

# SCRABBLE YOURSELF TO SUCCESS: METHODS IN TEACHING TRANSCRIPTION

*Lukas Sönning*

University of Bamberg  
lukas.soenning@uni-bamberg.de

## ABSTRACT

This paper summarizes the results of a study that tested and evaluated two methods for teaching phonemic transcription to German EFL students at university level. The research design included a control group and two training groups receiving treatment with different methods: one based on the transcription of auditive stimuli, the other based on a phonemic adaption of the board game Scrabble®. The different training methods had significant effects on the improvement of transcription skills. A comparison of the training groups did not yield significant differences – the descriptive statistics, however, suggest that phoneme scrabble cannot be recommended as a uniform teaching method.

**Keywords:** phonemic transcription, evaluation of teaching methods, experimental study

## 1. INTRODUCTION

Courses including phonemic transcription are part of the obligatory requirements of linguistic curricula at university. Providing an unambiguous symbol-to-sound correspondence, transcription is particularly useful in the EFL context as English orthography and pronunciation diverge drastically. Its role in tertiary education is twofold. On the one hand, it is one of the traditional methods in pronunciation teaching [9, 11]; on the other, it is a subject in its own right, a skill that has to be learned and which requires extensive practice [8].

This paper summarizes the findings of a study concerned with the teaching of phonemic transcription to university students. Two activity-based methods of instruction were tested and evaluated: one is based on the transcription of auditive stimuli, the other employs a phonemic version of the classic board game Scrabble®. The objective was to examine the effect of these methods on students' transcription skills.

The experimental design included two trainings based on these methods. Conceptualized as

tutorials, they were provided to students enrolled in mandatory phonetics courses.

Two research questions were central: (1) Does participation in a tutorial improve transcription skills? (2) Do the methods differ in effect?

## 2. TEACHING TRANSCRIPTION

### 2.1. Sources of difficulties for students

Many students consider transcription a difficult task [10]. At the University of Bamberg, majoring in English requires passing the course 'English phonetics and phonology'. The final exam includes the transcription of a text of about 100 words. From a pedagogical perspective, a more profound understanding of students' difficulties is necessary.

Competent transcribers master three skills:

- (i) correct concept of the pronunciation of a word in isolation/context
- (ii) productive command of symbols
- (iii) knowledge of rules and regularities underlying pronunciation/transcription

Errors occurring in students' transcriptions can be categorized according to their origin (cf. table 1). The deductions of students with advanced transcription skills typically reflect their inter-language system and include transfer phenomena, developmental errors and mixing of the British and the American standard (hereafter RP and GA). Rules and regularities, though limited in scope, can be employed in instruction to erase systematic errors (e.g., the regular distribution of phonologically conditioned allomorphs). Less systematic errors are typically due to unknown lexemes or carelessness. In transcriptions of written texts, orthography-induced errors usually reflect grapheme-phoneme transfer or wrong inferences from ambiguous spellings. German learners are influenced by their L1 orthography, which has a predominantly phonemic basis [1].

**Table 1:** A typology of transcription errors of German learners of English: origin of errors and examples.

origin of error		examples (taken from the pretest and posttest)		
orthography		ambiguous spelling	<i>foot</i>	*/fu:t/
		grapheme-phoneme transfer	<i>cure</i>	*/cjuə/
(i) wrong concept of pronunciation	L1-L2 interference	final devoicing	<i>choose</i>	*/tʃu:s/
		vowel obscuration	<i>genetic</i>	*/dʒe'netɪk/
	developmental errors	overgeneralization [v]→[w]	<i>invasions</i>	*/ɪn'veɪzənz/
		overgeneralization voicing	<i>distinguish</i>	*/dɪs'tɪŋɡwɪʒ/
	GA-RP interference		<i>throw</i>	* <sup>RP</sup> /θrou/
(ii) command of phoneme inventory			<i>potter</i>	* <sup>RP</sup> /pɑ:tə/
			<i>wealth</i>	*/weɪlθ/
			<i>fork</i>	*/fɔ:rk/
(iii) unawareness of regularities		neutralized /i/	<i>react</i>	*/rɪ'ækt/
		weak forms	<i>war of nerves</i>	*/ɔ:f/

## 2.2. Motivation for the study

Two unfortunate facts motivated this study: (1) students' poor performance in phonetics courses and (2) the resulting unpopularity of these courses. Unconventional teaching methods can be a useful remedy for negative attitudes among students. This study was conducted to test whether they also effectively improve transcription skills.

## 2.3. Description of teaching methods

Two methods for teaching phonemic transcription were tested and evaluated: an audio-based method and one involving phonemic scrabble. The exercise format employed in the audio method included the transcription of recorded stimuli (e.g., words in isolation, cloze tests with weak form words, full sentences). Students' deductions were corrected and discussed in class. The use of auditory stimuli reduces orthography-induced errors and those originating from a wrong concept of a word's pronunciation. A central goal of this exercise format is to establish a psychological distance between written words and their pronunciation.

The second method involves a phonemic adaption of the board game Scrabble®. The rules are analogous to the original, but words are built with phonemes (and stress markers) instead of graphemes. Two versions (RP and GA) were designed. The values of the tiles reflect phoneme frequency [2] and didactic purposes (e.g., non-phonemic symbols [i u], difficult vowels and consonants have higher values). Phoneme scrabble reverses the typical transcription process. Learners depart from the passive role of transcribing stimuli to actively creating words from sounds. They abandon orthography and think in sounds. Besides its creative potential, two aspects are crucial to this

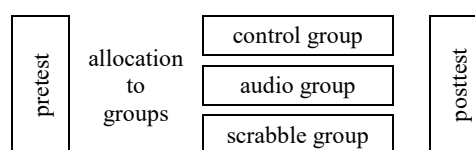
method: first, while trying to build words, students consult a pronunciation dictionary [12, 13] and actively explore L2 sound structures; second, it is genuinely communicative [4] – words on the board are discussed and corrected and students talk about sounds and symbols.

## 3. METHOD AND DATA

### 3.1. Research questions and research design

A pretest-posttest control group design was chosen for data collection [7]. The dependent variable, transcription ability, was measured prior to and after treatment (i.e., the training). The independent variable, teaching method, was experimentally manipulated and had three levels: a control group, which received no training, and two training groups differing in training method.

**Figure 1:** Research design.



### 3.2. Participants

The participants were undergraduates enrolled in identical phonetics courses taught by the same lecturer. The training was offered as an optional tutorial. As demand superseded capacities, a third training group was formed which could not be included in the evaluation (cf. 5.2.). Students not interested in the training automatically formed the control group. Due to experimental mortality, group sizes shrunk to 9 (control), 15 (audio) and 12 (scrabble) for the final evaluation.

### 3.3. Test

The dependent variable ‘transcription ability’ was measured with a test designed to give a valid measurement of this trait. It consists of two parts. Part one (20 min.) lists 60 words in isolation, which cover the complete phoneme inventory and target systematic errors (of German learners), such as final devoicing, overgeneralization, neutralized vowels [i u], difficult vowels and consonants, and GA-RP segmental differences. The total score for part one is the sum of six sub-variables: vowel accuracy, consonant accuracy, standard accuracy, avoidance of final devoicing, correct stress assignment and number of correct items (words). Part two (10 min.) consists of eight sentences which additionally serve to measure vowel obscuration as an aspect of connected speech. A total of 345 points are attainable.

### 3.4. Training concept

Each training consisted of five weekly sessions of 90 minutes (cf. table 2). In the first 45 minutes the treatment was identical for both groups and focussed on different aspects of transcription (including various tasks, such as discussion of cartoons, reading transcription and worksheets). In part two the groups received different treatments. Exercises for the audio group were designed in accordance with the aspect of transcription emphasized in part one. Students in the scrabble group played phoneme scrabble in groups of 2-4. These groups were uniformly RP or GA and had a pronunciation dictionary for reference.

**Table 2:** Training concept.

	min.	audio group	scrabble group
part I	45	visual input, reading transcription, 30 min. worksheet-based practice	
part II	45	auditory practice	phoneme scrabble

## 4. RESULTS

### 4.1. Descriptive analysis

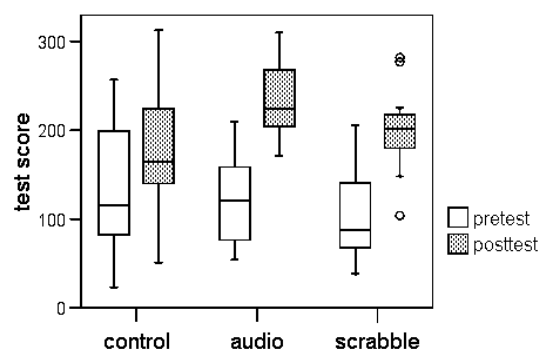
The statistics for the pretest and posttest scores are summarized in table 3. The overall range of pretest scores (from 7 to 74% of total) indicates a high heterogeneity among participants prior to treatment. The control group reached the highest mean ( $M = 134$ ) in the pretest, but also showed a high variation of scores ( $SD = 87$ ) compared to the

training groups (both  $SD = 51$ ). The boxplots in figure 2 illustrate the dispersion of scores and the median as a measure of central tendency.

**Table 3:** Summary of descriptive statistics.

group	test	<i>n</i>	<i>M</i>	<i>SD</i>	<i>min</i>	<i>max</i>
control	pretest	9	134	87	23	257
	posttest	9	178	82	51	313
audio	pretest	15	119	51	54	210
	posttest	15	232	42	171	310
scrabble	pretest	12	104	51	38	206
	posttest	12	201	49	104	282

**Figure 2:** Boxplots of pretest and posttest scores.



### 4.2. Inferential analysis

The very notion of learning implies growth or change – a pretest-posttest design is thus critical for a quantitative evaluation of teaching methods. Measuring ‘learning’ in terms of gain scores (posttest – pretest) neglects the ceiling effect which occurs for high pretest scores (i.e., a significant negative correlation between pretest and gain scores,  $r = -.43, p < .01$ ). An analysis of covariance is the preferred test for pretest-posttest designs [5], as it includes the pretest score as a second independent variable and filters out its effect on the gain score. This parametric test is based on certain assumptions [6], which are not met by the control group data. Comparisons including this group therefore resorted to the non-parametric Mann-Whitney test, which was carried out on gain scores and relative scores (calculated to filter out the ceiling effect bias).

The training groups showed significantly higher gain scores and percent scores than the control group. An ANCOVA on the gain scores of the training groups showed no significant effect of the teaching method after controlling for the effect of the covariate, i.e. pretest score,  $F(1, 26) = 2.62, p > .05, partial \eta^2 = .10$ . The adjusted gain score means are 116 (audio) and 94 (scrabble).

## 5. DISCUSSION

### 5.1. Discussion of results

In summary, all groups scored significantly higher on the posttest than on the pretest, indicating that during the five-week time span transcription skills increased regardless of the experimental manipulation. The two training groups, however, showed a significantly higher increase in ability than the control group. This indicates that the trainings offered were effective. A comparison of the two training groups demonstrated that they did not differ significantly regarding the increase in transcription ability, suggesting that the two methods were equivalent in terms of efficiency.

The correlation of pretest and gain scores was weaker in the control group ( $r = -.34$ ) than in the training groups (audio  $r = -.60$ , scrabble  $r = -.48$ ). The exclusion of one outlier from the control group even yields a positive relationship between pretest and gain scores. This is striking since the acquisition of basic principles, such as the correct reproduction of symbols, can boost participants with a low pretest score. Subjects with a high pretest score, however, need to show progress in more complex areas, e.g. vowel obscuration, non-phonemic symbols and correct transcription of complete items. This draws attention to an interesting aspect: students with more advanced transcription skills seem to profit more from seminar instruction than students with poor skills. These tentative findings suggest that enrichment activities are particularly beneficial to weaker students and should be offered early in the term as they balance out the heterogeneity of skills.

A comparison of the standard deviation (*SD*) of the groups' pre- and posttest scores shows that the audio method was more successful in reducing the dispersion of scores. This indicates that phoneme scrabble was an effective method for some but inadequate for others. This finding can be connected to comments made in an evaluation carried out at the end of the tutorials. They indicate polarized opinions about this method. Non-voluntary 'play' inevitably results in a lack of motivation, possibly refusal. However, play can generate flow experiences [3] which lead to an intense occupation with phonemic symbols and the sound structure of the English language.

A clear advantage of the audio method is its comprehensive effect – most participants profited from this method. The positive evaluation suggests

good applicability in university classes. In contrast, phoneme scrabble cannot be recommended as a teaching method. It should be applied as a voluntary activity, e.g. in station learning settings or for autonomous learners who enjoy playing it.

### 5.2. Discussion of research design

The implementation of the research design shows two methodological weaknesses. First, due to non-randomized allocation, group threats reduce the internal validity; there is a volunteer (training groups) vs. non-volunteer (control group) bias in the data. This bias could have been eliminated by assigning 'surplus' volunteers to the control group. To guarantee fairness, a third training could have been provided after the posttest. Second, the effect of the trainings might be solely attributable to part one, with part two (audio and scrabble) making no contribution to learning. The data collected does not allow conclusions on this issue. An optimal strategy would have been to include a fourth group receiving a training consisting of part one only.

## 6. REFERENCES

- [1] Coutsougera, P. 2007. The impact of orthography on the acquisition of L2 phonology: Inferring the wrong phonology from print. *Proc. PTLC 2007*, London. [www.phon.ucl.ac.uk/ptlc/proceedings/ptlcpaper\\_36e.pdf](http://www.phon.ucl.ac.uk/ptlc/proceedings/ptlcpaper_36e.pdf)
- [2] Crystal, D. 2003. *The Cambridge encyclopedia of the English language*. Cambridge: CUP.
- [3] Csikszentmihalyi, M. 1990. *Flow: The psychology of optimal experience*. New York: Harper and Row.
- [4] Dalton, C., Seidlhofer, B. 2001. *Pronunciation*. Oxford: Oxford University Press.
- [5] Dimitrov, D.M., Rumrill, P.D. 2003. Pretest-posttest designs and measurement of change. *Work* 20, 159-165.
- [6] Field, A. 2009. *Discovering statistics using SPSS*. London: Sage.
- [7] Field, A., Hole, G. 2003. *How to design and report experiments*. London: Sage.
- [8] García Lecumberri, M., Cooke, M., Maidment, J. 2001. Automatic feedback on phonemic transcription. *Proc. PTLC 2001*, London. 15-18.
- [9] Lintunen, P. 2005. Phonemic transcription and its effect on learning. *Proc. PTLC 2005*, London. [www.ucl.ac.uk/psychlangsci/ptlc/proceedings\\_2005/ptlcp30](http://www.ucl.ac.uk/psychlangsci/ptlc/proceedings_2005/ptlcp30)
- [10] Moran, M.J., Fitch, J.L. 2001. Phonological awareness skills of university students: Implications for teaching phonetics. *Contemporary issues in communication science and disorders* 28, 85-90.
- [11] Roach, P. 2009. *English phonetics and phonology. A practical course*. Cambridge: CUP
- [12] Roach, P., Hartman, J., Setter, J. 2006. *Cambridge English pronouncing dictionary*. Cambridge: CUP.
- [13] Wells, J.C. 2008. *Longman pronunciation dictionary*. Essex: Pearson.