

# Teaching Analysis Poll (TAP) A Qualitative Evaluation Technique to Identify Subject-Specific Training Needs

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## Procedure

Before the evaluation process begins, the lecturer provides information about the course objectives. To conduct TAP, the lecturer ends the session and leaves the room. An external evaluator asks the students to comment on which aspects of the classroom teaching facilitates or impedes their learning process. In small-groups, the students discuss these questions and record their results in writing. Subsequently the evaluator collects these arguments and clarifies vague statements. Later the evaluator categorizes students' feedback. The lecturer receives the feedback in an anonymized report by email. During a follow-up meeting, lecturer and evaluator together develop ideas to respond to the feedback and to improve the course.

## Teaching Analysis Poll

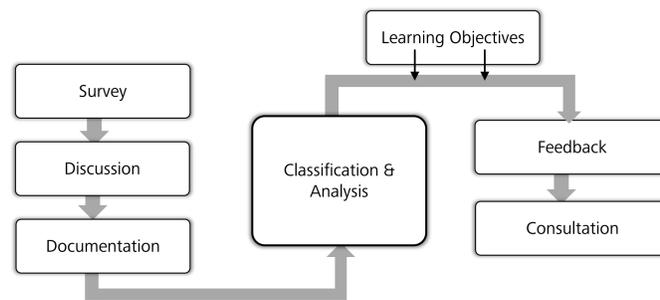


Figure 1 Procedure of Teaching Analysis Poll

## Advantages

- Interpretation is context-specific
  - Feedback can be interpreted against the background of the respective learning objectives
  - Systematic linking of evaluation and consulting
- Large effect size for *consultive feedback*  $d_+ = 0.69$  (Penny & Coe, 2004)

## TAP to Identify (Individual) Training Needs: A Closer Look

### Step 1: Data Classification as Crucial Element

Student feedback is categorized by a classification system (Hawelka, 2017)

Table 1 Classification System

Category	Number of Subcategories
Interaction	3
Task understanding	0
Motivational regulation	5
Cognitive learning strategies	4
Regulation of learning	3
Resources	2

This system has proven to be reliable, valid and comprehensive (Hawelka & Hiltmann, 2018)

### Step 2: Analysing Critical Feedback

Motivational Regulation		
+	Autonomy	-
+	Competence	-
+	Very pleasant atmosphere	-
+	Relatedness	-
+	Teachers' interest	-
+	Information about another area of Europe	-
	Interestingness & Relevance	-

Figure 2 Example of categorised feedback

Checking the didactic relevance for learning objectives

### Step 3: Consultation

Developing ideas to improve the course  
⇒ In this example: Reading prompts as a possible solution



Figure 3 Evaluator and lecturer in a consultation meeting

## Study

There is some evidence that epistemological beliefs are domain-specific and influence educational strategies (Green & Hood, 2013).

As a consequence it was hypothesized that (critical) student feedback varies between different subjects and TAP can also identify subject-specific weaknesses in courses beyond individual requirements.

In this case, TAP could be a reasonable instrument to identify subject-specific training needs.

## Method

### Sample

- $n_1 = 20$  Tutorials mathematics (58 small-groups)
- $n_2 = 20$  Seminars educational science & psychology (71 small-groups)

### Data Collection

- winter term 2016/2017 & summer term 2017

### Data Analysis

- Classification of critical feedback
- Weighted by number of groups
- Frequency distribution, central tendency, measures of dispersion
- Differences between subjects (Mann-Whitney  $U$  test)
- effect size ( $r$ )

## Results

Figures 4 - 9 show the frequencies of critical feedback per course in the different subjects as well as the differences between the subjects.

■ Tutorials in mathematics ■ Seminars in educational science & psychology

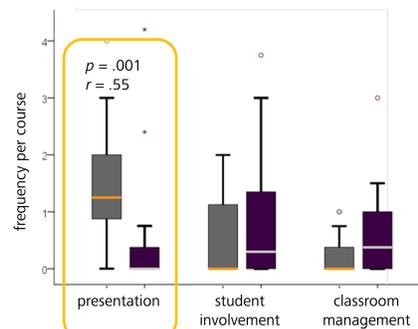


Figure 4 Feedback on „interaction“

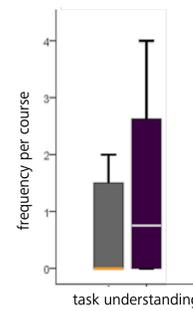


Figure 5 Feedback on „task understanding“

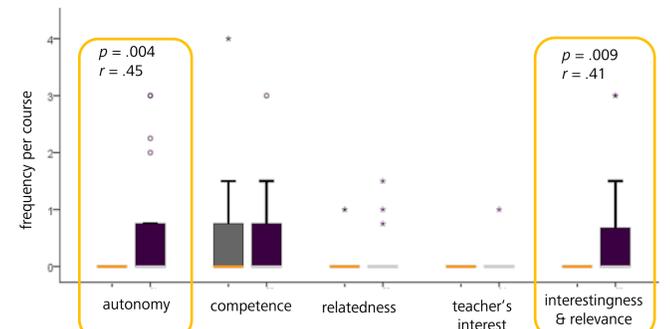


Figure 6 Feedback on „motivational regulation“

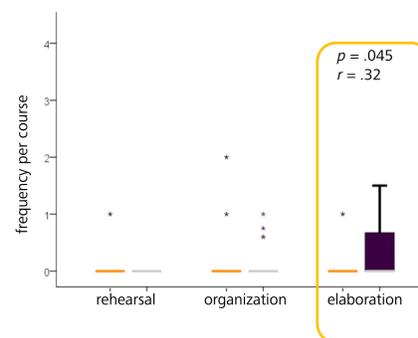


Figure 7 Feedback on „cognitive learning strategies“

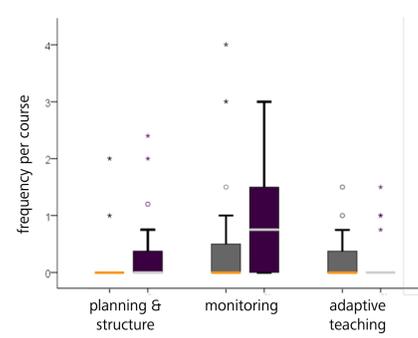


Figure 8 Feedback on „regulation of learning“

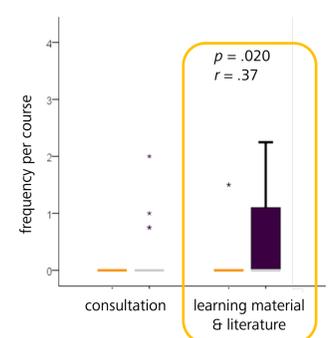


Figure 9 Feedback on „resources“

Note: As in previous studies (Hawelka, Hiltmann & Wild, 2016), students did not recognize teaching behaviour according to the subcategory critical thinking

## Interpretation and Conclusion

The results of this study indicate that TAP identifies subject-specific deficiencies. Students participating in mathematics tutorials noticed shortcomings in comprehensive and clear presentation. By contrast, students taking part in seminars in educational science and psychology wish to experience more autonomy, and identified shortcomings in interestingness and elaboration. Besides they are more dissatisfied with the learning material and literature. Both groups wish to have more support in task understanding.

These findings demonstrate TAP's usefulness for target-group oriented planning and training design in university teaching. An examination of conditions specific to other subjects were beyond the scope of this study. Moreover further work is required to evaluate the effects of trainings based on these results.

## Literatur

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