A survey of language teachers’ use of MALL and language technology in Europe

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Research into using Technology for Language Learning - 2018
In this presentation...

Personalization of language learning

- MALL
- Teachers
- Natural Language processing technologies (NLPTs)
- OER
These scaremongering headlines relate to the findings of a recent survey by the Life Science Centre in Newcastle upon Tyne, which claims that 79% of visitors to its Robots – Then and Now exhibition reported altering the way they speak in order to be understood by voice assistants, such as Alexa (Amazon), Google Assistant, Siri (Apple) and Cortana (Microsoft). Crucially, these visitors also reported having regional British accents, and their perceived need to accent-shift highlights two issues.

"Alexa, who am I?" Amazon Echo's voice-controlled virtual assistant, Alexa, doesn't have an answer to that – yet. However, for other applications of speech technology, computer algorithms are increasingly able to discriminate, recognise and identify individuals from voice recordings.

Voice control: why AI must resist our bad habit of stereotyping human speech
In this presentation...

Individualization

Learner generated content / learner queries

Automatization

User-oriented declarative knowledge
Steel (2016) found that Australian university students use mobile devices for speaking, listening, reading, writing, grammar, pronunciation and, lastly, for the learning of language cultural aspects.

Despite the impact of NLPTs, corpora and data-driven learning on language education, no mention in Steel (2016) to the use of user-generated resources for the acquisition of languages.

Thomas and Evans (2014) highlighted the relevance of OERs for language learning and teaching in the context of Web 2.0 services and, among others, user generated content and student production.

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Personalization of language learning

- OER
- Natural Language processing technologies NLPTs
- Teachers
- MALL
OERs

- OERs increase in ss productivity
- OERs encourages reflective practice
- OERs found to expand teachers´ roles
In this presentation...

Personalization of language learning

- MALL
- Teachers
- OER
- Natural Language processing technologies (NLPTs)
Ubiquitous learning
Different devices
Building knowledge & understanding across contexts and 21c data skills
In this presentation...

Personalization of language learning

- MALL
- Teachers
- OER
- Natural Language processing technologies NLPTs
Natural language processing technologies

- Natural Language Processing (NLP) is the process of understanding, generating, translating and conversing language in written and spoken form automatically (Nilsson, 2009).

- Use of both learners’ meta-learning skills and user-generated data in language learning.

- Data-driven learning: an inductive approach that makes use of attested uses of language as the main source for language learning rather than teacher-mediated discourse.

- DDL: POS tagging, key word in context, examination of frequency, analysis of lexis, analysis of POS keywords, etc.

- Boulton & Cobb (2017) meta-analysis
Natural language processing technologies

- Natural Language Processing (NLP): a broad, non-technical, non-commercial definition
- Learner-input >>> automatic generation of new linguistic information
- www.tellop.eu
TELL-OP - Transforming European Learner Language into Learning Opportunities

www.tellop.eu

KA200 Higher Education Strategic Partnership
2014-1-ES01-KA203-004782
Explore language teachers’ perceptions

(1) To what extent are language teachers familiar with the use of mobile devices in the UK and Spain? Do teachers use them for language teaching?

(2) To what extent are language teachers familiar with OER NLPTs in the UK and Spain? Do they use them at all? If so, what resources are most widely used?

• Survey methodology

• Online questionnaire: BE GE SP TK UK + intl mail lists

• Multilingual approach

• Proof of concept: pedagogy

• The technologies selected addressed different skills, vocabulary acquisition (online dictionaries, Wordnet), writing skills (spell checkers), reading skills (readability indexes, text summarization tools) and general language awareness tools (Parts-of-Speech taggers), etc.

• **SP n=131 UK n=99** (n -TELLOP=690)
How familiar are you with the following technologies? *

Only answer this question if the following conditions are met:
Answer was 'Yes' or 'I have heard of them, but never used them' at question '17 [C1]' (Are you familiar with Open Educational Resources (OERs)?)

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>Technology</th>
<th>Never heard of it</th>
<th>I have heard of it but never used it</th>
<th>I sometimes use it</th>
<th>I use it frequently</th>
<th>I always use it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language learning Apps (e.g. Duolingo, etc.) [<a href="https://www.duolingo.com/">https://www.duolingo.com/</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online dictionaries (e.g. Oxford dictionaries, etc.) [<a href="http://www.oxforddictionaries.com">http://www.oxforddictionaries.com</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online collocation dictionaries or databases [<a href="http://forbetterenglish.com/index.cgi">http://forbetterenglish.com/index.cgi</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Text-to-speech technologies (e.g. Naturalreaders, etc.) [<a href="http://www.naturalreaders.com/onlinetts.php">http://www.naturalreaders.com/onlinetts.php</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Text summarisation (e.g. Textcompactor, etc.) [<a href="http://textcompactor.com/">http://textcompactor.com/</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Wordnet [<a href="http://wordnet.princeton.edu/">http://wordnet.princeton.edu/</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Visual representation of word clusters [<a href="https://www.visualthesaurus.com/">https://www.visualthesaurus.com/</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Automated word lists and frequency counts [<a href="http://www.wordcounter.net/">http://www.wordcounter.net/</a>]</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
The teachers in this survey

- Women: 73%
- Age: 36-45 (36%) 46-55 (35%)
- BA (36%) MA (28%) PhD (25%)
- Background: Modern languages (63%), Education (44%) Language & Lit. (28%)
- Experience: 16-20 years (23%) 11-15 years (22%) 21-25 years (14%)
- Institution: HE (37%) Secondary school (37%) Primary education (17%)
- EFL (43%) French FL (17%) Spanish FL (10%)
The teachers in this survey

<table>
<thead>
<tr>
<th>Language taught</th>
<th>Spain</th>
<th>Percentage</th>
<th>UK</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as FL</td>
<td>94</td>
<td>71.76%</td>
<td>4</td>
<td>4.04%</td>
</tr>
<tr>
<td>English as SL</td>
<td>10</td>
<td>7.63%</td>
<td>3</td>
<td>3.03%</td>
</tr>
<tr>
<td>French as FL</td>
<td>8</td>
<td>6.11%</td>
<td>32</td>
<td>30.32%</td>
</tr>
<tr>
<td>French as SL</td>
<td>1</td>
<td>0.76%</td>
<td>10</td>
<td>10.10%</td>
</tr>
<tr>
<td>Others</td>
<td>18</td>
<td>13.73%</td>
<td>50</td>
<td>50.50%</td>
</tr>
</tbody>
</table>
Wifi provided by 86% institutions
MALL embraced by institutions: 59% UK (68.69%) vs Spain (51.15%) ($x^2 = 7.16; p = .005$)
MALL training provided by institution: 28% - Not significant diff. UK SP
Computer skills: Mean 3.6 /5 - Mode was 4: 44%
MALL: use of devices

- UK teachers appear to use tablets more frequently (UK: 45.45%; Spain: 24.43%; $\chi^2 = 11.19; p = .001$).

- Spanish teachers rely more frequently on computer labs at school (Spain: 56.49%; UK: 45.45%).

- Frequency of use in language teaching: Never (26%) Weekly (20%) Every day (13%)
42% SP reported to be familiar with OERs, 22% had heard of them but never used them, while 35.88% did not know anything about OERs.

Fewer teachers in the UK claimed to be familiar with OERs (24%) or had ‘heard of them but never used them’ (8%), while 68% claimed not knowing about them.

Table 2. Results for teachers’ frequency of use of OERs.

<table>
<thead>
<tr>
<th>How often do you use OERs in the context of language teaching?</th>
<th>Spain</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>28.57%</td>
<td>34.38%</td>
</tr>
<tr>
<td>A few times a year</td>
<td>32.14%</td>
<td>21.88%</td>
</tr>
<tr>
<td>Monthly</td>
<td>13.10%</td>
<td>15.62%</td>
</tr>
<tr>
<td>On a weekly basis</td>
<td>19.05%</td>
<td>21.88%</td>
</tr>
<tr>
<td>Everyday</td>
<td>7.14%</td>
<td>6.25%</td>
</tr>
</tbody>
</table>
The OER NLPTs teachers are most familiar with are Online Collocation Dictionaries, Spell Checkers and Language learning apps.

Vocabulary Profiling, Text density/readability index and automated POS tagging are the least known in terms of both familiarity and frequency of use.

Significant UK SP differences were found in the familiarity with online collocation dictionaries or databases (U: 655.5; p < .001), text summarization (U: 1016; p = .016), L1 corpora (U: 987; p = .021), specialized corpora (U: 998; p < .023), and learner corpora (U: 1039; p = .042).

Only online collocation dictionaries (U: 932.5; p = .009) was significantly different for frequency of use though. In all cases, teachers based in Spain showed higher means for both familiarity and use than those from UK.
NLPTs

- Training in the use of mobile devices (U: 3799; p < .001), and fostering their use in the classroom (U: 3835; p < .001) correlates with the frequency of use of such devices but little impact on familiarity or use of NLPTs.

- Institutional affiliation shows significant differences in the familiarity with OER NLPTs Readability Indexes and all corpora related tools. This association does not extend to frequency of use except for L1 corpora and Specialized corpora.
Qualification: PhDs present overall higher scores for familiarity than MA, which in turn present higher scores than BA holding a BA. BUT, differences were mainly non-significant for frequency of use.

Gender, age group or years of teaching experience showed no association with either familiarity or frequency of use in any of the NLPTs studied.

Significant association was found between being male and familiarity with language learning apps (U: 970.5; p = .005).
Some thoughts

- Just a first step: more research needed in this area
- Institutions and language teachers still a long way from taking full advantage of MALL
- NLPLTs: other than dictionaries, neglected potential
Some thoughts

- OERs vs commercial solutions
- Flexibility & wider access
- Tailor made solutions
- Standard tools: root learning vs more learner centered approaches
- The use of OER NLPTs that require some degree of sophistication and training need to be adapted and presented in ways that contribute to learning experiences that reinforce the pedagogical contributions while they decrease the challenges and obstacles involved in using OERs which do not necessarily present pedagogical user interfaces (Pérez-Paredes, 2010).
Thanks for your attention

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