Advanced Training Research Project

A Guide for Advanced Trainees

RACP
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About this document

This document outlines the guidelines for Advanced Trainees undertaking the Advanced Training Research Project

For more information or to provide feedback contact

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- Advanced Training (Aotearoa New Zealand): advanced.training@racp.org.nz

Contents

Purpose and overview

The purpose of the research project requirement in Advanced Training programs is to enable trainees to demonstrate competency against the 'Research' domain of the Professional Practice Framework.
By completing an Advanced Training Research Project, trainees across all programs will gain experience in:

- using research methods
- interpretation of research literature
- participating in research at some stage of their career
- developing quality improvement skills.

Submission of a research project provides evidence of:

- the skills of considering and defining research problems
- the systematic acquisition, analysis, synthesis and interpretation of data
- effective written communication.

Three research project types are accepted:

- research in:
    - human subjects, populations and communities and laboratory research
    - epidemiology
    - education
    - leadership
    - medical humanities
    - areas of study which can be applied to care of patients or populations
- audit
- systematic review

The ATRP requirement must be undertaken and completed during Advanced Training. Trainees undertaking dual training will only need to complete one ATRP over the course of Advanced Training.

The ATRP is not required to be a specialty-specific project but must be broadly relevant to the specialty the trainee is undertaking. 'Broadly relevant' as topics that can enhance, complement, and inform trainee practice in the specialty. In the new curricula training programs, the topic should align to at least one of the program learning goals

For more information on how to develop and plan a research project, please see available RACP Online Learning courses.

Title	Description	Audience
RACP Research Projects online course.	The Research Projects online resource is a self-directed resource covering the process of conducting RACP research projects. There are examples of completed projects available for review. *Please note that the acceptable projects formats have been expanded, please see full list above.*	Advanced Trainees
Research Supervision	This resource is designed to help Advanced Training Research Project supervisors address a number of key	Advanced Training

Title	Description	Audience
	supervision skills to help trainees succeed in completing their Research Projects.	Research Project Supervisors

The research project must be undertaken and completed during Advanced Training, unless the trainee is applying for Recognition of Prior Learning for a previously completed PhD, Master's by Research or project completed in a Master's by coursework.

Additional project formats may be considered for acceptance provided they meet the standards outlined in the research projects guidelines and marking criteria. Trainees and supervisors seeking approval of additional project formats should provide justification as to how the project submission meets the criteria.

Research Project types

Type 1: Research in human subjects, populations and communities or laboratory research

This category includes:

- human subjects, populations and communities and laboratory research
- epidemiology
- education
- leadership
- medical humanities
- areas of study which can be applied to care of patients or populations

Process
These are the steps for conceptualising, executing and reporting research in human subjects, populations and communities or laboratory research:

Step	Overview
1. General preparation	• identify a supervisor and review the College guidelines • develop skills in scientific writing to be able to apply for grant support and publish scientific and medical papers
2. Identify the problem and formulate research questions	• consider and define a health-related problem • review, analyse and synthesise evidence related to the existing literature or current practice to identify research gaps and to formulate research questions or hypotheses
3. Develop the research design	• convert information needs into answerable questions and clearly identify the specific aims of a study designed to address the question • identify an appropriate research method and techniques • identify the ethical issues arising from conduct of the study • obtain ethics approval from the appropriate body, if required
4. Collect or identify data to achieve the study objectives	• either quantitative or qualitative methods
5. Write up research	• appraise and synthesise the research findings considering the research objectives and hypotheses • set findings within the context of the wider literature on the topic • apply the results of the study to practice • demonstrate effective and succinct written communication • outline how research should and could contribute to the practice of evidence-based medicine • assess strengths, weaknesses and limitations of the research project • reference using a consistent style
6. Self-reflection	• evaluate own performance • discuss performance with the supervisor, considering if any issues arose during the research project and how the findings might change the trainee's practice

Type 2: Audit

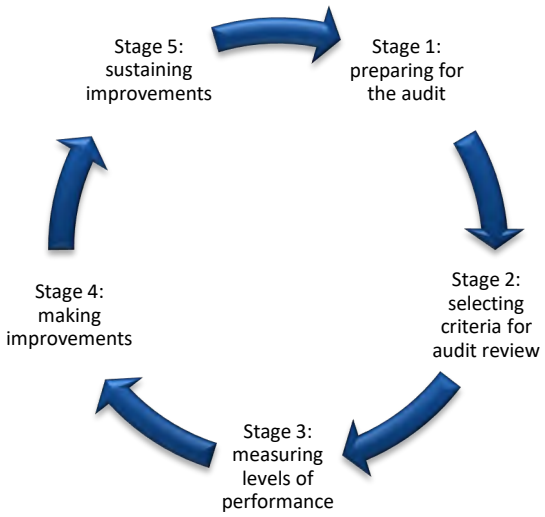
An audit project aims to assess, evaluate and improve the quality of health care through the systematic review of practice. A specific component of practice to be reviewed is identified and local performance is assessed against specific criteria in relation to the gold standard. This assessment will identify substandard areas, and specific recommendations should be made to implement improvements, based on a succinct review of the literature. The audit should then be repeated to assess the success of the interventions. If this is not possible due to time constraints, then a plan for implementing, measuring and sustaining improvements must be presented.

The audit should be of an area of interest to the trainee. It may audit a novel project or program within the hospital.

The trainee should demonstrate a clear understanding of the audit cycle (see Figure 1), with evidence of how their work will lead to an improvement in clinical practice.

The size of the audit will be dependent on the topic and nature of the audit undertaken. The presentation of the audit must adhere to the standards for presentation of research, including the suggested word count.

Audit cycle[1]



Process

This should follow the paradigm of 'joined-up research' which would begin by assessing a problem, moving on to implementing change, and completing the circle by evaluating change over an appropriate period.

1. Identify a topic that is important to audit
2. Review the literature and other relevant information to determine standards against which to audit
3. Develop audit criteria that will measure performance against the agreed standard
4. Collect and analyse data and report results
5. Reflect on results and develop improvement plan
6. Implement improvement plan
7. Repeat data collection to measure improvement.

[1] Benjamin A. The competent novice. Audit: how to do it in practice. British Medical Journal. 2008; 336; 1241-1245.

Type 3: Systematic review

A systematic review is a method of critically appraising bodies of research studies with a high level of rigour. Systematic reviews are different to narrative reviews and expert commentaries, in that they use a well-defined protocol to ensure high coverage of all the relevant information and so can be replicated easily. Typically, a standard, published protocol, such as the PRISMA guidelines would be used.

For College research projects, the systematic review should be conducted in an area of relevance to the trainee's practice.

Process

1. Define the review question and rationale behind the question.
2. Develop inclusion and exclusion criteria for including studies, search for studies and explain search syntax, define search strategy, e.g. brief description of PICO, identify and defend databases searched.
3. Assess study quality.
4. Select studies and collect data.
5. Assess risk of bias in included studies.
6. Analyse data.
7. Interpret results and draw conclusions.

Presentation of research

The report should contain the following sections:

1. **Abstract**
   - concise summary of the background, aims, methods, results, conclusions
2. **Introduction**
   - discussion of the literature and placement of the study in context
3. **Aims of the research**
4. **Methodological approach**
   - description of appropriate method chosen in sufficient detail to allow the study to be replicated
5. **Statistical analysis**
   - quantitative or qualitative analysis for the study
6. **Results of the study**
7. **Discussion**
   - interpretation of results and findings
   - discussion of the study and placement of the results in context of the available literature
   - limitations of the study
8. **Conclusion**
9. **Reference list**

The word limit should be appropriate to the type of study. For quantitative research up to 3500 words is expected and for qualitative research up to 5000 is expected. The word limit does not include words in table, references, abbreviations and table/figure legends.

Trainees should present their research projects orally at hospital, state or national meetings and are encouraged to publish their work and identify an appropriate peer-reviewed journal for submission for publication which may be eligible for ATRP exemption – for further detail, refer to exemption during training section.

If the project is submitted for publishing, the research project should adhere to the requirements of that journal, and instructions to authors for the journal should be submitted with the research project.

Advanced Training Research Project Supervisor role

A research project supervisor guides project choice, method, data analysis and interpretation, and quality of written and oral presentation.

A project supervisor requires specific skills and experience. It is recommended that trainees find an Advanced Training Research Project supervisor who is not their Rotation Supervisor. To find an Advanced Training Research Project supervisor:

- explore the work of notable researchers in a hospital or network who may be able to help find suitable potential project supervisors
- ask a training rotation supervisor for advice or other relevant contacts
- attend research groups or events at training settings to get ideas, meet research supervisors and network with trainees

These steps are important, particularly for trainees located at small training sites with limited research opportunities.

Trainees who have both an Advanced Training Research Project supervisor and a Rotation Supervisor should ensure both supervisors are aware of progress made towards research project work.

A project supervisor should:

- familiarise themselves with the guidelines and marking standards
- recommend colleagues to assist with supervision, if necessary
- meet with the trainee early in the period of supervision to clarify the research project goals and requirements
- consider and provide feedback regarding the merits of the proposed research project early in the process
- ensure the planned research project is feasible and of a suitable standard
- review the feasibility of the project timeline
- clarify access to statistical support or other resources required
- monitor progress at regular intervals
- review the research project prior to submission, ensuring it’s of an acceptable standard
- support a trainee to find a forum to present the research project
- approve the research project prior to submission to indicate that the proportion of work attributed to the trainee is correct

When selecting a research project supervisor, choose someone who:

- aligns with the project goals
- is an expert in the area of research
- is available for regular meetings or other correspondence
- is interested in providing mentorship and guidance on the project
- is interested in the topic of the proposal
- provides constructive criticism on completed work, such as abstracts and academic writing
- enjoys sharing knowledge, such as laboratory or technical skills, academic research and writing skills
- is experienced supervising research students

Manageable expectations should be established along with open and clear communication between the trainee and project supervisor from the beginning.

Access the Research Supervision self-paced online course for more information.

Requirements and Education Policy

All Advanced Training programs require an Advanced Training Research Project (ATRP). Before planning starts, it is important to refer to the relevant Advanced Training Learning, Teaching and Assessment (LTA) Programs to review the specialty requirement.

Advanced Trainee program	Link to requirements
New curriculum trainees	RACP Online Learning
PREP trainees	Advanced Training specialty pages

There are some important Education Policies and forms to refer to before starting a Research Project.

Education Policy or form	Purpose	More information
Academic Integrity in Training Policy	This policy sets out the meaning of academic integrity in the context of RACP training. The policy defines the principles that underpin the RACP approach to academic integrity and the roles and responsibilities of the relevant parties.	Submission guidelines
Recognition of Prior Learning policy	Recognition of Prior Learning (RPL) is the formal recognition of experience obtained prior to entry into an RACP training program. Apply for RPL to have research experience obtained before entering Advanced Training recognised as completion of ATRP.	RPL criteria
Advanced Training Research Project Exemption Form	Apply for an exemption if research activities have been undertaken during Advanced Training but outside of the Advanced Training Research Project. An exemption can be applied by trainees who undertook research during an interruption of RACP training.	Exemption criteria

Recognition of prior learning	
When to apply	RPL applications for research activities must be applied for within 6 months of commencing the first approved rotation in an Advanced Training Program. Trainees are required to submit evidence of satisfactory completion with an application.
Criteria Trainees can apply for Recognition of Prior Learning (RPL) for the Advanced Training Research Project requirement if they meet the following 2 criteria	1. Successful completion of one of the following before entering Advanced Training: 1. research doctoral degree, like MD or PhD 2. Master's/higher degree by research 3. major project completed through a Master's by coursework 4. publication of research as first author in a peer-reviewed, indexed medical scientific journal Research completed through a primary medical qualification is not eligible for RPL.
	2. Completion of the above in one or more of the following accepted project topics: • human subjects, populations and communities and laboratory research • epidemiology • education • leadership • medical humanities • areas of study which can be applied to care of patients or populations.
RPL policy	Applications for recognition of research completed prior to entry into training are considered in accordance with the RACP Recognition of Prior Learning Policy.
Application process	1. complete the Recognition of Prior Learning application form (PDF) 2. email completed form and supporting evidence to: • Advanced Training (Australia): advancedtraining@racp.edu.au • Advanced Training (Aotearoa New Zealand): advanced.training@racp.org.nz

Exemption during training	
When to apply	An application for exemption may be submitted to the College at any time during Advanced Training. We recommend trainees apply as soon as possible to allow time for review and to avoid delays in recommendation to Fellowship.
Criteria Trainees can apply for an exemption from the ATRP if they meet the following 2 criteria	**1.** Currently undertaking or have successfully completed one of the following during Advanced Training, or during an interruption of Advanced Training: **Research completed** • research doctoral degree, like MD or PhD • Master's/higher degree by research • major project completed through a Master's by coursework • publication of research as first author in a peer-reviewed, indexed medical scientific journal
	2. Currently undertaking or have completed the above during Advanced Training in one or more of the following accepted project topics: • human subjects, populations and communities and laboratory research • epidemiology • education • leadership • medical humanities • areas of study which can be applied to care of patients or populations
Exemption form	Submit one of the forms below: • Advanced Training Research Project exemption application form • Advanced Training Research Project exemption application form for major project completed through a Master's by coursework
Application process	1. complete the Advanced Training Research Project exemption application form 2. email completed exemption application form and supporting evidence to: • Advanced Training (Australia): advancedtraining@racp.edu.au • Advanced Training (Aotearoa New Zealand): advanced.training@racp.org.nz
Exemption outcome	An exemption application will be assessed by the specialty Advanced Training Committee or Subcommittee, and the trainee will be notified of the outcome. An exemption will only be granted if the evidence provided demonstrates that research meets the learning outcomes of the research requirement. Trainees who have not yet completed their degree will be considered 'eligible for exemption' until evidence of satisfactory completion has been submitted. This evidence must be submitted before the end of Advanced Training for the exemption to be granted.

Submission guidelines

Trainees must submit their research projects electronically with the ATRP cover sheet. Each project will be sent to two reviewers. Reviewers will mark the projects against

The ATPR is required to be submitted by the end of Advanced Training. It is recommended that the ATPR be submitted for marking by the end of the specialty consolidation phase (penultimate year of training) to allow time for resubmission in the transition to Fellowship phase if the project is unsatisfactory.

Research projects are independently marked by two assessors using assessment criteria that are common to all training programs. In the case that the two assessors cannot reach agreement, the research project is sent to a third assessor who will determine the final outcome.

Important resources	Description
Advanced Training Research Project cover sheet	Trainees must submit their research projects electronically with the relevant cover sheet. Each project will be sent to two reviewers.
Marking criteria	Reviewers will mark the projects against set marking criteria.
Turnitin	**Turnitin** Turnitin is an originality and plagiarism detection tool, which compares projects against electronic texts from the Internet, published works (such as journal articles and books), and assignments previously submitted to Turnitin by other students. Trainees will be required to obtain a similarity report from Turnitin. The report must be submitted with the project. Trainees will have the opportunity to obtain the similarity report and make any changes prior to submitting the project to the College for marking. An updated similarity report must be submitted with the project if changes are made. If this is not submitted, the College will obtain a report on the trainee's behalf and the trainee will not have the opportunity to make changes.

Deadlines and review timelines

There are three deadlines that need to be adhered to when submitting an Advanced Training Research Project. The trainee can choose to submit a Research Project on any of these three dates throughout the year.

It is strongly recommended that trainees submit their research project in the penultimate year of training/end of the specialty consolidation phase, to avoid delay in progression through training or admission to Fellowship.

- Deadline 1: 31 March (Australia and Aotearoa New Zealand)
- Deadline 2: 15 June (Australia and Aotearoa New Zealand
- Deadline 3a: 15 September (Australia only)
- Deadline 3b:15 December (Aotearoa New Zealand only)

Any research project received between two deadlines will be distributed for marking after the next published deadline. For example, if an ATRP is submitted in May, it will be distributed for marking after the 15 June deadline.

Trainees can expect to receive an outcome within approximately 8-12 weeks from the next published deadline closest to the submission date.

The review timeline may be longer between September and January, when most project submissions occur.

Final year trainees due for Fellowship at the end of the year who submit their research project after 15 September will still have their project distributed for marking. However, the review will take more than 12 weeks over the December–January holiday period, which could potentially delay admission to Fellowship.

Marking information

There are three outcomes that a project reviewer can make to a research project when marking.

Outcome	Grade	Resubmission information
Pass	Meets expected standard. Below expected standard in no more than 1 criterion	• Not applicable
Resubmit	2 or more areas below the expected standard	• If a project is marked as ‘resubmit’ a trainee will have 2 opportunities to resubmit the same project to the markers with revisions. • If a trainee is dissatisfied with the outcome after 2 resubmit outcomes, they may request 2 new reviewers to mark the project. • If new reviewers are requested, this re-mark can only be marked as pass or fail. • If the project is marked as a fail by the two new reviewers, the trainee cannot resubmit it again. To meet the requirement, a substantially new project will need to be completed.

Outcome	Grade	Resubmission information
Fail	Does not meet any of the criteria for a research project	• A trainee may also request 2 new reviewers to mark their project if their project is marked as a fail in the first instance. • A new project will need to be submitted.

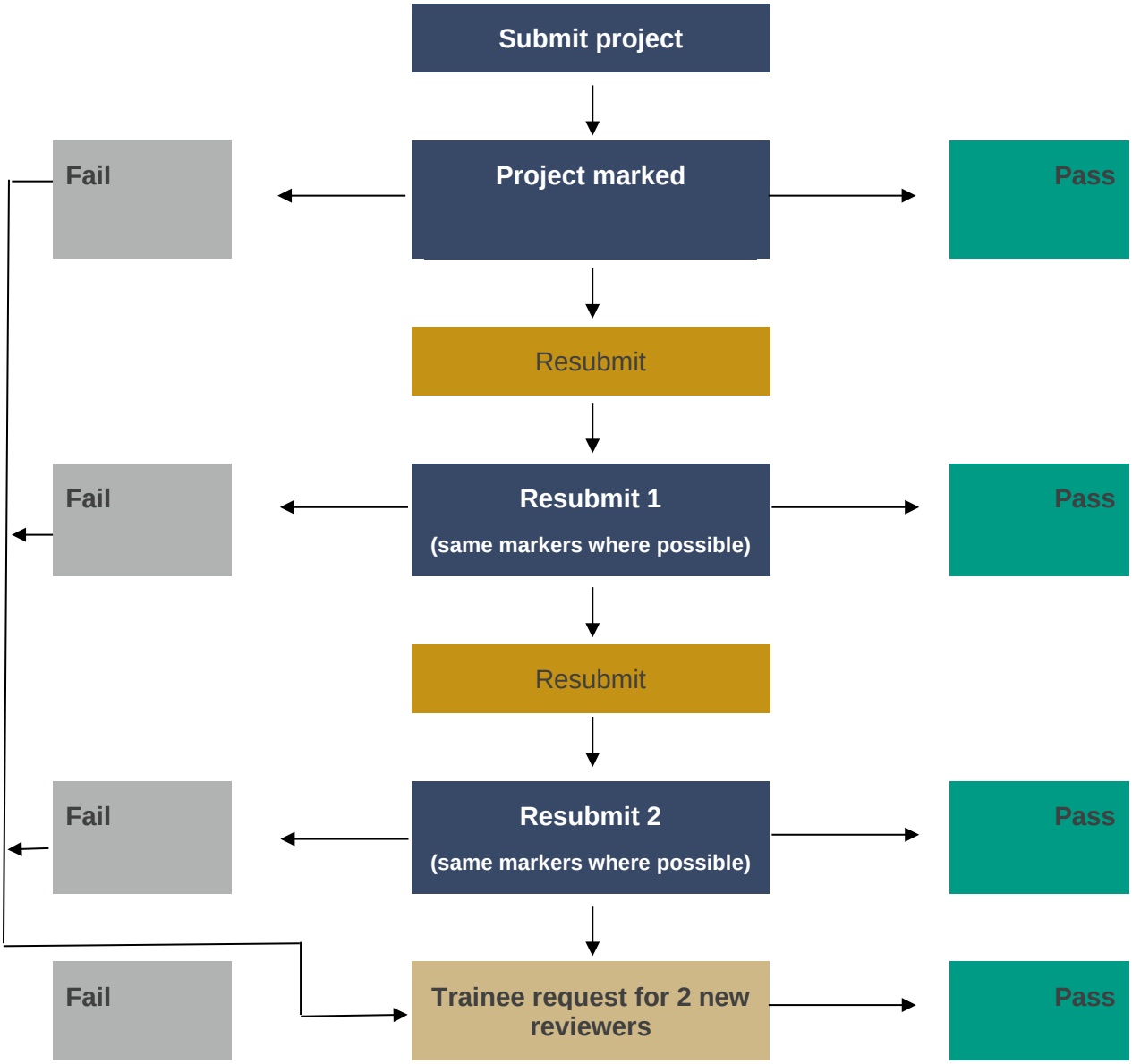
Project markers

ATRPs are reviewed and assessed by 2 RACP Fellows from the specialty the project is submitted for.

If a trainee is required to resubmit their project, the revised project is sent to the original reviewers where possible. In the event the reviewer/s are unable to re-review the project due to extended leave or other extenuating circumstance, the project will be sent to alternate reviewers. The initial project feedback will be shared with the new reviewer/s.

Project submission process

This flowchart outlines the submission and marking process for the Advanced Training Research Project.



Further queries?

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