



Dealing with Students' Undesired Responses to Teachers' Oral Questions in chemistry classrooms

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Overview



• Brief background –study objective

Study context –participants, methods and analysis

Results

• Implications -conclusions

Objective/aim of study



• How do teachers react when their students respond with incorrect or undesired answers to orally posed questions?

• What kind of teachers' practices are poised to promote students' progressive learning?

What research has to say on teaching questioning

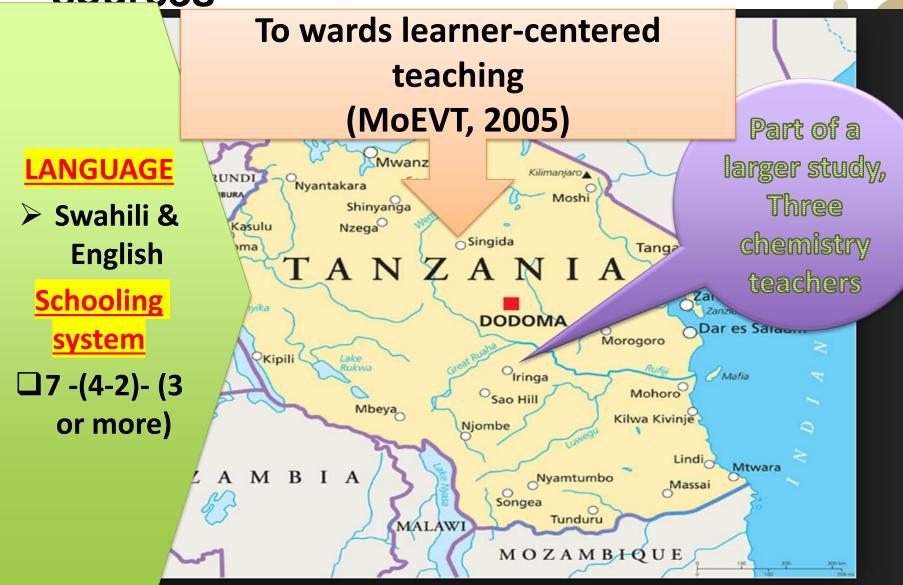


- Teachers' currect practice (1912 2019)
 - -Mainly facts questions
 - -Little or no wait-time
 - Authoritative-communicative approach
 - -IRF

Recommended – Productive questioning

- Closed/open-ended questions
- -Reflective tosses
- -Wait time
- -Students' questions/contributions
- Context of questions/situation adequacy
- Non-authoritative —dialogic communicative approach

Context of study; participants; data sources



Data Sources



- □Observed in <u>actual teaching</u>
- ☐ Interviewed after a period of one year
 - ✓ Actual teachings –video recorded,
 - ✓ Interviews —audio recorded, transcribed verbatim

Underpinning theoretical lens



 Towards a non-authoritative dialogic classroom communicative approach (Mortimer & Scott, 2003)

- Questions as mutual constructions between teacher and students
 - the interdependence of language and context (Carlsen, 1991)

Analysis:



Actual teaching situations:

- A socio-lingustic perspective taken into account in studying questioning situations
- Foci points—question exchanges involving unwanted/incorrect responses

Interview data:

 Intepretively analyzed following Gadamer's philosophical hermenuetics

Results

Dealing with Students' undesired/incorrect responses in question-answer exchange

Authoritative communicative approach

- Ignore students' deviating views
- Insufficient wait-time
- Exposing students' lack of knowledge
- Direct reject of students' views
- Angry and frustrated

Interactive-dialogic communcative approach

- Restructure/replaces question
- Use clarifying/probe/follow-up questions
- Supplements students' responses
- Accommodates students' views

TO WARDS PRODUCTIVE LEARNING?

Students roles/in-class activity

- Withdraw-remain silent
- Devise survival mechanisms
 –memorize

Students roles/in-class activity

- More students' engagement
- Question science views
- Question their own thinking
- Adjust their own thinking

Conclusions & Impications

□ Conclusions

- Authoritative communicative approach dominant (questions mainly factual)
- Lack knowledge/competence dealing with students' varied views not aligned with pre-specified science
- Use of classroom powers does not allow for exploration of opportunities

☐ Teacher training needs

- TPDP on inquiry based teaching
- Role of teacher questions in teaching

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