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ThinkAboutIt: A framework for learner-learner and learner-expert interactions

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Abstract for DBER Group Discussion on 2013-01-31

Presenter, Department(s):
Roger Bruning
Professor
Department of Educational Psychology

Title:
ThinkAboutIt: A framework for online instruction, learner-learner, and learner-expert interactions

Abstract:
Roger Bruning will describe an online system, ThinkAboutIt (TAI) that gives learners opportunities to make and justify decisions about content, compare these decisions to those of others, and access experts’ judgments. TAI has been used in a variety of contexts, including judging quality of children’s writing samples (elementary-level literacy education students), value of differing testing and measurement strategies (teachers), utility of NOAA and other weather products for farming decisions (farmers), and effectiveness of medical case presentations (medical students). The presentation and discussion will focus on TAI’s general design features, their ties to cognitive and motivational theory, and how these features can be incorporated in online and classroom instruction.
ThinkAboutIt: A framework for learner-learner and learner-expert interactions

Roger Bruning
Center for Instructional Innovation
Department of Educational Psychology
ThinkAboutIt (TAI) is a web-based framework for:

- Judging complex content
- Making and justifying multiple judgments
- Providing coaching as needed
- Receiving expert and peer feedback
Some Focal Problems in our Work with TAI

- Decisions about testing (teachers)
- Judging writing quality (pre-service teachers)
- Utility of weather/climate data (farmers)
- Quality of case presentations (physicians, medical students)
Learning Dimensions Available in TAI

- Making decisions
- Providing rationales for decisions
- Practicing on multiple “cases”
- Real problems
- Feedback
  - Expert
  - Peers
- Coaching
- Choice
Hampstire Escape

On Friday night a hampstire escaped out of her playground. My mom's hampstire named Pip went dog exploring. My mom's other hampstire named Squick stayed in the playground.
Below are samples of student writing, listed by their first sentence. Select a paper, and assign a rating for the trait of **Ideas/Content**. Please provide a justification for your rating using terminology from the rubric.

**Before beginning, please take a look at the following excellent paper. When viewing it, click on the expert button to see what an expert says about it.**

"I love my Grandma Johnson’s tea parties, they are always fun. My Grandma has a beautiful set of tea cups, ..."

<table>
<thead>
<tr>
<th>4th Grade Narrative Writing Samples</th>
<th>Rated</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;On Friday night a hampshire escaped out of her playground. My mom's hampshire name Pip went dog explor. ...&quot;</td>
<td>✓</td>
</tr>
<tr>
<td>&quot;One day I asked my mom if cold be in the x teams. My mom said yes but she ...&quot;</td>
<td>✓</td>
</tr>
<tr>
<td>&quot;One day my sister promised my brothers and I to go to the movies. So we went. We ...&quot;</td>
<td>✓</td>
</tr>
</tbody>
</table>
4th Grade Narrative Writing Sample

**Writing Prompt:** Think of an event you will want to remember when you are old. Write a story about what happened so that if you read this story again when you are eighty, every detail will seem as clear as if it happened yesterday.

**Hampstire Escape**

On Friday night a hampstire escaped out of her playground. My mom's hampstire name Pip went dog explor. My mom's other hampstire named Squick staded in the playground.

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**Rubric: Ideas/Content**

<table>
<thead>
<tr>
<th>BEGINNING</th>
<th>PROGRESSING</th>
<th>PROFICIENT</th>
<th>ADVANCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not yet showing any control</td>
<td>Need for revision outweighs strengths</td>
<td>Shows control and skill</td>
<td>Exceeds expectations</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

- communicates a very confused message
- contains no supporting details
- lacks a topic
- communicates a somewhat confusing message
- contains limited details
- often wanders from topic
- communicates a message
- contains some relevant details
- occasionally wanders from topic
- communicates a precise, clear message
- contains sufficient, relevant details
- stays on topic
TAI Sequence (Student Writing)
The Evolution of Psychology Theory

• Behaviorism
  – Key concepts: Association, repetition, reward

• Cognitive Psychology
  – Key concepts: Meaning, prior knowledge, active learning, constructed knowledge

• Social Cognition
  – Key Concepts: Social origins of learning, modeling and imitation, situated learning
Some questions to ask ourselves

Are we giving our students...

• ...real problems to make judgments about?
• ...criteria for warranting their judgments?
• ...opportunities to warrant their choices?
• ...chances for peer interaction?
  – See their peers’ choices?
  – See criteria peers are using to make their choices
• ...”rich” expert feedback?
• ...enough repetitions to insure learning?
• ...meaningful choices about their learning?
Thank you!

• Questions or comments?
ThinkAboutIt: A framework for learner-learner and learner-expert interactions
Presentation to the DBER Group, January 31, 2013
Roger Bruning
Center for Instructional Innovation, UNL

Presentation Summary
ThinkAboutIt (TAI) gives learners opportunities to make and justify decisions about content, compare their decisions to others, and access experts’ judgments. TAI has been used in a variety of contexts, including making decisions about quality of children’s writing (preservice teachers), value of differing assessment approaches (teachers), utility of NOAA and other weather products for farming decisions (farmers), and effectiveness of medical case presentations (physicians, medical students). The focus of this presentation/discussion was on TAI’s general design features, their origins in learning theory, and how these features might be incorporated in online and classroom instruction.

Some questions about our own instruction: Have we provided students with…
• real problems to make judgments about?
• criteria for making their judgments?
• opportunities to warrant their judgments?
• chances to interact with peers?
  – Seeing their peers’ choices?
  – Seeing criteria their peers use to make their choices?
• ”rich” expert feedback, including criteria utilized?
• enough repetitions to insure learning?
• meaningful choices about their learning?

Selected references


