Feeling confident about transcription (?): A student survey concerning numbers of repetitions and new voices.

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1 Introduction. It is obvious that transcription skills are crucially important for students of phonetics. They will be assessed on transcription, possibly several times during their studies, and it is therefore essential that they perform well and achieve passing grades. Perhaps even more importantly, students will often be expected to use transcription as part of their jobs once they have graduated. Students of general linguistics may go on to use their skills to investigate new languages or to propose new theories of phonetics and phonology. Students of English as a Foreign Language may need to transcribe their own students' speech to give practical advice about pronunciation. And students of speech and language therapy will need to use transcriptions of their clients' speech to make decisions about diagnosis and intervention.

Clearly then transcription skills are crucially important for students both during their course and after graduation. However, we also hear that phonetics and phonology are difficult subjects for students. The subjects are complex in that they require development of both theoretical knowledge and practical skills, and must also be transferred to whatever domain the student will later work in. Considering the difficulty inherent in the subject, it is important that lecturers have a good understanding of learning and teaching methodology in general, and particularly in their own subject, which comes with its own unique challenges. Whilst there is clearly a strong interest in teaching and learning in the phonetics community (hence PTLC's existence) there are still many areas of the field that need investigation.

The work here is part of a larger, ongoing study, investigating the skills and processes involved in transcription. Here, the role repetitions and voices play is investigated. The number of repetitions that students are exposed to is important for several reasons. We need to investigate if the number of repetitions affects transcription accuracy, and can then use these results to standardise practice across institutions, and to make recommendations to students for study and future work. The role of the voice heard for transcription is also worthy of consideration. Whilst we know that normal speech processing and word recognition is assisted by hearing a known voice (e.g. Goldinger, 1998), we do not know if this is the case for material to be transcribed (as different skills are involved in the two activities). In addition we do not know how students trained in a small number of voices can transfer their skills to new speakers. The work presented is a student survey dealing with the effects of number of repetitions and novel voices.

2. Method
2.1 Participants. Participants were 33 students in the second year of the BSc in Speech and Language Therapy at City University London. In the first year all students had passed modules in phonetics and phonology, with assessment components including phonemic transcription, substitutions, nonsense words, parametric diagrams, mid-saggital sections and theoretical essays. In their second year the focus moves partly to prosodic description, but also to clinical uses of phonetics and phonology. At the time of the survey students were preparing for their first class test of the year, and were working

towards their final phonetics viva in five months time. The group is all female (generally reflecting the student population in the department) and of mixed ability.

2.2 Questionnaire administration. Survey questionnaires were handed out in class. The purpose was explained verbally and in writing, and students filled in consent forms allowing their responses to be used for research. Students filled in the questionnaires anonymously and left them behind at the end of class if they wanted to participate. 33 of the 35 students in class responded (one did not complete some questions). The questionnaire consisted of eight multiple choice questions, focusing largely on perceptions of transcription ability in relation to numbers of repetitions, and novelty of voices. There was also a free text section to allow students to make further comments. The responses to each question, and a discussion of the results are given below.

3. Results and Discussion

1. How would you rate your competence in transcription?
12% of students said they were very competent, 64% felt fairly competent, 21% said they were not very competent and 3% (1 student) that they were not at all competent.
It is interesting to see that more than 75% of the students rate themselves as 'very' or 'fairly' competent in transcription. This is encouraging as we often hear and believe that students find phonetics to be a particularly challenging subject. However, these students are in their second year, so have been successful enough with the subject to pass, and progress into more advanced study. It is possible that a similar question asked of first year students would highlight anxieties and difficulties with the subject.

2. Do you feel you produce better transcriptions when you hear more repetitions?
88% of students said yes. 12% said no.
3. Do you ever feel you would have produced a better transcription if you'd heard fewer repetitions (because you later change a previously correct answer)?
76% said no and 18% said yes. 1 student (3%) wrote in a category of 'don't know' and 1 (3%) failed to answer. From these two questions it appears that students think they improve in accuracy when they hear more repetitions of an item, which matches experimental results of Knight (submitted). The majority do not recognise the experience of changing correct answers when they hear an increased number of repetitions. However, one student wrote her own category of 'don't know', indicating that she has not benefited from the reflective exercises in class which are aimed at encouraging students to work out why and how their answer deviates from the model answer.

4. How many repetitions of nonsense words would you prefer to hear?
5. How many repetitions of sentences for phonemic transcription would you prefer?

Response	% Nonsense	% Sentences
Fewer than 4	24	42
4-6	61	49
7-9	12	6
10-12	0	0
12+	0	0
Missing	3	3

There is a slight tendency for students to want more repetitions for nonsense words. However, for both types of transcription most think that 4-6 repetitions is enough, and no one suggests that any more than 7-9 repetitions should be provided. In class students

are typically exposed to eight repetitions of each so may be basing their decision on what is familiar. However, Knight (submitted) found that for nonsense words in new voices accuracy improved between 6 and 10 repetitions. The responses to these questions are somewhat at odds with the responses to question 2 where students indicate that they improve with more repetitions. This suggests that students make a distinction between 'enough' and 'too many' repetitions. In other words they may not think that they get worse with more repetitions, but seem to appreciate that excessive repetition will not improve their performance.

6. How easy would it be to transcribe a nonsense word in an unfamiliar voice?
7. How easy would it be to phonemically transcribe a sentence in an unfamiliar voice?

Response	% Nonsense words	% Sentences
Very easy	0	3
Fairly easy	24	58
Not very easy	64	39
Not at all easy	12	0

Responses indicate that students do not think it easy transcribe new voices. The majority of students indicate that novel voices will be particularly problematic for nonsense word transcription. This is likely to be because phonemic transcription allows them to mediate transcription through their mental lexicon and knowledge of English connected speech processes, and therefore bypass the effect of voice (although as Howard and Heselwood (2002: 383) point out, in an ideal world 'which words a speaker is pronouncing should have no bearing on the choice of symbols' used for transcription). Nonsense words cannot be transcribed in this way. Students perhaps also perceive more variability between different productions of nonsense words than sentences. The responses to this question perhaps highlight a potential problem in work situations. It might suggest that students, and perhaps even new graduates, will not feel confident in transcribing a new voice at work, particularly where a narrower transcription is required.

8. Would you prefer to have more tutors for phonetics so that you could be exposed to more voices?
70% of students said no, 30% said yes. Despite the perceived difficulty of transcribing new voices, the majority of students did not want to be exposed to more tutors and more voices for phonetics. This somewhat contradictory result possibly suggests that students do not perceive any correlation between the number of voices they hear in class and the ease with which they might transcribe new voices. It might also reflect an unwillingness to change from a familiar situation where the same tutor has taught phonetics for two years, or a belief that their abilities cannot be changed (Mangels et al. 2006). As a result of this finding we are currently exploring ways to use more client videos and audio recordings so that students can be exposed to more voices and real clinical data in the same familiar environment that they are used to.

9. Are there any other factors that affect your ability to transcribe?
   a) Just need enough time to answer. Sometimes too many repetitions can be distracting (8-10 best)
   b) I think 10 repetitions is a good amount to gather an answer and have the opportunity to check it is correct
   a) Being able to see the person speaking
   b) I like the podcasts but would prefer a DVD so I can actually see as well as hear

a) Lack of time to revise them!
b) Practice!

There were six free text comments out of 33 completed questionnaires, a rate of 18%. Whilst this number is not particularly high, the comments fall into three distinct pairs. The first pair of comments seems to be at odds with the group data, as students indicate that around ten repetitions are preferred. One student suggests that she does get distracted by too many repetitions, whilst the other says that some of the repetitions can be used to check the transcription. It is possible that these students are the most reflective of the group and that their views are representative of the factors that really affect students' transcription accuracy. On the other hand it is possible that they just feel strongly about this issue without being necessarily representative of the group as a whole.

The second pair of comments relates to the importance of visual cues. Students are constantly reminded in class that many sounds are identified more easily if visual information is used in addition to the acoustic signal. Student comments may reflect this practice. The comments may also reflect the students' experience using different learning resources. A new initiative for this course (see Knight, in prep) has been the creation of podcasts of exercises tailored to the students' upcoming assessments. As one student notes, the podcasts are useful for phonetics, but their crucial problem is that the speaker's face cannot be seen, so visual cues are not available.

The final two comments are interesting because they show that these students understand their own role in the process of transcription. They indicate that the time taking to revise (presumably this refers to revision of symbols and sound correspondences) and practice makes a difference to their accuracy. These comments are particularly interesting as the rest of the questionnaire had focused on how attributes of the presentation can make a difference to accuracy, so it is encouraging to see that some students acknowledge their own role in improving their transcriptions.

4 Conclusion. The perceptions collected in the survey are useful because they help lecturers to understand what the important issues are for students, and what they might find helpful to improve their confidence and competence in transcription. Students recognise that the number of repetitions affect their accuracy. This, combined with the results of Knight (submitted), suggests we may need some standardisation across institutions, and that we can make useful recommendations when teaching transcription. Students are concerned about transcribing new voices. As teachers we should provide opportunities for students to work with different voices, but also investigate the degree to which the novelty of the voice really impacts transcription accuracy.

5 References
Goldinger, S (1998). Echoes of echoes? An episodic theory of lexical access. *Psychological Review, 105(2)*, 251-279.

Howard, S. & Heselwood, B. (2002). Learning and teaching phonetic transcription for clinical purposes. *Clinical linguistics and phonetics, 16 (5)*, 371- 401.

Knight (in prep) Sounds for study: Speech and language therapy students' use and perception of exercise podcasts for phonetics . For submission to *Medical Teacher*.

Knight (submitted) Transcribing nonsense words: The effect of numbers of repetitions and voices. Submitted to *Clinical Linguistics and Phonetics.*

Mangels, J., Butterfield, B., Lamb, J., Good, C & Dweck, C. (2006) Why do beliefs about intelligence influence learning success? A social cognitive neuroscience model. *Social Cognitive and Affective Neuroscience, 1(2)*, 75-86.