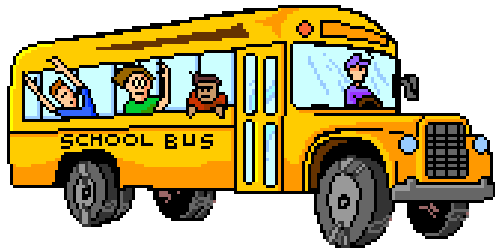


# **SP\_IRS Introduction to Research in Special and Inclusive Education (spring 2015)**

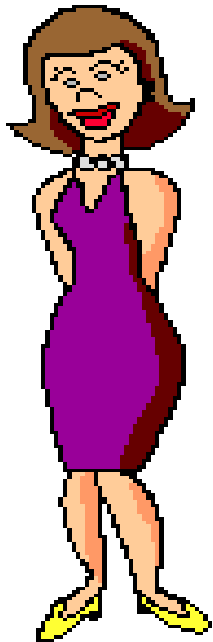
**Lecture 1: Introduction**

**Lecturer: Mr. S. Kumar**

# Welcome



# Presentation Outline



- Introduction to Educational Research
- Types of Research



# Introduction

- Classroom teachers are consumers of educational research
- Research is one means of seeking answers to questions
- Therefore have to know basic understanding of concepts /key terms related to notion of research
- Questions arises constantly through out a day . It may be personal/ professional
- When we have to look for answers we have to

## Consult sources for answers

- Convenient
- Comfortable

However these sources have the potential to be fraught with problems.

# Familiar sources of Information

## Tradition

- Ways in which we have behaved in the past. Interventions that have worked in past may in fact still work today., BUT there is no guarantee, in addition there may now be newer interventions that will work better than our old standby

## Authority

- Refers to the use of the opinions of experts , whom we assume will know what will work best. However, simply finding someone who has a strong opinion about a given intervention does not necessarily support the use of that strategy.

## Common sense

- Refers to the use of human reasoning as basis for answering questions
- Global culture throughout history
- Reliant and dependable information
- Information collected if it is of substandard quality or accuracy it will reflect on those various deficiency

# Problems with the familiar sources

- Tendency to provide unreliable information.
- Biased to some degree.
- Bias occurs
  - Information collected in an unsystematic way and subjective manner.

For accurate answers and high quality work  
we need to obtain information that is valid and  
reliable

# What is Validity and Reliability

- Validity is term that indicates the authenticity of the data; that is validity involves asking whether we are measuring what we said we are going to measure. It is vital for interpreting and generalizing research.
- Reliability refers to the consistency of our measures to produce similar results over repeated measurements.



# Types of research

Scientific method – systematic way of answering questions more objectively.

- Is a specific strategy used to answer question and resolves problems.
- Systematic and has got step by step set of procedures
- Dewey (1938) scientific method is a procedure for thinking for objectively .

# Procedures

1. Clarify the main question inherent in the problem
2. State a hypothesis
3. Collect, analyse and interpret information related to the question, such that it will permit you to answer the question.
4. Form conclusion derived from your analysis
5. Use the conclusion to verify or reject the hypothesis.

# Educational Research

- Involves the application of the scientific method to educational topics , phenomena, or questions in search of answers.

# Educational Research procedures

1. Specify the topic about which a concern exist
2. Clarify the specific problem on which the research will focus.
3. Formulate research questions and /or hypotheses concerning the main problem
4. Carry out procedures by which data (a more appropriate term for information) are collected analysed and interpreted

5. State the findings determined as a result of the data analysis.
6. Draw conclusion related to the original research questions and/ or hypothesis

# Quantitative and Qualitative Research

## Quantitative

- Research that involves numerical data.

Deductive reasoning

## Qualitative Research

- Research that involves collection of data that are analyzed and reported verbally
- Inductive reasoning.

# Non experimental research

- The researcher has no direct control over any variable of the study
- Reasons

It has already occurred not possible for it to be influenced

- Variables cannot be controlled or manipulated by the researcher

# Examples of Non experimental research designs

- Descriptive-studies simply report information about the frequency or amount of something
- Comparative – studies characteristically build on descriptive studies by comparing two or more groups to that which is measured.
- Correlation – studies measures the degree to which a relationship exists between two or more variables
- Casual Comparative studies where group is determined by something that has occurred in the past.



# Experimental research

- The researcher has control over the one or more variables included in the study that may somehow influence (or cause ) the participants behavior .
- Independent variables the researcher has control on, the researcher determines the subject which will receive condition

# Descriptive statistics

- Allows researchers to summarize, organize and simplify data
- Techniques used

Mean, mode, range. Sd, correlations and standardized scores

# Inferential statistics

- Statistical techniques that allow researchers to test the statistical significance of the differences between two or more groups or to test the degree of relationship between two variables.

# Qualitative Research

- Phenomenological studies – engage the researcher in a long process of individual interviews in an attempt to fully understand a phenomenon.
- Ethnographic- attempts to describe social interaction between people in group.
- Grounded theory research studies attempt to discover a theory that relates to a particular environment

- Case studies

Are in depth studies of individual programs , activities , people, or groups

The combination of both types of data tends to provide a better understanding of a research problem than one type of data in isolation.

# Mixed- methods research designs

The combination of both types of data tends to provide a better understanding of a research problem than one type of data in isolation

# Action Research

- Using quantitative and qualitative data for individuals to study education problems that they face in their settings

# Tutorial activity

1. Specify the topic about which a concern exist
2. Clarify the specific problem on which the research will focus.
3. Formulate research questions and /or hypotheses concerning the main problem
4. Carry out procedures by which data (a more appropriate term for information) are collected analysed and interpreted



# Workshop

- Discussion of assignment 1

# Conclusion

- Research is a very broad topic so keep your discussion on be reflective in approach and you will excel as a 21st century teacher.