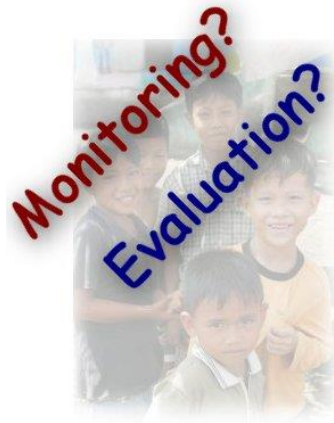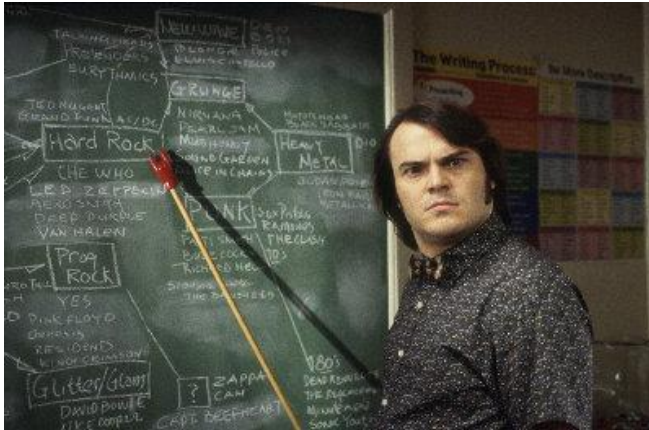# MONITORING AND EVALUATION

Monitoring is the systematic and routine collection of information from projects and programs for four main purposes:

- To learn from experiences to improve practices and activities in the future;

- To have internal and external accountability of the resources used and the results obtained;

- To take informed decisions on the future of the initiative;

- To promote empowerment of beneficiaries of the initiative.

Monitoring is a periodically recurring task that starts in the planning stage of a project or program. Monitoring allows results, processes and experiences to be documented and used as a basis to steer decision-making and learning processes. Monitoring is checking progress against plans. The data acquired through monitoring is used for evaluation.

Evaluation is assessing, as systematically and objectively as possible, a completed project or program (or a phase of an ongoing project or program that has been completed). Evaluations appraise data and information that inform strategic decisions, thus improving the project or program in the future.

Evaluations should help draw conclusions about five main aspects of the intervention:

- relevance

- effectiveness

- efficiency

- impact

- sustainability

Information gathered in relation to these aspects during the monitoring process provides the basis for the evaluative analysis.

Monitoring & Evaluation is an embedded concept and constitutive part of every **project or program design**. It is not an imposed control instrument by the donor or an optional accessory of any project or program. M&E is ideally understood as dialogue on development and its progress between all stakeholders.
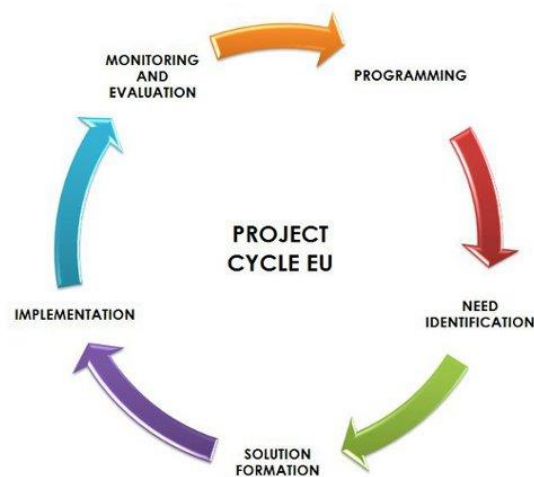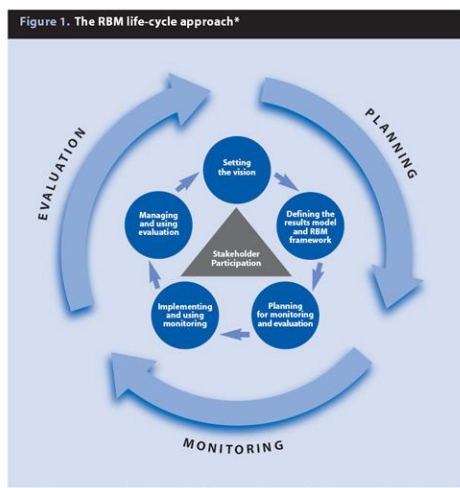
In general, monitoring is integral to evaluation. During an evaluation, information from previous monitoring processes is used to understand the ways in which the project or program developed and stimulated change. Monitoring focuses on the measurement of the following aspects of an intervention:

- On quantity and quality of the implemented activities (outputs: What do we do? How do we manage our activities?)

- On processes inherent to a project or program (outcomes: What were the effects /changes that occurred as a result of your intervention?)

- On processes external to an intervention (impact: Which broader, long-term effects were triggered by the implemented activities in combination with other environmental factors?)

The evaluation process is an analysis or interpretation of the collected data which

delves deeper into the relationships between the results of the project/program, the effects produced by the project/program and the overall impact of the project/program.

Types of evaluation

There are many types and models of evaluation. Five models below capture the purposes for most evaluations.[1]

- **Needs and Feasibility Assessment**

These assessments occur before the program begins. A needs assessment identifies a demand for new services or gaps in already established services the need to be met. These needs lead to establishing goals, objectives, program activities, program structure, and resource requirements. Feasibility assessments focus on whether the activities proposed are possible and whether the proposed objectives are achievable within a stipulated period of time.

- **Program Monitoring**

Although monitoring is distinguished from evaluation, it is the least acknowledged, but probably the most practiced category of evaluation related activity. Monitoring involves relatively straight forward "tracking" of services delivered and "counting" of clients. Monitoring may be similar to a process evaluation and describe the course of the project and its activities, staff requirements, and other resource requirements.

- **Formative (process) Evaluation**

These evaluations provide information for program improvement, modification, documentation and management. The intent is to strengthen the program by providing feedback on its implementation, progress and success. Useful information is collected early in the program so that changes can be made that will enhance program effectiveness, rather than waiting until the program is over. This is useful for all programs, but is especially appropriate for those lasting for several years. This type of evaluation might also include detailed description of the program so that others may adapt it to their own situation.

- **Context Evaluation**

These evaluations are intended to provide information about the setting or

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[1] *Based on materials originally developed by the Evaluation Research Society and adapted by the Skillman Foundation: A Guide to Evaluation for Skillman Foundation Grantees, Detroit, Michigan.*

environment in which the program is implemented. Context evaluation can assess how certain settings contribute to or impede program success. Important context considerations include the specific needs of the individuals targeted by the program as well as social, political, economic, geographic and/or cultural factors.[2]

- **Outcome (impact) Evaluation**

This type of evaluation measures the extent to which the program's stated goals and objectives were achieved and determines any unintended consequences of the program and whether these were positive or negative. Outcomes can be viewed as short term or long term. Sometimes comparison or control groups are used in impact evaluations. Outcome evaluations are important to making major decisions about program continuation, expansion, reduction and funding.

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[2] *W.K. Kellog Foundation, Program Evaluation Manual (Battle Creek, MI: The W.K. Kellog Foundation, 1989.*

Program outcome model

| Inputs | Activities | Outputs | Outcomes |
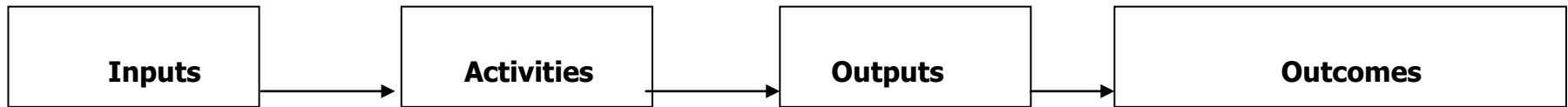
RESOURCES

- Money
- Staff
- Volunteers
- Equipment & Supplies
- ....

CONSTRAINTS

- Laws
- Regulations
- Funders' requirements
- ....

SERVISES

- Shelter
- Training
- Education
- Counseling
- Mentoring

DIFFERENT ACTIVITIES

- Meetings
- Conferences
- Study visits
- ....

PRODUCTS

- Implemented trainings
- Educational materials distributed
- Participants served
- Publications
- Created e-learning platform
- Clients served
- Hours of service delivered

BENEFITS FOR PEOPLE

- New knowledge
- Increased skills
- Changed attitudes or values
- Modified behavior
- Improved condition
- Altered status

Levels of Outcomes

- **Community Wide Conditions (measured by diverse social indicators)**

- **Cross System Shared Outcomes**

- **System Outcomes**

- **Agency Outcomes**

- **Program Outcomes**

- **Client Outcomes**

Process of Program Evaluation

1) Design

Diagnosis

- Identify stakeholders
- Identify program goals; describe activities
- Clarify information needed
- Identify appropriate data sources
- Identify key audiences
- Identify appropriate reporting procedures

Planning

- Formulate key evaluation questions
- Select data sources
- Select appropriate research methods
- Establish timeline, schedule and budget
- Determine information, use opportunities
- Develop evaluation plan

2) Implementation

Data collection

- Design the instruments and procedures for data collection
- Conduct data collection

Data recording

- Organize date
- Create database
- Verify data

3) Data Analyses / Interpretation

- Code data
- Comprehensive data analysis
- Organize data for interpretation
- Present preliminary information
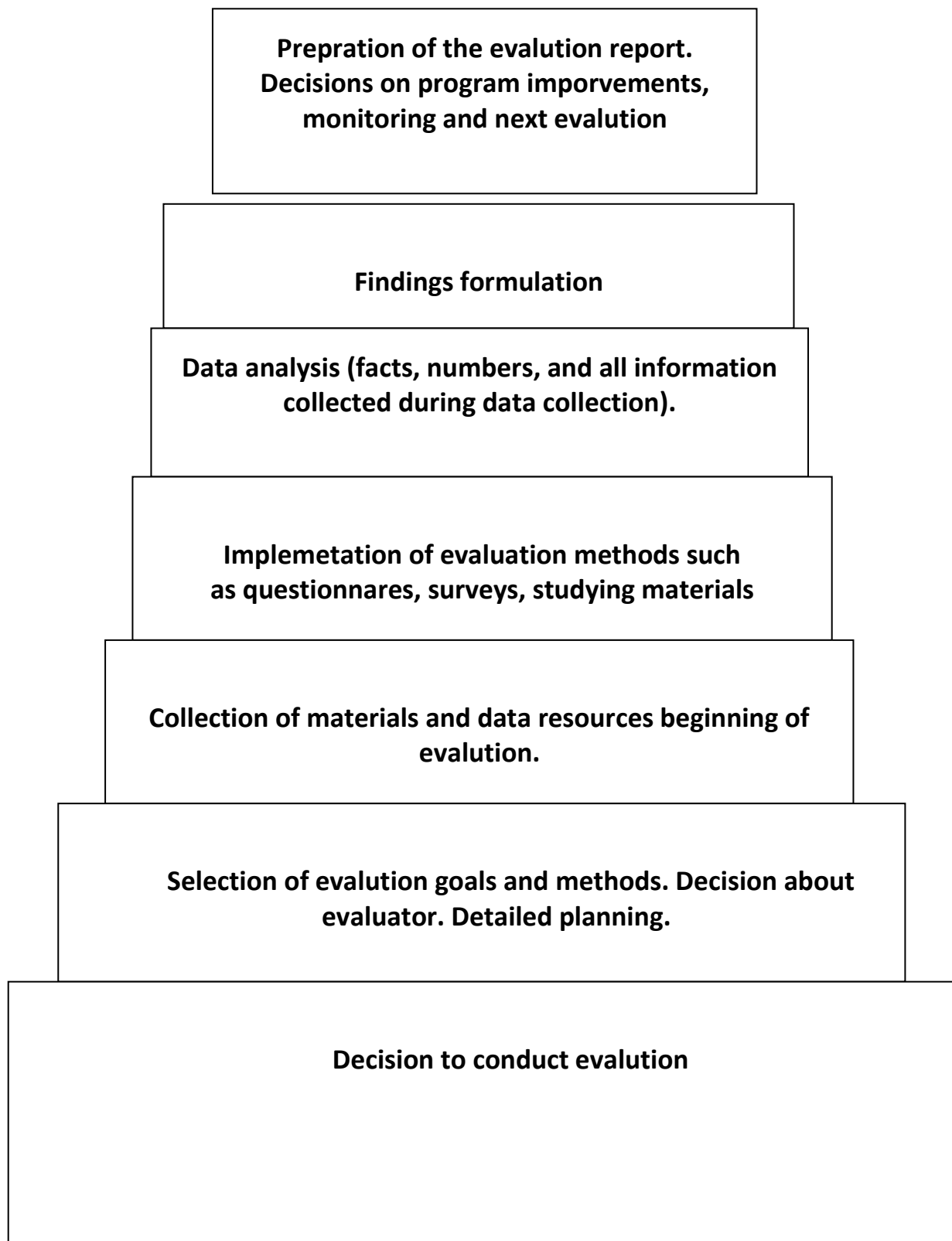- Facilitate interpretation/ Learning

4) Reporting

- Report findings to stakeholders
- Report findings to key audiences
- Gather reactions
- Incorporate reactions
- Finalize reporting product(s)

5) Utilization

- Deliver reporting product(s)
- Facilitate strategic/operational planning

Evaluation Diagram

Evaluation report $\longrightarrow$ feedback of program results, its implementation and utilization in praxes

**Prepration of the evalution report.
Decisions on program imporvements,
monitoring and next evalution**

Findings formulation

**Data analysis (facts, numbers, and all information
collected during data collection).**

**Implemetation of evaluation methods such
as questionnares, surveys, studying materials**

**Collection of materials and data resources beginning of
evalution.**

**Selection of evalution goals and methods. Decision about
evaluator. Detailed planning.**

Decision to conduct evalution

Evaluation Plan Outline

- **Introduction**

- **Description of the program**

- **Purpose of the evaluation**

- **Data collection procedures**

- **Data analysis/interpretation procedures**

- **Reporting process**

- **Schedule**

- **Budget**

- **Schedule of payments**

- **Management (roles and responsibilities, communication plan)**

Data Collection and Analysis

General characteristics

Describes the links between outcomes through use of: **Outcomes** / **indicators** / **data sources** / **data collection methods** / **data analysis methods** / **interpretation** / **reporting to key audiences** / **uses**

- Sufficient time is provided to implement the plan (usually more!)

- Each component of the plan is appropriate.

Outcomes

- Program can influence outcome in a non-trivial way; data on outcomes will be useful for understanding and improving the program. Audiences will accept the outcome as valid.

Indicators

- Indicators are measurable, unambiguous, meaningful, sensitive, timely, unbiased, acceptable and manageable.

Data sources

- The data source can provide the data information. The direct beneficiary of the program is data source, if at all possible. The data source will be willing to participate in the data collection process.

- If records are a data source, they are accurate, complete and correct.

Data collection methods

- The agency has the expertise and the time required to implement the process.

- The data collection method is appropriate for the data source, e.g., (phone interviews are not good for homeless people). Complicated, especially open - ended surveys are not good for people with limited writing skills.

- The length of time required from the data source fits their involvement in the program; the total amount of time for the data collection process is sufficient, follow-up.

- The data collection tool includes the information needed for analysis, e.g. influencing factors; information for improvement.

- Confidentiality is assured, when appropriate.

Data analysis / interpretation

- The analysis approach is appropriate for the information collected (numbers and percentages are usually sufficient; sophisticated statistics are rarely relevant).

- The agency has the capacity (staff, technology) to analyze the information.

- Opportunities for information interpretation sessions with key audiences are included, if appropriate.

Method	Forms

Survey / Questionnaire

- Focused on collecting data on knowledge, attitudes, skills, opinions, descriptive characteristics, behavior...
- Questionnaires (open (closed questions)
- Inventories / checklists / scales with items (quantifiable evaluation), tests

Interview

- Structured, semi-structured or unstructured interview
- Structured, semi-structured or free speeches (associations, unfinished sentences, spontaneous statements of program participants)

Group discussion

- Focus groups
- Experts groups
- Mixed groups

Case study

- Rich and detailed source of information

Observation

- Direct observation (independent observer, self-observation)
- Indirect observation (video, audio record)
- Interactive participatory observation (participating in a program, model "clinic")

Written record / produced materials

- Written documents analysis (statistics, program reports, minutes, webs, etc...)
- Recording, photographs, other products

Audience

People who are interested in the results of the evaluation. This usually includes the funding agency and the sponsoring organization, but it may also include other groups, such as the parents of participating students or interested researchers.

Audit

Independent or internal objective assessment of either compliance with applicable statutes and regulations ("regularity audit") or the relevance, economy, efficiency, effectiveness ("performance audit").

Beneficiaries

Individuals, groups, or organizations, whether targeted or not, that ultimately benefit, directly or indirectly, from a program or project.

Conclusions

Interpretations that have been synthesized in order to extrapolate even broader meanings about the project from the data (e.g., the low test scores, examined in conjunction with low student retention rates and low motivation from the survey data, suggest that the project is not meeting its objective of providing an interesting curriculum).

Control group

Objectivity of measurements significantly increases the use of a control group. It means to add the assessment of a comparable group that did not pass the program. It is assumed that the difference between those who have completed the program and those who did not participate in it should be visible and objectively demonstrable.

Criterion-Referenced

A scoring interpretation is when a test score is defined by whether a pre-specified level of accomplishment has been met.

Errors of Measurement

Sources of variability that interfere with an accurate test score and influence test

results in unexpected ways. Common sources include:

- characteristics of test takers
- characteristics and behavior of the test administrator
- characteristics of the testing environment
- test administration procedures
- scoring accuracy

Effectiveness

Objectives formulated in the program are being achieved, what the successes and difficulties have been, how appropriate the solutions chosen have been and the external factors that impact the program. In addition, the extent to which the program's or project's objectives were achieved, taking into account their relative importance ('to do the right things'), also measures effectiveness.

Efficiency

Comparing the results obtained or, preferably, the impacts produced, and the resources mobilized. In other words, do the effects commensurate to the inputs? (The terms 'economy and cost minimization' are sometimes used in much the same way as 'efficiency').

Formative Evaluation

Evaluations which examine the effectiveness of the project's implementation for the sake of facilitating project improvement.

Goal

A broad description of an intended outcome.

Impact

Refers to the changes caused by implementation of a project which are either intended or unintended. These changes may be either favorable or adverse.

Indicator

Quantitative or qualitative verifiable factors or variables that provide a simple and reliable means to measure achievements and results.

Interpretations

Meanings that have been inferred and extrapolated from the data (e.g., the scores were low relative to expectations).

Normative / formative evaluation

Evaluation is the process of valuation of certain phenomenon; it is finding out, whether implemented activities led to expected results. Most frequently we speak about **normative evaluation** (evaluation of activities after they were implemented) or **formative evaluation** (evaluation of activities during implementation to change them on the basis of recommendations of the evaluation).

Output, outcome

Frequently used terms in the evaluation are: **quantifiable result / output** or **qualitative result / outcome**. **Output** is the evaluation term that usually refers to quantifiable indicators compared with planned activities in the program. A long term training program would have as a result the percentage of participation in activities, a number of projects developed by participants, their activity during the training program, a number of techniques they have mastered during the training, a number of conferences and training sessions people have participated in during a program, and the amount of materials obtained, etc.

The impact (outcomes) indicates whether and how long-term objectives were achieved. This involves an assessment of the objectives. For example, did training help Roma to actually start a business through developing entrepreneurial skills?

Objective

A more specific description of an intended outcome. Objectives are usually stated in ways that allow the amount of attainment to be measured. In education, objectives are typically about cognition, affect, or psychomotor skill.

Pretest - test – retest

Ideal evaluation model is the evaluation type **pretest - test - retest** (measurements before, after training with hindsight). If we stay only with the model test - retest, or only with the assessment of the training just after the training, we receive information only about the training process itself.

Relevance of the program

Appropriateness of the explicit objectives of the program in relation to the socio-

economic problems it is supposed to address. The extent to which the overall goal of a project is consistent with beneficiaries' needs, country needs, and global priorities.

Qualitative Data

Non-quantified narrative information.

Qualitative Analysis

The use of systematic procedures for deriving meaning from qualitative information. It often involves an inductive, interactive, and iterative process whereby the evaluator returns to relevant audiences and data sources to confirm and/or expand the purposes of the evaluation and test conclusions.

Qualitative analysis can be conducted on data collected using interviews, observations, and open-ended questions on content assessments, as well as on other types of instruments. Content, thematic, and cognitive analyses are some of the approaches that are used to analyze qualitative data.

Quantitative Data

Quantifiable, numerically-expressed information.

Quantitative Analysis

The use of computational procedures and statistical tests to examine quantitative data.

Reliability

"The extent to which we are measuring some attribute in a systematic and therefore repeatable way" (Walsh & Betz, 1995, p. 49). For an instrument to be reliable its results must be reproducible and stable under the different conditions in which it is likely to be used. Test reliability is decreased by errors of measurement. Three commonly used types of reliability tests include:

- *test-retest reliability:* the degree to which a score on one instrument is equivalent to the score on the same or a parallel instrument
- *internal consistency reliability:* the degree to which items within an instrument correlate to each other
- *inter-rater reliability:* the degree to which an instruments similar results with more than on assessor

Results

Relevant information cleaned from the data collected in the evaluation.

Stakeholders

Agencies, organizations, groups or individuals who have a direct or indirect stake or commitment in the project design, implementation, benefits or its evaluation. For example,

- funder of the project
- sponsoring organization that hosts the project (e.g., a university or research and development institution) and typically hires the evaluator
- internal administrators of the project
- project audiences

Summative Evaluation

Evaluation which examines the project's impact in order to make a decision about its overall effectiveness.

Sustainability

Refers to the extent to which the results and outputs of the intervention are durable, such as institutional changes, socio economic impacts, and sustainable development. In other words, it is the continuation of benefits, and effects generated by a project after its termination.

Validity

"The extent to which the test being used actually measures the characteristic or dimension we intend to measure" (Walsh & Betz, 1995, p. 58). Three traditional conceptions of validity are:

- *content validity:* the degree to which a test content is tied to the instructional domain it intends to measure
- *criterion validity:* the degree to which a test predicts some criterion
- *construct validity:* the degree to which a test measures the theoretical construct it intends to measure

Recent theories view that validity is dependent on both:

- *evidential basis:* the interpretability, relevance, and utility of test scores
- *consequential basis:* the value implications of test scores as a basis of action and the social consequences of using these scores

Utility

Impacts obtained by the program in relation to broader societal and economic needs.

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