

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





# مرکز مطالعات و توسعه دانشگاه علوم پزشکی کرمان

پژوهش در آموزش  
(بخش کمی)



# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

Why do students show violent behavior at school?



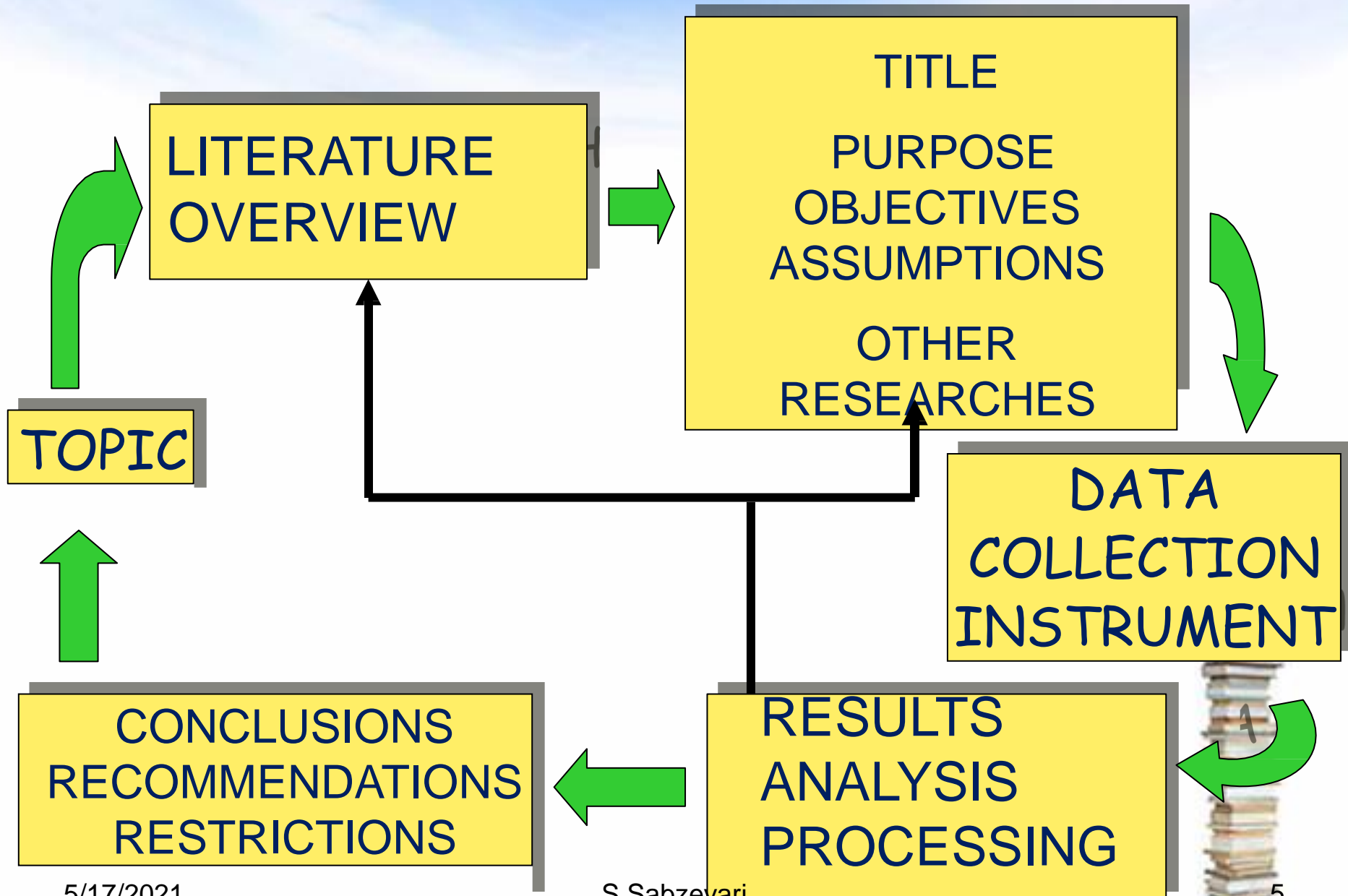
# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

## Educational Research:

A systematic process of collecting and analyzing information (data)

Purpose: broadening the understanding of phenomena of educational nature or solving educational problems





**TOPIC**

**LITERATURE OVERVIEW**

**TITLE**  
**PURPOSE**  
**OBJECTIVES**  
**ASSUMPTIONS**  
**OTHER RESEARCHES**

**DATA COLLECTION INSTRUMENT**

**RESULTS ANALYSIS PROCESSING**

**CONCLUSIONS**  
**RECOMMENDATIONS**  
**RESTRICTIONS**

# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

## QUANTITATIVE

- Find relationships between variables
- Structured form of research process
- large sample
- Objectivity-effort of generalization to larger populations
- Inference collection body data
- Statistical analysis



# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

## QUALITATIVE(1)

- Description and understanding of the phenomena
- More flexible form of the research process, small sample



# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

## QUALITATIVE(2)

- Subjectivity - results relate only to the sample under study.
- Direct contact / interaction with sample
- Text analysis





# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

## MIXED(1)

- A combination of quantitative and qualitative methods in the methodological design.
- The advantages of quantitative methods are the disadvantages of qualitative methods and vice versa



# MEANING AND CHARACTERISTICS OF EDUCATIONAL RESEARCH

## MIXED(2)

- Exploiting the advantages of each method
- More effective tackling weaknesses of each method



# STAGES OF EDUCATIONAL RESEARCH (1)

- The problem
- Looking further into the problem - literature review
- Research name(title)



# STAGES OF EDUCATIONAL RESEARCH (2)

- Formulate the purpose and individual research queries - assumptions
- Designing research methodology
- Data collection
- Data Analysis



# The problem (1)

- The core of the investigation
- The starting point for further investigation and looking further into the matter



## The problem(2)

- The primary criterion for the selection of the appropriate methodology
- Leads the process of analysis and interpretation of data



# LOOKING FURTHER INTO THE PROBLEM(1)

Look into the problem by:

- investigating different aspects
- isolating and determining the causes



## LOOKING FURTHER INTO THE PROBLEM(2)

### Ways of further investigation:

- Contact with experts
- Literature review
- Pilot survey on the meaning of the preliminary and somewhat "informal" investigation of the matter.





# LITERATURE REVIEW(1)

- It helps to scale down the problem
- Reveals:
  - work done for other similar problems
  - methods and other research techniques
  - new data sources



# LITERATURE REVIEW(1)

- Informs:
  - on areas that have been fully explored
  - on suggestions of other researchers
  - about weaknesses of other relevant research
- It helps to better evaluate the work of the researcher



# LITERATURE REVIEW(2)

## **SOURCES OF REFERENCE**

Scientific magazines

Books

International exhibitions

Conference Proceedings

Newspapers

Abstracts research

Internet



## Title of the research(1)

The title of the research should :

- Refer to a specific case of the research issue
- Correspond to the purpose of the research
- Be brief, specific and complete



## Definition of the objective of the research Research Questions– Assumptions (1)

- The objective of the research should be specific, simple, comprehensive without unnecessary details.
- Research questions and assumptions spring from the purpose of the research and actually they make up its extension guiding the researcher to the right direction.



## Definition of the objective of the research (2)

- Example
- The purpose of the research is to study to attitudes of local students towards foreign students and to identify significant differences regarding basic factors of gender, family background, financial status



# Research Questions(3)

## Examples

- Do native students have a positive attitude towards foreign students?
- Do native students socialize with foreign students inside school?
- Do native students socialize with foreign students outside school?
- Do native students have a positive attitude towards students with different religion?



## ASSUMPTIONS (4)

### EXAMPLE

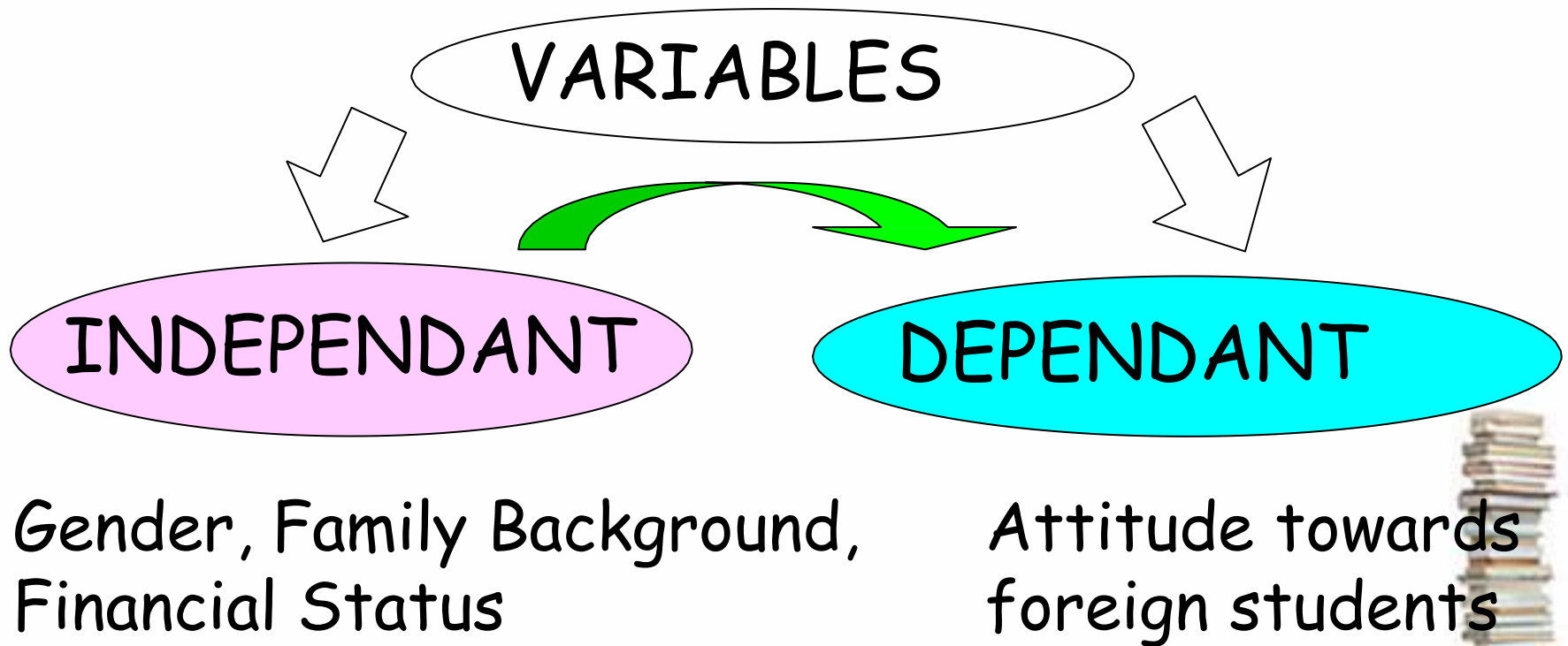
- There is *statistically significant difference* between *native boys* kai *native girls* regarding their attitude towards foreign students.

Gender Vs Attitude towards foreign students.





Definition of the objective of the research Research Questions- Assumptions (5)

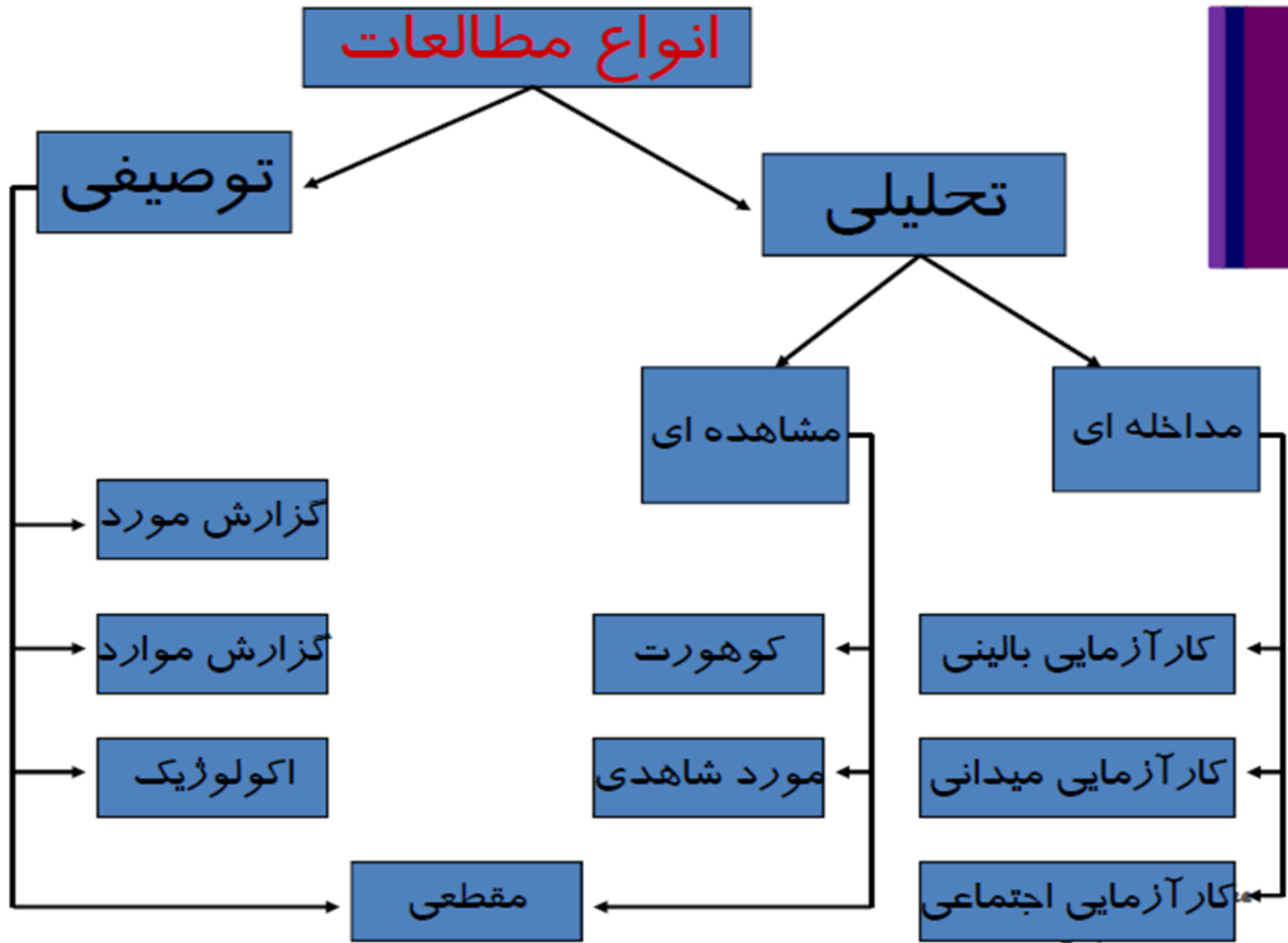


## Methodology Design

In designing the methodology the researcher should take into consideration :

- The purpose, research questions-assumptions.
- Time and means available
- His/her abilities and experience
- His/her personal interest
- Ethical dilemmas- consequences of the research procedure on the subjects of the research





- **مطالعات توصیفی:** مطالعاتی هستند که برای تعیین میانگین متغیر در جامعه و یا تعیین فراوانی یک پدیده بکار می روند
- بررسی سبکهای یادگیری دانشجویان پزشکی سال ... دانشگاه ...
- بررسی میزان بکارگیری روشهای تدریس نوین توسط اساتید در دانشگاه ...
- **مطالعات تحلیلی:** مطالعاتی هستند که برای تعیین ارتباط بین متغیرها بکار می روند مانند بررسی ارتباط بکارگیری روشهای نوین تدریس توسط اساتید با یادگیری فعال در دانشجویان ... دانشگاه ....



## • مطالعات مشاهده ای و مداخله ای

- **مطالعات مشاهده ای**: یعنی بررسی و سنجش متغیرها بدون تاثیرگذاری بر آنها مانند مقایسه رفتارهای تحصیلی دانشجویان گروه A با گروه B
- **مطالعات مداخله ای**: یعنی تاثیرگذاری بر روی متغیرهای مستقل و بررسی تاثیرات این تغییرات بر روی متغیرهای وابسته مانند مقایسه تاثیر روش تدریس A در مقایسه با روش تدریس B بر یادگیری فعال دانشجویان

...



• **مطالعات مقطعی:** مطالعاتی هستند که در یک نقطه از زمان تمام متغیرها سنجیده می شود مانند

• بررسی هوش هیجانی دانشجویان ... در سال ...

• **مطالعات طولی:** مطالعاتی هستند که متغیرهای مستقل و وابسته با تقدم و تاخر زمانی جمع آوری می شوند

• بررسی سبکهای یادگیری دانشجویان پزشکی از بدو ورود تا فراغت از تحصیل

• **مطالعات آینده نگر** که متغیر مستقل ثبت و در آینده وقوع متغیر وابسته سنجیده می شود

• بررسی تاثیر اجرای کوریکولوم جدید بر صلاحیت حرفه ای دانشجویان .. یا بر آینده شغلی

• **مطالعات گذشته نگر** که متغیر وابسته در زمان حال ثبت و بر اساس پرسشگری و بررسی تعیین می گردد یا بررسی مستندات متغیر مستقل در گذشته

• بررسی صلاحیت حرفه ای دانش آموختگان دوره ... یا ورودی ... که با کوریکولوم قبلی آموزش دیدند



# DATA COLLECTION(1)

Before the researcher starts collecting data he/she should:

- Select the sample of subjects for the research as well as sampling methods
- Secure permission of access to the subjects of the research
- Select the data collection method(s)



## DATA COLLECTION(2)

### DATA COLLECTION METHODS

- Observation (Structured- Free)
- Interview (Structured, Semi-Structured, Free)
- Questionnaire (Specific And Open ended questions)





# Sampling

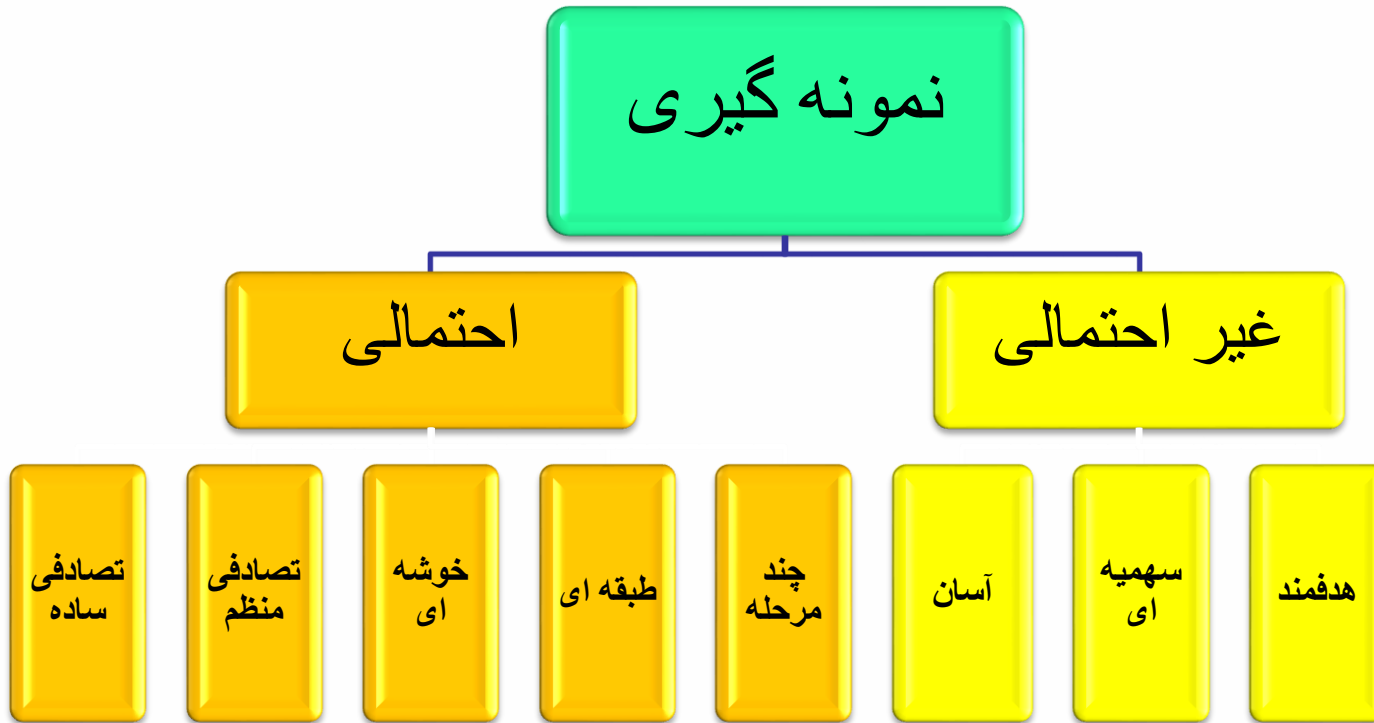
Exact definition of the population, so that the selection of the sample is possible(selection of a sub-set of the population)

If the researcher wants to generalize his/her conclusions then must select a large and random sample.

Otherwise a smaller sample can be used for the theoretical aspects of the research.



# انواع نمونه گیری



# Statistical Analysis (1)

## QUANTITATIVE

### Descriptive Statistics

- Shows data in graphical form
- Does not prove or reject any hypothesis
- Does not explain what caused the result
- *Frequencies( $f$ ), Percentages (%),  
Average( $\bar{x}$ ), Standard Deviation ( $SD$ )*



## Statistical Analysis(2)

### *Deductive statistics*

- Indicates the existence of significant relationships and differences between variables
- Accepts or rejects hypotheses
- X-Square (Chi-Square) test, t criterion, Analysis of distribution, Correlation



# PRESENTATION OF RESULTS

- Presentation of results in table and/or graphical form
- Simplicity in the construction of tables and graphs
- Explanatory text that accompanies the results giving further details.

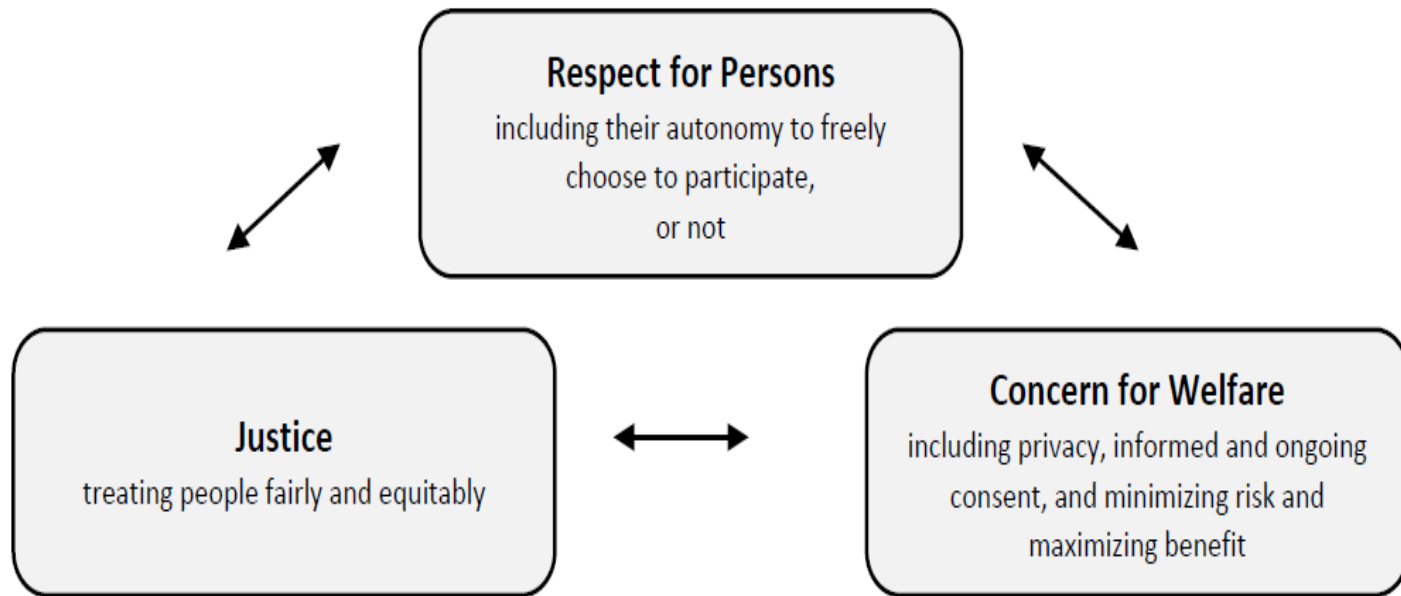


## ملاحظات اخلاقی، محدودیت های تحقیق

- اهمیت ملاحظات اخلاقی
- ملاحظات اخلاقی در مراحل مختلف تحقیق
- شناخت محدودیت های تحقیق و چگونگی ساماندهی فعالیتها



Figure 1: The Three Core Principles of the TCPS2



**Table 1: Potential Ethical Dilemmas and Key Principles of Ethical Practice**

Areas of Potential Dilemmas	Key Principles of Ethical Practice
<b>Conflicts of Interest and Power Relationships</b>	Mitigate undue influence, coercion, or power imbalances by <ol style="list-style-type: none"> <li>a. basing decisions first and foremost on an instructor’s goals (which sometimes may be at odds with research goals), and</li> <li>b. being sensitive to the inherent power differential between instructor and student.</li> </ol>
<b>Consent Processes</b>	Ensure that students’ decisions to participate in the research (or not) is informed and voluntary by <ol style="list-style-type: none"> <li>a. telling them about the purpose, benefits, risks, and consequences of the research before asking for their consent, and</li> <li>b. making sure they have the autonomy to freely and privately choose to participate, refuse to participate, or withdraw from participation at any time during the research.</li> </ol>
<b>Fairness and Equity in Research Participation</b>	Within the goals of the research project, be inclusive, fair, and equitable when selecting participants by <ol style="list-style-type: none"> <li>a. recognizing and respecting the vulnerability of individuals or groups and</li> <li>b. making the results available, accessible, and understandable to all participants upon completion of the study.</li> </ol>
<b>Privacy and Confidentiality</b>	Protect the participants’ information and the integrity of the research project by <ol style="list-style-type: none"> <li>a. meeting confidentiality obligations in the research,</li> <li>b. implementing appropriate institutional safeguards and security measures to protect participant information and data, and</li> <li>c. if the research involves identifiable secondary use of data (e.g., former students’ work or other identifiable materials collected before seeking REB approval), seeking students’ informed consent and applying the above principles of ethical practice to this secondary use of data.</li> </ol>

Lisa Fedorul





# گزارش نویسی

- اهمیت گزارش نویسی
- انواع روش های گزارش تحقیق
- نوشتن یک مقاله تحقیقی و پایان نامه تحصیلی
- ( نگارش گزارش: بیان نقل قول ، زیرنویس و منابع چگونه باید باشد )



# گزارش نهایی طرح

- چارچوب کلی گزارش نهایی
- الف) عنوان، شامل نام دانشگاه، نام دانشکده، مقطع تحصیلی، عنوان طرح، نام استاد، مشاور، نام نویسنده، تاریخ و شماره ثبت طرح.
- ب) نام مجری یا مجریان طرح و محل خدمت آنها
- ج) مقدمه، اهداف، فرضیه ها و مرور متون
- د) روش کار



- فهرست منابع:
- صفحه تقدیرها
- چکیده،
- پیوست ها:
- مانند پرسشنامه ها، .....



