

**Defining Undergraduate Research**  
**Office of the Vice Provost for Academic Programs**  
*Assessing Student Learning for the University's Quality Enhancement Plan (QEP)*  
*An Institutional Definition, Goal, and Taxonomy with Learning Outcomes*

Definition

For the purposes of identifying student work that will be counted as undergraduate research for the QEP, the Undergraduate Research Assessment Committee defines undergraduate research as ***the practice of carefully formulating or addressing a question, problem or objective, analyzing it within a disciplinary or interdisciplinary framework, producing findings, conclusions, designs, or creative works, and clearly communicating and defending such to a critical audience.*** Because of the specialized and varied nature of research at the University, the Committee recognizes that the direct assessment of undergraduate research projects needs to be undertaken at the program level, especially if the results are to be used to improve student learning. To aid programs undertaking such assessments, the Committee has formulated learning outcomes associated with four distinct types of inquiry that the committee defines as research: academic, applied, design-based and creative. Programs may apply the learning outcomes as is, modify them as needed, and/or specify additional outcomes.

Learning Goal:

Develop in students the capacity to conduct research, and the habits of mind of learners who frame and contextualize knowledge within their own reasoned points of view, recognize that knowledge evolves, and actively rethink and question existing assumptions, arguments, methods of inquiry, and facts.

Student Learning Outcomes

**Pre-research**

Prior to undertaking significant research projects, students must undergo instruction in research methodologies and approaches. This “pre-research” instruction is common to all four types of research. Students must be able to:

- approach the study of a subject or problem, from a particular disciplinary or interdisciplinary point of view (e.g., “thinking like an economist”)
- apply distinct techniques, research methods/methods of inquiry.
- ask sufficiently narrow research questions and/or formulate appropriate hypotheses.
- work independently or collaboratively, as appropriate.

**\*Four types of significant research projects**

**Each type of undergraduate research project typically involves students working closely with a mentor, either a faculty member or an advanced graduate student.**

1. In an **academic research** project, a student will:

- Form a research question based upon the relevant literature and/or observations.
- Collect pertinent data/information.

- Analyze data/information.
- Draw logical and defensible conclusions.
- Communicate clearly and effectively findings and conclusions.
- Defend the research to a critical audience.

2. In an **applied research** project, a student will:

- Identify a problem to be solved, or need to be addressed, based upon existing information.
- Collect pertinent data/information.
- Analyze data/information.
- Draw logical and defensible conclusions.
- Communicate clearly and effectively findings and conclusions.
- Defend the solution to a critical audience.

3. In a **design-based research** project, a student will:

- Define the problem and/or objectives.
- Identify prior designs or works from the literature.
- Generate concepts and design alternatives, establishing specifications.
- Model, analyze, test and evaluate conceptual designs.
- Create the design/work.
- Defend the design/work to a critical audience.

4. In a **creative research** project, a student will:

- Identify an aesthetic or creative conversation and a set of attendant questions inspired by that conversation (e.g. how might one write a series of original poems about familial incest?)
- Locate a gap or a problem within that conversation (e.g., how can such difficult, even transgressive material be approached in a manner that is not merely confessional and which is also artistically valid?)
- Gather data and inspiration from the relevant primary and secondary sources that will help address the specific gap or problem or question under consideration (e.g. read widely in confessional poetry and the literatures and literary critical treatments of incest; explore possible masks or personae to adopt from a range of mythologies and fables; read biographies, letters, and diaries by historical figures also concerned with similar material)
- Decide which method or combination of methods are most appropriate for embodying the student's own project (e.g. choose to create a series of related poems whose speakers are very clearly drawn from mythology – Adonis and his parents, for example – and use the borrowed narrative structure to explore anachronistic and personal concerns of the student poet).
- Perform an analysis of the data (e.g. seek feedback on the poetic sequence in peer workshop settings and from the faculty advisor for the project).
- Produce a final project of original creative work that has grown out of the accumulated research, reading, workshop response, and private stores of material (e.g. a creative thesis or collection of poems on this theme that would be evaluated by an orals or honors committee).