School of Education and Technology

Applied Research Project (ARP) Handbook

Master of Arts in Learning and Technology

Revised January 21, 2025

Applies to 2024 - 2026 Intake MALAT ARP Completion Pathway

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SECTION 1: General Information on Graduate Research in the School of Education and Technology

The MA in Learning and Technology is an innovative academic program that is designed to offer its graduate students both rigorous academic training and applied skills in the fields of learning and technology. Given the dynamic nature of this intersection, there are many opportunities to undertake research that is new, innovative, and interesting.

There are three research completion pathways in this program: (1) thesis, (2) applied research project (ARP), or (3) a digital learning research consulting project (DLRCP). Each pathway provides graduate students with an opportunity to engage in rigorous research that will contribute to the field while contributing to the skills and knowledge of the researcher. Conducting research in any of the three completion pathways means making a commitment to design and conduct of a substantial piece of independent work. The work must conform to the academic standards and conventions outlined below.

Purpose of Handbook

This document is designed to offer guidance for graduate students who have chosen to complete an ARP rather than a thesis or a digital learning research consulting project (DLRCP). It provides comprehensive guidelines for MALAT students as well as guidance to the academic supervisor overseeing ARP work and the ARP sponsor.

Requirements for Degree Completion

To graduate with an MA in Learning and Technology, graduate students must complete a minimum of 33 course credits. Course credits will normally consist of on-campus residency course work (blended program) or online equivalent (fully online program), course work taken at a distance, and the successful completion of the independent research component. The allocation of credits will depend on whether the graduate student is writing a thesis or an applied research project or a digital learning research consulting project.

ARP Timelines

The table represents general timelines and tasks associated with the MALAT ARP. For further detail, including specific due dates, consult the course schedule in Moodle.

ARP Activity	**Timeline**
Complete LRNT 622 NOTE: LRNT 622 is a pre-requisite for LRNT 691	Prior to beginning LRNT 691
Abstract and Research Question	January 2025
Obtain Sponsor Agreement	January 2025
Draft Version of Chapters 1 to 4 for Peer and Supervisor Feedback	March 2025
Virtual Symposium Presentation	April 2025
Draft Version of Chapters 5 and 6 for Peer and Supervisor Feedback	April/May 2025
Final Submission of ARP	Early June 2025
Address revisions and edits	By end of course*

*Students not successfully completing all course requirements by the end of course date will be required to apply to the MALAT program office for a program extension.

MALAT Program Learning Outcomes to be demonstrated

The MA in Learning and Technology program has foundational program learning outcomes (Appendix 1). The following program learning outcomes are directly associated with the MALAT ARP.

- PLO 1 Communicate and synthesize information and arguments at the graduate level.
- PLO 7 Contribute meaningfully to digital learning networks and communities.
- PLO 8 Explain the interrelationship between innovation, change and digital learning environments and their impact on organizations and society
- PLO 9 Apply reflective process to improve professional practice
- PLO 10 Critically evaluate and/or produce research.

An MA qualification is awarded to those graduate students who have demonstrated an appropriate depth of knowledge in the above areas. All projects must be relevant to the field of learning and technology.

ARP Goals

The ARP completion pathway includes designing and conducting the ARP itself as well as creating the ARP final paper. An ARP requires a sponsor within an organization (see Section 3 of this handbook for information on the role of the organizational sponsor). The ARP and the related ARP final paper should constitute approximately 200 hours of effort by the graduate student resulting in the awarding of 6 credit hours. This course is not taught, but students are supported by the Academic Supervisor on a 1:1 basis. The Academic Supervisor is the instructor of record for the course and possesses a relevant PhD.

In doing the ARP, students will consult with up to 3 stakeholders in the sponsor organization as part of the needs analysis component of the ARP. LRNT 691 has a course blanket ethics for data collection for the needs analysis component according to the research ethics guidelines outlined in the course and included for reference in Appendix 2.

> NOTE: If you are required in your context to apply for additional ethics, consult with your LRNT 691 Academic Supervisor before going forward as you will need to receive approval for an additional ethical review. If there is insufficient time to get this additional ethic review complete within the schedule and timelines of LRNT 691, you will be required to post your research question on your public MALAT blog for feedback. In doing so you will be required to include a disclaimer that any comment provided to the blog post may be used to inform your ARP as part of a requirement of your MALAT program.

The ARP final paper constitutes a substantial written investigation of the issue(s) examined in the project and the rationale for the overall project direction relevant to the study of learning in technology-mediated environments. Research-related learning outcomes of the program will be demonstrated in the ARP final paper; a demonstration of research skills, critical thinking and effective writing will be especially important. The ARP final paper will be assessed by the academic supervisor who is the instructor of record for LRNT 691 and who holds a doctoral degree. Standards of validity and academic rigor apply as appropriate to the nature of the ARP project.

Time to Complete Master's Degree

Graduate students who do not complete their ARP final paper by the specified end date will be required to apply for and receive a program extension.

Extensions:

From time to time, unavoidable circumstances will arise that prevent the graduate student from completing the research component of the program. An extension is required if the research is not completed by the scheduled end date of LRNT 691. A program extension of up to 90 days can be applied for; approval of the extension request is required from the academic supervisor and the MALAT Program Head. Extensions require the approval of the dean, or authorized designate of the Faculty of Social and Applied Sciences.

SECTION 2: Policies Governing Graduate Research

Compliance with RRU Policies

The information described in the handbook is consistent with the policies and procedures governing the academic operation of Royal Roads University.

RRU Policy Precedence: Formal university policies and regulations take precedence over the information contained in the research handbook.

Ethical Review Process

LRNT 691 has obtained ethics approval on behalf of students in LRNT 691 to conduct a human-centred needs assessment. The blanket ethics approval for this course must be reviewed and discussed with your academic supervisor to ensure that you and your intentions for your ARP are conforming. You are required to have completed the Tri-Council ethics tutorial before starting any research involving humans. ARPs need to comply with the following:

- The data collection methods will be limited to interviews.
- Participants will be asked to contribute under one hour each.
- You will be obtaining free and informed consent from all participants*.
- No more than three participants (your sponsor and up to two other key stakeholder/s) will be involved to provide insights on the need for research that addresses your research question/s. No participants will be under 18 or part of a

vulnerable population.

- The organization involved does not require its own ethical review.
- You are not in a position of power over any participants.
- You are not in a conflict of interest.
- You will store any data collected locally or on secure internal servers (not in the cloud or in servers located outside Canada).
- Stored data will be deleted permanently after 6 months.
- You do not have a perceived conflict of interest http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter7-chapitre7/. If you are an employee of the organization you are researching you will need to make this transparent and explicit on your informed consent form.
- The data collected will be used to produce the final ARP paper for LRNT 691.
- Participants can withdraw at any time.
- Participants views and opinions will be collected and reported back in the ARP paper but no personally identifiable information will be used.
- If your work is going to involve Indigenous peoples as defined here http://www.ger.ethique.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/#toc09-1, you will need to consult the Royal Roads Office of Research.

If your project falls outside of what is described above, consult with your academic supervisor before going forward with your ARP as you will need to receive approval for an additional ethical review.

Confidentiality in Research

In the ARP, graduate students undertake research with the support of an organization, such as their employer. When graduate students are conducting their research to serve the needs of an organization, they are required to adhere to the confidentiality guidelines of the organization. Potential projects that require graduate students to restrict their investigative or reporting methods should be avoided.

Restrictive Practices: Issues of confidentiality and non-disclosure must be thoroughly explored with your academic supervisor. Non-disclosure agreements or restrictive practices that curb the ability of the researcher to fulfil their research requirements should be avoided because it obligates the individual to confidentiality and restricts the use of specific information.

Examples are:

- an organization reserves the right to restrict the types of data reported in the final paper;
- an organization limits distribution of the final paper and therefore the ability of other researchers to use the paper are restricted; or
- an organization does not permit the graduate student to describe relevant productivity data or financial information in the final paper.

Intellectual Property and Research

The completion of the ARP may result in the creation of new knowledge, processes or tools. Ownership of this new knowledge, process or tool can be complicated, especially if the outcomes of the research has potential commercial applications. In most cases, the owner of the new knowledge, process or tool is the originator of the idea (i.e. the Royal Roads student). Students who create intellectual property as part of their ARP should familiarize themselves with the current intellectual property guidelines adopted by the university and speak with their academic supervisor and the Office of Research researchservices@royalroads.ca

Examples of intellectual property include written reports, supporting data, DVD's or digital media, sets of evaluation instruments produced to gather data, or databases used to collate and analyze data. Ideas are not considered intellectual property until they have been recorded in some medium that others can read, review, touch and/or see.

Ownership of Intellectual Property:
The issue of intellectual ownership becomes difficult when the person conducting a research project is either a paid employee or a paid contractor of the firm for whom the research project is being conducted. In these cases, ownership of any intellectual property should be clarified before the research is undertaken.

The method of clarifying ownership could be as simple as a statement in the Letter of Agreement or as complicated as a legally binding research contract. Research contracts often stipulate that intellectual property (which could be copyrighted) may be jointly owned and the agency or company participating in the research effort has the authority to exploit the knowledge, process, or tool for commercial gain.

RRU and Intellectual Property:
Royal Roads University holds no claim on the intellectual property produced as a result of the research project.

Copyright and the University

Copyright is the right to copy, distribute, publish and/or sell all or part of an academic, artistic or commercial product. The author of an RRU ARP final paper owns the rights to his or her product and should claim copyright on the title page of the final paper. Note that the Creative Commons Attribution-Non-Commercial ShareAlike logo (cc) may be used instead of the copyright symbol used here. This would require a statement as the second page after the title: Creative Commons Statement

> *This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 2.5 Canada License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-sa/2.5/ca/.*

All Royal Roads students are **personally responsible** for ensuring that their ARP final paper complies with Canadian Copyright Laws by obtaining permission for any third-party materials

reproduced or adapted for use in the thesis prior to final submission. These third-party materials remain the copyright of the original owner and may not be used without written permission of the copyright owner.

What are 'third-party' works?

Third-party works include anything that a student did not create themselves, and for which they do not own the copyright. However, work that a student has created for their employer, as a regular employee, is owned by that employer. Similarly, if a student has a contract agreement to create work for someone, the ownership of the work will be determined by the contract.

What are some examples of third-party works commonly used in theses?

- Figures
- Tables
- Diagrams
- Drawings

Although these may be small, they are **always** protected by copyright and students are required to obtain permission from the publisher or copyright owner to copy them into their work.

Redrawing or adapting any of these also requires copyright permission.

Those created by students using a cartography program – no permission is required for use in the thesis. A purchased map or aerial photograph – students need to make sure that the purchase agreement is for **commercial use** of the image. A map created by someone else – permission from the copyright owner is required to reproduce or to adapt and use it in the thesis.

Maps that belong to a student's sponsoring organization - copyright permission is required from the organization Google Maps and Google Earth - do not require copyright permission as long as the student adheres to Google's stipulations regarding attribution and use.

- Photographs

Any photographs not taken by the student will require copyright permission. Photographs of human research participants may not be used unless participants have given documented prior permission for such use as part of the Research Ethics Board-approved formal consent process.

Images and photographs found through Google Images or on websites such as flickr.com may not necessarily be used without permission. Students will need to determine who owns the copyright to the images they wish to use, and if the site has not indicated that permission is granted to use them for commercial use, students will need copyright permission to publish them in their thesis.

- Logos

Students will need to obtain copyright permission to publish logos in their thesis. Students may want to consider removing logos from their thesis if they are not absolutely necessary.

- Lyrics, poems

Although song lyrics and poems may be very short, they are always protected by copyright and require permission for use in a thesis.

- Substantial portions of text

Students need to consider the proportion of the text they want to reproduce in their paper to the whole of the document from which it came. A few paragraphs from a book may be 'unsubstantial' and therefore available to use without permission, while the same number of paragraphs from a short paper may require copyright permission

Reproducing entire documents in the appendix to one's paper is not permitted; students must obtain permission from the copyright owner.

Further information is available from the *Copyright Information for Thesis and Dissertation Publication* guide at: http://libguides.royalroads.ca/copyright_for_thesis_publication

Copyright Compliance Form Letter

By submitting their ARP final paper for assessment, students must confirm that they have obtained the necessary copyright permissions using the Royal Roads Copyright Compliance form in Appendix 3.

When students are asking for permission to use material in their ARP final paper, the wording used is very important. The person granting permission needs to be fully informed of how the material will be used and distributed. Information about copyright and a downloadable copy of the Royal Roads Copyright Permission Letter is available at http://libguides.royalroads.ca/c.php?g=264983&p=1769339.

SECTION 3: Roles and Responsibilities

The Role of the Graduate Student

The graduate student is responsible for planning, implementing, and completing the ARP, and writing the ARP final paper.

The graduate student:

- reviews and understands the policies, regulations, and guidelines governing the completion of ARP as outlined in the MALAT ARP Handbook;
- identifies an opportunity, challenge, issue, or problem that meets program guidelines for an ARP within an organization;
- develops the ARP preliminary project abstract;
- prepares the ARP Letter of Agreement for approval by the organizational sponsor;
- reviews the Research Ethics Guidelines for LRNT 691 before collecting any data, and if particular projects falls outside what is described within, consults with the ARP supervisor before moving forward with the project;

- completes the ARP as outlined in the ARP preliminary project abstract and in full compliance with the humanistic obligations specified in the Royal Roads University Research Ethics Policy and the Royal Roads University Policy on Integrity and Misconduct in Research and Scholarship http://student.myrru.royalroads.ca/policies-guidelines/academic-regulations-policies;
- participates in all meetings with LRNT 691 ARP supervisor and organizational sponsor as outlined in LRNT 691 schedule and, if not more often, updates the LRNT 691 ARP supervisor and sponsor on the status of the project;
- has organizational sponsor complete end of project form (Appendix 5); and,
- produces the ARP final paper, which conforms to the University and Program guidelines and in accordance with the standards specified including the Publication manual of the American Psychological Association (7th ed.).

The Role of the Academic Supervisor

Every graduate student completing an MA ARP in the School of Education and Technology will be supervised and assisted by an academic supervisor approved by the MALAT program head. The academic supervisor will be the LRNT 691 instructor of record and possess a relevant PhD.

The primary role of the Academic Supervisor is to help the student meet the ethical and academic standards of Royal Roads University for the project, and to advise and support the student in developing, implementing, analyzing, and writing the final paper. The following details the role of the Academic Supervisor through various stages of the process.

The Academic Supervisor:

- supports and advises the student throughout the entire ARP process as outlined in the MALAT ARP Handbook and the LRNT 691 online course;
- helps the graduate student to refine the research proposal, the research question, the methods to be used, and how to effectively proceed through the research process;
- reviews the ARP preliminary project abstract (student uploads to Moodle);
- reviews the ARP Letter of Agreement (student uploads completed form to Moodle);
- if required - reviews, approves, and submits the Request for Ethical Review Form to the Office of Research via email: ethicalreview@royalroads.ca;
- undertakes regular check-ins and consultations with the student during the project;
- reviews and provide comments to the student on the data collection activities, inquiry implementation, and data analysis process;
- reviews and comments on drafts of the ARP. This is to ensure steady progress and fewer surprises at the time of final submission. The consultations should provide a broader, academic perspective to the inquiry and help the student consider all possibilities that are presented by the evidence and to consider alternate explanations;
- completes the assessment of the graduate student's work and achievement of the course learning outcomes as the graduate student progresses through LRNT 691;

- ensures that the ARP final paper meets appropriate quality standards of academic rigour; and,
- acts as the final reviewer of the ARP final paper by reviewing and approving the ARP final paper as complete and fully meeting the standards of acceptability in all sections and elements of the final paper, as outlined in the MALAT ARP Handbook in alignment with those established by the university, such approval reflecting the best scholarly judgment of the Academic Supervisor.

The Role of the Organizational Sponsor

The primary role of the organizational sponsor is to represent the sponsoring organization's interest as the 'client' of the project.

The Sponsor:

- agrees to provide the resources and support described in the Letter of Agreement;
- reviews and approves the ARP preliminary project abstract and signs the Letter of Agreement;
- where appropriate, provides the resources, facilities, funds, and personnel needed to support the successful completion of the project as described in the ARP preliminary project abstract;
- where appropriate, facilitates the timely conduct of the research processes and collection of information;
- reviews the ARP final paper findings, conclusions, and recommendations with the student and where appropriate, facilitates a debriefing session on the data findings, conclusions, and recommendations with key representatives within the organization; and,
- reviews and sign off on the ARP final paper by completing the Completion of the ARP Sponsor Form (Appendix 4).

NOTE: While a few projects may result in recommendations implemented within the timeframe allocated to the student's project, for the majority, action may continue beyond the ARP completion date. Normally, the recommendations are handed on to the organizational sponsor for implementation. See the ARP Handbook for roles and responsibilities for the graduate student and their academic supervisor.

The Sponsor should:

- be a key stakeholder/supervisor in the organization or an individual who has ownership of the workplace problem or opportunity of the inquiry;
- be a representative of the sponsoring organization and is a key stakeholder who needs assistance in reorganizing, problem solving, improving performance, or for any reason may benefit from the outcomes of the ARP;
- have the authority and responsibility to provide the learner access to the organization (e.g., organizational documents, administrative resources); and,
- be able to champion recommendations made at the completion of the project.

A good Sponsor:

- has time to spend with the learner;
- has enthusiasm and the ability to support the inquiry;
- has control or authority over the issues that will be examined during the inquiry and is able to speak as the 'client' about the inquiry activities;
- is open to accepting and considering the findings and provides advice on ensuring that the recommendations are practical and are actionable;
- is open to learning and willing to expect the unexpected (as there may be new or different findings that arise out of this inquiry than originally expected or anticipated); and,
- is in a position to act on the recommendations.

A sponsor is required, given that the ARP research is to be an applied research project. Students who are working on a project for their employer are advised to develop a detailed addendum to the standard required Letter of Agreement (Appendix 4) that outlines the expectations of both parties concerning access to corporate data and resources, work planning, and other considerations. This agreement protects both parties in the event of questions or disagreements about the terms of support and involvement. Students must fully understand the problems and issues important to the sponsor.

The Sponsor:

- agrees to provide the resources and support described in the Letter of Agreement (Appendix 4);
- reviews and approves the ARP preliminary project abstract and signs the Letter of Agreement (Appendix 4);
- where appropriate, provides the resources, facilities, funds and personnel needed to support the successful completion of the project as described in the ARP preliminary project abstract;
- where appropriate, facilitates the timely conduct of the research processes and collection of information;
- reviews the ARP final paper findings, conclusions and recommendations with the student and where appropriate, facilitates a debriefing session on the data findings, conclusions, and recommendations with key representatives within the organization; and,
- reviews and sign off on the ARP final paper by completing the Completion of the ARP Sponsor Form (Appendix 5).

NOTE: While a few projects may result in recommendations implemented within the timeframe allocated to the student's project, for the majority, action may continue beyond the ARP completion date. Normally, the recommendations are passed on to the organizational sponsor for implementation.

SECTION 4: The ARP Proposal

Royal Roads University is committed to the production of useful knowledge. Course work and the research process are structured around the timely publication of your research. While RRU is committed to interdisciplinary, applied research, it is even more important to produce high-quality work that demonstrates the competency and literacy of our students, and their academic

supervisors. Graduate students are encouraged to form "learning networks" around their particular area of research, and to invite dialogue with other current and previous students.

The aim of the research proposal developed in LRNT 622 is to provide a roadmap for your proposed research, describing the problems and/or issues to be examined during the research. The following list describes a "typical" proposal, but the contents may vary depending on the planned research question and methodology. The proposal identifies the research questions, details the research methodology, and includes a comprehensive introductory literature review. It should also list the process deadlines that the graduate student expects to meet during preparation and completion of the ARP and the ARP final paper. The schedule of activities for LRNT 691 will need to be considered when creating the proposal timeline.

Your research proposal is created as part of LRNT 622 coursework requirements and is critiqued by the Academic Supervisor and by peers, as described in the LRNT 622 course outline.

Proposal Content

A typical research proposal will have the following sections:

1. Introduction and research question(s)
2. Theoretical framework and literature review
3. Methodology and methods
4. Timeline for project activities
5. Reference list: APA format for all articles, books, policies cited in the proposal.
6. Resource requirements (for example: room requirements, software licenses, honorarium etc.) and how they will be provided.

Citation style: American Psychological Association (7th edition) citation style must be employed. Upon approval, by the LRNT 691 academic supervisor, of the research questions developed in LRNT 622 and the preliminary project abstract, you will be ready to move forward with your ARP.

SECTION 5: ARP Final Paper

Aims of Graduate Research

The aim of the ARP final paper is to write an academically rigorous document that clearly and concisely communicates the theoretical framework, methods, findings, conclusions, and recommendations of the graduate student's project as consistent with the mission of the program, and that demonstrates the learning outcomes outlined in Section 1. Publication of the research in an appropriate journal, monograph, conference proceedings, or other format should be a consideration in the development of the work.

ARP Final Paper

The ARP final paper should be an absolute maximum 10,000 words, exclusive of references, appendices, etc.; the minimum expected word count is 7,500.

Layout Guidelines

Individual ARP final paper will vary in content and style based on the type of research being conducted. Care should be taken to cite referenced material thoroughly and appropriately. The work should be referenced and formatted in accordance with the Publication Manual of the American Psychological Association (7th edition), commonly referred to as the "APA style guide". Refer to the Draft ARP Assessment Form, Appendix 6, for additional information.

Organization:

Although the format and organization of a thesis is fairly standardized, the ARP final paper allows greater scope for alternative structure. Nonetheless, all research submissions have certain elements in common. These titles are indicative of the content of each section of the paper. A successful MALAT ARP final paper will include the following:

Beginning Section:

The first 3 items in this list must appear on every paper:

- Title Page (Sample title page, Appendix 8).
- Abstract (maximum of 150 words), with key words.
- Table of Contents.
- List of Figures (if appropriate).
- List of Tables (if appropriate).

Other prefatory elements such as acknowledgements may also be included. Refer to the APA style guide for details about positioning. Place all page numbers in the top right-hand corner in the document header. Include your title page within the total page count; however, do not provide a number on the title page. Use Arabic numerals (1, 2, 3) throughout the document, and continue the page numbers sequentially to the end of the paper, including all appendices.

Chapter 1 - Introduction:

This section should contain:

- The problem or opportunity.
- Introduction to the research question.
- Overarching research question and sub question(s).
- Discussion that illustrates that the researcher properly scoped the problem or opportunity identified in the proposal using valid problem identification tools or methods.
- Detailed description of the problem being investigated and how it relates to the

research question.

- Discussion of the impact of not fixing or eliminating the problem.
- The organizational context – organization charts, mission statements, job descriptions, key contributors, or participants to the problem (as appropriate to the study).
- Introduction to the theoretical framework perspective and explanation of its relevance to the study.
- Definition of terms.
- Limitations & delimitations.

The introduction is often the most difficult part, and many accomplished writers often go back to this section and re-write it after they have finished the entire document. The introduction is important for providing the context and the framework for the remainder of the document structure, and it is the reader's initial exposure to the writer's style.

Chapter 2 – Theoretical framework and Literature review:

Every ARP final paper will include a section outlining the theoretical framework(s) for the project and a review of the literature. An acceptable review of the literature should:

- Include an in-depth discussion of the theoretical framework introduced in Chapter One.
- Consider all appropriate sources of information.
- Describe similar problems or issues contained in peer review journals, books, or other acceptable sources of information.
- Provide support for the need to study this problem/issue and compare the situation with similar situations.
- Demonstrate the writer's knowledge/understanding about the problem/issue under study (including differing points of view where applicable), and
- Situate this study in the existing body of research.

In a typical literature review, the writer must demonstrate that he or she has a grasp of the relevant literature applicable to the field of study. The literature review and relevant references should be woven integrally into the text, wherever appropriate.

In addition to peer-reviewed journals and books, supporting documents may include, among others, websites, newsletters, policy papers, strategic plans, and personal communication. The length of the literature review may vary depending on the methodology and topic.

Chapter 3 – Methodology and methods:

This chapter should identify the methodology used and address all of the steps completed during the conduct of the research project — what you did, why you did it, and how you did it. This section should describe all options considered and attempted during the completion of the

project in sufficient detail that someone else could replicate your process without having to guess. In the methodology chapter you should:

- Include the methodology (e.g., systematic literature review and drawing from case study) as well as the methodological framework, (e.g., qualitative/quantitative, inductive/deductive), and the relevant supporting theory and justification for this approach.
- Provide a step-by-step description of the research methods used during the study and justify their use, including a description of all options considered and attempted during the completion of the study.
- Describe data gathering tools or processes, research subjects and why they were chosen, as well as search terms and processes for secondary data collection. The data gathering instruments should be described or attached to the paper in the appendix.
- Include a description of the reliability/validity/trustworthiness of all data gathering instruments or activities.
- Demonstrate the proper and effective use of statistical analysis or qualitative analysis tools or approaches.
- Discuss ethical considerations. See course blanket ethics for scope of data collection activities that are covered. If you intend to exceed that scope you are required to speak to your academic supervisor about an additional ethical review.
- Use past tense.

Chapters 4: Findings and Analysis

Findings (results): Detailed description of the findings or observations made during study completion. Each group of findings must be supported by the evidence collected. After the introductory paragraph, order your findings as follows:

- Needs analysis, based on your discussions with your stakeholder/s.
- The findings of your systematic literature review.

Analysis (discussion): Can be a component of the findings section or can be written under a separate heading. The analysis must be supported by the study findings and other related literature.

Chapter 5: Recommendations

The recommendations are unique and will flow from the findings and analysis documented in Chapter 4. They are distinct from the findings, and the analysis, and should be actionable. When writing the recommendations section, you should explore the following:

- Make a logical connection between the findings and the recommendations.
- Demonstrate an alignment between the specific strategies you are recommending and the issues you identified; in other words, your recommendations should address an identified need.

- Ensure each recommendation is feasible, starts with a verb, and is no more than one sentence.
- Include an explanation for each recommendation.
- Provide a timeframe for the implementation of the recommendations; they should be implementable within a reasonable timeframe (for example, three years).
- Consider unintended consequences of the recommendations.

Chapter 6: Research Implications

Research implications should include discussions on the following:

- The organizational implementation process for your recommendations.
- A section on potential future research.
- The contribution of the research results on the body of knowledge being studied.
- The implications if the recommendations are not undertaken.
- A brief conclusion to the paper, noting the relevance of the research undertaken.

The final paper will stand up to rigorous academic scrutiny.

Referencing:

Referencing is fundamental to the graduate student's scholarship and research integrity. The purpose of referencing is to give credit where credit is due—it acknowledges the source of ideas that are not our own. Referencing should be complete to the level of detail that allows the reader to locate the original source in order to verify the information presented and meet APA requirements.

Guidelines:

- do not use references selectively to give a false sense of authority;
- look for literature that seems to contradict your ideas;
- draw primarily on scholarly material, such as peer-reviewed journals, unless there are reasons to focus on other types of resources;
- avoid using references as a substitute for explanation or argument. The integration of ideas happens spontaneously in the human mind, but in an academic setting, it also needs to take place on the page. Dropping academic references is the scholarly equivalent of dropping names, and should be avoided; and
- quote and cite strategically; use what is cited – do not just cite.

Be careful with the use of web references. Many appear to be authoritative but really fall in the same category as other self-published work. Avoid those that are poorly researched and transitory. Look for evidence that the author has had his or her idea published in a peer reviewed journal and use that source instead.

SECTION 6: Quality Standards and Assessment

Quality Standards

The ARP and the ARP final paper should meet or exceed the content, layout and production standards set by the University and the program. A detailed description of the quality standards is provided in the Draft ARP Assessment Form (Appendix 6). Only those sections relevant to the individual study will be used to assess ARP final paper. ARP final paper will also be required to meet the quality standards as identified in the Final ARP Paper Assessment Form (Appendix 7).

Submitting the ARP Final Paper for Assessment

Please note that while the course end date is aligned with the program end date, schedules for submitting the ARP final paper must take into consideration the time required for assessment, revisions, program review, grade submission deadlines, etc. As a result, it is important that you carefully monitor your progress and ensure that you have allocated sufficient time to meet these deadlines.

The ARP final paper will be provided to the Sponsor for their review and feedback should they wish to provide it. In addition, the Sponsor will need to complete the Completion of the ARP Sponsor Form (Appendix 5). The academic supervisor will complete a final written assessment of the graduate student's academic performance in relation to the completed research using the Final ARP Paper Assessment Form (Appendix 7). The supervisor may consult with colleagues if he or she believes that a second opinion would help them to provide a fair assessment.

While the academic supervisor will provide feedback to the graduate student on any changes required to ensure that the work receives an acceptable grade, the graduate student is responsible for revising his/her ARP final paper in accordance with the guidance provided.

Program Head Review

Graduate students may be required to submit to a review by the program head when the academic supervisor deems the paper not acceptable.

Graduate Student Appeal Procedures

Graduate students will have an opportunity to formally appeal their assessment if the ARP final paper is deemed to be not acceptable following an unfavourable decision through the program head review. In which case, the university formal appeal process must be adhered to http://policies.royalroads.ca/academic-regulations/section-5-grade-appeal-process

SECTION 7: Final Submission

Submission Package

Once the ARP final paper has been given an acceptable grade, students must ensure they have submitted all relevant items to the LRNT 691 course site and completed all of the LRNT 691

required course activities. The content of the final submission package will vary depending upon the nature of the ARP. Requirements for each ARP will be identified on a case-by-case basis.

Those elements that will be common to all packages include:

- The Copyright Compliance form (Appendix 3);
- One copy of the title page formatted in accordance with Appendix 8;
- A statement about whether the title or general topic can be shared for purposes such as communication with prospects 1:1 or in venues such as conferences;
- The signed Letter of Agreement (Appendix 4); and,
- The signed Completion of ARP Sponsor Form (Appendix 5).

Graduation

The graduate student is eligible to have his or her name forwarded to Academic Council for graduation approval once all program requirements are met. The online graduation application form is located at http://www.royalroads.ca/news-events/convocation.

Students must apply to graduate if they plan to attend the convocation ceremony.

Students who are unsure if all program requirements have been met are encouraged to contact the MALAT program office.

Appendix 1: MALAT Program Learning Outcomes

The School of Education and Technology works with a program learning outcomes framework that informs the course learning outcomes. Program learning outcomes identify what the learner *will know and be able to do* by the end of the program. They are the essential and enduring knowledge, capabilities (attributes) and attitudes (values, dispositions) that constitute the integrated learning by a graduate of the MALAT program.

Graduates of the MALAT program will be able to apply the principles of networked learning, open pedagogy, and digital mindset as they work in the creation and evaluation of digital learning environments. They will apply theoretical and practical knowledge to critically analyze learning innovations and assess their impact on organizations and society. Graduates of the MA in Learning and Technology will have the knowledge, skills, and ability to:

- PLO 1 Communicate and synthesize information and arguments at the graduate level.
- PLO 2 Critically evaluate how learning occurs in a variety of contexts.
- PLO 3 Design and create research-informed digital learning environments.
- PLO 4 Demonstrate effective collaboration skills.
- PLO 5 Develop and analyze support strategies to meet the needs of stakeholders in digital learning environments.
- PLO 6 Select appropriate assessment and evaluation strategies for digital learning environments.
- PLO 7 Contribute meaningfully to digital learning network(s) and communities.
- PLO 8 Explain the interrelationship between innovation, change and digital learning environments and their impact on organizations and society.
- PLO 9 Apply reflective processes to improve professional practice.
- PLO 10 Critically evaluate and/or produce research.

Using learning outcomes helps to clarify a program's focus, helps students connect their program to their workplace, provides a focus for assessment and evaluation, allows for alignment across professional accreditation bodies of knowledge and helps employers understand the benefits of the program. Specifically, the MA ARP and ARP final paper (LRNT 691) is aligned the following MALAT program learning outcomes:

- PLO 1 Communicate and synthesize information and arguments at the graduate level.
- PLO 7 Contribute meaningfully to digital learning networks and communities.
- PLO 8 Explain the interrelationship between innovation, change and digital learning environments and their impact on organizations and society
- PLO 9 Apply reflective process to improve professional practice
- PLO 10 Critically evaluate and/or produce research

Appendix 2: Research Ethics Guidelines for ARP – blanket ethics

Your instructor has obtained ethics approval on behalf of students in LRNT 691 to conduct a human-centred needs assessment. Please review the blanket ethics approval for this course to ensure that you are conforming. You must have completed the Tri-Council ethics tutorial before starting any research involving humans. Your research needs to comply with the following:

- The data collection methods will be limited to interview.
- Participants will be asked to contribute under one hour each.
- You will be obtaining free and informed consent from all participants*
- No more than three participants (your sponsor and up to two other key stakeholder/s) will be involved to provide insights on the need for research that addresses your research question/s. No participants will be under 18 or part of a vulnerable population.
- The organization involved does not require its own ethical review.
- You are not in a position of power over any participants.
- You are not in a conflict of interest.
- You will store any data collected locally or on secure internal servers (not in the cloud or in servers located outside Canada).
- Stored data will be deleted permanently after 6 months.
- You do not have a perceived conflict of interest http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter7-chapitre7/
- The data collected will be used only to produce the final applied research project for LRNT 691.
- Participants can withdraw at any time.
- Participants' views and opinions will be used in the final research paper, but their personal identity will remain confidential (delete anonymous) unless they give specific permission to be identified in the final paper report.
- If your work is going to involve Indigenous peoples as defined here http://www.ger.ethique.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/#toc09-1, you will need to consult the Royal Roads Office of Research

If your particular project falls outside of what is described above, consult with your Academic Supervisor before going forward with your applied research project. It is the responsibility of the student to read and become familiar with the parameters of the LRNT 691 course blanket ethics approval and to fill in the Research Consent form* and provide it to any participants in your research project * Please see the informed consent form template in the LRNT 691 course.

Appendix 3: Copyright Compliance Form

Student's name:

Title (and brief description) of work:

_____

_____

_____

Authorization/Terms of use:

I certify that no other individual or parties hold copyright interest in the work(s) described above and that I hold all rights to the works listed. I understand that any third-party content within my work must be used with permission of the author(s) in compliance with the Canadian Copyright Act and I certify that I have received copyright clearance for any third-party content used.

Information about copyright and a downloadable copy of the Royal Roads Copyright Permission letter is available at http://libguides.royalroads.ca/c.php?g=264983&p=1769339

Course name:

Student's signature:

Date:

Appendix 4: Letter of Agreement - ARP

RRU School of Education and Technology: MA Learning and Technology Project

LRNT 691 Applied Research Project (ARP)

Organizational Letter of Agreement

Organization Participating in the Study (hereafter called the Organization):

Name:
Address:

Organization Representative/Organizational Sponsor:

Name:
Address:
Phone:
FAX:
E-mail:

RRU Graduate Student:

Name:
Phone: (work)
E-mail:

RRU Academic Supervisor for LRNT 691:

Name:
Phone:
E-mail:

Responsibilities and Organizational Commitment

The RRU MALAT graduate student, the Organization agree to participate in the successful completion of the proposed applied research project (herein referred to as the ARP) and perform the roles and responsibilities identified in Appendix 1.

Project Description

The context for the study, the key issues, why the study is significant, the methodology proposed, the scope, and the intent of the research are highlighted in the preliminary project abstract.

Confidentiality

The RRU MALAT graduate student agrees to honour individual and corporate confidentiality and non-disclosure guidelines. The Organization agrees to allow the Graduate Student full access to relevant resources. The Organization agrees to allow the student every opportunity to canvas and collect data from individuals and groups if deemed pertinent to the ARP.

The Organization's project participants will be asked to formally acknowledge that the information they provide to the researcher will be handled in a confidential and privileged manner, as described in the *Royal Roads University Research Ethics Policy* (2011), accessible on the RRU Web site at: http://www.royalroads.ca/research/ethical-reviews/

Specifically, as part of the data collection activities required, project participants will be asked to review and consent to participant in the research (Appendix 2) and acknowledge that the information they provide will be handled in a confidential and privileged manner, as described in the Research Ethics Guidelines for LRNT 691 (Appendix 3). Individual and group identity will not be disclosed to any other members of the Organization.

Intellectual Property

The completion of the ARP may result in the creation of new knowledge, processes, or tools. Ownership of this new knowledge, process or tool can be complicated, especially if the outcomes of the research have potential commercial applications. In most cases, the owner of the new knowledge, process or tool is the originator of the idea (i.e. the Royal Roads student). Students who may create intellectual property as part of their ARP should familiarize themselves with the current intellectual property guidelines adopted by the university and speak with their supervisor and the Office of Research researchservices@royalroads.ca

Examples of intellectual property may include written reports, supporting data, DVD's, or digital media, sets of evaluation instruments produced to gather data, or databases used to collate and

analyze data. Ideas are not considered intellectual property until they have been recorded in some medium that others can read, review, touch and/or see.

Deliverables

The MALAT graduate student will provide the Organization with a copy of the final ARP paper. In addition, the graduate student may agree to provide formal briefings to individuals or groups identified by the Organization.

Endorsement

We, the undersigned agree to abide by the arrangements and statements contained in this Letter of Agreement and have reviewed and approved the ARP preliminary project abstract.

_____	_____
Organization Representative/Organizational Sponsor	Dated
_____	_____
Graduate Student	Dated

Appendix 5: Completion of the ARP Sponsor Form

Sponsor Organization: _____

Project Title: _____

Student's Name: _____

I verify that I have received the project document and associated presentation (if applicable) understanding that it is undergoing academic review and as such, is not in its final form.

_____ _____

Signature of Organizational Sponsor Date

Comments or Feedback (not required but appreciated):

Appendix 6: Draft ARP Assessment Form

Name:	
Beginning Section: • Title Page (Sample title page, Appendix 8). • Abstract (maximum of 150 words), with key words. • Table of Contents. • List of Figures (if appropriate). • List of Tables (if appropriate).	
Chapter 1 – Introduction and research question(s): • The problem or opportunity. • Introduction to the research question. • The research question and sub question(s). • The researcher properly scoped the problem or opportunity identified in the proposal using valid problem identification tools or methods. • Detailed description of the problem being investigated and how it relates to the research question. • Discussion of the impact of not fixing or eliminating the problem. • The organizational context – organization charts, mission statements, job descriptions, key contributors, or participants to the problem (as appropriate to the study). • Introduction to the theoretical framework perspective and explanation of its relevance to the study. • Definition of terms. • Limitations & delimitations.	
Chapter 2 – Theoretical framework and Literature review: • Include an in-depth discussion of the theoretical framework introduced in Chapter One. • Consider all appropriate sources of information. • Describe similar problems or issues contained in peer review journals, books, or other acceptable sources of information. • Provide support for the need to study this	

problem/issue and compare the situation with similar situations. • Demonstrate the writer's knowledge/understanding about the problem/issue under study (including differing points of view where applicable), and • Situate this study in the existing body of research.	
Chapter 3 – Methodology and methods: • Include the methodology (e.g., systematic literature review and drawing from case study) as well as the methodological framework, (e.g., qualitative/quantitative, inductive/deductive), and the relevant supporting theory and justification for this approach. • Provide a step-by-step description of the research methods used during the study and justify their use, including a description of all options considered and attempted during the completion of the study. • Describe data gathering tools or processes, research subjects and why they were chosen, as well as search terms and processes for secondary data collection. The data gathering instruments should be described or attached to the ARP final paper. • Include a description of the reliability/validity/trustworthiness of all data gathering instruments or activities. • Demonstrate the proper and effective use of statistical analysis or qualitative analysis tools or approaches. • Discuss ethical considerations. • Use past tense.	
Chapters 4: Findings and Analysis Findings (results): Detailed description of the findings or observations made during study completion. Each group of findings must be supported by the evidence collected. After the introductory paragraph, order your findings as follows: • Needs analysis, based on your discussions with your stakeholder/s.	

• The findings of your systematic literature review. Analysis (discussion): Can be a component of the findings section or can be written under a separate heading. The analysis must be supported by the study findings and other related literature.	
Chapters 5: Recommendations The recommendations are unique and flow from the findings and analysis documented in Chapter 4. They are distinct from the findings, and the analysis, and should be actionable. The recommendations: • Make a logical connection between the findings and the recommendations. • Demonstrate an alignment between the specific strategies you are recommending and the issues you identified; in other words, your recommendations should address an identified need. • Ensure each recommendation is feasible, starts with a verb, and is no more than one sentence. • Include an explanation for each recommendation. • Provide a timeframe for the implementation of the recommendations; they should be implementable within a reasonable timeframe (for example, three years). • Consider unintended consequences of the recommendations.	
Chapter 6: Research Implications Research implications should include discussions on the following: • The organizational implementation process for your recommendations. • A section on potential future research. • The contribution of the research results on the body of knowledge being studied. • The implications if the recommendations are not undertaken. • A brief conclusion to the paper, noting the relevance of the research undertaken.	

The final paper will stand up to rigorous academic scrutiny.	
Production Quality Considerations	
Project paper layout and format conform to the guidelines provided in this handbook (or as negotiated).	
Document formatted in accordance with the Publication Manual of the American Psychology Association (7th edition) (especially in-text citations and the reference list).	
Tables, figures, diagrams, and graphs of sufficient quality that they can be reproduced clearly.	
Paper free of spelling or grammatical errors.	

Appendix 7: Final ARP Paper Assessment Form

ARP Final Paper Title:	
Assessor:	Graduate Student:
Date:	Final Paper Grade (Pass/Fail):

1. Critical Reasoning Quality of argument (organization, logic, all sides effectively presented, depth/ adequacy of analysis, power of criticism, interpretation separated from evidence, assertions and conclusions substantiated).	
2. Communication Quality of presentation (structure and form, coherence, lucidity, grammar, style, freedom from typographical errors, effectiveness of illustrations, etc.).	
3. Knowledge and Skills Grasp of subject; adequacy in review and understanding of other work; authoritative sources; accuracy and depth; diligence, care, technical skill in research.	
4. Integrated Perspective Incorporation of the concepts of learning and technology; effectively integrating knowledge from both fields for a unified, balanced approach.	
5. Overall Evidence of originality and creativity, resourcefulness, and awareness of the significance of the findings and the significance of the contribution.	

Appendix 8: Sample Title Page

ARP Final Paper Title

by

Graduate student's name

An applied research project final paper submitted in partial fulfillment of the requirements of the degree of

MASTER OF ARTS

in

LEARNING AND TECHNOLOGY

ROYAL ROADS UNIVERSITY

Month, Year

© Your name, Year