


 Research is the careful study of a given subject, field, or problem, undertaken to discover facts or principles. Academic Research is generally the work of scholars at universities or other academic institutions. Research can be funded or can emerge from the work of students and academics studying to gain qualifications and whose findings are of sufficient significance to be published in academic journals. The purpose of academic research and academic writing is to communicate the findings of research studies. Academic writing, when published, helps to inform policymakers as well as providing a permanent record of findings across all aspects of the sciences.

 A major difference between an academic research paper and, say, a magazine article is the use in academic research of 'referencing.' Referencing is the practice of acknowledging in the narrative the originators of sources which have been used. To the non-academic, this use of references can appear to interrupt the flow of the narrative but it is an essential part of published research. A list of references appears at the end of academic research papers and a shortened version of each reference appears within the main body of the paper to support or validate statements or provide quotes.


 When beginning the process of undertaking research, the understanding of the purpose and outcome of the study is the key starting point. For instance, does the research have a descriptive or analytical purpose, such as to understand behaviours, events, beliefs, attitudes, structures or processes that occur in a given situation? Or does the research have a predictive purpose, to predict an outcome or to forecast events or behaviours resulting from a particular situation?


Research is designed using a qualitative, quantitative or mixed methods approach. A qualitative approach could be used if the research has a descriptive or analytical purpose. Alternatively, if the research has a predictive element which suggests there will be an outcome that produces numerical data, a quantitative approach will be used. Should the research require both an interpretation of discussion and statistical measurement, a mixed methods approach is used.


 Qualitative research - a qualitative study is an approach where we understand the meaning of peoples' individual situations, often through their lived experience, which is the importance of this type of study. Conclusions are based on an interpretation of findings and related issues. The number of participants is not a critical factor to the research, as the response of every individual participant is seen as important. A qualitative approach can be used when detailed insight is needed to analyse and understand an issue, and can also be used when dealing with emotive or emotional subjects.


Qualitative approaches deal with the 'grey' issues in research, where there is no single, correct response. It allows people to express nuanced opinions and to reflect on personal, meaningful experiences. Depending on the way that the research is executed, qualitative findings can generate new theories and inform how particular practices or cultures exist or influence policy.

Examples of qualitative research approaches are interviews, focus groups (interviews or meetings with groups of people), case studies (an in-depth study of one particular person, group or example), and narrative data such as diaries or field notes.

 Quantitative study - a quantitative study is the understanding of numerical data, produced from methods such as surveys. Quantitative studies generate a hypothesis or an expected outcome, based on an experimental situation, which can be replicated and is generalizable in the statistical sense. Quantitative studies focus on measurement, analysis or probability of how likely it is that certain observations will occur. Examples of quantitative research approaches include surveys or large scale data collection, which is numerically based. The nature of this enquiry, which is based on numbers and not experience, means that findings are considered free from personal value. A significant number of responses are necessary in order for there to be confidence in the results.

 Research methods are the strategies and processes used as the basis for inference and interpretation or for explanation and prediction. Common research methods include action research (making a change to practice through repetition of a process), grounded theory (to identify a working theory based on patterns and similarities across experiences), phenomenology (exploring individual ideas and understanding, with an acceptance that we all experience the world differently), narrative research (detailed accounts of people's lives based on their broader, cultural narratives about the groups and societies in which they live and work), experiments (tests under controlled conditions, to examine the validity or efficacy of something previously untried), observations (where participants are observed either in their natural habitat or controlled conditions) and self-reporting (where a participant reports events they have experienced through a diary or questionnaire).

 Once the researcher understands what they are trying to achieve, how they will construct their research and the time and resources needed to bring the idea to fruition, they can begin to apply for funding. The application for research funding is extremely competitive and the success rate, no matter how good the application, is often low, due to the demands on finding income to undertake a project, limited funding pots available and the volume of organisations applying for the same grants. Where funding is provided by commercial funders, such as drug companies or charities, extreme care is needed to avoid bias that would support the aims of the funder in delivering a result.

 All organisations, and particularly universities, will need to undergo an ethics application as part of any research submission. This is particularly important if the research requires involvement, in any way, with human participants. Research requires ethical approval for a variety of reasons, including: the need to ensure that the rights and welfare of the participants have been considered; to protect the rights of the researcher to carry out their investigations; to ensure that the researcher is insured to carry out the study and meet the requirements of funding bodies. Research ethics approval is required in diverse areas including research relating to animals or habitats, human tissue or risk of damage or disturbance to artefacts.