

GLOSSARY to Accompany

A Short Guide to Action Research, 3e

academic journals - journals that contain articles written by specialists in the field who describe their research, secondary research, novel applications of existing theories, or interesting new ideas set in a theoretical context. Before acceptance, each article is peer reviewed, which means it is critiqued by a jury of three to six experts in the field to check for accuracy and validity.

academic learning time (ALT) - time spent by a student actively engaged in a task that is directly related to the teacher's desired outcome and where the student is able to successfully complete the task. ALT is different from engaged time in that students are able to successfully complete the task. It is positively correlated with achievement.

academic writing style - a writing style that uses concise, objective language. This is the style of writing preferred for action research reports. Ideas are presented in a logical, orderly manner so that the reader is able to gain a maximum amount of understanding with a minimum amount of time and effort. This writing style creates a more readable and credible report.

accuracy - a quality in action research in which the data collected creates a fairly true picture of the bit of reality being observed.

action research - a systematic and orderly way for teachers to observe their practice or to explore a problem and a possible course of action.

allotted time - the time allotted during the school day to teach a specific subject.

analysis of variance (ANOVA) - statistical procedure used to compare the difference in mean between or within three or more groups.

archival data - data sources that include past grades, test scores, cumulative folders, health records, parental occupation, or attendance records.

attitude scales - a series of statements given to respondents who must then choose from a set of responses for each statement. Their choice for each statement indicates their level of agreement or disagreement.

best practice - informed, thoughtful teaching that is supported by research and research-based theory.

brainstorm and list - a method of generating ideas where, given a problem or a prompt, you list ideas without evaluating them. The non-evaluative aspect of this method is important, as it gets you thinking outside of conventional boundaries.

causal-comparative research - a type of research designed to find the reason for existing differences between two or more groups. It is used when the random assignment of participants for groups necessary for the true experiment cannot be met, which is certainly the case in most classrooms. Like correlational research, it is used to describe an existing situation. It is called causal-comparative research as it compares groups in order to find a cause for differences in measures or scores.

checklist - a list that specifies certain attributes, such as behaviors, traits, assignments, or skills. When that attribute is seen, some method is used to check it off or indicate the number of times it was present.

checklist for collecting data - a checklist used to record which data were collected and when. This ensures that data are collected systematically and that all types of data are equally represented.

chi square - statistical procedure used to compare frequencies of two or more groups.

closed-ended questions (closed response questions) - questions for which there is a specific answer or response.

conclusion - found at the end of an action research report, the conclusion is a paragraph or two that describes your current state of knowing or a list of things you have come to believe as a result of your study. It should bring together the important data and explain what they mean. The conclusion will be the basis for your recommendation or plan of action.

conference - a data source in which one or more students talk about their work or some aspect of classroom functioning. Prompts may be used to get students talking about a particular topic; however, lists of planned questions are not used. Conferences can be conducted individually or in small groups known as focus groups.

consciousness - thoughts, images, emotions, and other stimuli (both internal and external) of which we are aware.

constructivism - an educational philosophy that posits that knowledge is not passively received; rather, it's actively built up or constructed by students as they connect their prior knowledge and past experiences with new information and experiences.

control group - in an experiment, a group as similar as possible in all characteristics to the treatment group that is not exposed to the particular treatment for the purposes of comparison.

correlation coefficient - a numerical value that describes the degree or strength of a relationship between two variables. A positive correlation means that when one variable increases, the other one also increases. A negative correlation means that when one variable increases, the other one decreases. A correlation coefficient of 1.00 would indicate a perfect one-to-one positive correlation. This rarely happens. A correlation coefficient of .0

means that there is absolutely no correlation between two variables. A correlation coefficient of -1.00 would indicate a perfect negative correlation. This also rarely happens.

correlational research - a type of research designed to determine whether and to what degree a statistical relationship exists between two or more variables. It is used primarily to describe an existing condition or something that has happened in the past.

Creative Problem Solving (CPS) - a problem solving strategy in which you define the problem, generate as many ideas as possible, then choose one or two to refine and test.

credibility - a quality in action research that indicates it is trustworthy or capable of being believed. This quality enables you and others to use your data with confidence.

data retrieval charts - visual organizers that are used to help collect and organize information. These can come in a variety of forms.

dependent variable - the particular result or the effect of the treatment or condition. The dependent variable depends on the treatment or independent variable.

descriptive statistics - statistical analyses used to describe an existing set of data. There are three major types of descriptive statistics: measure of central tendency, frequency distribution, and measures of variability.

discussion - the part of a thesis or action research report where you provide an overview of the study and a summary of the findings. It may also include some or all of the following: conclusions, recommendations, and an evaluation of the study.

dualism or a dualistic perspective - a view of reality that posits that the universe is comprised of two distinctly different kinds of stuff: physical and metaphysical. The physical dimensions consist of matter and energy and are studied using the traditional tools of science. The metaphysical (beyond the physical) dimensions are made up of meta-energy in the form of consciousness.

ego-consciousness - awareness and interpretation of the outer physical world.

equivalent time-sample design - a quasi-experimental research design in which the treatment is presented at irregular intervals; however, the measures or observations are made at regular intervals. This allows the researcher to account for and control outside influences.

ERIC - the Educational Resources Information Center, sponsored by the National Library of Education at the U.S. Department of Education, it is a massive database containing information on all imaginable subjects related to education. (www.eric.ed.gov/)

evaluation of the study - after reporting conclusions and recommendations, this section of a thesis or action research report evaluates the effectiveness of the study, explains particular aspects of it, or describes how it might be done more effectively the next time.

experimental research - a mode of inquiry in which a hypothesis is proposed and tested by examining relationships between independent and dependent variables. In experimental research the researchers create an artificial environment in order to maintain control over all factors that may affect the result of the experiment. True experimental research uses random sampling of subjects.

explicate reality - the physical world.

field notes - a data source that includes written observations of what you see taking place as you conduct your action research project.

figures - information found in visual form such as lists, graphs, diagrams, or pictures.

focus group - a small group conference used to gather data. The moderator uses questions as prompts and guides. The goal is to get participants to carry the conversation as much as possible.

frequency distribution - a way of organizing information that tells the scores or numbers that were attained and the frequency or how many times each score or number was attained.

holism - the idea that the universe is made up of integrated wholes that cannot be reduced to the sum of their parts.

holistic education - an educational philosophy based on holism and construction around the principle of interconnectedness. A holistic approach to education seeks to integrate multiple levels of meaning and experience and strives to help students' realize their full potential in multiple dimensions: intellectual, creative, spiritual, physical, social, and emotional.

holomovement - the underlying flow between implicate and explicate realms in which reality can be experienced.

hypothesis - a tentative statement that can be supported or rejected depending on the outcome of an experiment.

implicate reality - a reality deeper than physical reality that is beyond our senses; the metaphysical world.

independent variable - the treatment or factor that the researcher manipulates to determine a particular effect. It is what is done or not done to a group of people, animals, plants, or things in an experiment or other types of research.

inductive analysis - the process of looking at a field or group of data and inducing or creating order by organizing what is observed into groups.

inferential statistics - statistical analyses used to determine how likely a given outcome is for an entire population based on a sample size. These analyses allow the researcher to make inferences to larger populations by collecting data on a small sample size. The most common inferential statistical analyses are the t-test, analysis of variance (ANOVA), and chi square.

instructional time - the time during a class in which you are actually engaged in instruction.

interview - a data source in which students respond to a series of planned questions.

levels of significance - the level at which we can be reasonably certain that the differences in scores or other measures are due to something other than chance or sampling error. In educational research, two different levels of significance or probability are generally used: $p = .05$ and $p = .01$.

literature review - an examination of journal articles, research, research reports, ERIC documents, books, and other sources related to a particular topic.

materialistic monism - a view of reality that posits that the universe consists only of matter and energy. The only things said to exist are those that can be weighed and measured.

mean - the arithmetic average of a set of scores or numbers.

Means-End Analysis (MEA) - a problem solving strategy in which you first describe the desired outcome or end state and then list the goals necessary to reach the end stage.

measures of central tendency - a way of describing a set of data with a single number. The three measures of central tendency are the mode, the median, and the mean.

measures of variability - a measure that describes the spread of scores are or how close they cluster around the mean. There are three measures of variability: range, variance, and standard deviation.

median - in a set of scores or numbers it is the point in which where 50% of the scores are above and 50% are below.

meta-energy - energy in the form of consciousness.

metaphysical dimensions - dimensions that are beyond the physical dimensions (implicate reality) that are not readily accessible to our normal five senses.

mission statement - a statement that defines the core purpose of a school or district. It often contains some or all of the following: goals, a defining philosophy, a statement of beliefs related to teaching and learning.

mode - in a set of scores or numbers, it is the score or number attained most frequently.

Moses Effect - a situation in which researchers hand down research edicts to teachers with the expectation that they will be passive receivers of these edicts.

negative correlation - a relationship between variables in which one variable increases at the same time as the other one decreases.

ontological perspectives - what one believes to be real and true in regards to the nature of reality.

open-ended checklist - a checklist that contains a list of skills with enough space for students to describe their ability, understanding, or usage of each skill.

open-ended questions - questions for which there are no set answers or responses.

paradigm - a common framework from which to view reality. It includes a set of beliefs or assumptions that (a) establishes boundaries and principles within a particular field, (b) guides perception, and (c) describes a particular view of reality.

personal consciousness - the consciousness of an individual that includes both ego-consciousness and self-consciousness.

plan of action - the plan describing the actions you will take based on the findings of your action research.

positive correlation - a relationship between variables in which one variable increases at the same time as the other one also increases.

positivism - a philosophy that emphasizes observable, measurable facts as the only way to come to know the world in which we live. Here the scientific method is the final arbiter of truth.

pretest-posttest design - a quasi-experimental research design in which a group is given a pretest, a treatment, and a posttest. Pretest and posttest scores are compared.

Product and Performance Assessment Form (PPAF) - a rating checklist that is used to analyze and evaluate any type of product or performance, such as science projects, inventions, dramas, dances, or experiments.

pseudoscience - any inquiry that starts with the answer and looks only for data that supports that answer. Whereas science uses data to determine reality, pseudoscience uses beliefs to determine a perceived reality.

qualitative research - research that uses some type of systematic observation to understand a phenomenon, condition, situation, or environment. Qualitative researchers take the world as they find it instead of trying to manipulate conditions to isolate variables. The research questions are more open ended and less defined, with plenty of room to collect a variety of data through collateral observations.

quantitative research - sometimes called experimental research, the researcher takes an active role in setting up an observation or experiment to isolate a variable. The goal is to determine the effect (dependent variable) of a particular approach or treatment (independent variable). The strength of effect is determined by measurable (quantifiable) data.

quasi-action research - quasi-experimental research used in an action research setting.

quasi-experimental research - experimental research without random assignment to groups.

range - in a set of scores or numbers, the difference between the highest and lowest score or number.

rating checklist - a checklist that specifies traits you are looking for in a product or performance and allows the observer to assign levels of performance to each trait. This is similar to a rubric; however, whereas a rubric uses a sentence or more to provide a description of each level, a rating checklist uses one-word indicators

rating scales - a scale used to determine the strength of a response. These are often used to determine how much, how often, or how many times something occurs.

recommendation - found after the conclusions in an action research report, the recommendation section describes what is believed to be an effective action based on the findings. You tell how your findings might be used.

reference page - a list of the books, journal articles, and other sources cited in your thesis action research report. This informs readers as to what sources were used and allows them to locate these sources if necessary.

reliability - the degree to which a study or experiment can be repeated with similar results.

research - a variety of procedures that are used to view and re-view the world in order to understand it. Research is the systematic method used to collect data to answer questions.

research journal - (also known as a log) a notebook used to record thoughts and observations related to all parts of your research. A variety of data may be included here such as insights, analyses, interpretations, impressions, ideas, diagrams, sketches, quotes, student comments, scores, questions, or chronology of your research project.

research question - the purpose of a research study put in the form of a specific question for which the researcher seeks to find an answer.

science - the processes used to objectively examine and organize the world around us. To engage in the process of science means to look, to seek to understand or know, to guess and test guesses, to create order from chaos, and to develop concepts. True science does not start with an answer.

self-consciousness - one's awareness and interpretation of the inner world of feelings, memories, intuition, and impressions.

small-group conference - a focus group used to gather data. The moderator uses questions as prompts and guides. The goal is to get participants to carry the conversation as much as possible.

standard deviation - the square root of the variance. It is the most frequently used index to describe variability or the dispersion of scores. While variance tells you how tightly the scores are clustered, standard deviation tells you how tightly the scores are clustered around the mean in a set of data.

statistical significance - a measure that describes the likelihood that differences in mean between two or more scores or numbers were caused by chance or sampling error.

student checklist - checklists that are completed by students to evaluate their own performance or the performance of the group in which they are working.

students' products or performances - samples of students' work that are used as data sources.

surveys - a data source that enables you to get a variety of information from respondents fairly quickly. Surveys contain a pre-design list of questions that can be either open-ended or closed response.

teacher checklist - checklists designed for use by teachers to indicate exactly what skills have been introduced or mastered and when. Checklists can often be used to indicate the level of student performance for each skill.

theory - an interrelated set of concepts that is used to explain a body of data. A theory is a way to explain a set of facts.

time on task - in a class it is the time students are actively engaged in relevant learning tasks.

time series design - a quasi-experimental research design where a group is examined over time, both before and after the treatment. This is essentially an elaborate pretest-posttest design except that here the researcher collects an extensive amount of data in order to look for patterns over time.

transcendental monism - a view of reality that posits that the basic essence of the universe is consciousness. Here consciousness is primary, and matter and energy materialize from this. From this perspective ultimate reality is not found solely in the physical world as we know it; rather, it lies in a metaphysical dimension.

transition time - the time in a classroom between one class or activity and the next.

transpersonal research methodology - research methodologies or ways of collecting data that allow an individual to move beyond personal consciousness (ego-consciousness and self-consciousness) to approach universal-consciousness.

treatment group - sometimes called the experimental group, it is the group of subjects, participants, or objects that are exposed to the particular treatment.

triangulation - using different kinds of data to look at something from more than one perspective.

t-test - statistical procedure used to determine if the difference between two means is statistically significant

universal-consciousness - a type of consciousness that is shared by all individuals past and present. It also refers to dimensions described by religious and spiritual thinkers and also now being explored by some in quantum physicists.

validity - the degree to which a thing measures what it reports to measure.

variable - the thing that is changed or varied in an experiment. In a qualitative study the variable is the category or thing to be examined.

variance - a mathematical procedure that describes the amount of spread among a set of numbers or test scores. If the variance is small the scores are bunched together. Figure 10.9 shows scores with a small variance. If the variance is large the scores are spread out. Figure 10.10 shows scores with a large variance

wait time - the time between asking a question and answering a question. This gives students time to think about and fully process the question. About seven seconds is usually recommended for most questions; however, higher level and more complex questions require longer wait time.