

What is Research ?

- Noun: The systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.
- Verb: Investigate systematically

Types of Research

- Experimental Research
- Correlational Research
- Causal - Comparative Research
- Scanning Research
- Ethnographic Research
- Historical Research
- Action Research
- Case Studies
- Creation of Theory Case Studies
- AR & GE Studies

Experimental Research



It is a systematic and scientific approach to research in which the researcher manipulates one or more variables, and controls and measures any change in other variables.

The most accurate results are obtained from this scientific methods.

What is the most effective teaching method for my students?

Correlational Research

Correlational research is a type of non-experimental research method, in which a researcher measures two variables, understands and assess the statistical relationship between them with no influence from any extraneous variable

**What kind of individuals have problems
in learning math?**

Correlational Research

Steps:

- Data is collected
- Relation is checked
- The level of the relationship is determined
- Relationships are defined

Correlations

		YAS	CINSIYET	medeni durum	egitim durumu	meslek	SDERECE	CIHAZ	so kaga ciktimda insanların bana acidigini hissediyorum
YAS	Pearson Correlation	1,000	-,002	,590**	-,056	,214**	,138	,122	,028
	Sig. (2-tailed)	.	,975	,000	,451	,002	,071	,124	,682
	N	213	213	213	185	209	171	159	210
CINSIYET	Pearson Correlation	-,002	1,000	-,060	-,169*	-,293**	,124	-,063	,077
	Sig. (2-tailed)	,975	.	,378	,018	,000	,096	,419	,259
	N	213	222	222	194	217	180	166	219
medeni durum	Pearson Correlation	,590**	-,060	1,000	-,152*	,233**	,096	,176*	-,010
	Sig. (2-tailed)	,000	,378	.	,034	,001	,200	,023	,888
	N	213	222	222	194	217	180	166	219
egitim durumu	Pearson Correlation	-,056	-,169*	-,152*	1,000	,243**	,014	,066	-,012
	Sig. (2-tailed)	,451	,018	,034	.	,001	,860	,423	,871
	N	185	194	194	194	193	167	149	191
meslek	Pearson Correlation	,214**	-,293**	,233**	,243**	1,000	-,182*	,070	-,074
	Sig. (2-tailed)	,002	,000	,001	,001	.	,015	,378	,283
	N	209	217	217	193	217	179	162	214
SDERECE	Pearson Correlation	,138	,124	,096	,014	-,182*	1,000	,164	,079
	Sig. (2-tailed)	,071	,096	,200	,860	,015	.	,058	,295
	N	171	180	180	167	179	180	135	177
CIHAZ	Pearson Correlation	,122	-,063	,176*	,066	,070	,164	1,000	-,071
	Sig. (2-tailed)	,124	,419	,023	,423	,378	,058	.	,368
	N	159	166	166	149	162	135	166	163
so kaga ciktimda insanların bana acidigini hissediyorum	Pearson Correlation	,028	,077	-,010	-,012	-,074	,079	-,071	1,000
	Sig. (2-tailed)	,682	,259	,888	,871	,283	,295	,368	.
	N	210	219	219	191	214	177	163	219

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

Causal – Comparative Research

In this type of research investigators attempt to determine the cause or consequences of differences that already exist between or among groups of individuals.

A study on the comparison of the learning of individuals at different socio-economic levels “

Correlation Research deals with the change of two variables together.

In the Causal Comparative Research, one of the two variables affecting each other is investigated.

Scanning Research

- Their aim is to collect data to determine specific characteristics of a group.
- Survey techniques are widely used for this research.

Ethnographic Research

- Ethnographic research is a qualitative method where researchers observe and/or interact with a study's participants in their real-life environment.

Historical Research

One type of qualitative research is historical research, which involves examining past events to draw conclusions and make predictions about the future.

Action Research

Researches carried out in the course of an activity or occupation, typically in the field of education, to improve the methods and approach of those involved.

Case Study

The term **case** study refers to both a method of analysis and a specific **research** design for examining a problem, both of **which** are used in most circumstances to generalize across populations.

Creation of Theory Case Studies

AR-GE Research

- Research and Development (R&D, R+D, or R'n'D), also known in Europe as Research and Technological Development (RTD), refers to innovative activities undertaken by corporations or governments in developing new services or products, or improving existing services or products.

GENERAL TYPES OF RESEARCH

- ✓ Descriptive Reserch
- ✓ Associational Research
- ✓ Intervention Research

Descriptive Research

Descriptive research is used to describe characteristics of a population or phenomenon being studied.

Some Descriptive Research Methods:

Correlational Research

Causal-Comparative Research

Case Study

Ethnographic Research

Historical Research

Associational Research

Relationships among two or more variables are studied without any attempt to influence them.

Some Associational Research Methods:

Correlational Research

Causal-Comparative Research

Intervention Research

A type of research where a particular method or application is expected to affect one or more results.

Some Associational Research Methods:

Experimental Research

Action Research

Qualitative & Quantitative Research

- Qualitative research is empirical research where the data are not in the form of numbers.
- Quantitative research gathers data in a numerical form which can be put into categories, or in rank order, or measured in units of measurement. This type of data can be used to construct graphs and tables of raw data

	Qualitative	Quantitative
Conceptual	<p>Concerned with understanding human behaviour from the informant's perspective</p> <p>Assumes a dynamic and negotiated reality</p>	<p>Concerned with discovering facts about social phenomena</p> <p>Assumes a fixed and measurable reality</p>
Methodological	<p>Data are collected through participant observation and interviews</p> <p>Data are analysed by themes from descriptions by informants</p> <p>Data are reported in the language of the informant</p>	<p>Data are collected through measuring things</p> <p>Data are analysed through numerical comparisons and statistical inferences</p> <p>Data are reported through statistical analyses</p>
<p><i>Source: Adapted from Minichiello et al. (1990, p. 5)</i></p>		

McLeod, S. A. (2017, Dec 05). *Qualitative vs. quantitative research*. Retrieved from <https://www.simplypsychology.org/qualitative-quantitative.html>