Education in the 21st Century

Electronic Assessment

9 February 2017, Lugano, J. Handke
References

2012
Handke, J./Schäfer, A.M.

2015
Handke, J.

2015
HFD, AP #3

2016
HFD, AP #15
... some of our milestones ...

2000

The Virtual Linguistics Campus

2006

INVERTED CLASSROOM

2009

E-Assessment (summative)

2012

YouTube

2013

Inverted Classroom Mastery Learning
BYOD, collaborative scenarios

2016

BYOD in E-Assessment

2017 ++
Platforms:

- The Virtual Linguistics Campus

~ 14,000 users

~ 34,000 subscribers
~ 3.5 mill. clicks
~ 550 educational videos

Students:

- Teacher Degree (ca. 750)
- BA (ca. 300)
- MA (ca. 50)

Course Formats:

- 2-in-1
- FLOCK
- SPOOC
- MOOC
- pMOOC

E-Assessment
(on campus):

- ~ 1,000 summative e-tests/year
- ~ 10,000 formative e-tests/year

E-Assessment
(pMOOCs):

- ~ 30,000 summative e-tests/year
1. Digital Teaching and Learning
2. Scenarios of Testing
3. Test Types and Formats
4. Benefits and Consequences
The Elements of E-Education

- Components

- Scenarios

- Stages
Digital Enhancement

Teaching and Learning  Platforms  Communication
The Goal

Digital Enhancement

Digital Integration

Teaching and Learning  Platforms  Communication
The Inverted Classroom Model

1: Content Delivery

INVERTED CLASSROOM

2: Deepening
1. Digital Teaching and Learning
2. Scenarios of Testing
3. Test Types and Formats
4. Benefits and Consequences
Feedback

1: Content Delivery
- Diagnostic Test: Assessment of Current state
- Integrated Test: Self-Control (Gamification)
- Formative Test: Re-Teaching? (Show Mastery)

2: Deepening
- Live-Voting: Re-Teaching? (anonymous)
- Summative Test: Grading (Examination)

Prior to ..... Phase 1  immediate  in Phase 2  immediate  on request
1. Digital Teaching and Learning
2. Scenarios of Testing
3. Test Types and Formats
4. Benefits and Consequences
**E-Tests**

- **Selection**
- **Analysis**
- **Listening**
- **Counting**
- **Transcr.**
- **Input**
- **Drag/Drop**
- **Choice**

**Benefit (Content)**

- +
- -

**Benefit (administrative)**

- correction effort
- result transmission
- objectivity
knowledge survey
formative effects via additional offers
Integrated Tests

Test your knowledge and analyze the type of word!

- gamification
- immediate feedback
- learner motivation
- no storage of results

Test Types
- Choice
- Drag & Drop
- Pointing
Formative Tests

- survey of required knowledge
- formative effects: re-teaching or not?
- not anonymous
- storage of results

Test Types
- Single Choice
- Multiple Choice
- Dynamic Choice
- Input

Questions about Suprasegmental Features

A type of secondary articulation is ...

- glottalization
- labialization

Level: Standard
Total No. of Questions: 10
Required for this level: 60%
Question No.: 3
Correct: 0%
Questions about Suprasegmental Features

A type of secondary articulation is ...

- glottalization
  - True
  - False
- labialization
  - True
  - False

My Worksheets

<table>
<thead>
<tr>
<th>No.</th>
<th>Unit</th>
<th>E-Worksheet</th>
<th>Passed</th>
<th>Highscore</th>
<th>Student’s Score</th>
<th>Submission Date</th>
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<td>Language and Linguistics</td>
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<td>70 %</td>
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<td>70 %</td>
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<td>73 %</td>
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<td>Phonetics, Phonology and the Phoneme</td>
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<td>100 %</td>
<td>78 %</td>
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Overall Score for the Class: 29 % 2016-11-13 17:01:38 CET
### Formative Tests and Attendance

#### SS 2016 Varieties of English

- **n = 34**

#### Mastery and Attendance

- **Mastery (Ø 77 %)**
- **Attendance (Ø 84 %)**

**0 of 29 students are not prepared**

<table>
<thead>
<tr>
<th>Show</th>
<th>30% (6/16)</th>
<th>Ms. E</th>
<th>33% (7/16)</th>
<th>Ms. E</th>
<th>29% (6/16)</th>
<th>Mr. G</th>
<th>30% (6/16)</th>
<th>Ms. E</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Show</td>
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<td></td>
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</tbody>
</table>
Live-Voting

- survey of required knowledge
- formative effects: direct reaction in class
- anonymous
Summative Tests

E-Exam
Active: 11 February 2017, 09:59:00 CET - 11 February 2017, 11:30:00 CET

This e-exam consists of the following components:

<table>
<thead>
<tr>
<th>Test</th>
<th>Type</th>
<th>Description</th>
<th>Weight in %</th>
<th>No. of questions</th>
<th>Time allowed (mins.)</th>
<th>Status</th>
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<td>Counting Task (Analysis)</td>
<td>Counting Task</td>
<td>Counting elements in context</td>
<td>10</td>
<td>10</td>
<td>No time limit</td>
<td>Access</td>
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<tr>
<td>Input Task</td>
<td>Naming Task</td>
<td>Questions about the class</td>
<td>30</td>
<td>30</td>
<td>No time limit</td>
<td>Access</td>
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<td>EMnE Consonants</td>
<td>Listening Task</td>
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<td>10</td>
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<td>Access</td>
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<td>Selection Task</td>
<td>Elements in context</td>
<td>20</td>
<td>20</td>
<td>No time limit</td>
<td>Access</td>
</tr>
<tr>
<td>Counting Task</td>
<td>Counting Task</td>
<td>Counting elements in context</td>
<td>30</td>
<td>15</td>
<td>No time limit</td>
<td>Access</td>
</tr>
</tbody>
</table>

Test Types
- Selection Tasks
- Counting Tasks
- Input Tasks
- Audio-Based Tasks
- Segmentation Tasks
- grading
- certification
First “BYOD”/Exam-Statistics

- 36 participants (all used the web)
  - 28 passed (3 x time-out)
  - 8 failed (3 x time-out)
- average time spent on web: 10 mins
- average no. of internet accesses: 18

History of English, E-Exam: 90 minutes
1. Digital Teaching and Learning
2. Scenarios of Testing
3. Test Types and Formats
4. Benefits and Consequences
What is the benefit of E-Assessment?
Benefit – for whom?

- The Guides
- The Institution
- The students
- Politics
• quality assurance
• new financial sources
• new partners

• technical infra-structure
• investment
• e-assessment administration
## Traditional Assessment

**History of English, traditional (until 2010)**

# Students ~ 120

<table>
<thead>
<tr>
<th>Scenario</th>
<th># Tests</th>
<th># Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative (unit)</td>
<td>4 * 1</td>
<td>120</td>
<td>480</td>
</tr>
<tr>
<td>Summative (course)</td>
<td>1 * 4</td>
<td>120</td>
<td>480</td>
</tr>
</tbody>
</table>

# Tests = 960

Estimated correction time per test = 5 Min

=> **4,800 Min** => **80 Hrs** = **10 days à 8 Hrs** !!

Summative (course) only, per Test = 3 Min

=> **1,440 Min** => **24 hrs** = **3 days à 8 Hrs** !!
**E-Assessment**

**History of English, ICMM, On Campus, WT 2014/15**

# Students = 147

<table>
<thead>
<tr>
<th>Scenario</th>
<th># Tests</th>
<th># Students</th>
<th>Total</th>
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</thead>
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<tr>
<td>Diagnostic</td>
<td>1 * 4</td>
<td>124</td>
<td>494</td>
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<tr>
<td>Integrated</td>
<td>42</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Formative</td>
<td>13</td>
<td>147</td>
<td>1.911</td>
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<tr>
<td>Live-voting</td>
<td>13</td>
<td>?</td>
<td>?</td>
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<tr>
<td>Summative (Unit)</td>
<td>4 * 1</td>
<td>141</td>
<td>564</td>
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<tr>
<td>Summative (Course)</td>
<td>1 * 4</td>
<td>147</td>
<td>588</td>
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</tbody>
</table>

# Tests = 3.557
(10.671 Min. ~ 178 Hrs. ~ 22 Days)

Correction effort *History of English* (E-Assessment):
4 Hrs = 0.5 working days (incl. Live-Voting = 1.0 Day) !!
The Guides

- reduction of correction effort
- simple test-compile
- immediate result statistics
- new test options

- high developmental effort
- high organisational effort
- guidance may be required
- compromises needed
The Students

- Fast result transmission
- Objectivity
- Possibility of guessing

- Objectivity
- High difficulty level

E-Exams + BYOD = Tests become more difficult
Needed ...

- Coaching
- more media competence
- testing of new formats

- high self-responsibility
- E-Assessment as a standard
- high media competence

- creating incentives
- building the technical infra-structure
- simple e-assessment-administration
The Future is already here! (Gibson, 2003)

- ICMM, 2-in-1, FLOCK
- SPOOC, MOOC, pMOOC (part of our curriculum)
- mobile assessment
- robot assistance
- collaborative assessment
Thanks for your attention!

Jürgen Handke
handke@uni-marburg.de
http://pingo.upb.de
Identify the Correct Pair in RP!

park-pack mud-mood can't-shan't mould-should 
wane-rain her-Sir

Click on all minimal pairs in the set!
Analysis Tasks

Morphological Analysis of Malay

1. Ini kuda
2. Ini Ali.

This is a horse.
This is Ali.
Ali is good.
Ali sells that horse.
Ali's horse is good.
This merchandise is good.
This horse is sold by Ali.
Ali is a cloth seller.

Isolate the Malay word for engl. 'this' (det.).

Total No. of Questions: 10
Question No.: 1
Name: Juergen Handke

This exercise does not involve any time limit.
## Listening Tasks

### Consonants (EMnE)

<table>
<thead>
<tr>
<th>LET</th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Post-alveolar</th>
<th>Retrolflex</th>
<th>Palatal</th>
<th>Velar</th>
<th>Uvular</th>
<th>Pharyngeal</th>
<th>Glottal</th>
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<tr>
<td>Plosive</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
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<tr>
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<td>f</td>
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<td>θ</td>
<td>ð</td>
<td>s</td>
<td>z</td>
<td>j</td>
<td>3</td>
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<td>h</td>
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</tbody>
</table>

**Total No. of Consonants: 10**
**Consonant No.: 1**
**Name: Juergen Handke**

This exercise does not involve any time limit.

Your answer has been stored!

- Draw
- Help
- Submit
Counting Tasks

How many items ...?

How many consonants are in "psycholinguistics"?

Total No. of Items: 20
Item No.: 1
Name: Juergen Handke

This exercise does not involve any time limit.

- How many consonants are in "psycholinguistics"?
- How many phonemes can you find in "pragmatic"?
- How many plosives are in /pætæn mætʃɪŋ/?
- How many diphthongs does /trævəl ɪrdʒant/ exhibit?
- How many consonants does the word "knowledge" contain?
- How many peaks are in "collateral damage"?
- How many phonemes does "enormous" exhibit in RP?
- How many consonants are in "phonology"?
Transcription Tasks

Phonemic Transcription (RP)

Word to be transcribed: "margitrauf"

maːɡɪtrauf

Total No. of Words: 3
Word No.: 1
Name: Juergen Handke

This exercise does not involve any time limit.
Questions about English Linguistics

The 'central' component of a speech act that describes what the speaker does by uttering a sentence is known as the ...

Total No. of Questions: 20
Question No.: 1
Name: Juergen Handke

This exercise does not involve any time limit.

- The 'central' component of a speech act ... tence is known as the ...
- When a lexeme comes to refer to only par ... ing we have a case of ...
- Which syntactic function is in a copular ... ionship with another one?
- What is the complement in [I find him a funny guy.]?
- Which types of major sentence may occur without an overt subject?
- What is the pink area referred to?
- What is the verb in [My other daughter is called Jessica.]?
- What is the verb in [We will be walking down the street.]?