Evolving from a test-based to a curriculum-based approach in evaluating a systems thinking curriculum

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On behalf of Asemaan Group,
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I. Asemaan ST Project
Current situation & future plans

II. Transformation of Evaluation Approach
From a Test-based to a Curriculum-based approach

III. Discussion
Discuss, criticize and provide feedback

Evolving from a test-based evaluation to a curriculum-based evaluation
Section I. Asemaan Systems Thinking Project

I.I. Curriculum

I.II. Teacher training
I. Asemaan’s Systems Thinking Curriculum
I. Main Curriculum

A. What happens in classroom

Weekly ST sessions for 5th/6th Grade

- Some questions
- Concepts & example of real life
- Game/Story
- Discussion & Dialogue

B. Implementation status

- 3 years of pilot, by our own ST educators for developing our curriculum
- From this year: starting ToT
- Negotiation with school boards
- 2012-13: implementing in 50 schools

C. Evaluation (to be discussed)
I. Supplementary Curriculum

- In the succeeding grades: finding samples of the skills in school curricula (e.g. Science, Social Sciences)
- With the goal to move from a separate subject to integration with other subjects at school
I. Teacher Training & Support

- An introductory workshop for school principals
- TOT workshops for school teachers
- After the workshops
  - Online Forum
  - Ongoing support from Asemaan’s ST educators (based on needs)
  - Teachers networks (monthly meetings)

- Challenges
  - ST: a new concept for teachers
  - It needs several ongoing workshops, not only one.
Section II. Evaluation

II.I. Test-Based

II.II. Curriculum-Based
Different Evaluation Approaches at Asemaan Program (from test-based to curriculum-based)

Phase one: a test-base approach

- **Assumption**: Learners will gain an explicit understanding of ST after our ST classes
- **Question (goal)**: Looking for valid evidence to evaluate the output (focus on measuring ST skills: evaluating objectives)
- **Evaluation evidence (tools)**: Pre-test/post-test
Transition from a test-base approach to a curriculum-based approach

Phase two: a curriculum-based approach

- **Assumption:** Learners will NOT gain an explicit understanding of ST after our ST classes; we can only expect an implicit understanding

- **Question (goal):** Looking for valid evidence to evaluate the whole curriculum (objectives+ learning experiences+ their organization+ the evaluation method itself)

- **Evaluation evidence (tools):** Teachers’ observations/ focus group meetings/ informal feedback from students/ school’s feedback
Section III. Discussion
Discussion:

A. Two major differences of the 1st and 2nd approaches

- Evaluation of methods, objectives and output of our educational experience instead of just evaluating the output
- In other words: evaluating education process, educators, and learners instead of just evaluating the learners
- Multi sources of evidence

B. The test-based approach is neither effective nor possible

- Possibility is do to gaining an explicit level if understanding by learners
- Effectiveness is about the question what is the goal of evaluation?
Thank you