Train the trainer
Evaluation of Programs
Evaluation for Learning

2nd Training in Saltillo, MEX

December 17-20, 2018

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Evaluation is …

Image from: http://www.ice-org.eu

Evaluation is …

The process of **collection and analysis of** relevant **information** to **describe** a specific reality and issue **a value judgment** on the suitability of a **pre-established referent**, as a basis for **decision making aimed to change** the analyzed reality. (Gairín, 1999)

It is a systematic process to obtain objective and useful information on which to support a value judgment to be used as a basis for making relevant decisions and to **promote knowledge and understanding of the success and failure of the training.** (Cabrera, 2003)
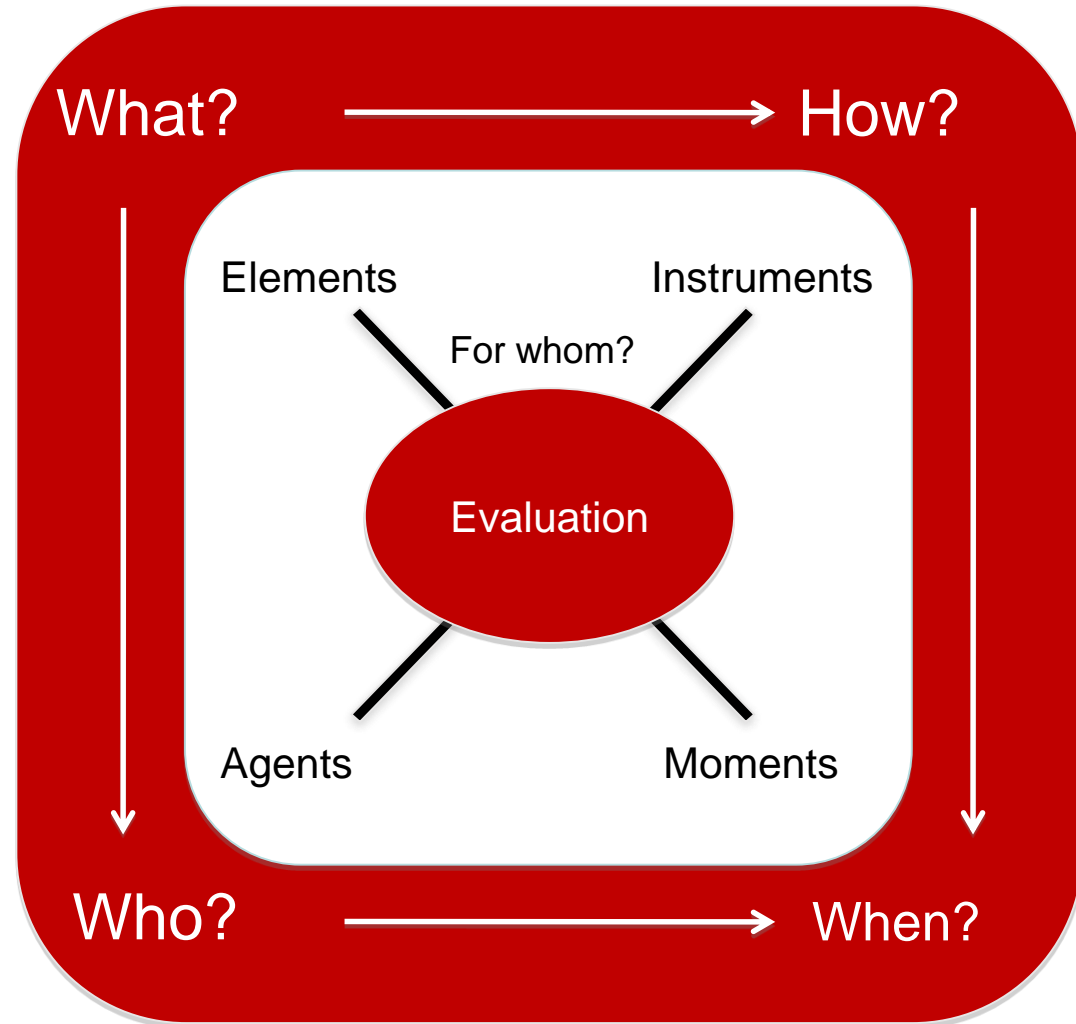
Evaluation of Programs

It is the process of identifying, obtaining and providing useful and descriptive information about the **value and contribution of objectives, planning, realization, and impact** of a specific object to serve as a guide for decision making, to solve responsibility issues, and to promote understanding of the phenomena involved.

Stufflebeam and Shinkfield (1987:183)

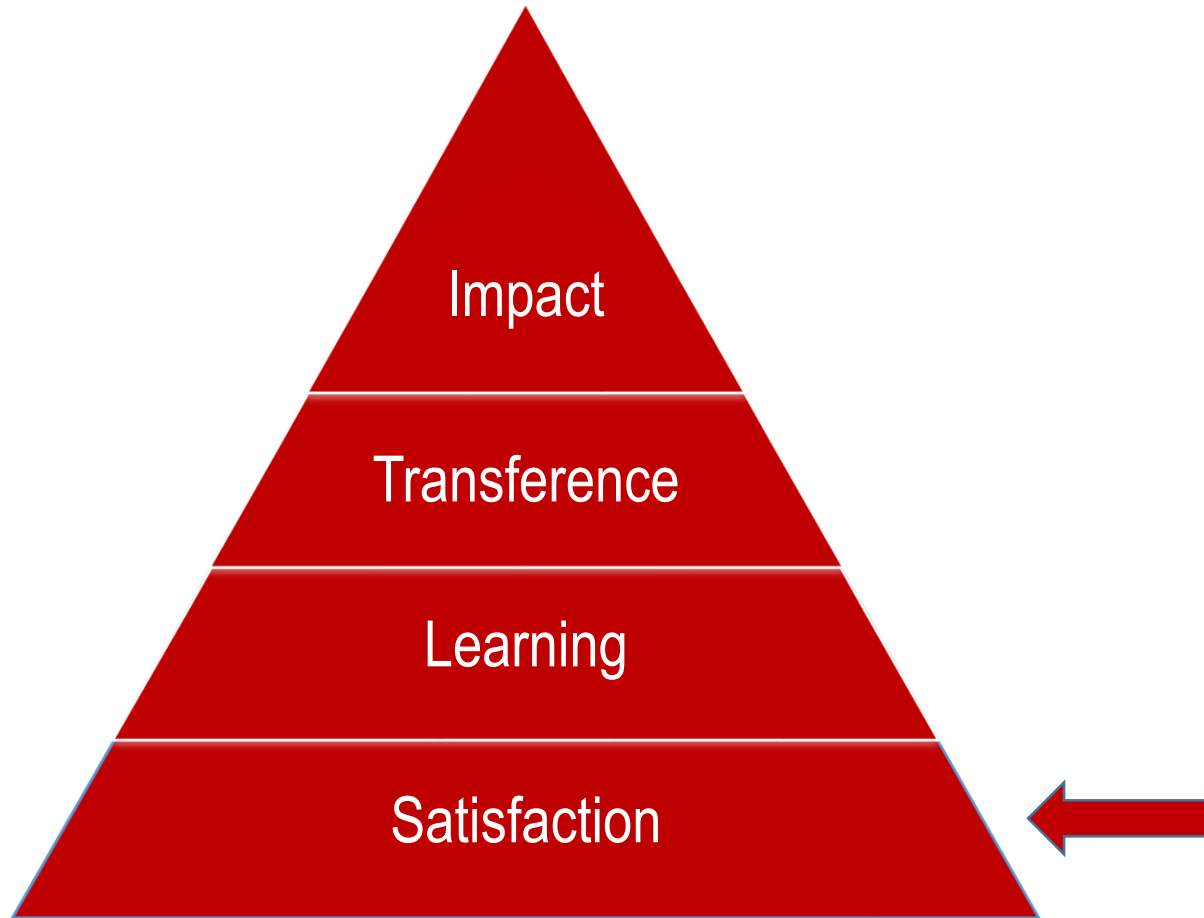Pozo and others (2004)

Basic Questions About the Evaluation

What? → How?

Elements   Instruments

For whom?

Evaluation

Agents   Moments

Who? → When?

Pineda (2003)

What Do We Want to Evaluate?

Impact

Transference

Learning

Satisfaction

Kirkpatrick (1959, 2004)

What Do We Want to Evaluate?


Impact

Transference

Learning

Satisfaction

- Development of the activity.
- Adjustment to previous knowledge.
- Materials handed in for training.
- Response to educational needs.
- Trainer mindful of the needs of the group.
- The educational space and available resources.
- Etc.

Kirkpatrick (1959, 2004)

What Do We Want to Evaluate?

Impact

Transference
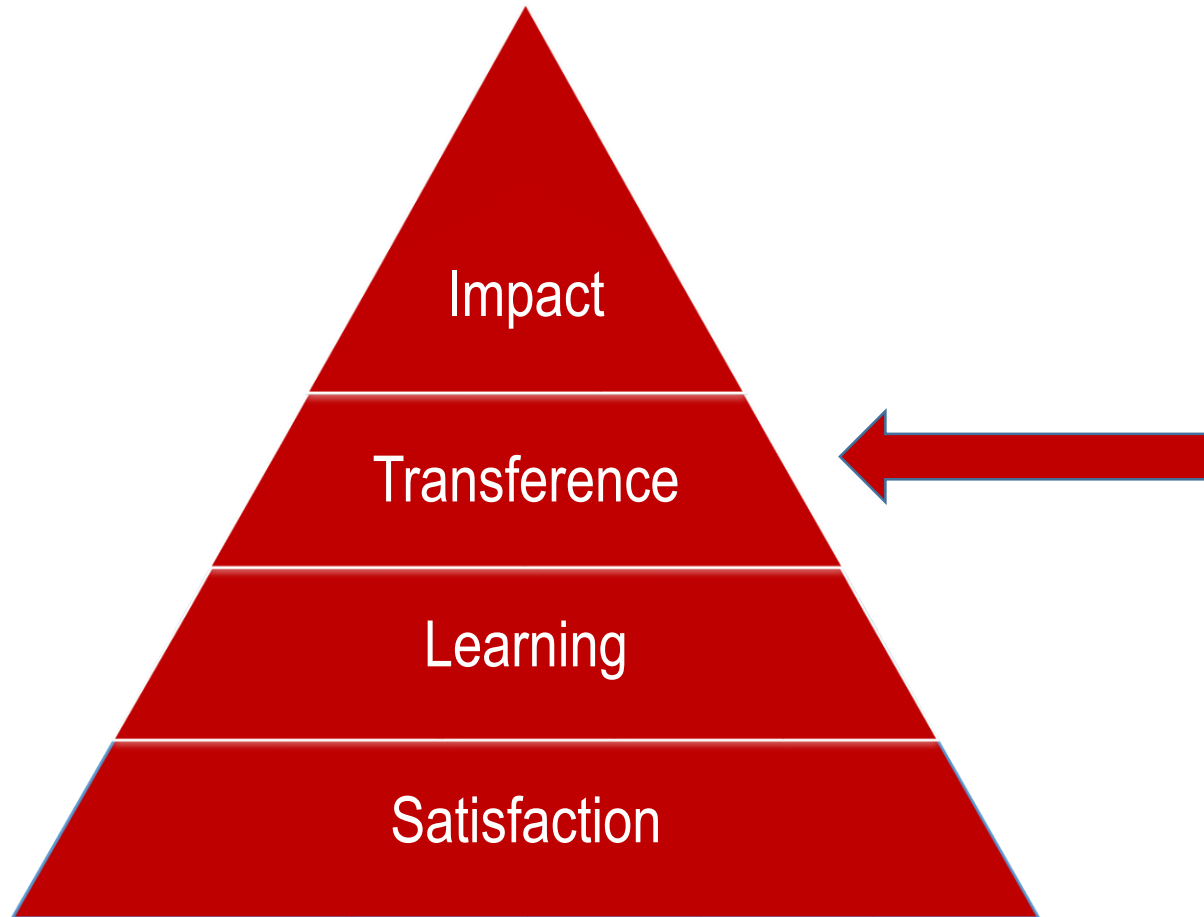
Learning

Satisfaction

Kirkpatrick (1959, 2004)
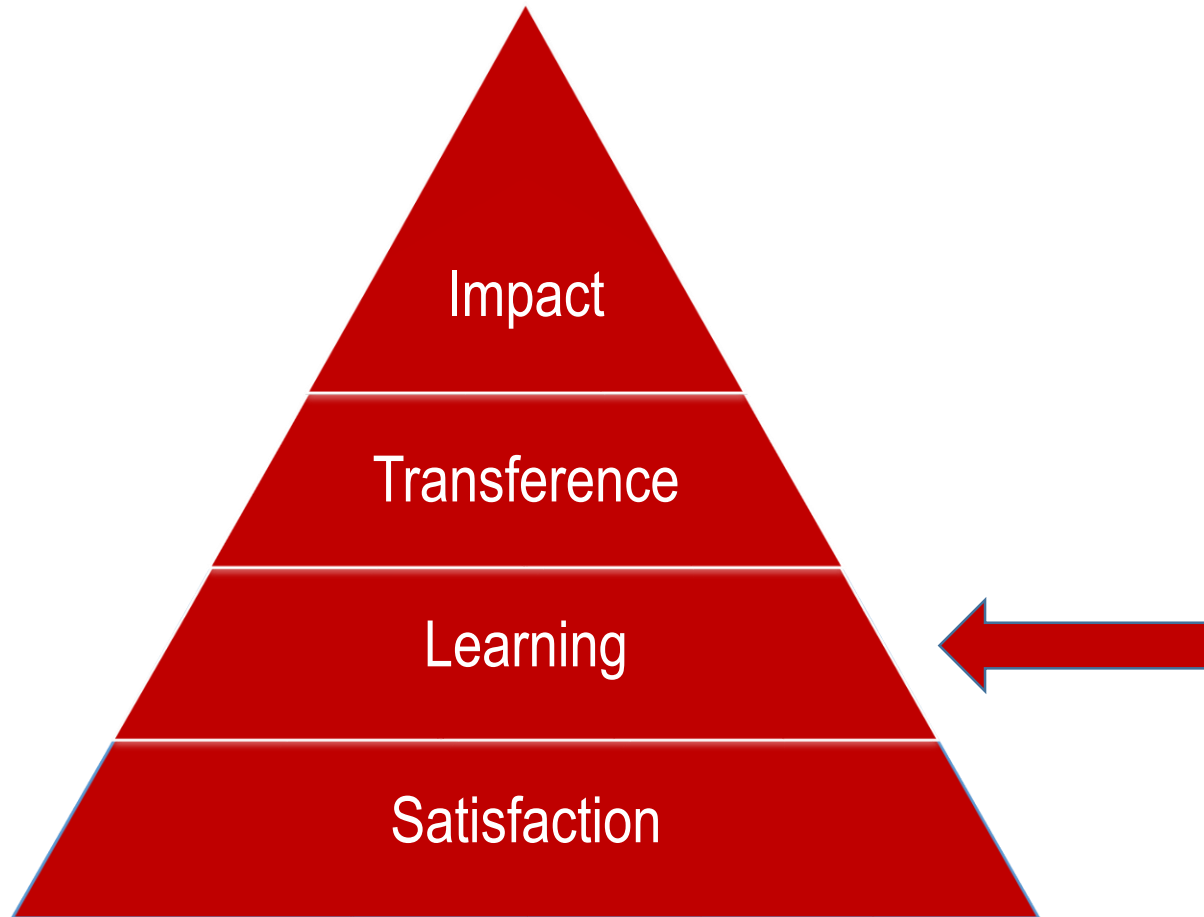
- Achievement of learning objectives.
- Acquisition of professional skills.
- Acquisition of transversal competences.
- Reflexion on one's own formative process.
- Involvement in one's own learning process and that of the colleagues.
- Etc.

What Do We Want to Evaluate?

Impact

Transference

Learning

Satisfaction

- Knowledge is transferred to other subjects.
- Improvement of laboratory practices.
- Improvement of company practices.
- Better adaptation to the professional context.
- Ease to acquire new learnings.
- Etc.

Kirkpatrick (1959, 2004)

What Do We Want to Evaluate?

Impact

Transference
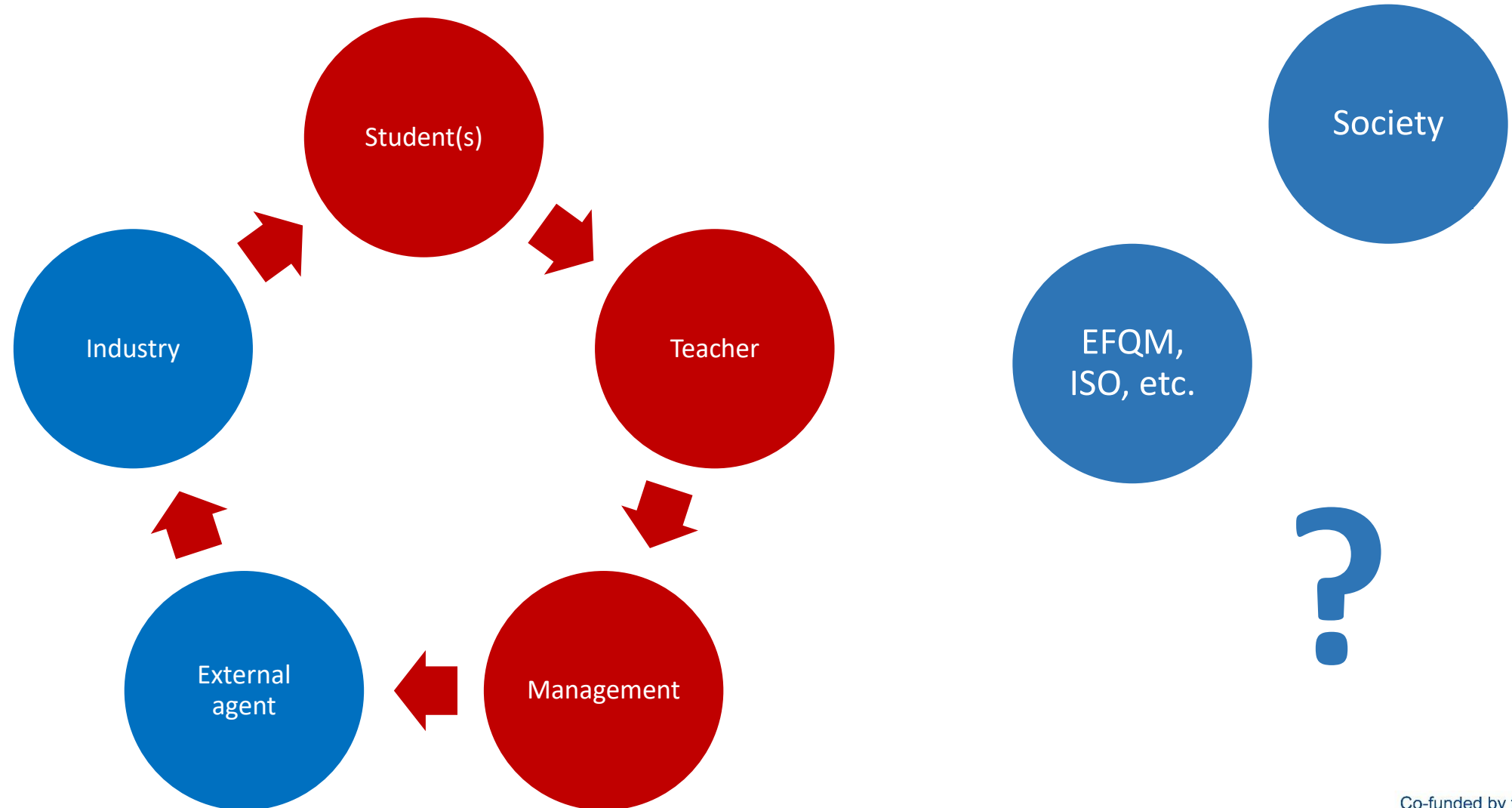
Learning

Satisfaction

Kirkpatrick (1959, 2004)
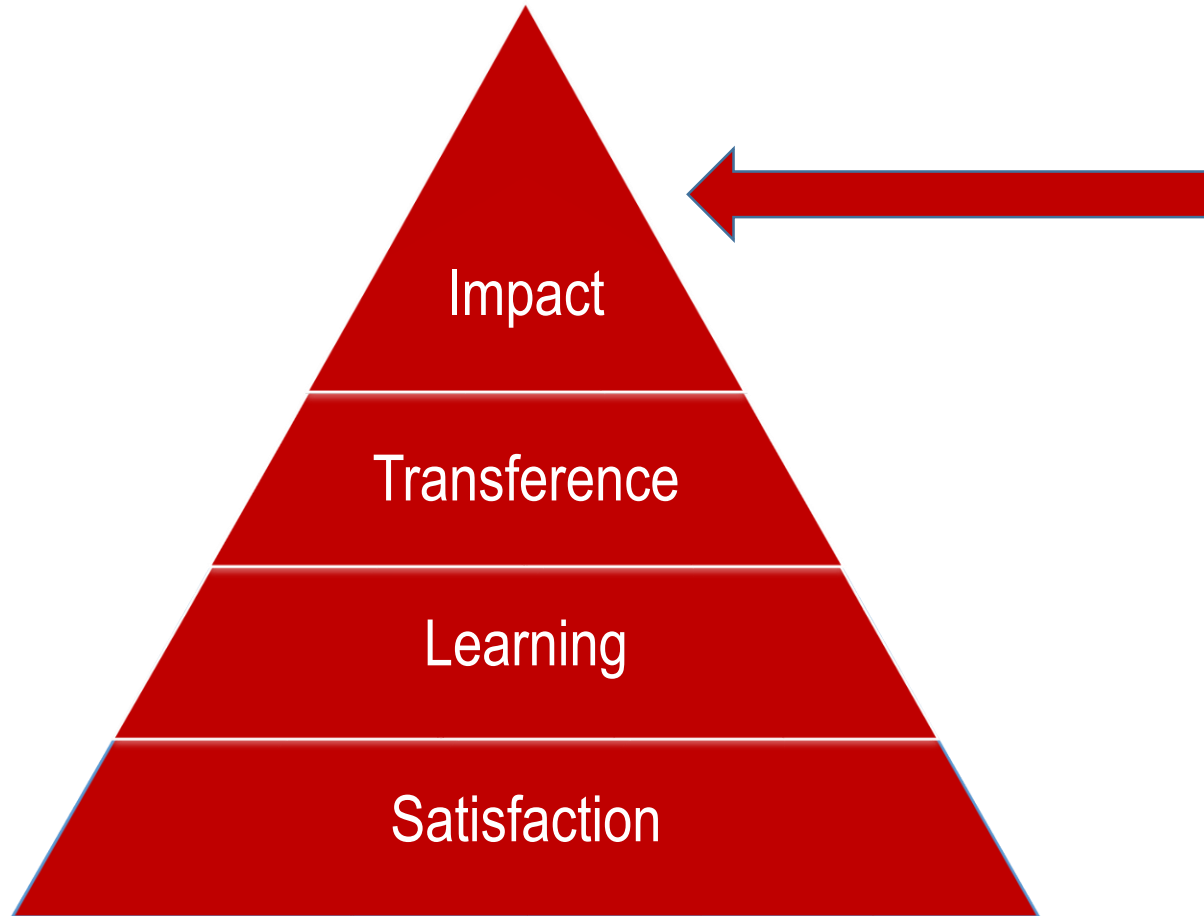
- Answer to the objectives proposed in the course.
- Improvement of students' employability.
- Satisfaction of the reference industrial sector.
- Increase of enrollment demand.
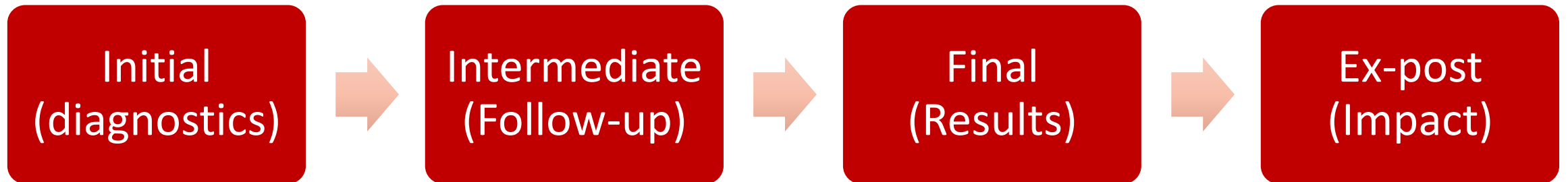- Increase of sector's investment.
- Etc.

Who Takes Part in the Evaluation?

When Do We Evaluate?

- It helps us determine the starting point.
- Definition of educational plan objectives.
- Connection with the productive sector.
- Analysis of available resources.
- Etc.

| Initial (diagnostics)	→	Intermediate (Follow-up)	→	Final (Results)	→	Ex-post (Impact)

When Do We Evaluate?

- It allows us to identify problems.
- Deviations from foreseen objectives.
- Participants' involvement.
- Validity of available resources.
- Etc.

| Initial (diagnostics) | → | Intermediate (Follow-up) | → | Final (Results) | → | Ex-post (Impact) |
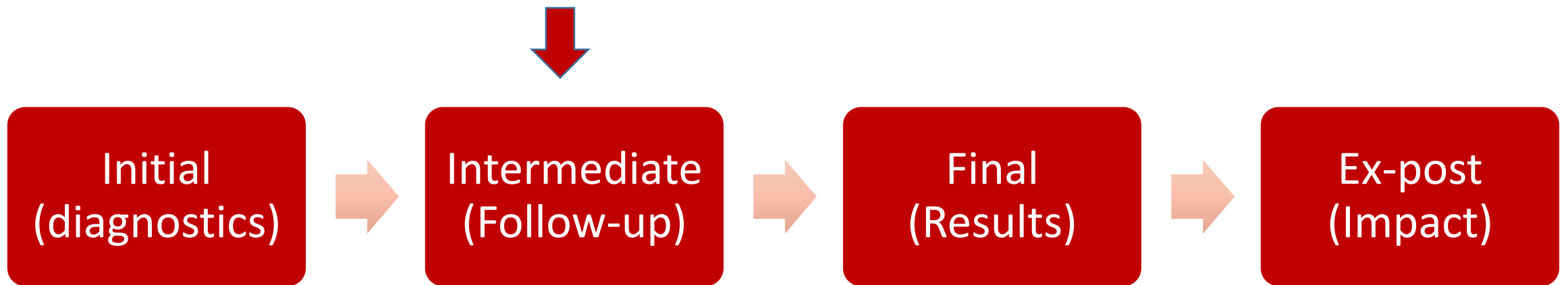
When Do We Evaluate?

- It lets us know the success of the activities carried out.
- Compliance with foreseen objectives.
- Participants' satisfaction.
- Efficiency and effectiveness of available resources.
- Etc.

Initial (diagnostics) → Intermediate (Follow-up) → Final (Results) → Ex-post (Impact)
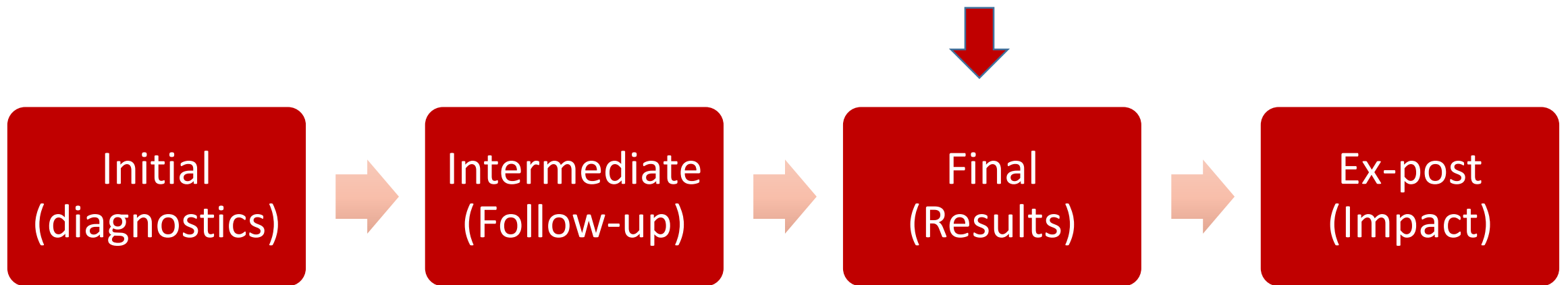
When Do We Evaluate?

- It allows us to know the effects of the action after some time.
- Improves employability.
- Improves the capacities of the productive sector.
- Improves the institution's prestige.
- Etc.

Initial (diagnostics) → Intermediate (Follow-up) → Final (Results) → Ex-post (Impact)
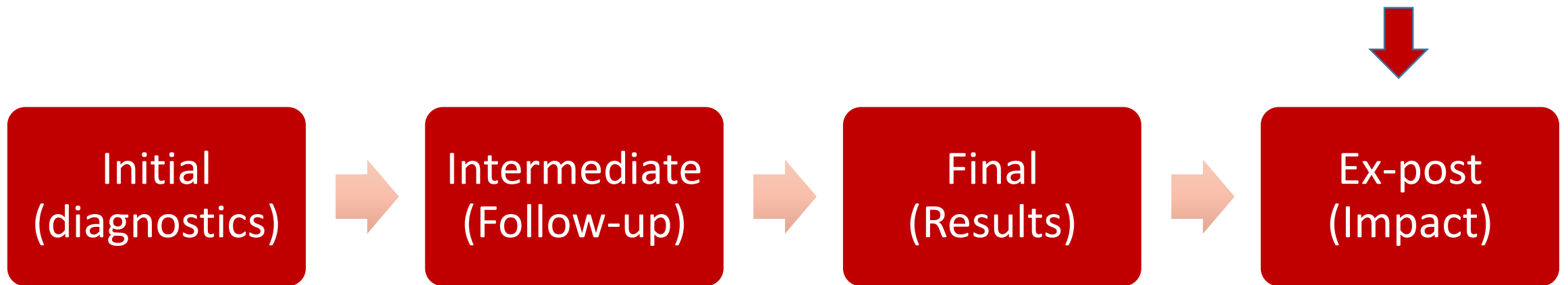
How Do We Evaluate?

Questionnaires

Interviews

Analysis of reports

Observation

Debate groups
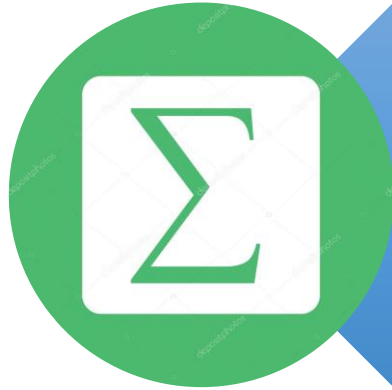
Etc.

How Do We Evaluate?

Indicators

- Use of resources
- Achievement of objectives
- Improvement of results
- More students
- Improvement of satisfaction
- % of passing students
- % of employability

Criteria

- Efficiency
- Sufficiency
- Satisfaction
- Effectiveness
- Relevance
- Updating
- Coherence
- Applicability

Evaluation of Learning

Summative evaluation

Formative evaluation

Formative evaluation

- Part of an initial and diagnostic evaluation.

- Clarifies what is intended to teach.

- Clear and transparent evaluation criteria.

- Centered on the teaching-learning **process**.

- Teacher-student dialog.

- Favors students self-evaluation.

Learning-Oriented Assessment

Learning-oriented assessment is the **process** by which **information** is used by **teachers** to **adjust** their **teaching strategies**, **AND** by **students** to **adjust** their **learning strategies.**

Learning-Oriented Assessment

FIGURE 1: Conceptual framework of learning-oriented assessment
(Translated from Carless, Joughin and Liu, 2006:14)

Peer Feedback

feedback for learning.org
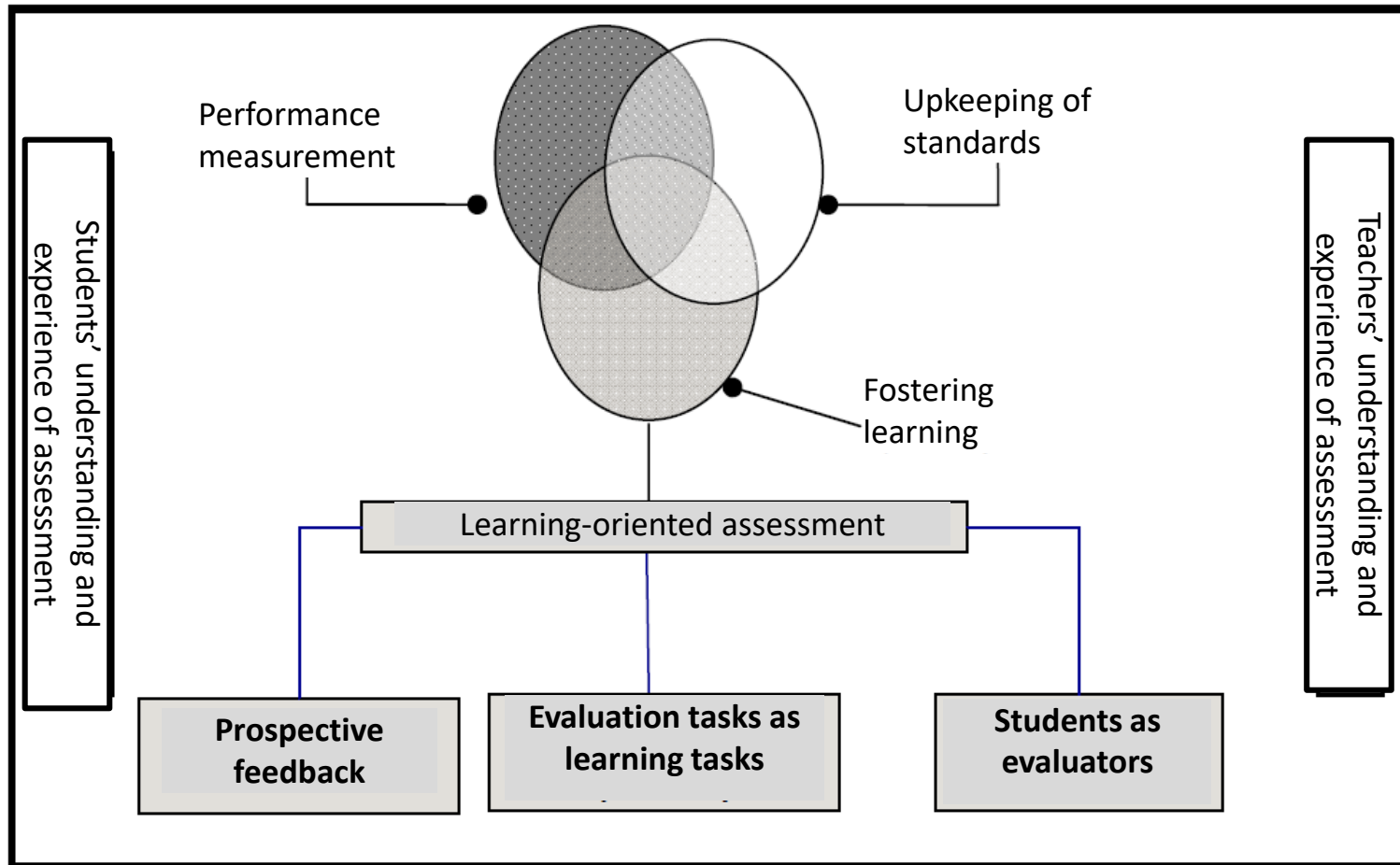
Peer Feedback

- It helps clarify the meaning of good execution.

- Provides high quality information and helps self-evaluation.

- Favors a positive impact on learning.

- Eases development of self-evaluation and reflection for study.

- Enables the relaxation of the method, criteria, and time devoted to the evaluation.

- Involves students in decision making to design evaluation practices.

- Stimulates self-esteem and motivation.
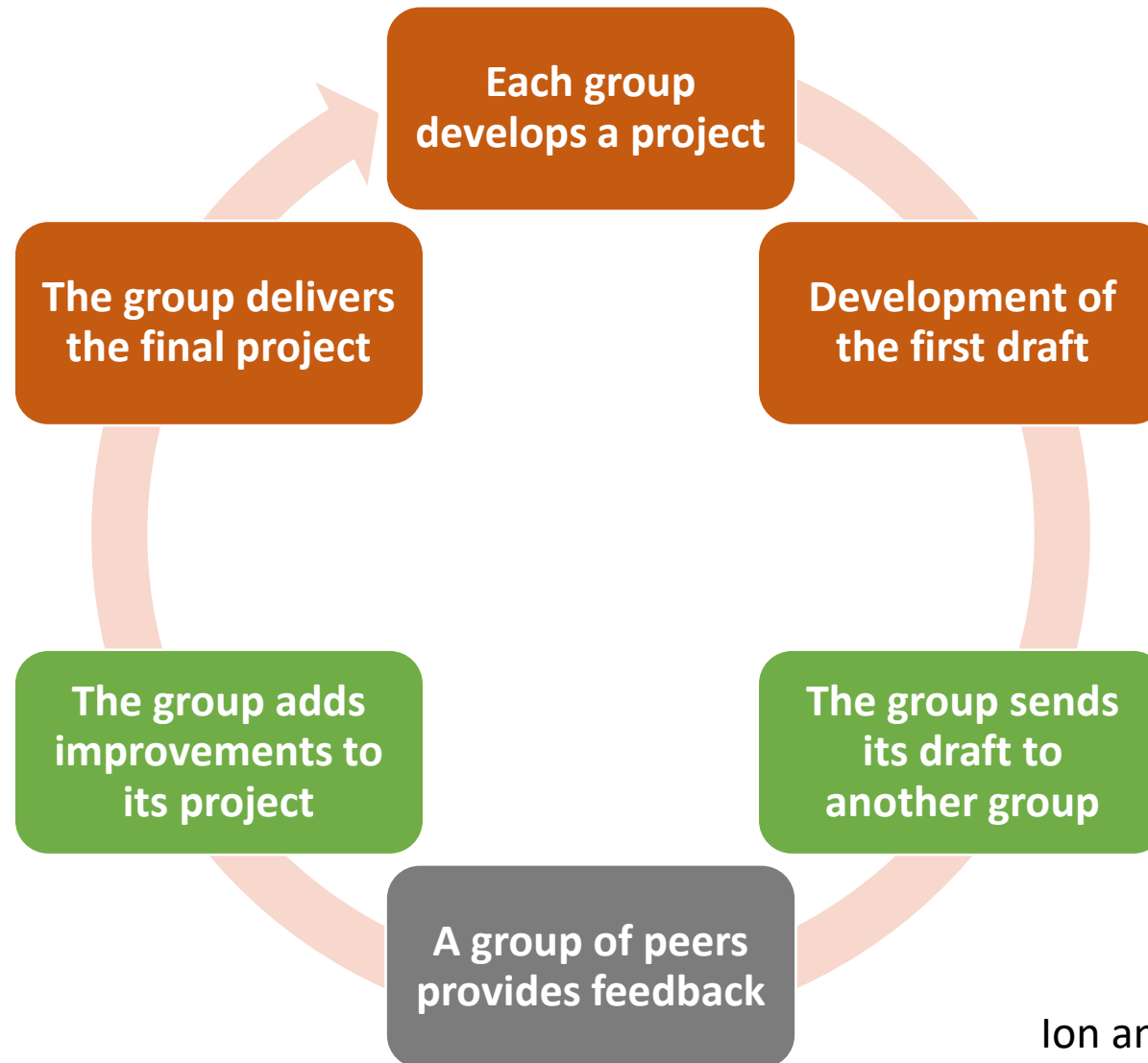
- Provides information to teachers.

As of Nicol (2007)

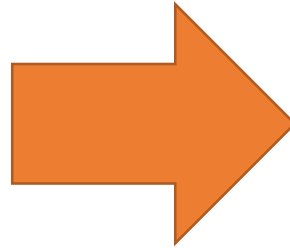# Example of Peer Feedback

Ion and others, 2017

What Tasks Could be Susceptible?

Peer Evaluation

Evaluation strategies that imply diversity of agents, fostering the **students' role** in their process of learning and evaluation, which is key to achieve **sustainable learning** and that is related to practice driving to the self-regulation of learning.
(Panadero, Jonsson, & Botella, 2017)

Rubrics

Rubrics are scoring guides used in the evaluation of students' performance that describe the specific characteristics of a product, project, or task in several performance levels to clarify what is expected from students' work, to assess its execution, and ease feedback.

(Andrade, 2005; Mertler, 2001)

Rubrics

Table 4.1. *Example of rubrics to assess the "capacity to apply mathematical concepts"*

	Level of quality			
	Not acquired (0)	**Minimally acquired (1)**	**Acquired (2)**	**Very well acquired (3)**
Mathematical concepts	Either the explanation shows a very limited understanding of the underlying concepts necessary to solve problems or there is no explanation.	The explanation shows little understanding of the mathematical concept necessary to solve the problems.	The explanation shows substantial understanding of the mathematical concept used to solve the problems.	The explanation shows full understanding of the mathematical concept used to solve the problems.

Rubrics

Table 4.4. *Rubrics to assess the individual interview made after the delivery of each PDI practice.*

Rubrics to assess the interview. Level of quality				
	Very poor (VP)	**Poor (P)**	**Good (G)**	**Very good (VG)**
Use of Matlab	The problem was not posed correctly and no solution has been implemented for the problem posed. The help was not properly used.	The problem posed was solved. The solution could have been optimized using Matlab functions. The help was not properly used.	The problem posed was solved. The solution could have been optimized using Matlab functions. The help was properly used.	The problem posed was solved. The solution could have been optimized using the most suitable Matlab functions. Matlab help was properly used.
Knowledge of the implemented functions	The implementation made cannot be justified.	The implementation is partially justified. The operation of the functions used is not known.	The implementation is fully justified. The operation of most of the functions used is known.	The implementation is perfectly justified. The operation of all the functions used is known.

Evaluation of Skills

https://goo.gl/JNsC45

Evaluation of Group Work

Individualization of the group scoring.

Evaluation of the product *vs.* Evaluation of the process.

Involves the students.

Evaluation of Group Work

- Involvement and participation.

- Acceptance and compliance with tasks and objectives.

- Responsibility and commitment with the group.

- Contribution to the work environment.

- Analysis and contribution to the task.

- Communication.

https://ddd.uab.cat/pub/recdoc/2018/196345/DDD_Pauta_Avaluacio_Treball_Grupal.pdf

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