

GLOSSARY

abstract A summary of a study that describes its most important aspects, including major results and conclusions.

audio-visual A term used to describe instructional materials or systems which use both sound and vision.

case study an in-depth examination of real-life or simulated situation carried out in order to illustrate particular characteristics.

computer-assisted learning Also referred to as computer-based instruction, learning using specially prepared instructional materials on a computer.

computer based instruction an instructional technique which utilizes a computer.

Conventional education education process where teachers and students are present in the same place and at the same time.

co-operative learning a learning situation in which students work together in small groups and receive rewards or recognition based on their group's performance

curriculum a term, which compasses all the learning that goes on in a school or other environment and expresses the aims, assumptions and values of the learning environment and of the educational system that supports it.

curriculum development a task of supervision directed toward designing or redesigning the guide lines for instruction. Includes specifications indicating what is to be taught, by whom, when, where and in what sequence.

data general term for raw research material or information.

Didactic material collective term for all material used for teaching purposes.

Distance education education conducted through no face to face contact between teacher and student.

Distance learning learning carried out by a student who is separated from the institution or person organizing the instruction.

Distance teaching A method of instruction in which the teacher and students perform their roles in different geographical locations and the content of the study is transmitted through technological means.

Education Organized and sustained instruction designed to communicate a combination of knowledge, skills and understanding valuable for all the activities of life (UNESCO)

Electronic mail (e-mail) a general term for systems that enable letters, memoranda, etc. to be sent from one to another solely by electronic means.

experiment a research study in which one or more independent variables are systematically varied by the researcher to determine the effects of this variation.

experimental group the group in a research study that receives the treatment (or method) of special interest in the study.

experimental research research in which at least one independent variable is manipulated, other relevant variables are controlled, and the effect on one or more dependent variables is observed.

experimental variable the variable that is manipulated (systematically altered) in an intervention study by the researcher.

follow-up study a study conducted to determine the characteristics of a group after some period of time.

histogram a graphic representation, consisting of rectangles, of the scores in a distribution; the height of each rectangle indicates the frequency of each score, or group of scores.

hypothesis a tentative, testable assertion regarding the occurrence of certain behaviors, phenomena, or events; a prediction of study outcomes.

independent variable a variable that affects (or is presumed to affect) the dependent variable under study and is included in the research design so that its effect can be determined; sometimes called the “experimental” or “treatment” variable.

information technology the technology involved in the creation, storage, selection, transformation and distribution of information of all kinds.

nonparametric technique a test of statistical significance appropriate when the data represent an ordinal or nominal scale, or when assumptions required for parametric tests cannot be met.

ODL (Open distance learning) the acquisition of educational or training information, including the instruction and experience, from the learners, although they are physically distant from the source of that information.

one-group pre-test-post-test design a weak experimental design involving one group that is pre-tested, exposed to a treatment, and posttttested.

parametric technique a test of significance appropriate when the data represent an interval or ratio scale of measurement and other specific assumptions have been met.

pilot study a small-scale study administered before conducting an actual study its purpose is to reveal defects in the research plan.

population the group to which the researcher would like the results of a study to be generalizable; it includes all individuals with certain specified characteristics.

Post-test-only control group design an experimental design involving at least two randomly formed groups; one group receives a treatment, and both groups are post-tested.

prediction the estimation of scores on one variable from information about one or more other variables.

pretest-posttest control group design an experimental design that involves at least two

groups; both groups are pre-tested, one group receives a treatment, and both groups are post-tested (e.g. e-Hermes test design). For effective control of extraneous variables, the groups should be randomly formed.

probability the relative frequency with which a particular event occurs among all events of interest.

problem statement a statement that indicates the specific purpose of the research, the variables of interest to the researcher, and any specific relationship between those variables that is to be, or was, investigated; includes description of background and rationale (justification) for the study.

procedures a detailed description by the re-searcher of what was (or will be) done in carrying out a study.

purpose (of a study) a specific statement by a researcher of what he or she intends to accomplish.

qualitative research/study research in which the investigator attempts to study naturally occurring phenomena in all their complexity.

random sample a sample selected in such a way that every member of the population has an equal chance of being selected.

regressed gain score a score indicating amount of change that is determined by the correlation between scores on a post-test and a pre-test (and/or other scores). It provides more stable information than a simple post-test-pre-test difference.

regression line the line of best fit for a set of scores plotted on coordinate axes (on a scatterplot).

regression threat the possibility that results are due to a tendency for groups, selected on the basis of extreme scores, to regress toward a more average score on subsequent measurements, regardless of the experimental treatment.

reliability coefficient an index of the consistency of scores on the same instrument. There are several methods of computing a

research the formal, systematic application of scholarship, disciplined inquiry, and most often the scientific method to the study of problems.

Research / test design the overall plan for collecting data in order to answer the research question. Also the specific data analysis techniques or methods that the researcher intends to use.

research hypothesis a prediction of study outcomes. Often a statement of the expected relationship between two or more variables.

research proposal a detailed description of a proposed study designed to investigate a given problem.

research report a description of how a study was conducted, including results and conclusions.

results (of a study) a statement that explains what is shown by analysis of the data collected; includes tables and graphs when appropriate.

sample The group on which information is obtained.

sampling the process of selecting a number of individuals (a sample) from a population, preferably in such a way that the individuals are representative of the larger group from which they were selected.

scatterplot the plot of points determined by the cross-tabulation of scores on coordinate axes; used to represent and illustrate the relationship between two quantitative variables.

scientific method a way of knowing that is characterized by the public nature of its procedures and conclusions and by rigorous testing of conclusions.

standard deviation (SD) the most stable measure of variability; it takes into account each and every score in a distribution.

statistically significant the conclusion that results are unlikely to have occurred due to sampling error or "chance"; an observed correlation or difference probably exists in the population.

survey study / research an attempt to obtain data from members of a population (or a sample) to determine the current status of that population with respect to one or more variables.

target population / group the population to which the researcher, ideally, would like to generalize results.

test of significance a statistical test used to determine whether or not the obtained results for a sample are likely to represent the population.

validity the degree to which correct inferences can be made based on results from an instrument (e.g. a questionnaire); depends not only on the instrument itself, but also on the instrumentation process and the characteristics of the group studied.

variable a characteristic that can assume any one of several values, for example, cognitive ability, height, aptitude, teaching method.