

## **Interpreting student work (including daily homework, regular checking, tests, projects and standardized evaluations)**

### **What is a pedagogical practice of interpreting results of the students work, including daily homework, regular checking, tests, project and standardized evaluations?**

“A Student’s work is the main information source about teaching efficiency. Teachers must analyze student’s production, including any kind of evaluation and look for patterns that guide the effort of each one of them. Also, teachers must inform future lessons.”

If teachers understand evaluations properly, it allows to compare the current state of a student regarding the learning objective. In this way, teachers obtain key information that will guide their labor when interpreting their students’ results. It is necessary for every evaluation not only to measure the taught contents, but also to be properly interpreted to build a clear image of what students understand and what still needs to be understood. In this way, wrong learning could be fixed by adjusting the lessons to the students’ specific needs.

To be able to interpret the students’ results in an efficient way, the first thing is to recognize that measuring results is hard by using an isolated instrument. On the other hand, to know how much a student has learned, it is more suitable to triangulate the information; that is to say, to rely at least on three information sources (homework, regular checking or quizzes, tasks, tests, projects), comparing them, and interpreting the learning level according to the sources.

In the same way, teachers get benefits by properly interpreting the student’s results, it is better for students to know their results and to be able to interpret what they imply. This implies not just to deliver information about their current performance, but to inform how to improve the future performance, thus, helping to decrease this learning gap. In this regard, teachers should focus on promoting a change in students, not in their work, considering the students’ position, where he or she is and where they should be.

Teachers should take advantage of the varied instances to deliver results to motivate their students and to remind them the goal of their effort. Although summative assessments tend to be done at the end of the units, it is important to remember that evaluation is not an objective itself, but a mere instrument. Then, the results of evaluations are part of the process, not the end.

## What is not a pedagogical practice of interpreting results of the students' work, including daily homework, regular checking, tests, project and standardized evaluations?

- × Interpreting results is not the same as keeping a document where student's grades are organized. It is not about a grade register, but about how deep and diverse the learning achievement is
- × The results should not be interpreted using isolated instruments. It is unlikely for a test to show with precision and justice the student's learning level. It is more convenient to triangulate information by interpreting several instruments that measure the achievement of the same objective.
- × It is not about categorizing students' goals achievements as obtained or not. Students will get much more from an interpretation open to nuances, being teachers capable of perceiving a gradient in the students' achievement. A deeper analysis of the students' evaluations allows teachers to deliver feedback in a more precise and specific way.
- × Interpreting results is not the same as communicating results. It is important for every student to get to know their results, but that it is just the beginning of the task. It is not enough to know ranges and averages of each evaluation, but an effort to find patterns and exceptions must be done, in order to describe in detail each student's learning process.
- × It is said "to interpret results" because results by themselves are not informative enough; the same result could have different explanations. To manage unexpected result, teachers have to hypothesize possible explanations and continue the evaluation cycle to check the veracity of their hypothesis.
- × Finally, interpreting results is completely useless if it is not used to make decisions. The main goal is to adjust the teaching process in a way to allow every student to reach the learning goal.

### Strategies

- Strategies to interpret information in a more effective way:
  - To become familiar with statistical concepts such as percentile (decile, quartile), average, median, standard deviation, standard error, etc. to understand in a deeper way results from tests and standardized tests.
  - Likewise, using qualitative techniques to analyze the evaluations contents, using what it is known as content analysis, clustering answers around a common thread, and especially, deep analysis of found errors.

- Organizing evaluations in sections regarding different learning goals. Calculating partial percentages arranging/organizing these sections to get a better idea of achievement depending on each goal.
- Using technological tools to analyze information faster, synthesizing information visually. For example, using graphics in Excel for numeric data, and word clouds such as Wordle for qualitative information.
- Interpreting the results of the evaluations with other teachers with expertise in that level and/or in that discipline, which helps for a deeper discussion about the learning progress and decisions based on it, also regarding quality and capacity of the selected instruments.
- Being clear about causality sequence. Several causes could explain the students' results; it is better to explore them all before accepting simplistic conclusions.

### **Strategies to obtain more precise information about students:**

- Triangulating at least three information sources before reaching any conclusion. For example, never measure any achievement with just one item.
- Including process evaluation (as portfolio, class observation notes, pre-submissions, drafts, class participation) and not just results (presentations, projects, tests, quizzes, essays)
- In case of unexpected results, resort to students to obtain answers (for example, a student that seemed to understand during the class got bad results in a test). Recognize that there are outside factors in the classroom which affect evaluations, and therefore, could blur the results.
- Instead of comparing results among students, it is convenient to compare results of each student at different times. For the same reason, pre-evaluations could be useful to have comparison points.
- To interpret the students' learning deeply, integrating qualitative techniques to get information, such as interviews, focus groups, observation notes and open questions. To analyze this information, tags and codes could be created to facilitate grouping ideas around common topics.

This document has been elaborated by Montserrat Cubillos and framed in the project “Observatorio de Prácticas Pedagógicas”, based on the following references:

<http://www.teachingworks.org/work-of-teaching/high-leverage-practices>  
<http://assessmentliteracy.org/>

Visited on April 27<sup>th</sup>, 2017.

Brookhart, S. (2016). *How to make decisions with different kinds of student assessment data*.

Alexandria, Virginia: ASCD.

Teaching Works. University of Michigan. (2016). High-Leverage Practices. July 13<sup>th</sup>, 2016, de Teaching Works. University of Michigan. Sitio web: <http://www.teachingworks.org/>

Wiliam, D. (2016). The Secret of Effective Feedback. *Educational Leadership*, 73(7), 10-15.

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