of action research, one of which is called Collaborative Action Research (CAR). CAR, also sometimes called Collaborative Enquiry, is a framework that can draw on a range of research methods. This document provides an overview of the key components of CAR and outlines the processes of two models which provide a structure for CAR – Assess Plan Do Review (APDR) and Plan Do Study Act (PDSA).

Worked examples of each are provided further on in this document. It is important to note that regardless of which methodology is used, the aim is to start with small tests of change (e.g. one pupil, a small group, a class), with the possibility of upscaling the improvements on a larger basis.

**3. What are the benefits of using CAR?**

CAR is a methodology that practitioners can use to measure their impact. The use of CAR in this way supports practitioners to adhere to the requirements of their professional bodies and local authority and national requirements.

For example, the use of CAR also accords well with some of the features of highly effective practice in How Good Is Our School 4 (HGIOS 4), the General Teaching Council for Scotland (GTCS) standards (practitioner inquiry) and Education Scotland. It is recommended by Education Scotland as a core element for working to improve education services and Scotland’s Public Services.

It helps practitioners to plan and review their work in a systemic way in order that they can make informed decisions (based on reliable evidence about the impact on children and young people) about what to do more of and what to change. The information gathered during CAR can also be shared with colleagues to promote helpful professional discussion and promote effective practice.

**4. How can children and young people benefit from the use of CAR?**

The use of CAR allows practitioners to gather evidence about the specific approaches and practices that have a positive impact on children and young people e.g. literacy, numeracy and wellbeing. This evidence can then be used, along with other sources of evidence (e.g. the Education Endowment Foundation’s Teaching and Learning Toolkit) to help staff in nurseries and schools make informed evidence-based decisions about how best to teach and support children and young people.

**5. What does CAR look like in practice?**

CAR is part of a three-step model designed to support delivery of interventions that have a positive impact on inequity and attainment. As detailed in Education Scotland’s CAR paper (2015, p.4), the three steps can be summed up as follows:

“• What are we trying to accomplish?

 • How will we know that a change is an improvement?

 • What change can we then make that will result in improvement?...

 …in order to establish:

 • What works?

 • What needs to be changed and how?”

The CAR model requires engagement in a constant process of Assess Plan Do Review (APDR) or Plan Do Study Act (PDSA). Both PDSA and APDR provide cyclical frameworks which support the process of improvement – either may be used, depending on the preference of the nursery or school.

Education Scotland’s CAR paper (2015, p.4) lists six key questions that are integral to any change or research programme. They are:

1. Does everyone in the system understand the agreed aim? (Do all staff understand what is happening, why it is happening and what their role in it is?)
2. Are we using all the information we need to in order to do the things that are most likely to have the biggest impact on our aim? (Are we using the evidence already available to us? Have we looked at, for example, John Hattie’s research on Visible learning or the Sutton Trust Teaching and Learning Toolkit? Do we know our own local data and what it tells us about our context?)
3. Does everyone have an understanding of the methods we are using? (Why and how are we using these methods and approaches to improve attainment and wellbeing?)
4. How do we measure and report on the impact that our changes/approaches are having on the overall aim? (For example, are we using PDSA? What measures will we use and why?)
5. How do we best deploy people and resources to achieve our aim in the best possible way? (Who will carry out the interventions? How does this link to evidence based practice, for example, the best use of Teaching Assistants report?)
6. Do we have a clear plan for how we will innovate, test and share our learning and the learning of others so we can promote improvements more widely? (How do we plan to feed this back within our setting? Within our alliance groups? Within our ward? With parents/carers? With Education Managers and Officers? How do we use APDR or PDSA to support this?)

**6. How can Assess Plan Do Review (APDR) be used?**

One methodology that can be used to facilitate the process of CAR is APDR. This cyclical framework has a wide applicability and is particularly useful for the overall planning of projects (e.g. a nursery or school’s overall plan for How Nurturing Is Our School (HNIOS), Dundee Educational Psychology Service’s (DEPS) overall plan for involvement in the Attainment Challenge) as well as for small tests of change which can then be up-scaled. It supports nurseries and schools to plan and implement the specific details and stages of the work they will be doing (e.g. data available, data sought, detailed plan of action, plan for data gathering and analysis including triangulation and a strong basis from which to identify and plan next steps). It is embedded in Dundee’s Addressing Barriers to Learning (ABLe) framework and is detailed on some of Dundee’s staged assessment and intervention diagrams.

**Diagram 1:** Assess, Plan, Do, Review

Assess – in light of the existing data, what test or change are we going to implement and why

Plan – plan for carrying out the test or change

Do – carry out the test or change

Review – review the outcome in light of the main aim/question and begin next cycle

There are a number of questions/tasks in each stage of the cycle, as shown below in the worked example and in Box 1. A recording template is provided in Appendix 1.

**Assess Plan Do Review – Record Sheet**

|  |  |  |  |
| --- | --- | --- | --- |
| **AIM****What are our main questions/main aims and why?****What are we trying to achieve?**  | **Cycle No. & Start Date** | **Target group/issue** | **Review****Date** |
| Aim: to use filmed interactions reflectively to further develop staff skills in relation to the use of ABC and Beyond and to increase attuned interactions.Main question: Does the reflective use of film with staff enhance their skills in the use of ABC and Beyond and increase attuned interactions? | Cycle 107/03/2016 | Morning Orange GroupAfternoon Blue Group | 28/03/2016 |
| ASSESS | **What data do we have and what does it tell us?** * HNIOS highlighted positive relationships between most staff and children, positive feedback on this from the extended review and Care Commission.
* Dartington data: 12.8% young children have poor language development by age 5, with significant delays in key language development milestones.
* Staff observations have highlighted that children’s interactions tend to be short and functional, staff are keen to extend these and encourage a greater use of language.
* The use of filmed interactions is recognised as effective for this type of work.
 |
| Plan | **What is the intended outcome and how will we measure impact? How will we get this data?**The intended outcome is that staff will grow in skill in relation to their use of ABC and Beyond and will be more attuned in their interactions. This will be measured:* through staff self-report as they work through three sessions of film – staff will scale their confidence and skill and provide qualitative feedback about their progress,
* the video footage will also be used to measure the frequency of target behaviours e.g. turning towards the child, naming positively what you are doing or feeling – it is predicted that these behaviours will increase over each session, as staff skill increases.
 |
| **How do we plan to implement this change/intervention/address the identified need – who, what, why, where, when, how?**Two EYPs (Angie and Sarah) will film themselves on a Thursday during story time with the morning orange group (Angie) and the afternoon blue group (Sarah). They will then review the footage themselves on a Friday and meet with the link Educational Psychologist on the following Monday to review and discuss the filmed interaction and to set a target for the next week. This will take place over three sessions and the APDR record will be completed.Equipment/materials needed: parent/carer permission forms for filming, tablet to film, secure locked drawer to store tablet, observation and target sheets, quiet room for shared review of the film. |
| Do | **What happened during implementation?** The filming went well. A lot of background noise was picked up in one of the filmed sessions, so a notice has now been put on the door to remind people to keep the door closed whilst filing is taking place.The EYPs were a bit unsure at first but have grown in confidence in filming and reviewing their interactions. Their self-ratings of skill in using ABC and Beyond and level of attunement increased over each session. Review of the footage also shows that there was an increase in the number of times EYPs turned towards children, named what they were doing and feeling, and building on children’s initiatives. |
| Review | **What does the data tell us about the impact of this change/intervention? What does it tell us in relation to our aim?**The data tells us that the reflective use of film was effective in supporting staff to feel more confident and develop their skills in relation to the use of ABC and Beyond and in their interactions with children. |
| **What do we need to do next (ongoing assess, plan, do, review cycle)?**Continue to use film in this way and target other key behaviours for three more sessions e.g. using the child’s words, nodding in response to them, checking for understanding. See APDR Record Sheet for cycle 2. |
|  | This template has been adapted from the PDSA template available on the Scottish Government website. Content added by DEPS. [www.gov.scot/Topics/Education/Schools/curriculum/Raisingeducationalattainment/RAFA/QIMaterial/programmetemplates](http://www.gov.scot/Topics/Education/Schools/curriculum/Raisingeducationalattainment/RAFA/QIMaterial/programmetemplates) |

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**Box 1: Assess, Plan, Do, Review**

**Assess**

* What are our main questions/main aim and why?
* What data/knowledge do we have and what does it tell us? (data gathered in school, research evidence e.g. Sutton Trust)
* What else do we need to find out?

**Plan**

* What is the intended outcome?
* What sources of evidence will we gather in order to measure impact?
* How do we plan to address the identified need – who, what, why, where, when, how?
* Does everyone know what their role is?

**Do**

* Implementation of the plan (amendments made as necessary)

**Review**

* What happened during implementation?
* What do all the sources of evidence gathered tell us about impact? (triangulation)
* What do we need to do next (ongoing assess, plan, do, review cycle)?

**7. How can Plan Do Study Act (PDSA) be used?**

PDSA is also a cyclical framework that can be used to test an idea by temporarily trialling a change and assessing its impact. It is particularly helpful for recording small scale changes that can be up-scaled. This framework provides a structure and set of questions which support the planning and evaluation of specific interventions and/or changes to practice (i.e. what was the impact of the change/intervention that was carried out).

**Diagram 2:** Plan, Do, Study, Act

Plan - the change to be tested or implemented

Do - carry out the test or change

Study - data before and after the change and reflect on what was learned

Act - plan the next change cycle or full implementation

See more at: [www.institute.nhs.uk/quality\_and\_service\_improvement\_tools/quality\_and\_service\_improvement\_tools/plan\_do\_study\_act.html#sthash.yL3g1OEX.dpuf](http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/plan_do_study_act.html#sthash.yL3g1OEX.dpuf)

There are a number of questions/tasks in each stage of the cycle, as shown below in the worked example and in Box 2. A recording template is provided in Appendix 2.

**Plan Do Study Act – Record of Activity**

|  |  |  |  |
| --- | --- | --- | --- |
| **AIM****Describe your first (or next) test of change: What are we trying to accomplish? Cycle number: 1** | **By whom?** | **When?** | **Where?** |
| Does the use of Goal-Plan-Do-Review have a positive impact on pupil’s self-regulation in learning relation to challenging numeracy tasks? | P4 and P6 pupils and teachers | During numeracy lessons/tasks | In class |
| P | **PLAN****List the tasks needed to set up this test of change. How will we do it?** | **By whom?** | **When?** | **Where?** |
| * CLPL from DEPS and working group materials already carried out/developed.
* P4 and P6 pupils to be given baseline/pre Myself As a Learner Scale (MALS).
* P4 and P6 teachers to use CLPL and working group materials to support pupils in P4 and P6 to use Goal-Plan-Do-Review during numeracy tasks.
* Impact of the above to be measured in three weeks via post-intervention MALS and teacher and pupil feedback.
 | P4 & P6 pupils and teachers | As per timetable | In school |
| **Predict what will happen when the test is carried out. What do you think will happen?**We predict that by using Goal-Plan-Do-Review, pupils will become more able in managing challenges in numeracy. | **Measures to determine if prediction succeeds.**Pre and post-intervention MALS scores and teacher and pupil feedback. |
| D | **DO****Describe what happened when you ran the test*** For the most part, pupils appeared keen to take part. P4 pupils adapted to Goal-Plan-Do-Review quite quickly and P6 pupils needed more encouragement and scaffolding.
* Pupils found it easier to use when teachers showed them a worked example.
* Teachers said that they felt that implementation was fairly straightforward.
 |
| S | **STUDY****Describe the measured results and how they compared to the prediction.*** Comparison of the pre and post MALS showed that following the intervention, there was an increase in how confident/positive children felt in relation to their learning.
* Qualitative feedback from teachers and pupils indicates that using Goal-Plan-Do-Review is helpful in providing a structure and guidance for pupils to follow.
 |
| A | **ACT****Describe what modifications to the plan will be made for the next cycle.*** Use of Goal-Plan-Do-Review in other literacy tasks with P4 and P6.
* Use a worked example at the start/during the initial explanations.
 |
| This template and headings have been taken from the Scottish Government website. Other content added by DEPS. [www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA/QIMaterial](http://www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA/QIMaterial) |

**Box 2: Plan, Do, Study, Act**

**Plan**

* Describe your first (or next) test of change: - what are we trying to accomplish?
* What cycle number is this? Who, when, where?
* List the tasks needed to set up this test of change - how will we do it?
* Predict what will happen when the test is carried out – what do we think will happen?
* What measures will help us to determine if our prediction has succeeded?

**Do**

* What happened when you ran the test? Describe this.

**Study**

* Describe the measured results - how do they compare to the prediction?

**Act**

* What modifications will be made to the plan for the next cycle?

**8. Choosing which to use – APDR or PDSA?**

As both PDSA and APDR provide cyclical frameworks which support the process of improvement, either may be used. Nurseries and schools may already be using one of these frameworks and wish to continue with that method.

Alternatively, a nursery or school may prefer to try one method in order to ascertain whether it is suitable for their needs. This can be done by one or two practitioners for a short period of time, for example, and then reviewed. If necessary, nursery and school staff can consult with their link Educational Psychologist regarding which method to select.

**9. How can the gathered evidence be used?**

The data gathered regarding the changes that have been made and the impact they are having (e.g. as recorded through APDR or PDSA cycles) are beneficial and applicable in a number of ways, including:

* As part of the ongoing cycle of self-evaluation and improvement (HGIOS 4) e.g. To measure the impact of whole-school and targeted approaches and interventions in relation to raising attainment/closing the attainment gap – what does the evidence suggest about the impact that approaches and intervention in your nursery/school are having on outcomes for children?
* A framework for supporting staff development and practice within the setting/attuning practice to the needs of pupils in an evidence-based and needs-driven way (e.g. HGIOS 4, GTCS standards, underpinning principles of ABLe).
* It provides data and evidence to inform Nursery and School Improvement Plans (the APDR or PDSA records can be used for school planning and evaluation and supports the articulation of this work in extended reviews and inspections).
* It provides data to use in the Attainment Challenge updates to Scottish Government (completed APDR or PDSA cycles provide details regarding the progress made on your provision’s Attainment Challenge action plan by detailing the rationale, outcomes/impact and next steps of interventions and approaches you are adopting).

**10. Where can I get more information and support?**

Nurseries and schools can access support with CAR in a number of ways:

* Consultation and coaching from your link Educational Psychologist
* Learning conversations and networking with other provisions/alliance provisions, etc to share practice and ideas
* Accessing key documents and websites such as:
	+ - Collaborative Action Research:

<http://www.educationscotland.gov.uk/Images/CAR_tcm4-870851.pdf>

* + - Plan Do Study Act/Tools for Improvement:

<http://www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA/QIMaterial>

and

<http://www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA>

and

<http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/plan_do_study_act.html>

and

[www.ihi.org/resources](http://www.ihi.org/resources)

* + - Scottish Government National Improvement Framework: [www.gov.scot/Topics/Education/Schools/NationalImprovementFramework](http://www.gov.scot/Topics/Education/Schools/NationalImprovementFramework) and [www.gov.scot/Topics/Government/PublicServiceReform/Improvementframework](http://www.gov.scot/Topics/Government/PublicServiceReform/Improvementframework)
		- How good is our school? 4th edition: [www.educationscotland.gov.uk/Images/HGIOS4\_tcm4-870533.pdf](http://www.educationscotland.gov.uk/Images/HGIOS4_tcm4-870533.pdf)
		- General Teaching Council for Scotland – What is Practitioner Enquiry? [www.gtcs.org.uk/professional-update/research-practitioner-enquiry/what-is-practitioner-enquiry.aspx](http://www.gtcs.org.uk/professional-update/research-practitioner-enquiry/what-is-practitioner-enquiry.aspx)

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**Appendix 1:** APDR Recording Sheet Template

**Assess Plan Do Review Recording Sheet**

|  |  |  |  |
| --- | --- | --- | --- |
| AIMWhat are our main questions/main aims and why?What are we trying to achieve?  | Cycle No. & Start Date | Target group/issue | ReviewDate |
|  |  |  |  |
| ASSESS | What data do we have and what does it tell us?  |
| What else do we need to find out? |
| Plan | What is the intended outcome and how will we measure impact? How will we get this data? |
| How do we plan to implement this change/intervention/address the identified need – who, what, why, where, when, how? |
| Do | What happened during implementation?  |
| Review | What does the data tell us about the impact of this change/intervention? What does it tell us in relation to our aim? |
| What do we need to do next (ongoing assess, plan, do, review cycle)? |
| This template has been adapted from the PDSA template available on the Scottish Government website: [www.gov.scot/Topics/Education/Schools/curriculum/Raisingeducationalattainment/RAFA/QIMaterial/programmetemplates](http://www.gov.scot/Topics/Education/Schools/curriculum/Raisingeducationalattainment/RAFA/QIMaterial/programmetemplates) |

**Appendix 2:** PDSA Record of Activity Template

**Plan Do Study Act – Record of Activity**

|  |  |  |  |
| --- | --- | --- | --- |
| AIMDescribe your first (or next) test of change: What are we trying to accomplish? Cycle number: | By whom? | When? | Where? |
|  |  |  |  |
| P | PLANList the tasks needed to set up this test of change. How will we do it? | By whom? | When? | Where? |
|  |  |  |  |
| Predict what will happen when the test is carried out. What do you think will happen? | Measures to determine if prediction succeeds. |
| D | DODescribe what happened when you ran the test |
| S | STUDYDescribe the measured results and how they compared to the prediction. |
| A | ACTDescribe what modifications to the plan will be made for the next cycle. |
| This template has been taken from the Scottish Government website: [www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA/QIMaterial](http://www.gov.scot/Topics/Education/Schools/Raisingeducationalattainment/RAFA/QIMaterial) |