Why not use CBM beyond testing, e.g. as an instructional strategy for engaging students in their own learning process?

How can this CBM strategy turn useful also for instructors, providing information towards formative assessment decisions?


Course 2019-2020: CBM for prior knowledge awareness and re-construction.

INSTRUCTIONAL TEAM WITH DBR RESEARCH PROGRAM: LOOKING FOR A VARIETY OF ALTERNATIVE APPLICATIONS OF CONFIDENCE-BASED MARKING - CBM (GARDNER-MEDWIN & CURTIN, 2007).

CBM SYSTEM FOR PROMPTING ENGAGEMENT AND SRL AMONG MASTER STUDENTS

Universidad de Barcelona

Virtual Poster presented at EARLI SIG6-7, Tübingen. 2020 August 24th-25th.

CONTEXT AND CBM-SYSTEM

321 Master students (prospective secondary teachers of twelve different disciplinary areas: language, foreign languages, philosophy, biology, chemistry, geology, history, geography, sports, vocational education, arts, music).

Three initial tests, one for each topic with eight CBM-items on folkloric ideas (prior knowledge) on adolescence, learning and school-teaching. Final CBM testing with the same eight items per topic.

DATA COLLECTED:

- CBM Learning results.
- Self-confidence/self-confidence declaration.
- Final evaluation questionnaire (students).

RESULTS

Significant increase of learning from pre- to post-test. Significant increase of self-confidence. Positive evaluation altogether by participants.

LEARNING RESULTS

N = 321

PKT1 PKT2 PKT3

F11 F12 F13

Max (60) 37.5 21.24 40

30 27.5 30

Result below 0 7.7% 7.48% 20.87% 17.76% 2.49% 0.31%

Result 0 1.64% 2.14% 1.87% 3.64% 0.08%

Result 1-10 44.86% 30.22% 44.24% 41.43% 21.81% 11.84%

Result 11-20 27.14% 43.30% 27.74% 29.88% 44.88% 43.83%

Result 21-30 8.72% 16.82% 6.30% 7.99% 30.22% 43.93%

Average 7.62 12.42 6.10 7.67 16.12 19.72

S.D Deviation 10.51 9.03 10.02 9.57 7.94 6.99

DATA COLLECTED:

- CBM Learning results.
- Self-confidence/self-confidence declaration.
- Final evaluation questionnaire (students).

STUDENTS’ EVALUATION RESULTS

Students' evaluation results

- Participate more (than usual) in class:
  - Agree: 80% Agree: 75%
  - Strongly agree: 30%

- At the teacher:
  - Agree: 85%
  - Strongly agree: 35%

- Careful and precise work:
  - Agree: 85%
  - Strongly agree: 35%

- Revealed learning strategies:
  - Agree: 75%
  - Strongly agree: 25%

- Time focused on reading:
  - Agree: 85%

- Pay more attention in class:
  - Agree: 80%

- Joke/interesting comments:
  - Agree: 90%

- Created interest for topic:
  - Agree: 85%

- CBM coding scheme

- Declared confidence results

CONCLUSIONS SO FAR & FUTURE LINES OF RESEARCH

1) CBM proofed to be a very promising instructional tool far beyond the original goal of testing.
2) Differences between disciplinary areas (in the case of prospective teachers and also other careers) must be explored.
3) The CBM system must be explored “from the instructors’ side”. Open questions:
   - How can instructors make sensible and sustainable use of the information provided?
   - How can self-competence / self-confidence be fostered instructionally?
References


Other References on Confidence-Based Marking


Clark, C. (2020). The impact of confidence-based marking on unit exam achievement in a high school physical science course. Graduate Research Papers. 1449. https://scholarworks.uni.edu/grp/1449


