MASTER OF ARTS IN EDUCATION

GUIDE TO THE CAPSTONE


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Table of Contents

INTRODUCTION: WELCOME TO THE CAPSTONE PROJECT .................................................. 4
  What is the Capstone Project? ..................................................................................... 4
  Selecting Your Topic ................................................................................................. 5
  What Should the Capstone Look Like? ..................................................................... 6
  Tips to Guide You Through the Process ................................................................ 7
  Academic Integrity .................................................................................................... 8

SECTION I: CAPSTONE COURSE PROCEDURES ............................................................. 10
  Prerequisites .............................................................................................................. 10
  Registration and Payment Procedures ...................................................................... 10
  Registration Dates .................................................................................................... 10
  Course Dates ............................................................................................................. 10
  Texts .......................................................................................................................... 10
  Capstone Materials to be Received at Registration .................................................. 11
  The Twenty-Four Hour Workshop and Workshop Instructor ................................. 11
  Capstone Project Submission ................................................................................... 11
  The Project Reviewer ............................................................................................... 12
  Your Final Grade ...................................................................................................... 12
  Incomplete Grades ................................................................................................... 12
  Applying for Graduation .......................................................................................... 13
  Isolated Students ...................................................................................................... 13
  Capstone Project Storage .......................................................................................... 13

SECTION II: THE RESEARCH PROPOSAL ................................................................. 14
  Title Page .................................................................................................................. 14
  Definition of the Problem ........................................................................................ 14
<table>
<thead>
<tr>
<th>Section Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Statement</td>
<td>14</td>
</tr>
<tr>
<td>Research Questions and/or Research Objectives</td>
<td>15</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>15</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>15</td>
</tr>
<tr>
<td>Assumptions</td>
<td>15</td>
</tr>
<tr>
<td>Scope and Limitations</td>
<td>15</td>
</tr>
<tr>
<td>Preliminary Literature Review</td>
<td>16</td>
</tr>
<tr>
<td>A Word About Writing</td>
<td>16</td>
</tr>
<tr>
<td>Synthesizing is Not Easy</td>
<td>17</td>
</tr>
<tr>
<td>Methodology</td>
<td>18</td>
</tr>
<tr>
<td>What About Surveys?</td>
<td>18</td>
</tr>
<tr>
<td>Reliability and Validity</td>
<td>19</td>
</tr>
<tr>
<td>References</td>
<td>20</td>
</tr>
<tr>
<td>Appendices</td>
<td>20</td>
</tr>
<tr>
<td><strong>SECTION III: THE FULL CAPSTONE</strong></td>
<td>21</td>
</tr>
<tr>
<td>The Unifying Thread</td>
<td>21</td>
</tr>
<tr>
<td><strong>SECTION IV: LIBRARY AND WRITING RESOURCES</strong></td>
<td>23</td>
</tr>
<tr>
<td>Library Resources</td>
<td>23</td>
</tr>
<tr>
<td>Librarian Assistance</td>
<td>24</td>
</tr>
<tr>
<td>Document Delivery Services</td>
<td>24</td>
</tr>
<tr>
<td>Writing Help</td>
<td>25</td>
</tr>
<tr>
<td><strong>SECTION V: HUMAN SUBJECTS IN RESEARCH</strong></td>
<td>26</td>
</tr>
<tr>
<td>Ethics and Professional Behavior</td>
<td>26</td>
</tr>
<tr>
<td>Research Review/IRB Approval</td>
<td>26</td>
</tr>
<tr>
<td>Ethical Review Procedures at CMU</td>
<td>27</td>
</tr>
<tr>
<td>Issues to Address</td>
<td>29</td>
</tr>
</tbody>
</table>
APPENDIX A: SUGGESTED FORMATS FOR FREQUENTLY-OBSERVED RESEARCH TYPOLOGIES ........................................................................................................... 36
APPENDIX B: POLICY FOR ACADEMIC INTEGRITY .............................................................. 50
APPENDIX C: ASSESSMENT RUBRICS FOR CAPSTONE PROJECT .................................... 51
APPENDIX D: SAMPLE TITLE PAGE FOR CAPSTONE PROJECT .................................... 54
APPENDIX E: RESEARCH REVIEW PROCESS AND APPLICATION............................... 55
APPENDIX F: RRA FREQUENTLY ASKED QUESTIONS .................................................. 57
APPENDIX G: CITI TRAINING ............................................................................................. 62
APPENDIX H: SAMPLE LETTERS OF INFORMED CONSENT ........................................ 67
APPENDIX I: IRBNET INFORMATION .................................................................................. 70
INTRODUCTION

WHAT IS THE CAPSTONE PROJECT?

The Capstone is the culminating project for the Master of Arts in Education degree and must be completed successfully in order for you to qualify to earn your degree. You should enroll for the capstone course, EDU 776 Seminar: Issues in Education, after you have completed at least 21 credit hours, including EDU 660: Methods of Educational Research. During this course, you will design and carry out a project on a topic that you have deemed relevant to your work or professional interests. The project is a vehicle for you to demonstrate your ability to think critically as you draw on skills and knowledge acquired through the program, and apply those skills and that knowledge in solving the problem or addressing the need or issue that you have identified.

Unlike most courses, you will complete the Capstone Project largely on an individual basis with only 24 hours in a classroom/workshop setting. You will plan, organize, research, analyze, and write independently, but in close association with your Capstone Project Faculty Monitor. There are three goals for the project:

1. **Synthesize and integrate your prior learning:** As you begin the project, review your notes and papers from previous MA in Education courses so you can identify concepts, information, and methodologies relevant to your identified topic. This can also be a useful way of identifying a topic if you do not already have one solidified.

2. **Apply learning to your profession:** Academic learning becomes increasingly valuable when used to solve organizational problems. Ideally, your project will relate directly to your professional activities so that you and your employer can benefit from your work.

3. **Demonstrate competence to warrant the awarding of your degree:** Produce a document, which demonstrates your competence to earn the MA in Education degree. The action you propose in your project report will also demonstrate your ability to define an issue or problem, perform applied research using appropriate methodologies, report conclusions, and present your recommendations in a professional, persuasive manner.
Your capstone project should reflect your...

1. understanding of the relevant literature
2. knowledge of the area investigated
3. skill in conducting the study
4. ability to analyze data and apply knowledge and theory
5. conclusions in a professional, coherent, logical, and persuasive manner.

SELECTING YOUR TOPIC

Students approach the capstone course, EDU 776: Issues in Education, with varying levels of topic preparedness. You may have solidified your research interests at some point earlier in the program. You may have begun problem identification during EDU 660: Methods of Educational Research. You may have a confirmed source of data for your study. All of this is possible, but not necessary for successful completion of the MA in Education Capstone.

No matter how you arrive at your capstone topic, your research problem should meet certain criteria. It should be...

1. A problem identified by you and defined in researchable terms; regardless of the type of capstone you choose, the problem must also have a body of literature to support it.
2. Related to your work or your professional interests; although it does not have to be connected directly to your specific work, it should arise from your school, organization or company.
3. Oriented toward the long-term benefit of your school, organization or company.

NOTE: Keep it simple! A major pitfall of doing research is to choose a topic that is too broad or too complex. Remember that this is not a doctoral dissertation. You want to choose something relevant that you can research and write the report on in a reasonable frame of time, taking into consideration the course dates, and your life’s obligations. Research adds a small slice to the larger pie of knowledge; you can always expand on your topic should you decide to pursue further advanced education!

A selection of suggested formats for commonly-used research typologies is included in Appendix A. You will have covered these in detail during EDU 660: Methods of Educational Research. The formats presented in this manual can serve as a reminder and guide for applying and/or amending these formats for your capstone research.
WHAT SHOULD THE CAPSTONE LOOK LIKE?

The capstone is divided into chapters:

Chapter 1: Definition of the Problem. This is where you identify the problem/issue/questions on which you are focusing, present the rationale for why this is worth studying, and identify your research questions.

Chapter 2: Review of the Literature. In this chapter, you discuss the relevant literature that you will have read, and synthesize the concepts you have found in those materials. The idea here is to look for the patterns and themes that occur across the literature, in order to “paint the picture” of what is currently being said and done in the area you are researching. This is also where you want to compare and contrast perspectives, and possibly identify where there may be gaps. In this way, you provide readers with the foundation for your project.

Chapter 3: Methods of Research. In this chapter you spell out how you went about conducting your research, including whether your research was approved through the Research Review Application (RRA) or Institutional Review Board (IRB) process. If you did a survey, include how the survey was developed, how many participants you sent it out to, and how many responded (response rate). If you are using someone else’s survey, explain why you chose this instrument and include data to verify reliability and validity. If you have human participants, describe how you maintained anonymity and confidentiality. Finally, describe your method for analyzing the data collected. If you developed a handbook, you should discuss your target population and any costs for producing the product. In addition, discuss how you will monitor use of the product and evaluate it for effectiveness based on your stated outcomes.

Chapter 4: Results. In this chapter, you discuss what you found out as a result of conducting the research. Identify patterns and themes that arose. Paint the picture of what the results have told you about your question/issue. Use charts and graphs as necessary to illustrate the data visually, as well as discussing it in the narrative. If you developed a product (e.g., handbook or training program) for your capstone project, you will include the full product in this chapter.

Chapter 5: Summary, Conclusions, and Recommendations. In this final chapter, pull it all back together. Revisit your research question/problem and discuss it in light of what you found, and how that connects to the themes from your literature review. Make recommendations or suggestions for further work or study as you see fit.
The entire capstone is combined into one document, rather than submitted separately. The exception to this is capstones with products. If your capstone includes a product and the format is not compatible with the main capstone document, then the product (which is your chapter 4) may be submitted as a separate document.

**TIPS TO GUIDE YOU THROUGH THE PROCESS**

**Expect your instructor to expand upon this guide**
This guide has been created to assist you as you undertake your Capstone. Although the guide provides parameters for the project, your capstone instructor will be more familiar with your topic and able to provide additional structure to guide you, which may involve expanding on some of the information presented here. Your instructor’s requirements are designed to help you create the best possible academic and organizational conclusions and should satisfy your needs, the needs of your organization, and of Central Michigan University.

**Keep an Ideas Log**
As you move through the courses in the program, keep a notebook of possible capstone ideas as they occur to you. Use this as a means to help you make connections between the material you learn from one course to the next as well.

**Consult with others**
Be sure to consult others while developing your project. No senior decision-maker works in isolation, and neither should you. Discuss your ideas with instructors, mentors, colleagues, peers, family and friends. Your faculty monitor has final authority over your projects, so it is essential that you are in close contact throughout the process.

**Expect revisions and use proofreaders**
You will go through several drafts and rewrites before your capstone is ready for final submission. All aspects of the project are your responsibility, including spelling, syntax, structure, and content. Check your work carefully and use proofreaders to proof for content and technical errors. Your faculty monitors are not expected to closely edit multiple drafts. Monitors usually return poorly prepared projects unread which can lead to time delays. Fortunately, the CMU Writing Center ([http://global.cmich.edu/student/writing-center.aspx](http://global.cmich.edu/student/writing-center.aspx)) is a great, and free, resource to assist you with all aspects of writing.
Take advantage of Global Campus Library Services

You are fortunate to have free access to exceptional library support services. The library will work with you on your project, assist in your research, and facilitate your use of resources. There are several useful tutorials on the GCLS website (http://GCLS.cmich.edu) as well to assist you with writing and with using APA format style.

Determine your timeline

Some monitors and instructors ask students to create a timeline for developing each section of the capstone and writing the final report. Communicate with your monitor to see if this step is required for you. Regardless, you may find a detailed timeline to be a useful tool to keep you on target.

ACADEMIC INTEGRITY

The following italicized passages are taken from Central Michigan University’s Academic Senate Policy on Academic Integrity (passed by the Academic Senate on 05/05/09). This policy and further details can be found online in the CMU Bulletin (https://bulletins.cmich.edu).

Academic Integrity

Because academic integrity is a cornerstone of the University’s commitment to the principles of free inquiry, students are responsible for learning and upholding professional standards of research, writing, assessment, and ethics in their areas of study. In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. Written or other work which students submit must be the product of their own efforts and must be consistent with appropriate standards of professional ethics. Academic dishonesty, which includes cheating, plagiarism and other forms of dishonest or unethical behavior, is prohibited.

Plagiarism

Remember, whenever you use others’ ideas or words, you must cite the source. Exact words must be quoted and cited appropriately in the text. Any ideas or conclusions you present must be yours. Ignorance of the policy is not a defense!
Plagiarism is intentionally or carelessly presenting the work of another as one's own. It includes submitting an assignment purporting to be the student’s original work which has wholly or in part been created by another person. It also includes the presentation of the work, ideas, representations, or words of another person without customary and proper acknowledgement of sources. Students must consult with their instructors for clarification in any situation in which the need for documentation is an issue, and will have plagiarized in any situation in which their work is not properly documented.

NOTE: Always check! If you have any questions or concerns regarding academic integrity, you need to check with your instructor, in this or any case. Academic dishonesty is treated seriously and can result in dismissal from CMU. See Appendix B for more on the CMU Policy for Academic Integrity.
SECTION 1: CAPSTONE COURSE PROCEDURES

This section discusses registration and payment procedures; the role of the workshop instructor, the monitor, and the reviewer; and the forms you will need to complete. If you have questions, contact your program administrator or academic advisor.

Prerequisites
To register for Capstone, you should have completed twenty-one hours of graduate credit including EDU 660.

Registration and Payment Procedures
You will register for EDU 776 using the same registration procedures you have used for other courses. The tuition rate is the same as your other 3-credit courses in the program.

Registration Dates
Registration dates for EDU 776 are published in the program center’s course schedule, or your cohort schedule. You cannot register after the last day of registration.

Course Dates
Because the Capstone typically requires more time than other CMU classes you have completed, the course dates for EDU 776 are longer than other CMU classes. In the face-to-face format, the dates for your workshop meetings are available from the term schedule, your program center, or your cohort schedule. You will want to careful consider when to take the Capstone course, especially if you plan to involve human subjects during a specific time frame. For example, if you wish to survey or interview K-12 teachers, administrators, parents or students during the school year, you will want to ensure your study can be developed, approved, and conducted before winter or summer breaks.

Texts
- This MA in Education Guide to the Capstone
- APA Style Manual, latest edition

Your instructor may require additional textbooks which will be available through MBS (Missouri Bookstore). For international sites, please contact the program coordinator in your area for information about ordering and/or receiving textbooks.
Capstone Materials to be received at Registration
When you register for EDU 776, please obtain the following materials:

1. Application for Approval of Capstone: Applied Research Project form
2. Capstone Project Evaluation form
3. Course syllabus
4. Application for graduation, if not already completed

The Twenty-four-hour Workshop and Workshop Instructor
If you are taking EDU 776 in a face-to-face format, you are required to attend the twenty-four (24) hours of seminar instruction that comprise the Capstone course. Dates, times and locations are listed in the term schedule.

The instructor for the seminar will also be your Capstone monitor. The workshop is designed to assist you in finalizing your project proposal and in further refining the skills you need to complete your project successfully.

Your Capstone project proposal must be approved by the Capstone monitor before you begin the research, the data collection and the writing of your Capstone project. (Note: No data can be collected until you have received the approval of your monitor and the appropriate ethical research review authority--see Section V.) See the following section for directions on submitting your proposal.

Capstone Project Submission
The Capstone monitor will work with you on an individual basis to complete your Capstone project. When the project is ready for final evaluation, you will need to do the following:

1. Complete the upper portion of a Capstone Project Evaluation form. Save the document and send two (2) electronic copies to the monitor. One will be used by the monitor and the second one will be used by the second reader.
2. Submit two copies of the project with the Capstone Project Evaluation form if you are following a paper process. If you are participating in an electronic document submission process for EDU 776, please follow the instructions provided by your monitor.

These materials must be received by the monitor prior to the last published date of the Capstone term. Typically, your monitor will establish a date a few weeks prior to the course end date to allow for processing and grade submission. Once your project is received, the monitor has three weeks to grade the project. The monitor will complete
his or her section of the *Capstone Project Evaluation*. The final grade will be submitted to the appropriate CMU office.

**The Project Reviewer**

Once your monitor grades your project, it is sent to the MAEd Coordinator who will assign it to a second reader within two weeks. The second reader, or reviewer, will read and grade your completed project using the same rubric type as did the monitor. The second reader has two weeks to review your capstone after receipt. In general the second reader process should not exceed 4 weeks. The reviewer will assign a grade and place it on the *Capstone Project Evaluation*.

**Your Final Grade**

Usually the grade assigned by the monitor is your final grade. In instances where a full two-letter difference separates the grades of the monitor and reviewer (e.g., A and C) or where one of the evaluators assigns a grade of *E*, the Capstone project is sent to the MA in Education Director for evaluation. In this case, the grade assigned by the campus reviewer will be your final grade. You will receive a copy of both the monitor and reviewer evaluations and rubrics, as well as your capstone with feedback from your capstone monitor. The assessment rubrics for EDU776 are available in Appendix C. There are two types of rubrics; one for quantitative research and one for action research projects.

**NOTE:** Courses in which you earn a grade below C are not acceptable in fulfillment of this degree requirement.

**Incomplete Grades**

An Incomplete grade is assigned if you have not completed your project before the scheduled last day of the course. **In order to qualify for an Incomplete, you must have the first three chapters of your Capstone paper approved by your Capstone monitor and you must have received either Institutional Review Board (IRB) or Research Review Application (RRA) approval.** If you meet these criteria, you will be assigned an “I” grade if you have not completed your Capstone project by the last day of class. If you are assigned an “I”, the monitor will submit a *Statement of Requirements for Removal of Capstone Incomplete* form. On the form, the monitor lists a deadline for completion of the Capstone project. It is your responsibility to make arrangements with the monitor to complete the project. **The length of time within which an “I” must be removed is determined by the monitor, but no later than 120 days following the**
receipt of the “I”. If you have not completed your project within that time, you may need to re-register for the capstone course.

Once you complete the project, the monitor will submit a Removal of Incomplete card that lists the new grade. Once the grade has been changed on your transcript, you will be notified of the grade change by campus. Courses in which you earn a grade below C are not acceptable in fulfillment of this degree requirement.

Please note that IRB approvals are good for one calendar year for projects in the “expedited,” or “full board review” categories. However, your monitor may have set an earlier date for project completion. You must comply with the deadline set by your monitor.

Applying for Graduation
Many students apply for graduation at approximately the same time they register for capstone. Graduation deadlines and requirements are listed in your Bulletin. The application form and additional information is available on the Global Campus Web site at http://global.cmich.edu/student/graduation/. If you have questions about meeting graduation requirements, you should arrange for an appointment with your academic advisor and review your program plan. You may also contact your program administrator for assistance with graduation deadlines and other procedural questions.

Isolated Students
If you relocate during the course of your program and are no longer living near a CMU program center, you may be able to make arrangements to complete your Capstone project on an individual tutorial basis. Contact your academic advisor for more information.

Capstone Project Storage
We strongly encourage you to keep an electronic copy of your capstone project and all associated materials/records, such as research approval documents, for your own records. CMU is currently exploring the best method for storing all Capstone projects and your monitor will advise you on any additional submission requirements for storage purposes (e.g., electronic submission through the Blackboard Learning Management System).
SECTION 2: THE RESEARCH PROPOSAL

For the purpose of the capstone, the research proposal applies to any systematic and organized effort to investigate a specific problem or issue. The research proposal consists of your first three chapters. The purpose of developing this proposal is to allow you to test the waters, so to speak. The proposal allows you to get your ideas down on paper so that you can revise and refine as needed, before you actually conduct the research or initiate your project. It is an important building block for the final capstone document as well. Research proposals consist of the components listed below. Explanations of each follow.

- Title Page
- Definition of the Problem
- Preliminary Literature Review
- Methodology
- References
- Appendices

Title Page
The title page includes the title of your research/project proposal, your name, date of submission, and your faculty monitor’s name. The title should be brief but descriptive enough to be clear about the project’s purpose.

See Appendix D for a sample Title Page.

Definition of the Problem
Problem Statement
The problem statement provides fundamental direction to the project. It describes the problem, its significance and organizational context. Generally, it is accepted that if the researcher cannot state the issue clearly and succinctly, the researcher does not have a good understanding of what he or she is studying. The problem statement should be just that: one statement or question. It should also be something that can have an outcome in a reasonable amount of time.

Example: The attendance at freshmen orientation sessions at a major college in the Toronto area appears to be on the decline.
Remember that your research problem is not the same as the organization’s problem, however, the recommendations you make following research may help to resolve the organizational problem.

**Research Questions or Research Objectives**
The research questions or research objectives flow from the problem statement. The research question(s) and objective(s) can be broken down into more precise sub-questions or research proposition statements. Your research questions should be written in clear, concise, measurable terms. For example:

1. What is the perceived current level of student satisfaction with the freshman orientation program?
2. What suggestions do students offer that might help improve the freshman orientation program?

Research objectives should also be written in clear, concise, and measurable terms.

**Hypotheses (alternate approach to Research Questions or Research Objectives)**
When undertaking a research study type of capstone, some students choose to write formal hypotheses instead of research questions. Working with hypotheses will likely require more statistical analysis than posing research questions. You must be able to devise or otherwise identify a statistical test (usually a test of inference) that will allow you to either accept or reject the hypotheses you’ve posed.

**Definition of Terms**
Any special terminology that is used in the project needs to be defined for your reader. This would include any terms that are specific to an occupation, or terms that are being used in any unique way.

**Assumptions**
This section states the assumptions upon which the study was based. Assumptions are like axioms in geometry—self-evident truths. The assumptions must be valid in order for the research to have meaning. In your research, it is essential that others know what you are assuming to be true with respect to your study. To help bring your assumptions into clear view, ask yourself what you are taking for granted with respect to your problem.

**Scope and Limitations**
This section describes the limits and boundaries within which data will be collected, analyzed, and interpreted. No study is perfect; all have their limitations. Describing the
Scope of your research will enable the reader to better understand your process. Limitations will affect your ability to make generalizations or other conclusions about your project and need to be acknowledged. For example, if your subject sampling ends up being small (a small n), your ability to generalize from the data you collect will be limited.

**Preliminary Literature Review**

For your proposal, you will want to conduct a review of the literature that will adequately establish the context for your proposed research. This chapter will then be expanded into a more thorough review for your final study or project. For the purpose of this preliminary literature review, you should cite at least 15 scholarly sources. The actual number of sources required will be determined by your capstone monitor.

There are three purposes for conducting a literature review:

1. **To substantiate the purpose and variables in research:** Increase your knowledge in your research area by learning from those who conducted previous research. In your capstone, note the variables related to your topic that other authors reported in their research.

2. **To avoid the limitations and difficulties found by previous research:** Learn from others—avoid pitfalls other researchers experienced. In your capstone, note the difficulties and limitations others experienced.

3. **To discover successful research techniques and instruments:** Again, learn from others. Discover survey designs, observational techniques, methods of data collection and analysis, and instrument construction which may be useful to you in your own research.

**NOTE: A word about writing!** High quality writing is the essence of graduate level work and the proposal and the capstone are no exception. The literature of your topic will drive your writing, particularly in the literature review in Chapter 2. It is critical that you learn how to say what you want to communicate through the academic literature.

You will need to master the important skill of paraphrasing what the author of any given article or book is saying. You will also need to master the skill of synthesizing what several authors have written about your topic. Avoid the common pitfall of creating a paper that we call “a quote quilt”; this is what happens when you simply cut and paste too many direct quotations into your paper, inserting quotation after quotation with virtually no interpretation of your own. You will seem to be simply spouting the words of others without having thought about what those words and ideas mean in the
context of your topic. More importantly, YOUR voice will not be discernible. Rather, you will want to use long direct quotations sparingly and you want to use them for emphasis, to support and develop your ideas.

So, once you have a number of articles and books, how do you synthesize the ideas and information that you find? The term “synthesis” means to combine separate elements to form a whole. The review of literature then is the “whole” which you have fashioned from separate scholarly sources. Synthesizing literature means that you have read a number of different scholarly sources, and you have identified common themes and patterns that occur across all those sources. In this process you will also identify different perspectives that various authors have taken and you can compare and contrast those, and discuss them in the context of your research topic focus. Your ability to synthesize literature is connected to your ability to ask appropriate questions of what you are reading: what is this author’s main thesis? What perspective is s/he taking? What factors/variables is s/he looking at in this research? Do the conclusions presented make sense given what was being looked at and how it was researched?

You want to answer these questions for each article you read, and then look across all your responses to identify the patterns and themes as they pertain to your topic.

**NOTE:** Synthesizing is not easy! The ability to synthesize is not something you are born with. As with any kind of writing, you learn by doing. As you go through the program, look for opportunities to identify themes and patterns in the materials you are reading for different assignments or courses. There are also resources available to help you in this, which are presented in this guide in Section IV on Library Support and the Writing Center.

**HINT:** Start early by keeping organized notes on materials you read as you progress through the program. Start asking these key questions and note them on cards, along with the responses. Then, when you are ready to start your preliminary review of literature, you will already have a framework for approaching that task!
Methodology
Methodology is the blueprint for your research. This chapter addresses how you will study your chosen issue or design your project. An important aspect of any kind of research is that you choose the approach that is appropriate to answer the questions you are posing. There is no one right or wrong method to research. The key is to match method with purpose.

A number of methodological approaches are available to the researcher, such as hypothesis testing, policy analysis, and program design or evaluation (see Appendix A). Students should consult with their monitor before selecting the methodology for their projects.

It is vital that you select your method in the beginning of your project since it will influence all of your activities including the literature review, data collection and analysis, and writing the paper. This will help you maintain the integrity of your method throughout the entire process. For example, if you select case study methodology, then your activities will include time frames of observation, recordation and compilation. However, if you select a testing format, there may be no observations necessary. If you are using product development, your methodology will outline the process you are utilizing for developing the project, including possible costs, a tentative timeline, a means for assessing the effectiveness of the product, and a means for identifying potential weaknesses that may need to be addressed.

NOTE: What about surveys? Many students choose to use surveys as their principal data gathering instrument. Survey research is harder to do well than it may appear. There is much more to good survey research than just posing a number of questions to your participants. Just as you want to choose a method that matches your purpose for research, you want to make sure that the questions you pose on a survey will elicit the kind of data necessary to make a reasonable interpretation. For example, if you are seeking to determine how teachers feel about a certain policy decision, or a particular teaching strategy, and you want to see if there is a range of feeling about that topic, you will need to avoid posing questions that can simply be answered Yes or No. For topics that are fairly complex, you may do well to identify a survey that has already been developed, tested, and validated. If you find an existing survey, be sure to obtain permission from the developer to use it! Final note: Be sure to consult with your capstone monitor regarding the use of surveys as a data collection method.
Please remember that you may not collect data without receiving written approval through either the IRB or RRA processes. Students who collect data without receiving written IRB or RRA approval will be subject to the following sanctions:

1. Student will not be able to use the data collected. If the project has already been written, it will be rejected AND
2. Student will have to request IRB approval to collect new data for the MA in Education Capstone project.

**HINT: Select a methodology that works within your time restrictions.** Your methodology should facilitate the completion of your project within the class time frame and within the limitations of your research.

**Reliability and Validity**
Generally, students do not have too much difficulty in developing methodologies which identify data they will collect. Many, however, have difficulty describing how they are going to acquire reliable and valid data. The terms can be confusing. **Reliability** describes the ability of a research instrument to measure a construct such as intelligence so that it gives the same or very similar results each time it is measured. For example a reliable IQ test would determine a test subject’s IQ to be the same each time it was administered. **Validity** on the other hand describes the extent to which an instrument measures what it is presumed to be measuring – a mathematics test for example should measure a student’s mathematical ability. However if the language used in the mathematics test is not suitable or too advanced for the student then it could be argued the test is actually measuring language skills not mathematics skills and would then not be considered a valid mathematical test.

Two other terms are also used that relate to Reliability and Validity. These are **Precision** and **Accuracy**. As an example a scale for weighing items should really be both precise and accurate. If a weight is placed on a scale and weighted many times then a precise scale will give the same weight each time it is measured. If the measured weights vary a lot then the scale is not precise. Precision is this context is equivalent to the Reliability of a measuring instrument. Accuracy is a description of whether the scale measures what it is supposed to. If a known 1 pound weight is placed on the scale and the scale consistently measures 1.0 pounds then it is an accurate scale but if it measures 1.4 pounds then it is not an accurate scale. Because the scale in this case consistently measures 1.4 pounds then it would be considered precise but not accurate. Accuracy as described in this manner is equivalent to the term Validity for educational measurement purposes.
The same principle applies with research instruments. Some measure the concept under study very accurately; that is, they are valid if they measure what they are supposed to be measuring. Establishing Reliability and Validity for measuring instruments can be complex. There are several forms for each term.

References
Each proposal must have a list of references—a listing of the books, articles and other sources that you have cited directly within the proposal. All references and in-text citations must be in APA style (latest edition). Your capstone monitor will indicate the minimum number of sources you are to include with your proposal, but the general rule is a minimum of 15 sources. Please keep in mind that you will need a minimum of 25 sources for your final Capstone Project.

Appendices
Anything which might be distracting or which is not needed in the body of the proposal is put in the appendices. This includes RRA/IRB approval documents, copies of questionnaires, surveys, computer programs designed for the researcher’s study, analytical formulas and calculations, and detailed descriptions of tests or equipment used. A complete listing of terms and their definitions should also be included, although the terms should also be defined when they first appear in the proposal.
SECTION III: THE FULL CAPSTONE

Your full capstone will consist of five chapters. You may have already begun the initial development of your first 3 chapters, preliminarily through your Research Proposal (note: the proposal you developed for EDU 660 may not necessarily be on the topic you choose for your capstone). Even after you have developed the proposal on your topic, you will provide further depth and scope to these chapters in order to revise, refine, and expand as you complete your study or project. For example, your final document should contain a minimum of 25 references and be at least 35 pages in length (minus introductory material and appendices).

In order to complete your capstone, you will actually carry out the research or project development that you have proposed, following the method of data collection that you described in your proposal. Again, between the writing of your proposal and your actual data collection, you will likely need to do some fine tuning.

For the full capstone, you will complete Chapters 1, 2 and 3 and add Chapters 4 and 5. In Chapter 4, you will present the results of your research or the product you have developed. For most research projects, you will present your results both in writing and through graphic illustrations including graphs and charts. Finally, in Chapter 5 you will discuss the implications of your results as they pertain to your research questions, hypotheses, and/or study objectives.

Your final capstone should provide evidence of that you have:
1. Understanding of the relevant literature.
2. Knowledge of the area investigated.
3. Skill in conducting the study.
4. The ability to analyze data and to apply knowledge and theory.
5. The ability to report conclusions and recommendations in a professional, coherent, logical, and persuasive manner.

The Unifying Thread
Your research questions provide the thread about your topic that should be pulled all the way through your capstone. As was indicated earlier, your questions set the path for your research. The literature review in Chapter 2 should illuminate the issues surrounding your topic and should enable the reader to see the significance of your choice of that topic. The method described in Chapter 3 should be appropriate to
answer the questions posed or hypotheses stated in Chapter 1 and illuminated in Chapter 2. The results reported in Chapter 4 should make sense for the method used, the questions posed or hypotheses tested, and the summary, conclusions, and recommendations presented in Chapter 5 should tie it all back together.

As you progress through the capstone process, ask yourself if this thread is clear and visible. If it is, great! If it is not, you may need to revisit your process to ensure that the project as a whole is consistent and cohesive.

**Hint:** Don’t forget to adjust your language for the past tense! You will have used future tense (i.e., The purpose of the study is to......) in your proposal, but now you have completed the study and it is appropriate to use past tense (i.e., The purpose of the study was to......).

See the diagram below for a visual representation of the capstone chapters.
Section IV: LIBRARY AND WRITING RESOURCES

Access to library resources and services for students completing their capstone projects is provided by CMU's Global Campus Library Services (GCLS) department. Through GCLS, MA in Education students have access to the full range of the book (both print and electronic), journal, and online resources owned by the CMU Libraries as well as the library's full suite of patron services. When you need information or require assistance with your research, feel free to contact GCLS.

Library Resources
The Charles V. Park Library on the campus of Central Michigan University is the resource center for all CMU students, faculty, and staff. Its collections contain more than 1,000,000 books and other print items, 25,000 electronic books, 15,000 multimedia items, 130 electronic periodical article databases, and electronic and print access to the full-text content of more than 48,000 journals. Additionally, it is a federal and state government document depository library, which means it provides access to items published by the United States Government and the State of Michigan.

NOTE: If you are accessing the library's resources from off campus, you may first be asked to authenticate as a CMU user. You do this by entering your CMU Global ID and password.

- Finding books -- Books, both print and electronic, can be found by searching Centra, the CMU Libraries' online catalog. Electronic books can be viewed and used entirely online, while print books can be ordered for delivery to you through the library's Documents on Demand service (see below for more information). To search Centra for books or eBooks, go to http://catalog.lib.cmich.edu/search/X

- Finding journal articles -- Access to journal articles is provided through the library's article databases. For a listing of searchable databases relevant to the discipline of Education go to http://libguides.cmich.edu/c.php?g=103905&p=861086

- Finding videos -- The library offers students access to a growing collection of streaming videos. These videos can be viewed entirely online. A guide to our streaming video collections can be found at http://libguides.cmich.edu/videos
Research Guides -- GCLS librarians have created a thorough and informative research guide for students enrolled in the MA in Education program. This guide provides information on books, databases, journals, and other online resources that will be helpful to you as you do your capstone research. It also provides information on how to contact a librarian for assistance a link to the CMU Writing Center. This guide can be found at http://libguides.cmich.edu/content.php?pid=26081&sid=188235

Librarian Assistance
GCLS librarians are a great resource for you as you work on your capstone project. The librarians will provide research assistance to you by:

- Providing direction to relevant articles, books, and other materials
- Identifying proper terminology to effectively search our resources
- Giving instruction in the use of library resources and services
- Providing assistance with citing sources
- Assisting with research for the formal literature review

GCLS librarians can be reached by telephone, email, web form, and chat. For more information on contacting a librarian see http://www.cmich.edu/library/gcls/Pages/default.aspx

Reference and research assistance are provided during the hours listed at http://www.cmich.edu/library/gcls/Pages/default.aspx

Document Delivery Services
The library's Documents on Demand office offers a document delivery service that allows MA in Education students to obtain books as well as copies of single book chapters, journal articles, sample projects, and more. This service is provided at no charge to program students and all requests are typically processed within a 24 – 48 hour period. If the item you seek is not owned by the CMU Libraries, Documents on Demand can obtain a copy from another library for you. For more information on utilizing this service go to http://www.cmich.edu/library/gcls/Pages/Documents-on-Demand.aspx

Documents on Demand services are provided during the hours listed at http://www.cmich.edu/library/gcls/Pages/Hours.aspx
Writing Help

More in-depth help with writing is available to you through the CMU Writing Center. You can submit your paper, or some portion of it, to the CMU Writing Center for feedback. Consultants will offer helpful suggestions on organizing and editing your writing. For more information on utilizing this helpful service go to http://global.cmich.edu/student/writing-center.aspx

GCLS also provides assistance when it comes to writing your capstone paper. The librarians can provide answers to commonly asked writing questions, including guidance on how to cite and reference sources in the APA style. The librarians have also created a handy online writing guide that answers many questions about the writing process; this guide can be found at: http://libguides.cmich.edu/gcls/mae_resources?hs=a

Specific information on conducting the literature review can be found at: http://libguides.cmich.edu/gcls/lit_review
SECTIONS V: HUMAN SUBJECTS IN RESEARCH

RRA: Research Review Application Procedures
and
IRB: Institutional Review Board Policies and Procedures

Ethics and Professional Behavior
Ethics are an important aspect of research. The ethical review process examines the proposed research involving human subjects, to weigh the likely benefits against possible risks to the participants. The process ensures that the participants have been notified of the possibility of any potential risks and that they have been given the option to consent to participate.


The primary ethical principles, which must be considered in all research involving human subjects, include the following:

- **Maintaining subject autonomy:** Potential participants must determine for themselves, without coercion, whether or not they wish to take part in the study.
- **Maintaining the safety of subjects**
- **Promoting benefits to the subjects and larger community**
- **Conducting research in a fair and equitable manner**
- **Honoring commitments made to subjects in a study**, including protecting confidentiality
Research Review (RRA/IRB) Approval

Collecting data from human participants generally requires that the researcher apply for and receive ethical approval from a responsible ethical approval agency.

You may not collect data without written approval from CMU and also perhaps from your employer or other organization. Your capstone monitor must see the approval letter from either the MA in Education Office (Research Review Application) or the Institutional Review Board (IRB) Office (IRB Application) before you are permitted to proceed with your capstone. A copy of your RRA or IRB approval is included in an appendix of your final project submission.

NOTE: If you are using human subjects and proceed to collect data without the appropriate approval, you are in violation of federal regulations and put yourself, the subjects, and Central Michigan University at risk. This process must be followed so that we remain in compliance with the federal regulations regarding the use of human subjects in research.

Please be advised that if you proceed with a capstone project involving human subjects without having received proper approval, and are issued a grade for that project and the course, the grade will be rescinded and you will have to retake the course and conduct a new study. This will cost you time and money, and will delay graduation.

Be sure that you have a solid, approved plan for data collection and analysis before starting your RRA or IRB application process.

Ethical Review Procedures at CMU

Who Needs to Complete a Research Review Application?
Students who are using human subjects or secondary human subjects’ data, but who are not intending to disseminate their findings to a wider audience, will complete the Research Review Application (RRA). It is also required for students not utilizing human subjects in any way for their project (i.e., historical records, aggregated data), including students pursuing a product development Capstone project. This enables the MA in Education staff to document appropriately in our system that the student has completed the process and will allow students to be cleared for graduation without delays. For the RRA process and applications, see Appendix E. For RRA frequently asked questions, see Appendix F.
Who Needs to Complete an IRB Application?
Students using human subjects and who intend to publish or disseminate their findings to a wider audience, i.e. through a conference presentation, are required to complete training through the Collaborative Institutional Training Initiative (CITI - see below) and submit an application through the IRB Office’s electronic application system, IRBNet.

Ethical Review Training – CITI – Collaborative Institutional Training Initiative
Before an IRB application can be submitted, CMU students who are using human subjects in their research and who intend to publish or otherwise disseminate their findings to an audience outside their organization must complete a series of ethical review training modules and accompanying quizzes. This training is conducted online by an organization called CITI – Collaborative Institutional Training Initiative. Their website is found at: http://www.citiprogram.org.

Once the CITI training is complete then capstone students can complete and submit an IRB application. CITI training registration information can be found in Appendix G.

NOTE: Even if you are not planning to apply for IRB approval or use human subjects in your capstone research, it is a good idea to take the CITI training as this provides a valuable orientation to the issues involved with human research. Instructors for EDU 660 will require you to complete the training as part of that course.

The Importance of Informed Consent
You may be required to write Letters of Informed Consent or Letters to Participants depending on the type of study you undertake. These letters will inform possible participants about your study and any potential risks, allowing them to make an informed decision about participation.

These letters need to be on CMU letterhead. Several sample letters are found in Appendix H and include an introductory statement along with answers to the following questions:

• What is the purpose of this study?
• What will I do in this study?
• How long will it take me to do this?
• Are there any risks of participating in the study?
• What are the benefits of participating in the study?
• Will anyone know what I do or say in this study (Confidentiality)?
• Will I receive any compensation for participation? Is there a different way for me to receive this compensation or the benefits of this study?
• Who can I contact for information about this study?

If you are engaging human subjects in your study, this is a critical ethical component. Your RRA/IRB application will not be approved without an acceptable notification to participants.

Issues to address in your RRA/IRB application

There are some issues that arise when completing your RRA or IRB application that would benefit from some explanation. It is important to address these issues when completing your application.

Benefits versus Risk

Researchers need to clearly articulate the benefits of the proposed research in the RRA/IRB application along with the perceived risks that participants might experience as a result of taking part in the study. There must be recognition of the need to maximize the benefits of the research while at the same time minimizing the risks to participants.

Anonymity

Anonymity refers to whether the researcher knows the identity of the participants in a study. It is important to try and preserve the anonymity between the researcher and the participants. Surveys are the most common way to gather data that assures anonymity. A researcher distributes surveys to a sample of participants and collects them in an anonymous manner. Researchers should avoid using as a sample people with whom they have a relationship. For example a teacher should avoid surveying a class of his/her own students.

E-mail surveys are problematic as the respondents can be identified from their return e-mail address. One solution to the problem of lack of anonymity for e-mail surveys is to send the survey as an e-mail attachment and to instruct the participants to return the completed survey in the same manner with no identifying information added to the completed survey.

There are also online survey tools available that allow researchers to design an online survey and distribute it, and receive the responses back anonymously. The best known of these free tools is Survey Monkey (www.surveymonkey.com). However, you may
have to pay a small fee based on the depth of your study and your need for enhanced survey or data analysis capabilities.

Interviewing participants usually implies that the researcher knows the identity of the participants to be interviewed. When there is a concern about the lack of anonymity between researcher and participant, your application will likely have a higher degree of scrutiny. Your application should provide a justification about why you want to do interviews. One way to avoid the lack of anonymity issue is to have a third party select the interview participants for you so that you are unaware of their identities.

Confidentiality
All data collected from study participants need to be kept confidential. This refers not only to the way these data are collected and reported in the capstone document but what measures you employ to ensure that the information you have collected is kept in a secure location. **Only you and your Capstone monitor should have access to the raw data for your project.**

Coercion
Undue coercion can result if a researcher plans to collect information from people with whom he/she has an existing relationship. A researcher who wishes to survey or interview co-workers, students they teach or people who report to them in a workplace may place these people in an uncomfortable situation as a result of the existing relationship. Avoid these situations if you can.
Research Review Application (RRA) Process

Unless you are planning to publish or widely disseminate the findings of your study, you will likely use the RRA process for capstone project research approval. This includes cases where you plan to use human subjects but you do not plan on disseminating the results publicly or to a wider audience. The basic process is outlined in the following steps and a procedural flow chart is included in Appendix E.

**Step 1:** Develop your research proposal and send it to your Capstone monitor for approval. The RRA Application should include the following headers at a minimum:

- Statement of Purpose
- Research Questions
- Description of Data Sources
- Data Collection Method

**Statement of purpose** - Articulate why you are doing this research or developing the product, etc.

**Research questions** - What specifically do you want to know about the subject or what questions about the subject are you trying to address

**Description of data sources** - Are you using historical data, public data, or original data

**Data Collection Methodology** - How are you gathering this data; literature, interviews, focus groups, statistical analysis, etc.

**Step 2:** The Capstone monitor reviews proposal, provides feedback, and, when appropriate, approves the proposal.

**Step 3:** You and your Capstone monitor determine the project will not generate findings that can be generalized and you do not intend to disseminate findings to a wider audience.

**Step 4:** You will complete the Research Review Application fully and send to your Capstone monitor along with any required supporting material such as letters of permission to survey, permission to access records, surveys, and/or consent letters.

**Step 5:** The monitor reviews application and materials, provide feedback, and when the application is complete, signs the application and emails the application and supporting materials to the MA in Education (MAE) office. Students may not submit applications to the MAE office directly.
**Step 6:** The MAE Office reviews the Research Review Application and materials. If needed, the MAE Office may request additional information or updates to your Research Review Application. When your updates or changes are complete, re-submit the updated RRA to the monitor for approval. The monitor will forward your revised Research Review Application to the MAE Office. Once the MAE Office deems your Research Review Application is acceptable, the office will send you and your monitor an approval email with a copy of the approved application.

The Research Review Application and instructions for creating a digital signature are included in Appendix E and available electronically at [http://www.cel.cmich.edu/student/forms/](http://www.cel.cmich.edu/student/forms/). Your monitor will provide additional information on the expectations and timelines for RRA submission.
Institutional Review Board (IRB) Application Process

If you are engaging human subjects or using human subjects data AND you intend to publish or widely disseminate your study, you will follow the IRB application process for research approval. Before this, you need to have finished the CITI training and obtained your Certificate of Completion. CITI training information is available in Appendix G. Then you can turn your attention to completing your IRB application using the IRBNet website. IRB information is available in Appendix I.

**Categories of Ethical Review—IRB only**

**Expedited Review** – research involving no more than minimal risk, with competent adult participants.

**Full Board Review** – research involving the deception of participants, sensitive behavioral research, or using subjects such as children or vulnerable persons, etc.

Step-by-step directions on how to register in IRBNet and create/submit your IRBNet “package” are included in Appendix I. Below are the basic steps in the IRBNet submission process.

1. Once the Capstone Monitor approves your topic, please POST your complete application using the IRBNet website process. Be sure that you include everything listed below:

   • Your IRB application form
   • Your certificate of completion for the CITI training modules
   • Your letter(s) of permission to conduct study
   • A copy of your survey or interview questions
   • Your approved Application for Approval of Capstone form
   • Draft Letters of Informed Consent or Letters to Participants on CMU letterhead

2. When you create your study in IRBNet, please include your name (last name, first name) before your study title. For example: *Smith, Susan, Sample Study for MA Degree in Education*. If you have a fairly common name, you might also wish to add your CMU student number. Also add your student ID number and the course name (ex. EDU 776) in the “keywords” field and your monitor’s name and your course ID number (CRN/EPN) in the “sponsor” field. This will help us to easily locate and track your application through the IRBNet system.
3. Within the IRBNet “Study Designer”, you will use the “Central Michigan University Institutional Review Board” library of forms. Download and read the “IRB – Instructions for Completing Application” first.

4. When you are ready to have your monitor review your IRB application and supporting materials, sign the study electronically (see the choices on the left side of the IRBNet web page) and share the study with your EDU 776 monitor (full access). **Do NOT select the “submit” function**, as this would send the application directly to CMU’s IRB office without the necessary instructor and director signatures.

5. When the monitor agrees that the application is ready for review, the **monitor** should sign the study and share it with the Director of the MA in Education Program and/or designated MA in Education staff. The monitor should provide the Director and the staff person with full access. Students do not need to share their studies with the Director or the staff person, as this is part of the EDU 776 monitor’s process. The monitor will then submit the study package to the IRB office for final review.

6. The IRB Office will not review your application if the application is not “signed” by you and your monitor. If supporting materials are not included, the IRB office will notify you that further information is needed.

7. Communications from the IRB Office regarding your application will be sent by email and stored through IRBNet, including the notification of your final approval.

**Changes to your Research Plan**
Any significant changes to any plan which has been previously approved will require that you submit a formal application to amend your proposal for additional ethical approval.

**Additional Requirements**

**End of Data Collection Report**

There will be at least one more step in the IRB process, before your project is considered complete and the protection of human subjects is assured. Once your study has been conducted and data collected/analyzed, you will need to submit the End of Project Report Form through IRBNet. The fillable form is available through your IRBNet document library. This simple form reports basic information on your final number of participants, how many withdrew from the study, and if any challenges were encountered.
Request for Annual Continuation of Project Form

If you need to continue using your capstone project research (e.g., retaking EDU 776 with same research or publishing journal articles), you will need to request permission from the IRB Office every year. This applies to any use of your research that occurs one year past your approval date and beyond.
APPENDIX A
SUGGESTED FORMATS FOR
FREQUENTLY-OBSERVED RESEARCH TYPOLOGIES

The following information is taken from *Master’s Thesis: Procedures and Approaches Manual* (1993) by John T. Cirn, Ph.D., with the assistance of Bruce C. Stuart, Ph.D. Reprinted by permission of John T. Cirn, Ph.D. The section dealing with feasibility studies was developed by faculty from the College of Extended Learning.

1. **HYPOTHESIS TESTING**
   - a. Formulation of the hypothesis
   - b. Research design
   - c. Operational definitions and data
   - d. Statistical methods
   - e. Findings
   - f. Discussion and conclusions
   - g. Significance
   
   Typical title: “The Effect of Three Different Styles of Giving Critical Feedback on Student Behavior”

Hypotheses are formal statements about the relationship of two or more variables, events, or concepts. They are expressed in the form of conditional statements such as: “If X increases, then Y will decrease, other things being equal.” To test hypotheses, the terms (such as X and Y) must be clearly defined and measurable. Data must be systematically collected and analyzed. Statistical analyses are then typically performed to help decide whether expected relationships are supported by the data. The techniques of inferential statistics may be used to draw conclusions about a population on the basis of data from a carefully selected sample. Among the elements of a hypothesis test may be the following:

   a. **Formulation of the Hypothesis**
      Specification of the research problem, research objectives and development of one or more hypotheses to be tested. This may include a discussion of how the hypothesis has been derived deductively from theory, generated from previous hypothesis tests, or simply based on observations of social phenomena. The relationship of the hypothesis to the pertinent literature should be specified and analytically examined.

   b. **Research Design**
      Description of the overall research strategy (cross-sectional, longitudinal, experimental, survey, etc.), and discussion of the strengths and weaknesses of this strategy. This discussion may include a description and defense of the populations chosen for investigation, and the criteria and methods for sample selection.
c. Operational Definitions and Data
   Translation of concepts in each hypothesis into measurable terms (operationalization). Also, description and defense of the types and sources of data, and the methods and instruments used for data collection (including assessment of measurement reliability and validity).

d. Statistical Methods
   Description and rationale for the statistical techniques used for data reduction and analysis.

e. Findings
   Verbal and tabular presentation of results of the data analysis, generally refraining from interpretations.

f. Discussion and Conclusions
   Reaching of a judgment as to whether the hypothesis is supported or refuted. There may be a discussion of how the findings: (a) are consistent or inconsistent with the findings of previous hypothesis tests; (b) support, extend, specify, or undermine the theory from which the hypothesis was deduced; (c) suggest one or more new theories or explanations that may account for the findings; and/or (d) suggest the need for more research, and if so, of what type.

g. Significance
   Discussion of the relevance and practical benefits of the findings and conclusions to clinicians, administrators, policymakers, members of the general public, or other possible audiences besides researchers.

2. CASE STUDY
   a. Structure of the social unit
   b. Problem statement
   c. Contextual factors
   d. History
   e. Perspectives of the participants
   f. Interpretation
      Typical title: “A Case Study of the Multiple Intelligence”

A case study is an interpreted narrative account of decision-making, or the unfolding of some other social action, in an organization, community, or other social unit. The aim is to support or develop one or more generalizations about individual or group behavior or other social phenomena. A case study is not merely a chronologically arranged list of actions or events. There must be selectivity in the facts that are reported, and they must be arranged so as to maximize the educational value of the account. This approach often involves some degree of “participant observation,” i.e., the investigation of the perspectives of the individuals under study by sharing in their activities and experiences. The data-gathering approach is eclectic: the case-study writer may (a) study all available private and public documents, such as student records, committee minutes, official reports, policy and procedure manuals, personal letters, and internal memoranda; (b) record direct observations from personal attendance whenever possible at meeting and
other events; and (c) hold conversations and conduct interviews with the principal actors and with informants. The data-gathering need not be undertaken with a specific orienting proposition in mind; the interpretation may emerge during or after the field research. Indeed, the method may entail a continuous interplay between emerging conceptualizations of reality and empirical observations. Among the elements of a case study may be the following:

a. Structure of the Social Unit
   A description of the salient structural features of the social unit selected for study, and a demonstration that the unit is representative of the population to which generalizations are made.

b. Problem Statement
   Identification of the behavior or area of action under study, the problems or challenges faced by the social unit, the proposals that were considered, and the outcomes that emerged.

c. Contextual Factors
   Specification of the various legal, social, institutional, political, economic, psychological, and other dimensions of the context in which the social action took place, and which significantly affected its flow and outcomes.

d. History
   A narrative report of the relevant events and activities. The account should be faithful to the actual movement and complexity of the process under study, and at the same time not drown the reader in trivial or idiosyncratic details.

e. Perspectives of the Participants
   A description of the principal actors’ “definitions of the situation,” i.e., their experiences as they see them, their interests, intentions, and interpretations of the policy questions at issue and the crucial forces at work.

f. Interpretation
   Presentation of one or more propositions about individual or group behavior which are supported, refined, or refuted by the narrative and which can be subjected to other techniques of validation. Alternatively, there may simply be an identification of previously unexplored issues or considerations where the effort to generalize is likely to be fruitful.

3. FEASIBILITY STUDY
   a. Assumptions
   b. History and future
   c. Demand assessment
   d. Current conditions
   e. Management concerns
   g. Financial information
   h. Appendices
The opportunity to develop a strategic plan and use it as a research strategy allows a student to focus on the myriad aspects of starting or enlarging programs. Writing a feasibility plan for new programs or entrepreneurial ventures is no easy task. Since most new programs will require additional funding, the best way to approach the a new project or program is to prepare a plan as though it will be presented to your administration, school board or organization.

The successful plan not only sells the concept to decision makers with qualitative information, but must be convincing in its inclusion of quantitative details about every aspect of the plan. Decision makers must feel confident that the individuals planning the new programs know exactly what they are doing, have solid knowledge of the concept, and have carefully thought through all aspects of the program.

A good plan starts with background information that acquaints the reader with placement of the program in the general societal context and then proceeds with the specifics of the planned program. Every strategic and operational detail is covered so the reader fully understands what the focus of the program will be and how the leaders intend to position the program relative to other existing or competing programs. The plan includes exactly what the program or product will be, what services it will provide, and who are the intended recipients. The plan also includes the intended location of the program (with a map in the Appendix), the key personnel and their qualifications, and the daily operations of the program. The total required funding for the program or product is stated, with a detailed breakdown, and the sources for funding are listed. There is also projection of total costs and if applicable, revenues for the first five years.

The product or program plan cannot be created in a vacuum. Educational analyses provide the reader with a background of the nature of the learning environment and the driving forces in the organizations environment. Typical driving forces that can impact the success of new products or programs are the development and implementation of new technology, government regulation, and general economic and social conditions.

In creating a plan for a new product or program, the researcher is to analyze the characteristics of the educational setting. Any competition is to be described and discussed in detail. Include demographics, products/services, relative geographic proximity to the proposed program or product, and strengths/weaknesses in the analysis. Identify, define, and analyze and define the driving forces that affect education. Identify the characteristics of a successful educational programs or products.

The program or product plan also includes much thoughtful introspection. The internal functional analyses need to cover management analysis and should include a strategic management plan and how it will be implemented. The marketing analysis includes product or program identification, and pricing, and distribution if appropriate. The financial analysis covers startup of the program or developing of the product and maintaining viability. The researcher must estimate the monthly and annual cost of a
proposed program. Economic feasibility should be analyzed using a “best case scenario,” “worst case scenario,” and “mostly likely case scenario” approach. A five-year balance sheet, and monthly budget statement should be developed for each year. There also needs to be discussion of the feasibility of the product or program including the probability of success and possible threats and opportunities.


4. POLICY ANALYSIS

a. Definition of problem or choice
b. Previous responses
c. Criteria for choice
d. Description of alternatives, to include time, capital and human resources, affected activities, organizational components and size, time to implement, etc.
e. Consequences of alternatives
f. Evaluation of alternatives, including political feasibility in areas of institutional factors, interest group factors, and potential factors
g. Choice

Typical title: “An Analysis of Computerized Testing”

A policy analysis specifies, and provides evidence for, the pros and cons of various options facing policymakers. It involves drawing together and evaluating facts and informed judgment regarding the causes and consequences of alternative strategies for dealing with a specific problem or opportunity in the delivery of human services. Previously-considered options may be compared, or one or more new options or new combinations of options may be formulated and included in the analysis. Among the elements of a policy analysis may be the following:

a. Definitions of the Problem or Opportunity

A review of why an issue is, or should be, receiving attention from policymakers. This will typically include a presentation of alternative viewpoints representative of various affected interests. There may be a review of the arguments on the
nature and interaction of socio-economic and other factors generating or sustaining the problem or creating the opportunity. There may be a prediction of trends if no action is taken. This prognosis may include “worst case,” “best case,” or “most probable” scenarios for the short term and long term.

b. Previous Responses
A review of the history and effectiveness of relevant policy activities, including important legislative, administrative, and/or judicial actions. This review may include an analysis of previous program evaluations in the policy area.

c. Criteria for Choice
A clear and consistent statement of the criteria by which the policies under study are to be judged. This should include a specification and defense of the objectives to be pursued, and of the operational indicators to be used in assessing the success of policies in achieving these objectives. This discussion may assess the values that would be furthered by the policies in question and the implications should the policy limits be exceeded.

d. Description of Alternatives
A description of the alternative programs or strategies for coping with the problem or taking advantage of the opportunity. These may be compared in such terms as human and capital resource needs, organizational activities, size, and the time required for implementation.

e. Consequences of Alternatives
Prediction of direct and indirect consequences of each alternative considered in the analysis framed in terms of costs and benefits for various affected interests. If consequences are uncertain, estimates of their probability may be presented. There may be specification and defense of the underlying assumptions about cause-effect relationships and of the techniques used for making these predictions.

f. Evaluation of Alternatives
An evaluation of each alternative (including the alternative of doing nothing) in terms of the specified criteria of choice. When alternatives are found to be superior with respect to certain criteria but inferior with respect to others, it may be necessary to rank or weight the criteria, or develop additional criteria for evaluating the trade-offs, the different combinations of goal achievement. It may be important to evaluate each alternative in terms of the political feasibility of its enactment and implementation.*

g. Choice
A reasoned recommendation as to which specific course of action should be pursued on the basis of the specified criteria.

*Assessment of political feasibility might include analysis of the major facilitating and constraining factors falling into the following categories:

Institutional factors: analysis here would include identification of the institutions most important for the generation, adoption, and implementation of policy in the area under study, and a description of their characteristic responses to
reform proposals and of any structural features which may help to explain policy outcomes in this area.

**Interest group factors:** there may be a description of the active interest groups. This may include an examination of: their formal positions, other values at stake which help to account for motivations, organizational attributes, alignments and coalitions among groups, lobbying tactics, and the availability and use of political resources.

**Potential factors:** there may be a study of the inactive affected interests, reasons for their inactivity, and their likely orientations if aroused.

5. **PROGRAM DEVELOPMENT**
   a. Program or setting
   b. Needs assessment
   c. Objectives
   d. Target population
   e. Design specifications, including frequency, duration, and form of activities or services, personnel, equipment, location and structure of delivery sites, time-frame for implementation, coordination with other programs, lessons learned from similar programs elsewhere, design materials (charts, procedural manuals, lesson plans, catalogues, job descriptions, forms, detailed budgets, etc.)
   f. Sources of required resources
   g. Program benefits/costs
   h. Financial feasibility
   i. Political feasibility
   j. Monitoring and evaluation plan

Typical title: “An Analysis of Peer Mentoring”

A program design is a detailed plan for a human services delivery program (e.g., an instructional, training or education program) accompanied by arguments supporting implementation of the program by a particular organization. The proposal may be for a significant extension or modification of an existing program, the adoption of a program as it has been in operation elsewhere, or an original creation that calls for a new approach or a new combination of familiar elements. The design should be specific to an actual site; real data should be used, and the advocacy should be directed to an identified audience. At the same time, the design should be a vehicle for demonstrating administrative knowledge and skills applicable in various settings.

The design may be a preliminary one, but the information should be sufficient to form a framework for a more developed plan, and to serve as a means for eliciting feedback and constructive criticism from work colleagues, superiors, and other interested parties. The program description and defense should be comprehensive enough to convince the organization’s leadership, or an external funding or regulatory agency, that the proposed program is appropriate and feasible.
A program design done in the field will typically entail more effort than is normal for the purposes of a master’s thesis. The following list offers an extensive checklist from which some subsets of elements might suffice to meet the expectations of a thesis. Many institutions have quite specific format requirements for program proposals and designs, but among the elements may be the following:

a. Program and Setting
   A description of the characteristics of the implementing organization and the proposed service delivery program. This introductory section should also present an overview of relevant market characteristics or other environmental factors. Existing features of the delivery system and future trends may be briefly discussed.

b. Need Assessment
   A systematic appraisal of the problem or new opportunity to be addressed. Consideration can be given to known discrepancies between available and required services or facilities, forecasted supply and demand, potential and actual utilization of services. The results of censuses, sample surveys, or utilization trend studies may be reported, or there may be a defense of other indicators and techniques used for identifying the problem and community support for the proposed program. There may be a discussion of variations in perspectives on needs and priorities as held by professionals, potential service recipients, and other constituencies, and an examination of the reasons for these discrepancies.

c. Objectives
   Articulation of the intended general and specific accomplishments of the program. There may be short-term and long-term predictions. This section may set forth the guiding hypotheses about modification of individual or community conditions which underlie the assumed cause-effect relationships between the program and the objectives.

d. Target Population
   Identification of the individuals or other units to which the program is to be directed, and specification of the criteria for selecting the service recipients. (This should follow closely the evidence presented in the need assessment.) The target population may be analyzed in terms of size, geographical location, social and demographic characteristics, distribution of problems and conditions, and sociocultural and transportation factors likely to affect utilization of services and program effectiveness.

e. Design Specifications
   Detailed description of the structure and operation of the proposed program, including: frequency, duration, and form of activities or services; personnel, equipment, and other resource requirements; staff functions and organization; location and structure of new service delivery sites; time-frame for implementation; and plans for coordination with other programs both within and outside the organization. It may be advisable to demonstrate how the
elements in this section conform to two major sources of design specifications:

1. the standards set forth in the State Health Plan, the Health Systems Plan and
   Annual Implementation Plan of Health Systems Agency; the institution’s own
   plan, if there is one; the requirements or regulatory agencies and
   accreditation bodies; and the guidelines promulgated by professional
   associations.

2. the lessons to be learned from model programs in operation or completed
   elsewhere.

Design materials which may be attached as appendices could include organization
charts, operations flow charts, policy and procedure manuals, job descriptions,
record forms, price lists and catalog descriptions of required equipment, detailed
budgets, and architectural plans.

f. Sources of Required Resources
   Analysis of the availability of labor and materials needed for construction, and of
   the equipment and personnel needed for operation. This may include
   assessments of the relevant labor markets, and plans for the recruitment of
   scarce professionals.

g. Program Costs and Benefits
   An estimate of expected direct installation and operating costs. There may also
   be an estimate of indirect costs, or additional burdens placed on general
   administration, housekeeping and maintenance, and other services and
   departments. This section addresses the question: “Is this program an efficient
   use of resources compared with alternative uses of resources?” Ideally this
   would be answered using a prospective cost-benefit analysis. The proposal might
   also contain discussion of two or more alternative approaches to achieving the
   specified goals, with each alternative carrying a different total cost. A
   comparative cost-effectiveness analysis of these options could then be carried
   out.

h. Financial Feasibility
   An assessment of the need for, and potential sources of, funding. Beyond the
   payment of program start-up costs, the institution must also have reasonable
   assurances that ongoing operating costs will be covered by program revenues or
   funds earmarked from other operations.

i. Political Feasibility
   An appraisal of the probable sources and level of support for and opposition to
   the proposed program as a whole or to various components of it, at the
   launching and the operational stages. This could include an examination of the
   likely arguments and tactics of opponents, and the counterarguments and
   countertactics likely to be most effective. Insights for such an analysis could be
   drawn from the history of past program promotions, both successful and failed
   initiatives, at the proposed implementing organization or elsewhere.

j. Monitoring and Evaluation Plan
   A description of how data will be gathered to determine to what extent: (a) the
   program is reaching the appropriate target population; (b) the delivery of
services or other program activities are being undertaken in conformity with the design specifications; and (c) the program is meeting the objectives and having the desired impacts. This plan may include: criteria for assessing success, operational indicators of goal achievement, identification of information needs, and an outline of a data collection system.

6. **Product Development:**

1. Identification and Description of Product
2. History of Need for Product
3. Design Specifications
4. Sources for Required Resources
5. Budgets
6. Considerations
7. Plan for Evaluation

Typical title: “A Peer Mentoring Handbook”

A product development is a completed product for use in an educational or organizational setting, accompanied by rationale for utilizing the designed product. Institutions, organizations and individuals should be able to use the product in its finished form. The product description and defense should be comprehensive enough to convince individuals and organization’s leadership, that the proposed product is comprehensive and usable. The product development should include:

a. **Objectives**
   Articulation of the intended general and specific accomplishments of the product.

b. **Target Population**
   Identification of the individuals or other units which the product is to be used.

c. **Design Specifications**
   Detailed description of the structure and operation of the product including: frequency, duration, and form of activities or services; personnel, equipment, and other resource requirements; staff functions and organization; location and structure; time-frame for implementation; and plans for coordination with other programs both within and outside the organization. Design materials which may be attached as appendices could include organization charts, operations flow charts, policy and procedure manuals, job descriptions, record forms, catalog descriptions of required equipment, detailed budgets, and architectural plans.

d. **Required Resources**
   Clearly delineate everything that needs to be done so that anyone can pick up product and use it in its final form.

e. **Product Costs and Benefits**
   An estimate of expected direct use and operating costs. There may also be an estimate of indirect costs, or additional burdens placed on anyone or
organization utilizing the product.

i. Monitoring and Evaluation Plan
A description of how data will be gathered to determine to what extent: (a) the product is reaching the appropriate target population; (b) the delivery of services or other product activities are being undertaken in conformity with the design specifications; and (c) the product is meeting the objectives and having the desired impacts.

7. Program Evaluation
   a. Statement of Purpose
   b. Description of Program Inputs
   c. Description of Program Activities
   d. Performance Criteria
   e. Operational Indicators
   f. Research Design and Data Analysis
   g. Conclusions and Recommendations
Typical title: “A Program Evaluation of the Ready to Achieve Program in Clayton County”

A program evaluation, or evaluation research, is the use of systematic methods of empirical investigation to produce information useful for making a judgment about a program’s worth or performance, according to specified criteria. It may be an investigation of how and why a program operates as it does, and/or the measurement of the extent to which it has achieved certain objectives or has had certain other outcomes, and at what costs. It may include recommendations about the continuation, modification, or termination of the program. Among the elements of a program evaluation may be the following:

   a. Statement of Purpose
      Identification of the ways that the collected information might be useful, and the intended or possible users of the information. Possible uses of the information would be to: (a) demonstrate the quality of a program and gain support for its continuation or expansion, (b) identify ways that the program could be improved, and/or (c) impartially compare competing programs or alternative methods or practices. Possible users of the information would be: legislators, budget officers, program sponsors, planners, administrators, service providers, and service recipients. To maximize the utility of the research for particular audiences, it is frequently important to include among the examined variables some which are amenable to manipulation and control.

   b. Description of Program Inputs
      Description of human and capital resources available to the program, together with information on the program’s location, sponsorship, staffing patterns, length of time in operation, and other relevant structural characteristics.
c. Description of Program Activities

Precise description of who has done what to whom, in what sequence, with what resources, under what supervision, within what period of time at what sites, and other relevant dimensions of program operation, so that there may be accurate specification of what program activities account for what effects.

d. Performance Criteria

Presentation of the standards to be used in assessing the merit or the success or failure of the program. This may include a specification of the objectives of the program as well as beneficial and harmful outcomes and impacts that were unintended or unforeseen.

The objectives may include the stated formal objectives or official mandates of the program, and/or objectives formulated by the research or others. Note may be made as to whether the objectives are consistent or conflicting, or varying in importance.

Judgments may be made regarding the time period in which the objectives were to have been achieved or through which the effects were to continue to be felt. The timing and frequency of the measurements will depend on the interest in capturing delayed as well as immediate effects, and temporary as well as permanent effects.

Program objectives may fit into a hierarchy from immediate to ultimate, from lower-order to higher-order. A program evaluation may thus focus on (a) implementation variables in the administrative operation of the program, and/or (b) effectiveness, the extent to which the program as implemented achieved objectives or had other effects.

An implementation or process evaluation is concerned with how the program was established and carried out. It may simply measure “effort” or “utilization” (number of dollars spent, number of manhours or other resources consumed, number of activities performed or services produced, number of persons who received services, etc., and relationships among these variables). Alternatively, the study may investigate the degree to which the program was implemented or used as intended, the causes and consequences of the deviations from various implementation strategies, how well or how poorly the availability and use of resources and the performance of activities met programmatic expectations or standards, or what proportion of eligible users of the program actually used the program.

An effectiveness or outcome or impact evaluation measures the extent to which the program produced chances in the status or behavior of users or had other desirable and undesirable outcomes. The study may include a concern with “adequacy,” i.e., actual performance level relative to the level needed to eliminate all or a realistic amount of the total problem or need that existed. Or
the study may be concerned with “efficiency,” the relationship between the program’s benefits and the costs incurred in producing those benefits.

e. Operational Indicators

Translation of each criterion into procedures by which outcomes can be observed and measured, so that it can be determined whether or to what extent the criterion has been satisfied.

f. Research Design and Data Analysis

Description and defense of the strategies used for the collection, reduction, and analysis of data; and presentation of findings based on this analysis. In outcome evaluations, there may be a need for collection and presentation of base-line and post-intervention data on the conditions which the program is intended to change. There must also be identification and, ideally, control (by data collection or statistical procedures) of activities and events occurring within the implementing organization, among the affected groups, or in the larger environment which were not part of the program under study but which may offer competing explanations for any observed changes.

g. Conclusions and Recommendations

Judgments as to whether the program satisfied each of the specified criteria to an acceptable degree, and recommendations on that basis to continue, expand, reduce, modify, or terminate the program. If the level or mix of outcomes is found to be less than ideal, it is important to try to determine whether the results were due to resource inadequacies or other problems in implementation, or to error or underdevelopment in the underlying assumptions about the relationship between program activities and outcomes. Suggestions may be made for replacement of the program with an alternative, or for reforms in program objectives, design, operation, scope, or funding level.

8. Other

In consultation with you mentor you may select another format for your methodological approach.

POSSIBLE COMBINATIONS

There are numerous instances in which a Capstone topic is most appropriately pursued by a combination of approaches. Research representing one approach may be a component of one of the others, or be a specialized version of another approach. Some of the examples listed in the bibliographies exemplify hybrid versions of two or more approaches. Among the possibilities for overlap among the approaches are the following:

1. Some of the evidence for or against the options under consideration in a policy analysis may be composed of a comparison of the findings of one or more case
studies, program evaluations, cost-benefit or cost-effectiveness analyses, or legal studies.

2. A program evaluation may take the form of a case study, or it may take the form of a hypothesis test where, for example, the hypothesis specifies a formal relationship between the intended and actual administration of a program or between the intended receipt of benefits by a target population and the actual distribution of benefits.

3. A legal study is often a vehicle for a wide-ranging policy analysis, in view of the many societal problems of significance that are dealt with in some fashion by our legal system.

4. Identification and measurement of costs and benefits in a cost-benefit or cost-effectiveness analysis may rely upon one or more program evaluations.

5. At the core of some operations research topics are hypotheses about the importance of various factors in explaining system operations.

6. A program design may draw heavily upon program evaluations, case studies, legal studies, and cost-effectiveness analyses for design features and/or for defense of estimates of the technical and political feasibility of the proposed program or of its satisfaction of legal standards.

7. An analytic literature review of some scope and depth should form a section of each of the other approaches.
APPENDIX B
POLICY FOR ACADEMIC INTEGRITY

Please see the most current CMU Bulletin for the full Academic Integrity Policy (http://bulletins.cmich.edu).

Ethical and Professional Behavior
Students are expected to adhere to the ethical and professional standards associated with their programs and academic courses. Such standards are generally communicated to students by instructors and are available through publications produced by professional organizations. Unethical or unprofessional behavior will be treated in the same manner as academic dishonesty.

Sanctions for Violations of the Policy on Academic Integrity
In cases involving violation of the Policy on Academic Integrity, determination of the student’s grade and status in the course are made by the instructor. The instructor’s determination can be appealed by the student to the dean of the appropriate college.
APPENDIX C

Grading rubrics will be utilized to assess student performance on their Capstone Project. The MA in Education capstone project will be graded based on the standards set forth in the rubric, including adherence to APA format, evaluation criteria for each of the 5 chapters, references, and academic writing.

Non Product Rubric

| Student Name: |
|---|---|---|---|---|
| Levels | 4 = Excellent | 3 = Satisfactory | 2 = Fair | 1 = Unsatisfactory |
| Dimension and Percentile Weight | | | | |
| Problem Statement 15% | | | | |
| Articulates clear research problem/question/objective | | | | 0 |
| Makes connections to previous research | | | | |
| Establishes need/contribution/value to the field of study | | | | |
| Includes Introduction, Problem Statement, Purpose of the Study, Research Objectives/Questions, Definition of Terms, Scope/Limitations/Delimitations | | | | |
| Describes limitations to the study | | | | |
| Literature Review - 20% | | | | |
| Sets out a context for the research | | | 0 |
| Evolves in an organized progression | | | |
| Utilizes and synthesizes current, relevant, and credible sources | | | |
| Uses a minimum of 25 sources, cited in text | | | |
| Uses appropriate APA format for citations | | | |
| Methodology - 10% | | | | |
| Research methods complement the problems/purpose/hypotheses/objective | | | 0 |
| Details methods of collecting and analyzing data based on problem/purpose/hypotheses/objective | | | |
| Provides rationale for the instrument used in data collection | | | |
| Analysis/Results - 20% | | | | |
| Analyzes and explains the data presented in the context of the research questions/hypotheses | | | 0 |
| Displays data graphically and explains clearly in narrative | | | |
| Conclusions/Recommendations - 15% | | | | |
| Makes interpretations and recommendations based on the data provided | | | 0 |
| Integrates findings of the literature with findings of the study that relate to the research objectives | | | |
| Provides succinct summary of research project | | | |
Product and Program Rubric

Student Name:

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<thead>
<tr>
<th>Levels</th>
<th>4 = Excellent</th>
<th>3 = Satisfactory</th>
<th>2 = Fair</th>
<th>1 = Unsatisfactory</th>
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**Dimension and Percentile Weight**

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<tr>
<th>Dimension and Problem - 16%</th>
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<th>3</th>
<th>2</th>
<th>1</th>
<th>Points Earned</th>
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<tbody>
<tr>
<td>Sets out problem and purpose of the research</td>
<td>0</td>
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<td>Makes connections to previous Research</td>
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<td>Establishes need/contribution/value to the field of study</td>
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<td>Describes limitations to the study</td>
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<td>Defines unique terminology</td>
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<td>Includes Introduction, Problem Statement, Purpose of the Study, Research Objectives/Questions, Definitions of Terms, Scope/Limitations/Delimitations</td>
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**Literature Review - 16%**

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<tr>
<td>Sets out a context for the research</td>
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<td>Evolves in an organized progression</td>
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<td>Utilizes and synthesizes current, relevant, and credible sources</td>
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<td>Are sufficient in number to create the context for the problem and to demonstrate understanding of the problem/issue</td>
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<td>Supports the purpose and direction of the research project</td>
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<td>Includes Introduction, Organization of the ROL, Other Subheadings as needed for topic, Summary</td>
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**Methodology - 16%**

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<tr>
<td>Detail methods of collecting and analyzing data provided</td>
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Identifies population and selection procedures
For a product, explains process for design and development specifications, including monitoring and evaluation of the product.
Includes Target Population, Procedures, Required Resources, Product Cost and Benefits

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<th><strong>Product/Program Development - 24%</strong></th>
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<tr>
<td>Addresses and explains all the data presented and/or materials</td>
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<td>Provides narrative to explain information/presentation/charts</td>
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<tr>
<td>Appropriate copyright and citation information provided for materials utilized</td>
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<tr>
<td>Product suited the needs of the intended target population (If a product)</td>
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<tr>
<td>Includes Letter of Introduction, Table of Contents, References relevant to product/program, Operational Definitions, and a Plan for Monitoring and Evaluation</td>
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<th><strong>Conclusions/Recommendations/Summary - 8%</strong></th>
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<td>Integrates findings of the literature with findings of the study that relate to the research objectives</td>
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<th><strong>References - 4%</strong></th>
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<td>Reflect current scholarship on the problem/issue as well as historical scholarship</td>
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<tr>
<td>A minimum of 25 scholarly sources utilized within document</td>
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<tr>
<td>Are cited in the text and listed at the end of the capstone and in the product</td>
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<th><strong>Writing/Formatting - 16%</strong></th>
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<td>Demonstrates control of syntax, grammar, coherence; paragraphs are focused and connected with transitions</td>
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<tr>
<td>Builds a sequence of ideas that convey a reasonable argument</td>
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<tr>
<td>Proofread for spelling, typing, punctuation</td>
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<tr>
<td>The plan B paper included the preliminary and supplementary, pages required by the College of Graduate Studies, College of Extended Learning Capstone Project Guide: Title page, Appendix, List of References.</td>
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<tr>
<td>IRB approval letter included in Appendix</td>
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<td>End of Collection Data Report included (if required by IRB)</td>
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**Final Score**

Scale is as follows:  
A = 100-93  
A- = 92-89  
B+ = 88-84  
B = 83-80  
B- = 79-75  
C+ = 74-72  
C = 71-67  
E = Below 66

Monitor Name and Signature:
APPENDIX D

SAMPLE TITLE PAGE – CAPSTONE PROJECT

How Students Respond to Perceived Critical Feedback and Interactions

In and Outside the Classroom

Capstone Project

Submitted in Partial Fulfillment of Requirements

for the Degree of

Master of Arts in Education

(Concentration in Instruction)

Central Michigan University

by

Student Name

Student ID #

Project Monitor

Faculty Member’s Name

May 2014
APPENDIX E
RESEARCH REVIEW PROCESS AND APPLICATION

Research Review Process

Student develops research sends to monitor for approval.
Monitor reviews proposal, provides feedback, and when appropriate, approves the proposal
When proposal is acceptable, monitor approves the proposal
Student/instructor determine if project findings will be generalizable and the student intends to disseminate findings to a wider audience (Follow Yes)
Student/instructor determine if project findings will not be generalizable and the student does not intend to disseminate findings to a wider audience (Follow No)
Follow IRB Process
Yes

No

Student completes Research Review Application and sends to monitor with supporting documents
Monitor reviews application and materials, provides feedback, and when application is complete, signs the application, and forwards it the MAEd Coordinator for approval
MAEd Coordinator reviews the Research Review Application and materials. If needed, clarification or additional information is requested from the student
When RRA is acceptable, the MAED Coordinator will send an approval to both student and monitor via email.

DONE

MAEd Coordinator asks for updates to the RRA.
RESEARCH REVIEW APPLICATION
FOR MSA 685/699 AND EDU 776 CAPSTONE COURSE PROJECT

Project title: ____________________________________________________________

Student name: ______________________  Student ID#: ________________________

E-mail address: _____________________  Work phone: _______________________
Home phone: _______________________

Concentration: ______________________

Instructor’s name: ___________________  Instructor e-mail: ___________________

Course: ____________________________  EPN: ______________ Program center: _______

Do you intend to use human subjects or human subjects data in your project?  Yes ☐  No ☐

Do you intend to publish your project or present project results outside of your organization?  Yes ☐  No ☐

If you answered “yes” on both questions, you are required to complete CITI training and seek approval through CMU’s Institutional Review Board (IRB). The IRB process requires registration in IRINet and submission of your application materials and supporting documents through IRINet. Please consult with your instructor and the appropriate program office for assistance.

If you answered “no” to one or both questions, you may use this form for your research review. Read the following directions:

<table>
<thead>
<tr>
<th>Non-human subject research</th>
<th>Human subjects research</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the box below describe the purpose of your research, describe the data you plan to use, and specify the sources of your data (URL, organizational source, etc.)</td>
<td>In the box below describe the purpose of your research, specify the source of your subject pool, the number of subjects, and the selection criteria. Specify your relationship to the subjects (coworker, supervisor, work in same organization, etc.), describe your research methodology.</td>
</tr>
<tr>
<td>Required attachments: Permission letter on the organization’s letterhead if the data is not available to the general public.</td>
<td>Required attachments: Copy of survey or interview questions, cover letter or consent form, permission letter on the organization’s letterhead if the subject pool is not selected from a public source such as a phone directory or web page.</td>
</tr>
</tbody>
</table>
APPENDIX F
RESEARCH REVIEW APPLICATION – FREQUENTLY ASKED QUESTIONS

1. What will my instructor and the MAE office look for in my Research Review Application materials?

We will look for the completeness of your research review application materials, along with proper grammar and spelling. The fillable Research Review Application form does not allow you to use any spell-checking functions, so be sure to read through for spelling issues and readability. Check the spelling in consent forms and surveys prior to sending the documents to your instructor. This package of documents is a reflection of you and your professionalism. In addition, in consent documents, you are a representative of Central Michigan University. Take time with your RRA materials. Be as detailed and specific as possible.

2. Are there different categories within the Research Review Application Process?

Under the RRA process, we categorize projects as “non-human subjects” or “human subjects research.”

a. Projects involving data that is not human subjects’ data, such as school/institutional policies qualifies for the non-human research determination. Survey data may qualify for this category if it already comes to the researcher as summarized and de-identified data. If the source of the data is not available to the general public, a permission letter (on letterhead) should be included in your Research Review Application materials.

b. Projects involving surveys, interviews, or records studies will fall into the human subjects research category. A copy of the survey/interview questions, a consent document, and a permission letter (on letterhead) should accompany your Research Review Application.

3. Can I use e-mail to distribute and collect surveys?

Unfortunately, the use of e-mail to distribute and collect surveys poses a number of issues in terms of subject anonymity. Even if the researcher chooses to delete the emails, which contain identifying information, there is still the possibility that the emails still exist on hard drives or, in networked systems, are backed up by the server. As students, you have access to many free web-based survey services. You are strongly encouraged to use these services.
4. **What about hospital and other Institutional or Ethical Review Boards (IRB/REB)?**

Although you may not be required to go through CMU’s Institutional Review Board process, you may be required to seek approval from a hospital’s or other institution’s review boards. The review board approval, on letterhead, from the other institution should be included with your Research Review Application materials. In cases where the other institution requires CMU approval prior to their review process, we will note on the CMU approval letter that access to subjects is dependent upon approval of the host institution.

5. **What should I consider when using secondary data and records studies?**

Secondary data encompasses many types of data, such as financial data, public records, and record reviews (e.g., student files, medical files, etc.). In general, data that comes to you in a summarized and/or de-identified format is considered non-human subject research.

Projects where you, the researcher, have access to raw data (e.g., survey responses, student files, employee files, etc.) fall into the human subjects research category. In the Research Review Application, be sure to specify what data is being recorded for purposes of research and be sure that names or other identifying information is not recorded. You will also need to provide a permission letter stating that you may use the data in your project.

6. **Are there sample telephone scripts?**

If you plan to conduct a telephone survey, the “telephone survey/informal interview template” should be used. The template for this form is found at [http://global.cmich.edu/student/forms/default.aspx](http://global.cmich.edu/student/forms/default.aspx).

7. **When do I need to submit permission letters?**

Approvals to conduct surveys or interviews should be on company or institution letterhead. If the name of the person giving authorization is not clear, you may be required to supply the name. A contact phone number should be included on the letter. E-mail permission letters may be accepted if sent from the organization’s e-mail system.
Requesting a permission letter may be a lengthy process, for example, if you need review by the legal department or consent from the union.

8. **What about data collection on public property?**

Remember that public property is just that, property belonging to the city or state. However, local ordinances may vary and it may be prudent to obtain a permission letter if you plan to access possible participants on public property. Surveys conducted in school parking lots or in front of a business locations require letters of permission.

9. **Why is it important to state the number of subjects in my project?**

Your instructor and the MA in Education office reviewer need this information to assess one of two things. First, is the subject population so small that subject anonymity cannot be protected? Second, if demographic questions are used, can any subject be identified from responses to those questions? Ask yourself why you need the demographic information. If you do not plan to use this information in your analysis, then delete the questions. If you wish to describe only the subject population, there may be other sources, such as the HR department, for that information. Keep in mind that with each demographic question, you are subdividing the sample. For example, your survey has two demographic questions, gender, and level of education. In the subject population, there is only one male with a doctorate. If that subject participates in the study, he will not be anonymous.

10. **Do I still need to identify potential risk to participants in the Research Review Application?**

The requirement for sound research methodology and appropriate research ethics should always be part of your research project. So, it is important to provide adequate notice to subjects on any potential risks. It is possible for a project to have some risk and be approved if the risk is clearly identified, if subjects are informed of the risk, if the benefits outweigh the risk, and if the investigator has made provisions to minimize the risk. According to the Institutional Review Board and still applicable to the Research Review Application process, “a risk is a potential harm (injury) associated with the research that a reasonable person, in what the investigator knows or should know to be the subject’s position, would be likely to consider significant in deciding whether or not to participate in the research.” Risk can be more than a breach of confidentiality or the possibility of subject identification. Additionally, risk may involve sociological issues,
psychological issues, and so on. The five major types of risk are physical, psychological, social, legal, and economic. Many projects contain a mixture of risks.

11. When do I use a consent form/cover letter for anonymous surveys and when do I use an adult consent form?

A consent form for anonymous surveys or a survey cover letter is used whenever the project involves a survey which can be returned anonymously by subjects. Anonymous return is achieved by using U.S. mail, interoffice mail, or a secured drop box.

An adult consent form is used in the following types of projects:
   a. personal interviews are conducted and questions are non-programmatic
   b. children are involved in the project (Child assent and parental consent are also needed. There are age-specific child assent forms. The adult consent form is used for parents.)
   c. subjects are being observed and there is no expectation that their behavior is public.

12. What is the difference between programmatic questions and non-programmatic questions?

Programmatic questions are factual in nature. The interview subject is being asked about things, not opinions. For example, “how many employees work here?” is programmatic in nature, while “do you feel that staffing levels are adequate for your store?” is not. Non-programmatic questions ask the subject to express feelings, give an opinion, or make a judgment.

13. What do I say in my consent form/cover letter for anonymous surveys or adult consent form if I am a supervisor?

If you supervise any or all of your subjects, you must reduce the possibility of any perception of coercion on the part of potential subjects. In the consent form for anonymous surveys, you can add the following: “Although I supervise some (or all) of you, your decision to participate or not to participate in this project will not jeopardize your position in any way because I will have no way of knowing who participated and who did not participate.” In the consent form, you must acknowledge that you supervise the interviewee and assure the research subject that they may stop at any time or decide not to participate in the interview without repercussion and without putting their jobs in jeopardy.
14. How do I address risk in my consent materials?

If the project involves some potential risk to subjects, for example, recalling episodes of workplace violence, you can add the following to the consent for anonymous surveys or consent form: “Some of the questions included on this survey (or in this interview) may make you feel uncomfortable (Note: this is where you can specify the risk in more detail). Please answer only the questions you are comfortable in answering. You may stop at any time. If you experience any emotional distress because of this project, please call (XXX) XXX-XXXX which is a contact number for support services (specify the name of the service).” Identify any potential risks as you describe your research methodology on the Research Review Application form.
Go to www.citiprogram.org
Choose a security question and answer

Enter your First and Last Name

Enter your Preferred Email
And Verify Email

Choose No

When finished. Click on

Enter your Secondary Email
And Verify Email

Your choice. Yes or No
Select Basic Human Subjects – Social & Behavioral Focus

Note: The order of fillable boxes may have changed. The information is the same.

Complete ALL fields.

Select Principal

Click on Submit

Choose Human Subjects Courses

Click on Next
Choose Social & Behavioral Research Investigators.

Click on Next

Click on No
Click Enter To Begin

Click on a module and begin taking your CITI course.
APPENDIX H
SAMPLE LETTERS OF INFORMED CONSENT

• These are available at http://global.cmich.edu/student/forms/default.aspx.

Sample Consent for a Telephone Survey or Informal Interview

Hello, my name is <insert name> and I am a graduate student at Central Michigan University. I am conducting research on <insert information about the nature of the research project>. This research will fulfill my master’s degree requirements. You were selected to participate in this study because <insert criteria>. Participants must be age 18 or older. Please confirm that you meet this criteria.

I anticipate that this survey/interview will take less than <insert number of minutes> minutes to complete. There is no compensation for responding nor is there any known risk. In order to insure that all information will remain confidential, I will not record your name. I will only record you as a <insert appropriate text, such as survey subject a, b, c, etc.>. Copies of the project will be provided to my Central Michigan University faculty monitor and <insert other appropriate text, such as commanding officer or superintendent>. Participation is strictly voluntary and you may refuse to participate at any time.

I appreciate your willingness to help with my project. The data collected will provide useful information regarding <insert purpose of research>. If you would like a summary copy of this study please let me know at the end of the survey/interview and I will add your name to a list that I will maintain separately from my survey/interview notes. If you have questions later, please contact me at <insert phone number>. My faculty monitor is <insert name> and he can be reached at <insert phone number>.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the <insert your program and the contact information for the program. MA in Education students should use MA in Education program, 989-774-3784>

Let’s begin with the first question.
ALL GREEN SECTIONS ARE FOR THE STUDENT ONLY AND SHOULD NOT APPEAR IN THE ACTUAL FORM. This form is intended as an informational document for subjects who are given the opportunity to take your survey. Even without the IRB requirement, it is important to provide enough information so that subjects can make a good decision about taking the survey or not taking the survey. Avoid any language that might be perceived as coercive and remind the subject that participation is voluntary. If you elect to use this format, keep all of the statements in bold. Keep the language at an appropriate level for your audience.

**Study Title:** Insert your study title

**Student’s Name and Department:**

**Instructor’s Name and Department:**

**Contact information for you and your instructor:**

**Introductory Statement**

Provide a brief introduction to the study, inviting the subject’s participation and explaining that details of the study are provided in the consent document. At this point, you can explain that you are available to answer any questions the subject may have about the project.

**What is the purpose of this study?** In non-technical language, describe the purpose of your study. Keep this short and to the point.

**What will I do in this study?** Describe what the subject will do. For example, “If you decide to participate in my project, you will complete a short survey and return it through interoffice mail.”

**How long will it take me to do this?** Specify how long it will take the subject to complete the survey. A range of minutes is appropriate.

**Are there any risks of participating in the study?** Describe any risks and/or discomforts to the subject that can reasonably be expected as a result of participating in this study.
What are the benefits of participating in the study? Describe any benefits to the subject. For example, sharing the project results with the administration in order to influence change is a benefit. Providing a copy of the project results to participants upon request is a benefit.

Will anyone know what I do or say in this study (Confidentiality)? Can you guarantee anonymity? If not, then describe how you will protect the participant’s responses.

Will I receive any compensation for participation? Describe the amount and nature of any compensation or fee to be paid to the subject for participating in the study.

Is there a different way for me to receive this compensation or the benefits of this study? Disclose appropriate alternative procedures, if any that might be available to the subject.

Who can I contact for information about this study? Insert your name and contact information and your instructor’s name and contact information.

You are free to refuse to participate in this research project or to withdraw your consent and discontinue participation in the project without penalty or loss of benefits to which you are otherwise entitled. However because of the anonymous nature of the survey it will not be possible to remove your data once submitted. Your participation will not affect your relationship with the institution(s) involved in this research project.

My return of this survey implies my consent to participate in this research and I have been given a second copy of this form to keep for my records.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the <insert your program and the contact information for the program. MA in Education students should use MA in Education program, 989-774-3784>
APPENDIX I

IRBNET

There are 3 steps for completing the IRB application for EDU776.

STEP 1 -- REGISTERING YOURSELF

1) Go to www.irbnet.org

Click on New User Registration
Fill in Your First and Last Name

Make sure you Use a username and password that you can remember!

Click continue When you are finished.

Click Accept.
Only Research Institutions Should have a check mark. Unclick Check marks at "Boards" and "sponsors" if necessary.

Scroll Down to Central Michigan

Click continue When you are finished.
Type in your Telephone Number and Email Address.

Click continue when you are finished.

Click Register when you are reviewed.

Click the Edit buttons if you need to make any changes.

Your Account Information and Affiliations.
You will receive an email that will confirm your affiliation.

Next - Close your internet browser.

Then – Check your email.
You have completed STEP 1 -- REGISTERING YOURSELF

Now onto STEP 2 – Filling out and submitting your IRB application.

There should be an email in your inbox from

IRBNet – activation@irbnet.org

Click on the link.
Enter your Username And Password
Click on Login
Click on Create New Project
Enter your Last Name, First Name. Then the Title of your study.

Enter your First and Last Name

Leave Degree(s) Blank

Enter your Student ID

Enter your 776 Monitors Name, EDU776 and the CRN # of your course.

Click Continue when you are finished.

Click on Blue Arrow and select Central Michigan University IRB1

Enter your First Name, Last Name. Title of Study
NOTE!

If you are using Human Subjects please consult the Document Called IRB – Instructions for Completing Application. This will assist you in choosing which forms and documents you will need for submitting your IRB application.

Click on Blue Arrow and select Non-Human Research Determination Form if you are not using Human Subjects.

Click Download
Click on save

Make sure you verify where your document is being saved.

Thumb drive?

C drive?

My Documents?

Click on Open

Close the dialog box when download completes.

Open the document.
Fill out the Application.

When you have finished filling out the form(s).

Return to here.

ATTACHING DOCUMENTS AND FORMS

Click on Add New Document
1. Select Application Form
2. Type in the Name of the Document that you are Submitting.
3. Click Attach When you are finished.
4. Click Browse To find the document on your computer.

Your Course Monitor may want you to submit your CITI Certificate if you are using human subjects.
Verify with your course monitor.

REPEAT THE LAST STEP for submitting additional documents/forms/etc.
You may also need to submit an abstract and/or topic proposal. Follow the steps above for adding a new document.

Verify that Your document has been uploaded.
Click on Share this Project.

Click on Share

Unclick the boxes Boards and Sponsors.

Click Select Organization

Verify Central Michigan University

Select Organization
Type in the last name of your EDU776 Course Monitor

Click on Search

Click on Full

Click on Save
Click on Sign this Package

Select Principal Investigator
Click on Sign.

You will see this confirmation page.