Qualitative research is becoming more prominent in academic medicine and health care fields, and an increasing number of publications using qualitative methods are featured in prominent journals. Thus, recognizing the different available approaches can benefit researchers of all types. While a debate may wage between proponents of qualitative versus quantitative research, both sets of methods—and often a blend of the two—offer important insights into the problems the academic medicine community faces.

### Qualitative paradigm

- **Nature of the research question**
- **Typologies of designs**
- **Data sources**
- **Analytic techniques**
- **Assessment of rigor**
- **Strengths**
- **Weaknesses**

<table>
<thead>
<tr>
<th>Qualitative paradigm</th>
<th>Quantitative paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How and why events or behaviors occur in complex settings where context is important to understanding:</strong> Examples: How do a diverse student body and faculty affect teaching and learning? How does a resident make the transition to attending physician? What characterizes the phenomenon of a mentor–mentee relationship?</td>
<td><strong>Nature of the research question</strong> How many, how often, what level, and what direction of relationships between defined variables in settings that can be decontextualized: Examples: What is the relationship between student grades and graduation rates? What type and amount of monetary incentive or financial reward affects a medical student’s specialty choice?</td>
</tr>
<tr>
<td><strong>Inductive by researchers (e.g., normative or transcribed text analyzed thematically for patterns)</strong></td>
<td><strong>Deductive by statistics (e.g., data and patterns analyzed through statistical means)</strong></td>
</tr>
</tbody>
</table>
| **Normative data from interviews, documents, focus groups, and/or observations** | **Types of designs** Experimental: The researcher manipulates all variables including the assignment to treatment and control groups in order to discern causality
Quasi-experimental: Research using an experimental variable with groups not formed through random assignment or selection
Surveys: Measurement procedures that involve asking questions of respondents
Mixed methods: A combination of quantitative and qualitative approaches including triangulation design, embedded design, explanatory design, and exploratory design |
| **Data sources** Ordinal or cardinal data from surveys, financial reporting, census reports, test scores, demographics, and/or observations |
| **Analytic techniques** Descriptive statistics
Regression
Regression discontinuity
Hierarchical linear modeling |
| **Assessment of rigor** Internal validity (e.g., through study design and procedures)
External validity (e.g., through criterion measurement)
Reliability (e.g., through test–retest, internal consistency) |
| **Strengths** Delineates relationships among variables
Provides generalizable research findings when the data are based on sufficiently sized random samples
Provides generalizable results when research has been replicated in different populations/subpopulations
Is useful for large populations |
| **Weaknesses** Narrow variables might not be valid
Knowledge produced might be too general for direct application to specific contexts or individuals
Phenomena may be missed if analysis focuses on hypothesis testing rather than hypothesis generation |

### References