

## **Students' views and experiences of the training and use of phonetic transcription in speech and language therapy – the Irish perspective**

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### **Abstract**

Phonetic transcription is an essential skill for a practicing speech and language therapist (SLT) required during the assessment, diagnosis and management of clients with speech difficulties. It is vital that appropriate training is received by student SLTs to ensure that they carry out phonetic transcription accurately and reliably once out in the workplace. This study investigates the views and experiences of final year SLT students regarding the training in phonetic transcription they received in **university**, with the aim to identify what poses difficulties for them and what could be done to enhance their learning. Responses from 40 participants representing one cohort of SLT students, graduates of a particular year, were collected using an online questionnaire based, with some changes, on Knight et al (2018). The majority of the respondents consider phonetic transcription an important professional skill and plan on maintaining it after graduating. Learning phonetic transcription was easy/quite easy for 57% of the respondents, however, the confidence in transcription skills was rather low: 70% of them reported not being confident and fully equipped to enter the

workforce with their transcription skills. The main difficulties were associated with narrow (impressionistic) transcription and transcription of disordered speech. 58% of the respondents found **the** teaching environment suitable; however, a recurring theme is the need for small-group tutorials during which the lecturers could provide feedback to individual students more efficiently. Participants' responses suggest that more clinically relevant transcription practice of disordered speech, the opportunity to refresh and apply phonetic transcription skills throughout the four-year curriculum and smaller group teaching would benefit their learning and enhance their confidence using transcription on placements and in **the** workforce.

**Keywords:**

phonetic transcription; SLT-in-training; phonetic training; student perspective

Word count: 6756 including references

## **Introduction**

### ***Transcription***

Phonetic transcription is the representation of speech sounds using phonetic symbols. The International Phonetic Association<sup>1</sup> provides the scientific community with a widely used notational standard, the International Phonetic Alphabet – the IPA (The International Phonetic Association, 1999). The Extensions to the IPA for the Transcription of Disordered Speech - ExtIPA (Ball, Howard, & Miller, 2017) and symbols for the transcription of voice quality - VoQS (Ball, Esling, & Dickson, 2017) are also available.

Phonetic transcription is a core skill for practicing speech and language therapists (SLTs) worldwide which allows them to assess disordered speech patterns and identify the nature of any delay/disorder that may be present (Enderby, et al., 2009; Howard & Heselwood, 2002; Knight, Bandali, Woodhead, & Vansadia, 2018). Accurate phonetic transcription based on a careful auditory analysis of speech and following the conventions of the IPA is the starting point for diagnosis and treatment of many clients. Phonetic transcription is a skill that many SLTs use in clinical practice: 95.2% of SLT participants in a recent study by Nelson, Mok, and Ttofari Eecen (2020) reported that phonetic transcription was needed for their current role. According to the RCSLT Good Practice Guidelines for Transcription of Children’s Speech Samples in Clinical Practice and Research, phonetic transcription is necessary for establishing the nature and extent of a client’s speech difficulties, for differential diagnosis and for choosing a service delivery model. It is also necessary when selecting an intervention approach to use with a client and for measuring effectiveness or change in a client’s speech over time (Child Speech Disorder Research

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<sup>1</sup> [www.internationalphoneticassociation.org](http://www.internationalphoneticassociation.org)

Network, 2017). The choice of the type of phonetic transcription (systematic or impressionistic) and the level of detail in the representation of phonetic variation (broad vs. narrow transcription) depends on the client group and specific aims of the auditory analysis (e.g., Grunwell, 1987; Heselwood, 2013; Laver, 1994). While broad systematic (phonemic) transcription might be sufficient when dealing with phonological disorders in children, a more detailed narrow impressionistic transcription is often required to accurately reflect productions of individuals with cleft palate (Harding & Grunwell, 1996) or hearing impairment (Teoh & Chin, 2009) or of clients with diverse linguistic backgrounds (Ball, Müller, Rutter, & Klopfenstein, 2009; McLeod, et al., 2017). It is therefore essential that student SLTs receive appropriate training to acquire phonetic transcription skills and are able to confidently use them in the clinic. Such training would include not only learning the symbols and diacritics of the IPA, the ExtIPA and VoQS but also developing the ability to use them correctly and appropriately in systematic and impressionistic transcription. It goes without saying that phonetic transcription is the result of a careful auditory analysis of speech sounds based on thorough grounding in and understanding of the principles of speech production.

### ***The views of practising SLTs on transcription***

The views of practising SLTs of the training, use and maintenance of phonetic transcription have been explored in a recent large-scale study (759 participants) conducted in the UK by Knight et al. (2018) and a smaller study (84 participants) in Australia (Nelson et al., 2020), see also references therein. A recent small-scale study (n = 18) used the questionnaire in Knight et al. (2018), with permission, to explore the views on phonetic transcription of SLTs in the Republic of Ireland (Delaney & Yanushevskaya, [accepted]). The findings of these studies, similar to the findings in earlier survey-based studies, e.g. Skwarcewicz (2014), suggest that while learning transcription may be difficult, clinicians feel equipped to

undertake transcription upon completion of training. The majority of SLTs (75% -95%) require transcription for their role and use it for assessment, diagnosis and formulating and monitoring therapy goals. The use of broad (phonemic) transcription is more common, the use of narrow **impressionistic** transcription is limited, often due to the lack of confidence and attrition of transcription skills acquired during **university** training, e.g. a survey in Windsor (2011). **Broad** transcription may also be preferred in practice by clinicians due to the time pressure when the case load is heavy, or when broad phonemic transcription is deemed sufficient for assessment and intervention planning when working with a specific client group. Thus, the participants in Nelson et al. (2020) reported using narrow transcription more often when recording the speech of children with childhood apraxia of speech and craniofacial impairment than when transcribing the speech of children who have SSD.

Transcription skills take time to acquire and require upkeep. Previous studies (Skwarcewicz, 2014) suggest that developing confidence in transcription depends largely on the amount of practice rather than the number of years **of** clinical experience. Participants of the three studies, Knight et al. (2018), Nelson et al. (2020), (Delaney & Yanushevskaya, [accepted]) expressed interest in further training in phonetic transcription, e.g. on the use of diacritics in narrow transcription or on the transcription of suprasegmentals; however, some participants did not feel supported in their workplace to maintain their transcription skills and many clinicians reported never attending refresher training in transcription. The strategies they use to maintain transcription skills include revising their **university** course notes, self-practice or informal practice with colleagues and using textbooks or web-based resources.

The findings of these studies have implications for the university training of SLTs and for continuous professional development courses for practising clinicians. Acquiring the skill of phonetic transcription is important for a student SLT if they wish to become a competent

clinician. As pointed out in Knight et al. (2018), the ability to transcribe accurately begins in the training SLTs received as students. The section below briefly summarizes what is known about teaching and learning phonetic transcription in SLT.

### *Teaching and learning phonetic transcription in SLT*

Learning to transcribe phonetically is often challenging for students (Howard & Heselwood, 2002; Knight, 2010; Knight, et al., 2018; Titterington & Bates, 2018) although factors such as increased phonological awareness (Robinson, Mahurin, Richards, & Justus, 2011; Spencer, Schuele, Guillot, & Lee, 2008) or musical aptitude (Beck, Docherty, Heselwood, House, & Howard, 1999) have been suggested as contributing to an enhanced ability to acquire transcription skills.

During the process of teaching and learning phonetic transcription, students require many hours of ear training and transcription practice of both typical and disordered speech, with support and guidance (Howard & Heselwood, 2002; Knight, 2010). Students must learn to listen to speech sounds analytically, disregarding the representations of conventional orthography (what Howard and Heselwood (2002, p. 389) call ‘escape from the orthographic mindset’). They must learn the symbols and diacritics of the IPA and acquire a mental representation of the sound behind each symbol; they must learn to transcribe unfamiliar sounds in rather fine detail with the appropriate symbols, and choosing the appropriate type of transcription. As pointed out by Howard and Heselwood (2002), to be able to accurately represent disordered speech patterns, SLT students are expected to have more advanced skills in narrow impressionistic transcription compared, for example, to their peers who study linguistics as undergraduates. Transcribing vowels and using narrow impressionistic transcription can be particularly challenging (Titterington & Bates, 2018).

The issues around teaching and learning phonetic transcription of disordered speech as well as the problems the students are likely to encounter while learning how to transcribe

have been discussed in detail in Howard and Heselwood (2002). Phonetic training typically combines the theory with production exercises and ear training along with transcription practice. The students should be given an opportunity to actively participate and receive feedback on their performance. It is generally agreed that group sizes should be small for practical sessions to be efficient (Beck et al., 1999; Howard & Heselwood, 2002). In practice, however, with over thirty students in a class, small group teaching can be difficult to achieve.

Phonetic teaching and learning require consistent practice outside of the classroom; the student self-study needs to be structured and supported, and the students' progress monitored by the lecturers. Computer and web-based teaching aids have been reported as a means to assist the students with acquiring skills in phonetic transcription outside of scheduled lectures (Knight, 2010; Titterington & Bates, 2018). These resources need to be used in a structured way to provide support for the students. This kind of structured approach was used by Titterington and Bates (2018) who explored the teaching value of online independent phonetic transcription practice for a group of 1<sup>st</sup> year SLT students. The students were given weekly self-study activities using webfont (Bates, Matthews, & Eagles, n.d.), an online self-study programme developed to facilitate the learning and maintenance of phonetic transcription skills, and the set of quizzes of the 'Ulster Set' designed to develop students' transcription of the Ulster vowels [Titterington, unpublished]. Students' feedback about experience with online learning was collected using a questionnaire. The results suggest that the online resources supported students' learning, however, the level of engagement with each of them varied. The authors conclude that the learning activities must be carefully managed and constructively aligned to assessment to ensure effective engagement. Knight (2010) looked into the benefits of online podcasts provided weekly to a class of student SLTs learning phonetic transcription. The majority of the students (76%) reported that the podcasts

helped them achieve a higher result in their phonetic transcription tests by aiding in their revision.

An important consideration in teaching phonetics to SLT-in-training is the relevance of the subject matter to their work in **the** clinic, as the way to bridge the theory-practice gap (e.g. Windsor, 2011). Transcribing disordered speech can be very challenging for the students; Howard and Heselwood (2002) suggest carefully selecting atypical data that **are** sufficiently interesting to the students and conducive to their reflecting on their learning but not too complex as to overwhelm them. They also point out the importance of supporting teaching and learning of phonetic transcription by integrating it into the overall curriculum, when it is revisited and refined across modules to make its relevance clear to the growing clinicians as they progress in their training.

Training in phonetic analysis and transcription is a core element of the SLT curriculum. It is assumed that learning phonetic transcription can be difficult for students, and, based on the literature, various factors may have an impact on their learning experience, such as class size, hours of dedicated learning, availability of online resources, structured support outside the classroom etc. It is important, we feel, to seek information about the experience of learning phonetics from the students themselves. To our knowledge, there has been no research to explore the views and opinions of student SLTs regarding the training of phonetic transcription they received, or are currently receiving, in **the Republic of** Ireland. This study aims to explore SLT students' learning experiences of phonetic transcription in universities in **the Republic of** Ireland and to get an insight into what they may perceive as impeding or facilitating their learning.

### ***Aims and objectives***

The aim of this study was to gather information about the views of final year student SLTs on the training in phonetic transcription they received, how confident they felt using this skill on



placements and whether they felt fully equipped to use transcription in the workforce. The study collected students' opinions regarding the teaching practice of phonetic transcription, the barriers/supports evident in this process and the changes that could be made to enhance their learning. An online questionnaire based on Knight et al. (2018) was distributed to final year SLTs-in-training in three **universities in the Republic of Ireland**. Although this study is limited to one cohort of final year SLT students, it could, we hope, provide educators with an insight of what currently works well in phonetic transcription training and what could be changed to enhance student learning.

## **Materials and methods**

### ***Data collection tool***

The questionnaire for this study was based on Knight et al. (2018), with permission. The original questionnaire was aimed at practising SLTs, so some modifications were made in order to suit the student participants, and the final version consisted of 29 closed multiple-choice questions and seven open response questions (see Appendix). We included questions to further investigate students' learning experiences of phonetic transcription, to determine their current level of confidence in using transcription and to identify any suggestions they may have to enhance their learning.

The questionnaire was informally piloted by the first author with peers, none of whom had links to speech and language therapy, to ensure all questions were easily understood and no mistakes were evident.

### ***Study design***

A mixed methodology design was used in this study, i.e. both quantitative and qualitative data were collected. This survey includes both closed- and open-ended questions. The open-ended questions give participants the opportunity to voice their own opinions by creating

their own answers, in comparison to the multiple choice closed-ended questions where the answers are provided for them. By including both types of questions, the rigour of the survey is enhanced.

### ***Ethical considerations***

Ethical approval was obtained for this study from the College of Medicine, Nursing and Health Sciences Research Ethics Committee (CMNHS REC) at National University of Ireland Galway (NUIG). The questionnaire was administered online using Microsoft Forms and the participants were not able to proceed with the survey without giving consent.

Participants received an information sheet prior to the survey, which assured them that any information or data they provided in the questionnaire would be completely anonymous and that the university they attend would not be named. Each participant was automatically assigned a numerical ID code by the survey software (Microsoft Forms); no personal identifying information was collected or stored. All participants gave their consent for the responses they included in the free text boxes in the questionnaire to be anonymously quoted.

### ***Participants and data collection***

The participants in this study were final year SLT students from the three universities in the Republic of Ireland that have Speech and Language Therapy as an undergraduate degree (BSc Hons). The questionnaire was distributed to all of these final year students via gatekeepers (Heads of Discipline/Department) through a link to Microsoft Forms.

Participants were informed of the aims of the questionnaire and decided to take part in this study voluntarily. There are approximately 25 students in each SLT class so this study aimed to have 75 participants. The questionnaire went live for two months; reminders were issued during that time through the gatekeepers to ensure that the desired sample size was achieved.

As all three **universities** that have Speech and Language Therapy as an undergraduate degree in **the Republic of Ireland** were included in this study, the results are expected to be representative of final year student SLTs, albeit of only one cohort of graduates. It is worth noting that the **universities** in question may have different approaches and time allocated to teaching and learning phonetic transcription in their curriculum which may impact the findings of this study.

### *Data analysis*

The questionnaire received a total of 40 responses from SLT students. The number of responses was not balanced across the three **universities**. Not all questions were answered by all participants and so the total number of responses is sometimes lower than that of the actual sample size. Due to the relatively small sample size obtained, all questionnaires received, both complete and incomplete, were analysed. Conversely, for open-ended questions participants may have covered more than one subject per response and so the total number of responses is sometimes larger than that of the sample size.

Descriptive statistics (number of answers and percentages relative to the total number of participants) were calculated for the closed-ended questions. For the open-ended questions, responses were coded using content analysis (Graneheim & Lundman, 2004).

## **Results**

### *Demographic information (Questions 6-8)*

The majority of the respondents were native speakers of English (90%, 36/40); four participants (10%) did not have English as their first language. **All of them (40/40, 100%)** were within the age range of 20-25 years at the time they completed the survey.

### *Phonetic transcription training (Questions 9-23)*

Overall, the majority of participants (38/40, 95%) had no experience with phonetic transcription prior to commencing their Speech and Language Therapy degree. **The majority of participants (38/40, 95%)** consider phonetic transcription to be an important skill for SLTs to have. The number of semesters spent studying phonetic transcription over the four years varied among participants, with answers ranging from one to five semesters. The most frequent responses were two semesters (15/40, 37.5% of participants) and three semesters (12/40, 30% of participants). **The time allocated to studying phonetic transcription over the four years was deemed sufficient by 49% (19/39) of participants,** and 51% (20/39) considered it insufficient.

**All participants (40/40, 100%)** reported being familiar with the IPA, 26/40 (65%) participants are familiar with the ExtIPA and 5/40 (12.5%) are familiar with the VoQS. The majority of participants (24/40, 60%) indicated that they were confident or very confident when using the IPA symbols in transcription; 15/40 (37%) were somewhat confident or slightly confident. The level of confidence was lower for the ExtIPA symbols: 18/37 (48%) participants reported feeling ‘not at all confident’ in using the ExtIPA in transcription, with 19/37 (52%) feeling somewhat or slightly confident. Finally, the majority of respondents (32/40, 80%) reported feeling ‘not at all confident’ in using the VoQS in transcription, with only 5/40 (12.5%) feeling somewhat/slightly confident. The fact that some of the students are less familiar with the ExtIPA and VoQS is likely to be the result of the differences in curricula across the **universities.**

Participants’ responses to the question ‘How easy did you find it to learn phonetic transcription on your course?’ are shown in *Figure 1*. The majority of participants (23/40, 57%) found learning phonetic transcription easy or quite easy; 12/40 (30%) students found it quite difficult, and 5/40 (12%) found it difficult or very difficult.

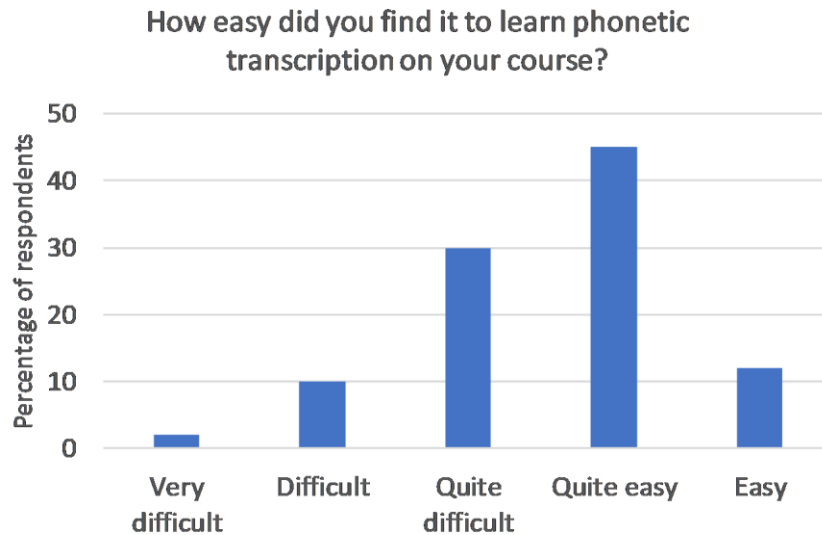


Figure 1: Participants' responses to the question 'How easy did you find it to learn phonetic transcription on your course?'

The majority of the participants (23/40; 58%) were of the opinion that the teaching environment was suitable for learning phonetic transcription; 42% of the participants did not consider it suitable. A free-text response option was given to explain what they think would have worked better. The most frequently given response (13/47, 28%) was related to the amount of practice and practical work during lectures and how that needed to be increased. Another issue that came up among 8/47 (17%) responses was related to how smaller class sizes would have facilitated learning.

*'More practical work was needed in this module. You can't learn how to transcribe by looking at a powerpoint. Dividing into small groups and taking turn transcribing in each lecture would've been beneficial.'*

*'Smaller class size and more corrected practice. Practicing at home does not tell me if I'm correctly transcribing'; 'More feedback on transcriptions that we did'; 'we needed more time to practice and get feedback from the teacher. Most of the time I feel we just watched her [the lecturer] do it'.*

The majority of **respondents** (38/40, 95%) reported that time allocated to teaching/learning transcription of normal and disordered speech was not equal; 36/40 (90% of participants) responded that more time was spent on normal speech. 29/40 (72%) students reported that time spent learning broad and narrow transcription was insufficient; 30/40 (75%) participants found the time spent teaching narrow transcription insufficient. Learning broad transcription was easier than learning narrow transcription for 100% of respondents.

### ***Using transcription on placements (Questions 23-27)***

The majority of students (21/40, 52.5%) had the opportunity to carry out phonetic transcription on two placements during their training; 11/40 (27.5%) students used phonetic transcription on only one placement and 7/40 (17.5%) used it on three or more placements. While on placements, students predominantly used broad transcription (25/40, 63% of respondents); only 12/40 (30%) students had the opportunity to administer both broad and narrow transcription.

Figure 2 shows the participants' responses to the question 'How well equipped did you feel to carry out phonetic transcription of disordered speech on placement?'

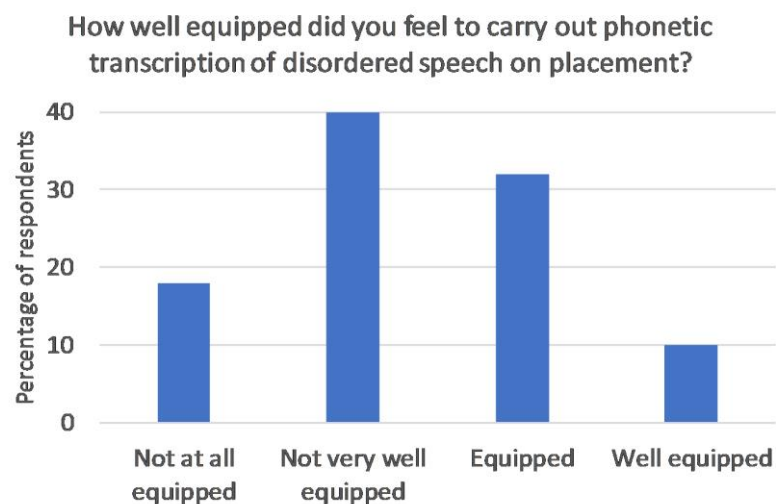


Figure 2. Participants' responses to the question 'How well equipped did you feel to carry out phonetic transcription of disordered speech on placement?'

The majority of the respondents (23/40, 58%) reported feeling not very well **equipped or** not at all equipped to carry out transcription of disordered speech on placement, 17/40 (42%) students felt equipped/well equipped to do it. Only a minority of respondents (10/40, 25%) reported having supports made available to them while on placement with regards to phonetic transcription. Examples of such supports included practice educators simultaneously transcribing with students to compare completed transcriptions, being able to use the IPA chart during sessions and being given the opportunity to revise prior to sessions where phonetic transcription was needed.

***Additional resources (Questions 28-30)***

**As indicated by 22/40 (55%) of participants**, additional resources for learning phonetics were provided by the lecturers outside of lectures. Websites were the most common extra resources made available to students (17/28, 61% responses). Other resources mentioned in the remainder of responses (11/28, 39%) included YouTube videos, phonetics books/articles, recordings and interactive IPA charts. **The majority of the respondents (21/29, 72%)** indicated that the resources made available to them benefited their learning.

***Confidence in using phonetic transcription and maintenance plan (Questions 31-33)***

The majority of the respondents (28/40, 70%) reported that they did not feel confident and fully equipped to enter the workforce with their current transcription skills. **Some students (14/43, 33%)** would appreciate an increase in exposure to disordered speech to help them feel more confident and enhance their transcription skills:

*'More practice with disordered speech. I feel as though anyone could handle normal speech if they had the IPA with them but disordered speech can be so complex and many children who have an ID along with disordered speech will not have the attention span to sit*

*for multiple assessments so you need to know how to transcribe so you can get it done in one session. More examples of disordered speech and the transcriptions that go along with them to review would be very helpful. If I had more experience transcribing disordered speech, I'd feel more confident'.*

Another common theme (emerging in 12/43, 28% of responses) was the need for more lectures or refresher tutorials on phonetic transcription over the four-year degree but particularly in final year:

*'Lectures on phonetic transcription in every college year. More time spent practising phonetic transcription in lectures, with more of a focus on narrow transcription and disordered speech'; 'a revision lecture should be given again before final year ends, preferably before placement'; 'refresher courses each year instead of ending all phonetic modules in 2nd year - you easily forget it'.*

Other comments suggested placing more focus on narrow transcription and adding a more practical element to lectures:

*'More work on the transcription of disordered speech and narrow transcription would help, specifically practicing transcribing disordered speech using the ExtIPA more often'; 'Practicing with real children before placement or videos of real children. In clinic transcription is difficult as you are trying to keep the child entertained, transcribe accurately online and keep the parent at ease.'*

**The majority of respondents (33/40, 82%)** plan on maintaining their phonetic transcription skills after graduating, by practicing transcriptions regularly, using websites/videos (15/44, 34%) and by using phonetic transcription in clinical practice (12/44, 27%).

*'I will continue to use the various websites and YouTube videos to facilitate continued learning. However, I believe I will have to engage in professional development in phonetic*



*transcription, because, I currently am not confident enough in my abilities to transcribe either normal or disordered speech’.*

A small minority of students (3/44, 7%) plan to maintain their phonetic skills using transcription in daily life when texting friends or writing in calendars:

*‘I actually love texting SLT friends in IPA from my phone... This is mainly why I feel confident with broad transcription! I also watch YouTube videos to help me’.*

### ***Reflecting on experience learning phonetic transcription (Questions 34-35)***

Participants were asked to think back on their learning experience of phonetic transcription over the four years and describe one feeling that stands out to them and why. The responses were quite diverse; the respondents used this question as an opportunity to comment not just on the way they felt but also on the difficulties they experienced as learners. One common theme that emerged in the responses was that learning phonetic transcription was ‘difficult, confusing, overwhelming, stressful’.

*‘Nerves. I didn’t really like it. I found it difficult and could never understand the symbols and sounds and was always getting them confused’.*

*‘Confusion - Trying to hear the difference between sounds was quite difficult, particularly with differing accents. If you did not practice phonetic transcription at least once weekly when learning, you would fall out of practice, and it is a skill that needs to be used regularly’.*

*‘Overwhelmed, phonetics used to make me really anxious and I never felt like I understood what was going on...’.*

A few respondents commented that they did not find teaching methods helpful:

*‘...the language used by the lecturer was overly complicated and no practical examples were given’; ‘some of the teaching methods used for transcriptions were very confusing’.*

Another theme that emerged was the lack of clarity regarding the relevance of phonetic transcription in clinical practice.

*'...It was often very difficult to comprehend the relevance of this module to our future careers in Speech and Language therapy'.*

*'I remember not having a clue what was going on in the first few weeks or why phonetic transcription was important for SLTs. I remember not understanding the difference between spelling and phonetic transcription'.*

However, a very different theme also transpired from the responses, that learning phonetic transcription can be an enjoyable and rewarding experience:

*'I really enjoyed studying phonetics, however, studying it in class was very different from transcribing within a session on placement'.*

*'Interesting - it is interesting to see how it can be so useful in clinic'.*

*'The feeling of learning something completely new and thinking in a different way, e.g. transcribing exactly what you hear and having to forget about how words are supposed to sound or how they are spelled. Learning phonetic transcription was a completely different skill to anything I had done before'.*

*'Enjoyable. It was a fun and interesting skill to learn'.*

### ***Suggestions for teaching of phonetic transcription (Question 36)***

The final item of the questionnaire asked participants to share any suggestions they may have for the teaching of phonetic transcription. The strongest theme identified in 13/40 (32%) responses was the need for more practice transcribing (particularly, disordered speech):

*'Have it more practical. More work with disordered speech'.*

*'I think more practical examples of real clients would be more engaging and allow students to apply theory to practice'.*

Another theme that was identified in 7/40 (17%) responses concerned placing more emphasis on the clinically relevant aspects of learning transcription:

*‘Make it as practical and related to clinical practice as possible so that students understand its importance and application’.*

*‘A more practical approach to teaching phonetics might be beneficial, i.e. more practice time in class transcribing different types of speech e.g. both adult and child, typical and disordered speech. Phonetic transcription is a practical activity that speech and language therapists use therefore the teaching of it should have a real-life practical focus to prepare students for using it in everyday practice when dealing with a variety of clients. Less emphasis on the theory and aspects which are not useful to the practicing speech and language therapist’.*

The remaining suggestions could be broadly grouped into the ‘general approaches to teaching’ theme. These include, for example, increasing the amount of time spent teaching/ learning phonetic transcription in the curriculum and providing refresher courses every year (4/40, 10%); teaching in smaller groups (2/40, 5%) and providing tutorials for those who struggle (1/40, 2.5%); making the classes more interactive and enjoyable (2/40, 5%), providing the opportunity for group work and comparing transcriptions (2/40, 5%); more feedback from the lecturer on completed transcriptions (3/40, 7.5%). Although mentioned in a small number of responses, these suggestions provide a valuable insight into what can be done to enhance the students’ experience learning phonetic transcription.

## **Discussion**

### ***Student SLTs learning experiences***

This study explored the learning experiences and the use of phonetic transcription among final year student SLTs in **universities** across **the Republic of Ireland** through an online

questionnaire consisting of both **closed- and open-ended** questions. The study collected responses from 40 participants representing one cohort of SLT students, graduates of a particular year. The majority of the respondents consider phonetic transcription an important professional skill; 82% plan on maintaining phonetic transcription skills after graduating. Overall, learning phonetic transcription was easy/quite easy for 57% of the respondents and only 12% found it difficult/very difficult. However, the confidence in transcription skills was rather low: 58% felt not very well **equipped** or not at all equipped to carry out phonetic transcription on placements, 70% reported not being confident and fully equipped to enter the workforce with their transcription skills. The main difficulties were associated with narrow (impressionistic) transcription and transcription of disordered speech. This was not surprising: difficulties that the students have with narrow transcription have been reported in earlier studies (Howard & Heselwood, 2002; Titterington & Bates, 2018); practising clinicians also experience difficulties transcribing disordered speech using narrow transcription (Delaney & Yanushevskaya, [accepted]; Knight, et al., 2018; Nelson, et al., 2020).

Participants indicated that the time allocated to broad (phonemic) transcription and narrow (impressionistic) transcription in the curriculum was not balanced and that insufficient time was spent on narrow transcription. Their reflections on their teaching/learning experience suggest that more transcription practice with disordered speech, shifting the balance towards more practical aspects of phonetic transcription and reducing the amount of time in class spent on theoretical aspects, making the content of the modules covering phonetic transcription more relevant to clinical practice (e.g. using real-life cases to practice transcription) would benefit their learning and enhance their confidence using transcription on placements and in **the** workforce. Similarly, SLT participants in Knight et al. (2018) indicated **that the focus on theoretical issues rather than practical applications in their**

phonetics course was the reason they found learning phonetic transcription difficult. SLT participants in Delaney & Yanushevskaya ([accepted]) also named the lack of balance between the theoretical and the practical components and not being able to see the relevance phonetic transcription would hold in the career of a SLT as factors impeding their learning while in university.

Teaching environment was found suitable by 58% of the respondents and the additional resources provided by the lecturers (such as web-based resources, recordings, books and journal papers) were found beneficial by the majority of the respondents (72%); however, a recurring theme appears to be the need for small-group tutorials during which the lecturer could provide feedback to individual students more efficiently. Similar considerations are found in Beck et al. (1999), Heselwood (2007), Howard & Heselwood (2002). SLT participants in Knight et al. (2018) commented on how using smaller class sizes would have made the learning of phonetic transcription easier during college.

Another issue that emerged time and again in the responses concerns the need for refresher courses or a more even spread of transcription practice over the four years of the SLT curriculum. Phonetic transcription is usually taught early in the course (in years 1 and sometimes 2) and its value is frequently not appreciated until the students go on placements. The importance of integration of phonetics (and, in practical terms, phonetic transcription) in the SLT curriculum and, if relevant, in clinical placements, has been emphasized in Heselwood (2007), Howard and Heselwood (2002), Knight et al. (2018). This would help students to understand the importance of learning transcription and its relevance to clinical practice, while also providing students with opportunities to practice transcription with real life clients and data.

### ***Limitations***

The study is focused on a rather narrow research question of teaching/learning phonetic transcription to SLT students in the Republic of Ireland. Phonetic transcription is typically taught in the first and sometimes also second years of the curriculum; the participants were asked to reflect on their experiences of learning 2-3 years previously. This study is based on a fairly small sample (n = 40). The responses obtained were not equally distributed among the three universities in the Republic of Ireland with Speech and Language Therapy as an undergraduate degree, although similarities were evident among responses. A larger sample size and a balanced distribution of responses across universities would have enhanced the study's reliability and validity. The study is based on the responses of one cohort of students – graduates of a particular year, and is limited by the experience of just that cohort. It is typically the case that the teaching and learning process is flexible and is continuously adjusted by the lecturers based on the feedback from the students. A longitudinal study spanning several years and collecting responses from several cohorts of graduate SLT students would have given a clearer representation of any persistent issues SLT-in-training might experience when learning phonetic transcription. The study's validity could have been further enhanced by interviewing students or running focus groups in addition to the survey, i.e. convergent validity (Bryman, 2012).

### ***Future directions***

As mentioned earlier, a longitudinal study over a number of years could be useful to identify persistent issues in teaching/learning phonetic transcription to SLT students. A study following students who have different experiences of phonetic transcription training into their clinical practice could explore how the various teaching strategies help to facilitate greater use and confidence in phonetic transcription. The effectiveness of some of the changes in

teaching and learning phonetic transcription suggested by the participants of the current study could also be assessed.

### *Conclusions*

This study provided but just a glimpse into the views and experiences of SLT students on the phonetic transcription training they received during their four-year degree. Although the results of this study represent the views of only a small cohort of student SLTs in Ireland, they provide an important insight into what changes could be implemented to enhance phonetic transcription training for SLT students, to make it more comprehensive and practice-oriented. The students' confidence in their phonetic transcription skills appears to be rather low and some of them do not feel fully equipped to enter the workplace with their current skills. While this lack of confidence in skills is understandable and is usually overcome with experience in practical clinical work, student confidence can be built up while in university by incorporating more clinically relevant data in teaching phonetic transcription and shifting the focus in class on clinically relevant practical aspects of transcription. The relevance of transcription (as well as of phonetic theory, without which meaningful phonetic transcription will not be possible) needs to be communicated early to the students; this relevance needs to be illustrated and supported by using data obtained in clinic and appropriate for the students' current level. The point some respondents in this survey made about the need to shift the balance towards more practical aspects of clinical phonetics is, in our opinion, valid. However, this can only be done if the students have already acquired a solid grounding in phonetic theory: as pointed out by Heselwood (2007, online), 'phonetic transcription needs to be taught in the context of phonetic theory, otherwise transcription conventions are not interpretable'. Making teaching and learning phonetic transcription more interactive and enjoyable, providing the opportunity to refresh and apply phonetic transcription skills throughout the four year curriculum, decreasing the group size as much as

is practical, incorporating group work and providing more feedback to the students could hopefully alleviate the stress for those who find learning phonetic transcription 'difficult, confusing, overwhelming and stressful' and transform it into a rewarding and enjoyable experience if not for all (that would be ideal!), but for the majority of future SLT students.

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### **Declaration of interest**

The authors report no conflict of interest.

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