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Student Response Systems in the Foreign Language Classroom: An Empirical Analysis of Potential Benefits for Learner Engagement, Motivation and Recall

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Engineering students in France

Engineering students:

- Academically very bright
- Not very communicative
- Foreign language seen as an abstraction
- Expectations clash with classroom activities

Research context:

- In the past, 10 to 12
- Now, no fewer than 24
- Because of increased numbers, learner attitudes and student culture ⇨ seek alternatives

Past research

Vast and covers all disciplines:

- Body of research dates back more than two decades
- SRSs broadly recognised as being beneficial (Trees & Jackson 2007)
- Not much in the area of foreign-language learning
- One previous (qualitative) study ⇨ Schmid (2008)

Quantitative Investigation

148 engineering students:

- Mandatory in-sessional English course
- Six mixed ability language groups (24-26 per class)
- Secondary-school English 5 to 8 years
- Students starting a five-year curriculum
- Pre-test scores – lower intermediate (545 / 990)
- 405 to 600 is the fourth level of six (Toeic can-do guide)
- B1 on the Common European Language Reference

Procedure

All results analyzed via a Mann-Whitney Test

The students were divided into two blocks

Six multiple-choice quizzes

- Each quiz – two sections:

☞ 10 questions on recent content (maximum 2 weeks)

☞ 10 questions on older content (4 weeks or more)

SRS Block	Paper Block
⇨ video projector	⇨ paper copies
⇨ 30 seconds	⇨ ten minutes to reply
⇨ immediate scores	⇨ no discussion or feedback or scores
⇨ immediate feedback	⇨ deferred feedback and scores

After the investigation, all participants filled in a 20-item self-report questionnaire

☞ potential benefits of regular quizzes

Results 1

Will SRS use contribute positively to overall learner attitudes, cognitive engagement and recall in language learners enrolled in in-sessional language courses, as measured by regular quizzes on use-of-English course content?:

Table 1: Average values on final test scores / 80 (SRS versus Paper)

	SRS Users (N = 63)	Paper Users (N = 57)	*p*
Average Score / 80	47.41	47.47	**0.48**

Results 2

Table 2: Mean values of overall differences between
All SRS quiz scores and All Paper quiz scores / 120
Average scores: 74.00 (SRS N = 63) and 70.81 (Paper N = 57)

Mann-Whitney Test **UOE All SRS / UOE ALL Paper**		**U_a = 1558**		
Mean for Ranks		z	$p_{(1)}$	$p_{(2)}$
Block A SRS	Block B Paper	1.25	0.1056	0.2113
N_a = 63	N_b = 57			
64.3	56.3			

Results 3

Table 3: Mean values of differences between
STR SRS quiz scores and STR Paper quiz scores / 60
Average scores: 38.65 (SRS N = 63) and 39.79 (Paper N = 57)

Mann-Whitney Test **UOE STR SRS / UOE STR Paper**		**U_a = 1957.5**		
Mean for Ranks		z	$p_{(1)}$	$p_{(2)}$
Block A SRS	Block B Paper	-0.85	0.1977	0.3953
N_a = 63	N_b = 57			
57.9	63.3			

Results 4

Table 4: Mean values of differences between
LTR SRS quiz scores and LTR Paper quiz scores / 60
Average scores: 35.35 (SRS N = 63) and 31.02 (Paper N = 57)

Mann-Whitney Test **UOE LTR SRS / UOE LTR Paper**		**U_a = 1270.5**		
Mean for Ranks		z	$p_{(1)}$	$p_{(2)}$
Block A SRS	Block B Paper	2.76	0.0029	0.0058
N_a = 63	N_b = 57			
68.8	51.3			

Implications

The success of this type of technology may depend on:

- The learners as individuals (Language identity and the L2 self?)
- Their culture
- Their specialist subject
- The educational culture of their country of origin
- The educational sub-culture of their institution
- The type of feedback they expect
- etc

Their enhanced long-term recall seems to suggest

- Peer interaction more meaningful
- More focused teacher / learner dialogue

In other words, strategies usually developed or implemented for quizzes

- Extrinsic motivation
- Superficial

are being cancelled out by the strategies implemented during SRS use, stimulate durable learning or cognitive schemata. (Middleton & C Midgley, 1997)

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Questions?

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