Atomic question generator
FROM DOMAIN ONTOLOGY

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E-learning systems

- Example: Moodle, blackboard
- Constrains
FORMING ONTOLOGY

Corpus

NLP

Ontology
ONTObOLOGY ENGINEERING

- importance
- Structure
Example

Company: Widgets, Inc
- Has a contract with
- Works for

Employee: Alice Reddy
- Reports to

Company: Consult, Inc
- Works for

Employee: Bob Jones
- Working on: Sales Process Redesign

Consultant: Kat Thomas
- Works with
- Working on
proposed solution
Generation Strategies

- Class based
- Property based
- Terminology based
**GENERATION STRATEGIES**

Table 11: Terminology feedback strategy

<table>
<thead>
<tr>
<th>Ontology strategy</th>
<th>Terminology-based strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem question</td>
<td>Is Transport layer transmits frames</td>
</tr>
<tr>
<td>Correct answer</td>
<td>No</td>
</tr>
<tr>
<td>Distractors</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Generated feedback pedagogical content when a student selects the **Yes**

1. Your answer is wrong.
2. The correct answer is **No**.
3. The reason why **No** is the correct answer is due to the following: Transport layer transmits datagrams.
4. The reason why **Yes** is the incorrect answer is due to the following: Data Link layer transmits frames.
Experimental study on 200 students
IMPLEMENTATION

programming languages

java
Java

Node js

Tools
protege

owlapi
FUTURE WORK

- machine learning
- arabic ontology
- connect with e-learning systems