The first thing that you will work on is the development of your project. The first table (1. Project Information) should contain general information about your project. The table also contains information about Human Subjects in Research Training (you need to complete this training—it is better to do this early in the process, so you know this information while you are creating your project).

|  |  |  |
| --- | --- | --- |
| 1. **Project Information** | | |
| **Research Project Title** | |  |
| **Primary Researcher** | |  |
| **Primary Email** | |  |
| **Primary Researcher Position** | | [ ] Faculty  [ ] Staff |
| **Primary Researcher Department** | | [Please indicate department of primary researcher] |
| **Additional Researchers or Support** | | [Please list any other researchers that will be working with you on this project.] |
| **Research Purpose (choose all that apply)** | | [ ] SoTL (Scholarship of Teaching and Learning)  [ ] Professional Development  [ ] Sabbatical Project  [ ] Course improvement  [ ] Program improvement  [ ] Other: *Please specify below* |
| Please specify: |
| **Type of Study** | | [ ] Quantitative  [ ] Qualitative  [ ] Mixed Method |
| **Data Source(s)**  **(choose all that apply)** | | [ ] Online Survey  [ ] Paper Survey  [ ] Interviews  [ ] Focus Group  [ ] Secondary Institution Data—Request for deidentified data from OIE--*please specify below*  [ ] Secondary Institution Data—Other: *Please specify below*  [ ] Other: *Please specify below* |
| Please specify: |
| **Characteristics of Population to be Sampled (who you are attempting to recruit to participate).**  ***Please read the information below. ↓*** | | [Please indicate the characteristics of the population that you are going to recruit/sample as part of your study. For example, ARCC students who are African American/Black, who identify as female, who are enrolled in PSYC courses.] |
|  | **Human Subjects in Research Training Requirement *(Recommend completing before fully developing your study.)*** | *You will need this to apply for IRB approval (documentation for each researcher involved in the study).* **Please attach documentation of your completed training to this application.**  ***ALL*** *data that has been collected from human beings requires completion of human subjects in research training. This includes data that you collect yourself and secondary data that someone else has collected.*    *A popular one is done through CITI, or there is a free option through the US Dept of Health and Human Services:* [*https://www.hhs.gov/ohrp/education-and-outreach/human-research-protection-training/human-research-protection-foundational-training/index.html*](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.hhs.gov%2Fohrp%2Feducation-and-outreach%2Fhuman-research-protection-training%2Fhuman-research-protection-foundational-training%2Findex.html&data=05%7C01%7Cshari.jorissen%40anokaramsey.edu%7C8687a4d7c3b04d6e004c08dba4b4ce0a%7C5011c7c60ab446ab9ef4fae74a921a7f%7C0%7C0%7C638284869542250660%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=m3n2Orr%2F9W%2BBkPzL3uIoYO0gyoVgKeHbnnh%2BFUM7Ruo%3D&reserved=0)***These trainings produce a certificate at the end, and we are required to have this certificates for the researcher on file.*** |
| **If your project involves collecting data about the following, please consult with the IRB during the development of your project (irb@anokaramsey.edu)** | *The following types of data can be collected but only within certain ethical parameters, which the IRB can discuss with the researcher during project development.*   * *Questions about professional work that might lead to disclosure of behavior(s) or views that could potentially get someone fired or passed over for promotion (e.g., cutting corners, lack of compliance with policy, disagreement with leadership decisions)* * *Questions about substance use, mental state, or violence that might obligate a referral or intervention to prevent harm to the participant (addiction, severe depression, suicidality, eating disorders, bullying, physical threats)* * *Illegal activities in which the participant might incriminate him/herself via research data (e.g., illegal drug use, illegal immigration, child neglect, insider trading, harassment, assault, bullying, cyberbullying)* * *Personal issues that could severely distress an individual if framed in a judgmental, non-inclusive, dismissive, or otherwise insensitive manner (ethnicity, body image, religion, etc.)* * *Outcomes of a new intervention or program (that is not already part of standard offerings) in an education, psychological, or clinical setting.* |
| **When recruiting potential participants, it is sometimes not possible to know if they belong to a vulnerable population.**  **These groups are considered “vulnerable populations”.**  ***How you will address the protection of these groups (the ones most probable) even if you are not specifically recruiting them, need to be explained in the Ethical Considerations and IRB application.*** | *Vulnerable population that may be approached to participate, and/or participate, in the study (even if not specifically recruiting that vulnerable population). Vulnerable populations include:*   * *Minors (age 17 and under)—approximately 40% of ARCC students are in this group.* * *Adult students of the researcher* * *Subordinates of the researcher* * *Patients of the researcher* * *Nursing home residents* * *Pregnant women* * *Prisoners* * *Those on parole or probation* * *Mentally impaired or disabled individuals* * *Emotionally impaired or disabled individuals* * *Physically impaired or disabled individuals* * *Individuals who may be less than fluent in English (within US)* * *Undocumented immigrants* * *Victims/witnesses of violent crime or other trauma (example: natural disasters)* * *Active-duty military personnel (due to the additional protections and gatekeeper approvals required by the federal government)* * *Any others who may be particularly unable to protect their own rights or interest.* |

In the 2. Project Design table you will get into the details of your project. The project design information you need to fill out depends on if your study is quantitative or qualitative. However, you will need to figure out the Background/Project Rationale (literature review), problem statement, and purpose statement first to determine if the study should be quantitative or qualitative.

Once it is determined if your study will be quantitative or qualitative, then you can move on to the sections in that table (delete the table that you are not using). Examples of quantitative and qualitative information can be found in the Examples area below. Shari Jorissen ([shari.jorissen@anokaramsey.edu](mailto:shari.jorissen@anokaramsey.edu)) in the OIE can help you with the different parts of the project design table.

|  |  |
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| 1. **Project Design--Quantitative** | |
| **Background/Project Rationale** | [What prompted you to be interested in the topic?  What data/information do you have that indicates there is a problem?  Briefly summarize research literature related to the scope of the study topic.  Describe a gap in knowledge in the discipline the study will address.] |
| **Problem Statement** | The specific research problem that will be addressed through this study is… |
| **Purpose Statement** | The purpose of this quantitative research study is to… |
| **Research Question(s), Hypotheses, Variables, & Statistical Test(s)** | [See examples below] |
| **Data Collection Plan (step-by-step)** | [Provide a step-by-step description of what participants will experience in relation to your study.   * Explain specific procedures for how the sample will be drawn (how you will recruit). * Provide inclusion and exclusion criteria to participate in the study. * Describe how participants will be provided informed consent. * Describe how data are collected. Include surveys/instruments you are using and indicate how these will be administered (online, paper-pencil, other).   + If you are using a pre-existing/published survey/instrument you will need to provide permission to use the survey/instrument in your IRB application. If you are considering “altering” an existing survey/instrument, please discuss with IRB as there are additional steps that need to be completed to ensure reliability of study.   + Demographic items (used to describe the sample for generalizability purposes) are created by the researcher (recommend using US Census race categories if including race as a demographic). * Explain how participants exit the study (for example, debriefing procedures, etc.). * Describe any follow-up procedures (such as requirements to return for follow-up interviews, treatments, etc.).   Additional Information if Conducting an Intervention:   * Describe clearly and thoroughly the nature of the treatment, intervention, or experimental manipulation, how it will be designed and administered, and by whom and to whom it will be administered.   If using secondary (existing) data:   * Include all procedures for recruitment, participation, and data collection associated with the main study. * Describe the procedure for gaining access to the data set. * Describe necessary permissions to gain access to the data (with permission letters—these are needed for IRB).   + Checking with the “owner” of the data should be done early and not after you have IRB approval (they could reject the request for data).   + For example, if you are acquiring data from the Office of Institutional Effectiveness (OIE), then you would contact [research@anokaramsey.edu](mailto:research@anokaramsey.edu) and discuss with them the data that you need and what they need to do to the data before providing it to you (such as deidentification). They will let you know if this is data that they can provide (if they have it) and if it is possible to provide it to you (some data is classified for OIE use only). The director will provide you an email to indicate what will be provided.   + It is not recommended to use data from your classes (grades, assignment grades, etc.) that you are pulling from your class(s) yourself as you 1) know who has what grade and 2) you may unconsciously be changing your behavior around grading, for example, which can skew the results of your research study. Please discuss your ideas for using information from your classes for research that you are conducting with the IRB as they can help you establish some type of research distance.] |
| **Data Analysis Plan (Statistical Test(s))** | Data Cleaning/Dataset Preparation:  [Describe how you will create your database, how you will clean your data, how you will analyze your data, and how you will arrive at your results.  Include any tools that you will use such as statistical software (and statistical tests used), transcription program/service, etc.  Data Analyses Plan:  There are also statistical assumptions of quantitative data that need to be tested and met to ensure that your results are valid and reliable. You can find what these are by searching the Internet for “[name of statistical test] Laerd Statistics”. This will bring up an explanation page that 1) explain what the statistical test is used for, 2) includes the statistical tests and assumptions, how to test them, and what those test results mean, 3) how to run the statistical test and 4) how to interpret the generated results. **Please contact Shari Jorissen (**[**shari.jorissen@anokaramsey.edu**](mailto:shari.jorissen@anokaramsey.edu)**) if you need assistance with this or would like someone to review your results and interpretation.**] |
| **Alpha, Effect Size, Statistical Power Used & Calculated Sample Size Needed** | [See examples below] |
| **Significance of Study** | [Identify potential contributions of the study that advance practice and/or policy, and/or potential improvements to teaching, course materials, program, retention, student learning, student success, etc. as applicable.] |
| **Ethical Considerations** | [Information that needs to be included here:   * Ethical concerns related to recruitment materials and processes and a plan to address them. * Ethical concerns related to data collection and/or intervention activities (these could include participants refusing participation or early withdrawal from the study and response to any predicable adverse events) and a plan to address them. * Describe treatment of data (including archival data), including issues of:   + Whether data are anonymous or confidential and any concerns related to each.   + Protections for confidential data (data storage procedures, data dissemination, who will have access to the data, and when data will be destroyed). * Other ethical issues as applicable (these issues could include doing a study within one’s own work environment, conflict of interest or power differentials, and justification for use of incentives).] |

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| 1. **Project Design--Qualitative** | |
| **Background/Project Rationale** | [What prompted you to be interested in the topic?  What data/information do you have that indicates there is a problem?  Briefly summarize research literature related to the scope of the study topic.  Describe a gap in knowledge in the discipline the study will address.] |
| **Problem Statement** | The specific research problem that will be addressed through this study is… |
| **Purpose Statement** | The purpose of this quantitative research study is to… |
| **Research Question(s)** | [See examples below] |
| **Anticipated Sample Size** | [Indicate how you will know when you reach data saturation and what your anticipated sample size is for this study. Would depend on what other researchers have found to be an appropriate sample size to reach saturation (on similar topics with similar research methods) and how homogeneous or heterogenous the population/sample is. Generally qualitative studies require 10-20 to reach saturation.] |
| **Data Collection Plan** | [Provide a step-by-step description of what participants will experience in relation to your study.   * Explain specific procedures for how the sample will be drawn (how you will recruit). * Provide inclusion and exclusion criteria to participate in the study. * Describe how participants will be provided informed consent. * Describe how data are collected. Include questions/interview you are using and indicate how these will be administered (online, paper-pencil, other).   + If you are using a pre-existing/published questions/interview you will need to provide permission to use them in your IRB application materials. If you are considering “altering” an existing questions/interview, please discuss with IRB as there are additional steps that need to be completed to ensure validity/reliability of study.   + Demographic items (used to describe the sample for generalizability purposes) are created by the researcher (recommend using US Census race categories if including race as a demographic). * Explain how participants exit the study (for example, debriefing procedures, etc.). * Describe any follow-up procedures (such as requirements to return for follow-up interviews, treatments, etc.).   Additional Information if Conducting an Intervention:   * Describe clearly and thoroughly the nature of the treatment, intervention, or experimental manipulation, how it will be designed and administered, and by whom and to whom it will be administered.   If using secondary (existing) data:   * Include all procedures for recruitment, participation, and data collection associated with the main study. * Describe the procedure for gaining access to the data set. * Describe necessary permissions to gain access to the data (with permission letters—these are needed for IRB).   + Checking with the “owner” of the data should be done early and not after you have IRB approval (they could reject the request for data).   + For example, if you are acquiring data from the Office of Institutional Effectiveness (OIE), then you would contact [research@anokaramsey.edu](mailto:research@anokaramsey.edu) and discuss with them the data that you need and what they need to do to the data before providing it to you (such as deidentification). They will let you know if this is data that they can provide (if they have it) and if it is possible to provide it to you (some data is classified for OIE use only). The director will provide you an email to indicate what will be provided.   + It is not recommended to use data from your classes (grades, assignment grades, etc.) that you are pulling from your class(s) yourself as you 1) know who has what grade and 2) you may unconsciously be changing your behavior around grading, for example, which can skew the results of your research study. Please discuss your ideas for using information from your classes for research that you are conducting with the IRB as they can help you establish some type of research distance. * If using a transcription service (or individual to transcribe qualitative data) please provide their confidentiality agreement as part of your IRB application. Please discuss how information will be transcribed in this section.] |
| **Data Analysis Plan** | *Some popular qualitative data analysis process authors:*   * *Saldaňa* * *Yin* * *Braun & Clarke* |
| **Significance of Study** | *Identify potential contributions of the study that advance practice and/or policy, and/or potential improvements to teaching, course materials, program, retention, student learning, student success, etc. as applicable.* |
| **Ethical Considerations** | *Information that needs to be included here:*   * *Ethical concerns related to recruitment materials and processes and a plan to address them.* * *Ethical concerns related to any dual relationships between the researcher and participant(s) and a plan to address them (possibility of sense of coercion, potential researcher biases/change in behaviors due to data collection such as in grading, etc.).* * *Ethical concerns related to data collection and/or intervention activities (these could include participants refusing participation or early withdrawal from the study and response to any predicable adverse events) and a plan to address them.* * *Describe treatment of data (including archival data), including issues of:*   + *Whether data are anonymous or confidential and any concerns related to each.*   + *Protections for confidential data (data storage procedures, data dissemination, who will have access to the data, and when data will be destroyed).* * *Other ethical issues as applicable (these issues could include doing a study within one’s own work environment, conflict of interest or power differentials, and justification for use of incentives).* |

Once you have drafted your 2. Project Design (or during that process), it is recommended to work with Shari Jorissen (Director, OIE) to assist with research question wording, hypotheses wording (if quantitative), data collection, sample size calculations, and data analyses ([shari.jorissen@anokaramsey.edu](mailto:shari.jorissen@anokaramsey.edu)). She can help streamline some of the elements of your project design as well as help with areas that the IRB will review to help that process be successful. You can do this early on and should do this before filling out the IRB application below or getting your Dean’s signature.

The IRB application is the third part of the process. It is important to make sure that you have the strongest project design/methodology possible and detailed information in your 2. Project Design to help ensure that the IRB will have few (if any) questions about your study. All of the tables in this document should be submitted to the IRB (irb@anokaramsey.edu).

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| 1. **IRB Application** | | | | | | | | | | | |
| **Attached Appendices** |  | | | | | | | | | | |
| **Affiliated Institution** | [ ] ARCC  [ ] Other: Please fill out information below | | | | | | | | | | |
| *If affiliated with another institution, do you have IRB approval from that institution?*  [ ] Yes (Please provide institution & IRB information below)  [ ] No | | | | | | | | | | |
|  | | | Institution: | | | | | | | |
|  | | | IRB approval number: | | | | | | | |
|  | | | IRB email/contact information: | | | | | | | |
| **Grant Information** | *Is this research being conducted with the support of a grant from the U.S. federal government (for example, the National Science Foundation, the National Institutes for Health)?*  [ ] Yes  [ ] No | | | | | | | | | | |
|  | | | If yes, please list agency: | | | | | | | |
|  | | | If yes, please list award number (if applicable): | | | | | | | |
| **Intended Use of Results (choose all that apply)** | [ ] Ongoing quality improvement internal to ARCC  [ ] Publication: *Please specify below*  [ ] Presentation: *Please specify below*  [ ] Other: *Please specify below* | | | | | | | | | | |
|  | | | Please specify: | | | | | | | |
| **Location of Data Collection (choose all that apply)** | *Note that investigators are discouraged from enrolling subjects who have status relationships with the investigators (e.g., students or advisees of a faculty researcher). IRB Approval may be granted with a compelling justification or employment of a mechanism ensuring anonymity of participation.* | | | | | | | | | | |
| [ ] Through researcher’s classes at ARCC  [ ] Through ARCC classes that the researcher does not teach  [ ] On the ARCC campus but outside of classes  [ ] Secondary data provided by department/office at ARCC: *Please specify below*  [ ] International Project (please also fill out International Projects section)  [ ] Other: *Please specify below* | | | | | | | | | | |
|  | | | Please specify: [Where do you think you may try to publish/present? This can change but good to think about.] | | | | | | | |
| **International Projects** | [ ] Not applicable to this study | | | | | | | | | | |
| *If the proposed project would be conducted wholly or partially outside the United States, please provide additional information about the institution or researcher under whose auspices the project will be conducted:* | | | | | | | | | | |
| Name: | | | | | | | | | | |
| Institution: | | | | | | | | | | |
| Country(ies): | | | | | | | | | | |
| Phone: | | | | | | | | | | |
| Email: | | | | | | | | | | |
| **Will your study involve deception?** | *Examples of deception used for research purposes: withholding relevant information, use of a confederate (someone who poses as someone they’re not), false performance feedback, offering fictitious information about the true purpose of the study, etc.* | | | | | | | | | | |
| [ ] No  [ ] Yes (*You must complete section below*) | | | | | | | | | | |
| *If yes, describe any deception procedures employed in this study, if applicable. Please explain why deception is necessary:* | | | | | | | | | | |
| **Possible Risks to Participating in this Study** |  | | | | | | | | | | |
| **Vulnerable Population(s)** | *Please indicate any of the vulnerable populations that may be approached to participate, and/or participate, in the study (even if not specifically recruiting that vulnerable population). Choose all that apply:*  [ ] Not applicable to my study  [ ] Minors (age 17 and under)—approximately 40% of ARCC students are in this group.  [ ] Adult students of the researcher  [ ] Subordinates of the researcher  [ ] Pregnant individuals  [ ] Patients of the researcher  [ ] Nursing home residents  [ ] Prisoners  [ ] Those on probation/parole  [ ] Mentally impaired or disabled individuals  [ ] Emotionally-impaired or disabled individuals  [ ] Physically impaired or disabled individuals  [ ] Individuals who may be less than fluent in English (within US)  [ ] Undocumented immigrants  [ ] Victims/witnesses of violent crime or other trauma (example: natural disasters)  [ ] Active duty military personnel (due to the additional protections and gatekeeper approvals required by the federal government)  [ ] Any others who may be particularly unable to protect their own rights or interest | | | | | | | | | | |
| *If you indicated working with any of the above-listed special populations, additional safeguards may need to be implemented to protect these populations from excessive risk, coercion, or undue influence. Please describe the precautions that you will take to minimize all possible risks given the unique setting or circumstance faced by these individuals below.* | | | | | | | | | | |
| [Please describe] | | | | | | | | | | |
| **Recruitment & Informed Consent** | *Describe how subjects will be recruited and how informed consent will be sought from subjects or from the subjects’ legally authorized representative. If children are subjects, discuss whether their assent will be sought and how the permission of their parents or legal guardians will be obtained. Use additional pages as needed.* | | | | | | | | | | |
| Recruitment: | | | | | | | |  | | |
| Informed Consent: | | | | | | | |  | | |
| **Participant Time Commitment** | [Indicate the amount of time that a participant is being asked to commit to participating in your study. This would include time for each step after obtaining informed consent. This information also needs to be included in the informed consent form.  Here is an example:   * Answer demographic questions: 5 minutes * Answer interview questions: 60-75 minutes * Review transcript post-interview: 10-15 minutes * Total time: 75-95 minutes] | | | | | | | | | | |
| **Incentives for Participation** | *If you are providing an incentive for participation in your study, all who were selected to participate and provided informed consent must be provided the incentive (even if they withdrew from the study part-way through).*   * *Lotteries/drawings cannot be used in research projects.* * *Incentives should not be so large that it could be interpreted as being coercion to participate. For example, a $200 gift card could be seen as coercing a student to participate as they may be struggling financially.* | | | | | | | | | | |
| Will your participants receive any compensation for participation in cash or in kind?  *Cash or in kind includes cash, gift card/certificate, computer, tablet, etc. Anything tangible in exchange for their participation.*  [ ] Yes: Please specify below  [ ] No | | | | | | | | | | |
|  | Cash or in kind: | | | | | | | | [Type, amount] | |
| Will your participants receive course credit (either extra credit or fulfillment of a course requirement?). *Note: Students must be offered an equally desirable, non-research option for receiving the same amount of course credit*  [ ] Yes: Please specify below  [ ] No | | | | | | | | | | |
|  | | Course credit: | | | | [Extra credit, course requirement, how many points, etc.] | | | | |
|  | | Non-research option: | | | | | [What non-research option do you have for students?] | | | |
| **Participant Privacy** | [Will identifiable, private, or sensitive information be obtained about the subjects or other living individuals? Whether or not such information is obtained, describe the provisions to protect the privacy of subjects and to maintain the confidentiality of data. Please indicate if participant identity will be anonymous (no one knows who participated) or confidential (at least one person knows who participated) in your study. If you are having someone else assist with your project so that you do not know who participated, participant identity would still be confidential (not anonymous) but you do need to explain in this situation how participant identity will be masked from you. Also, how will you ensure others will not know who participated in your study (for example, other students in your course)?] | | | | | | | | | | |
| **Data Security** | [How will the data be kept secure? This includes raw data that you collected as well as processed data (recoded, cleaned, themed data, etc.) that you will work with. Include how you will keep both electronic and paper data protected such as keeping in password protected computer/files, locked file cabinet, locked office, etc. Who else, besides you, will have access to the data (if applicable)? How will you destroy the data securely after your project is completed (within 2 years of completion)?] | | | | | | | | | | |
| **Supervisor Approval of Project** | **Supervisor Name** | | | | | | | | | |  |
| **Supervisor Position** | | | | | | | | | |  |
| **Supervisor Email** | | | | | | | | | |  |
| **Supervisor Signature** | | | | | | | | | |  |
| **Date of Approval** | | | | | | | | | |  |
| **Researcher Certification** | * I certify that the information furnished concerning the procedures to be taken for the protection of human subjects is correct. * I have completed human subjects in research training. * I will seek and obtain prior approval for any modification in the project design or informed consent document from the IRB. * I will report promptly any unexpected or otherwise significant adverse effects encountered during this study to the IRB. * I certify that all individuals named as consultants, additional researchers, suppliers of secondary data, supervisors, and other institutions/organizations have agreed to participate in this study. I understand that they may choose to no longer participate in my research study, and I will report if this occurs to the IRB promptly. | | | | | | | | | | |
| **Signature** | | | | |  | | | | | |
| **Date** | | | | |  | | | | | |
| **To be completed by the IRB** | IRB Application Approval: | | | | | | | | | | |
| Yes | | | | IRB Approval #: ARCC-[2023-XXXX] | | | | | | |
| Date Approved: | | | | | | |
| Date Expires: | | | | | | |
| Date Extended: TBD | | | | | | |
| No | | | | *The IRB will indicate what information needs to be added/revised in the research plan/IRB application. Please revise and resubmit.* | | | | | | |
| *TBD* | | | | | | |

***Examples***

**Quantitative Research Examples**

|  |  |
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| Measuring relationships between variables with linear dependent variable | |
| **Research Question** | What is the relationship between gender, age, race, and emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*) in students enrolled in a chemistry course? |
| **Null Hypothesis** | There is no statistically significant relationship between gender, age, race, and emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*) in students enrolled in a chemistry course. |
| **Alternative Hypothesis** | There is a statistically significant relationship between gender, age, race, and emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*) in students enrolled in a chemistry course. |
| **Population/Sample** | Students enrolled in a chemistry course |
| **Independent Variables (IVs)** | Gender, age, race |
| **Dependent Variables (DVs) & How Coded** | Emotional intelligence as measured by the *Schutte Self-report Emotional Intelligence Test—SSEIT*; total score 0-100 |
| **Statistical Test** | Multiple linear regression |
| **Alpha (p-value)** | .05 |
| **Effect Size** | .15 |
| **Statistical Power Desired** | .80 |
| **Sample Size** | Should be calculated using GPower: <https://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower>  For this example, the sample size would be calculated in GPower using alpha=.05, effect size=.15, desired statistical power=.80, 3 predictors (IVs). |

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| Measuring predictive relationships between variables with binary (2 value) dependent variable | |
| **Research Question** | What is the predictive relationship between gender, age, race, emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*), and course success in students enrolled in a chemistry course? |
| **Null Hypothesis** | There is no statistically significant predictive relationship between gender, age, race, emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*), and course success in students enrolled in a chemistry course. |
| **Alternative Hypothesis** | There is a statistically significant relationship between predictive relationship between gender, age, race, emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*), and course success in students enrolled in a chemistry course. |
| **Population/Sample** | Students enrolled in a chemistry course |
| **Independent Variables (IVs)** | Gender, age, race, Emotional intelligence as measured by the *Schutte Self-report Emotional Intelligence Test—SSEIT*; total score 0-100 |
| **Dependent Variables (DVs) & How Coded** | Course success (0=did not pass D-F; 1=passed A-C) |
| **Statistical Test** | Multiple logistic regression |
| **Alpha (p-value)** | .05 |
| **Effect Size** | .15 |
| **Statistical Power Desired** | .80 |
| **Sample Size** | Should be calculated using GPower: <https://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower>  For this example, the sample size would be calculated in GPower using alpha=.05, effect size=.15, desired statistical power=.80, 4 predictors (IVs). |

|  |  |
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| Measuring change in dependent variable (pre-test/post-test) | |
| **Research Question** | What is the difference in emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*) before and after taking a mediation training course? |
| **Null Hypothesis** | There is no statistically significant difference in emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*) before and after taking a mediation training course. |
| **Alternative Hypothesis** | There is a statistically significant difference in emotional intelligence (as measured by the *Schutte Self-report Emotional Intelligence Test--SSEIT*) before and after taking a mediation training course. |
| **Population/Sample** | Students enrolled in a mediation training course |
| **Dependent Variables (DVs) & How Coded** | Emotional intelligence as measured by the *Schutte Self-report Emotional Intelligence Test—SSEIT*; total score 0-100 |
| **Times measured** | Pre-test=first week in course; Post-test=last day of course |
| **Statistical Test** | Paired sample t-Test |
| **Alpha (p-value)** | .05 |
| **Effect Size** | .15 |
| **Statistical Power Desired** | .80 |
| **Sample Size** | Should be calculated using GPower: <https://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower>  For this example, the sample size would be calculated in GPower using alpha=.05, effect size=.15, desired statistical power=.80. |

**Qualitative Research Example**

|  |  |
| --- | --- |
| **Research Question** | What are the perspectives of Native American students about belongingness at Anoka Ramsey Community College? |
| **Population/Sample** | Native American students enrolled at Anoka Ramsey Community College |
| **Sample Size** | *Would depend on what other researchers have found to be an appropriate sample size to reach saturation (on similar topics with similar research methods) and how homogeneous or heterogenous the population/sample is. Generally qualitative studies require 10-20 to reach saturation.* |
| **Data Collection Tool(s)** | Semi-structured interviews (*other popular methods include observation, focus groups)* |
| **Demographics Collected** | Gender, age, number of semesters attended (*should be used to describe the sample and reported in aggregate)* |
| **Data Analysis Method** | *Some popular qualitative data analysis process authors:*   * *Saldaňa* * *Yin* * *Braun & Clarke* |