









Project title: « Delphi consensus survey – Developing reading passages for the assessment of speech and voice »

Principal investigators responsible for the project: Timothy Pommée (PhD), Julien Pinquier (thesis supervisor), Julie Mauclair and Virginie Woisard (co-supervisors), Renée Speyer

Research location: Institut de Recherche en Informatique de Toulouse (Université Paul Sabatier – Toulouse III, France)

Dear Sir or Madam,

We are contacting you in the context of a research project on the development of standard reading passages for speech and voice assessment. This study is part of Timothy Pommée's PhD thesis at the Institut de Recherche en Informatique de Toulouse (Université Toulouse III Paul Sabatier, France). This project is carried out in collaboration with the Hospitals of Toulouse, the University Cancer Institute of Toulouse Oncopole and the University of Oslo. The primary aim of this thesis is to identify the needs for objective assessment of speech disorders (particularly speech intelligibility), in order to help develop new speech assessment tools that are tailored to the needs of clinicians and researchers.

We also aim to create a new standard reading passage, specifically designed for speech and voice assessment. As, to our knowledge, no guidelines exist for this task, we have initiated this Delphi project in which we would like to invite you to take part. The aim of this project is to involve a large international panel of professionals (clinicians and researchers) active in the fields of speech and voice, in order to reach a consensus on what criteria have to be taken into account when creating a standard reading passage for speech/voice assessment.

Target audience:

This study is addressed to professionals (clinicians, researchers, lecturers) who are currently engaged in activities in at least one of the following fields:

- speech sound disorders (incl. dysarthria, apraxia/dyspraxia, orofacial structural deficits, head and neck oncology, velar insufficiencies, hearing impairment and articulation disorders)
- fluency disorders (stuttering/stammering)
- voice disorders

By "activities", we understand (if at least approximatively 20% relate to speech/voice):

- clinical activity
- research

- academic activity
- industrial activity
- a combination of the above

The Delphi method:

The Delphi technique is an extensively used group survey methodology that is conducted over several consecutive rounds and aims to reach a consensus among a panel of individuals with expertise (both professional and experience-based) in the investigated field.

This study is **quasi-anonymous**: the identity of each participant is only known to the main investigator/moderator, and only via the provided email address (to monitor round-to-round response rates); **participants remain anonymous to each other**, which allows for freedom of expression without any social or professional pressure from peers.

For more information about the Delphi method:

- Diamond IR, Grant RC, Feldman BM, Pencharz PB, Ling SC, Moore AM, et al. Defining consensus: A systematic review recommends methodologic criteria for reporting of Delphi studies. J Clin Epidemiol 2014;67:401–9. https://doi.org/10.1016/j.jclinepi.2013.12.002.
- Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. J Adv Nurs 2000;32:1008–15. https://doi.org/10.1046/j.1365-2648.2000.t01-1-01567.x.
- Hsu C-C, Sandford BA. The Delphi technique: Making sense of consensus. Pract Assessment, Res Eval 2007;12. https://doi.org/10.7275/pdz9-th90.
- McPherson S, Reese C, Wendler MC. Methodology update: Delphi studies. Nurs Res 2018;67:404–10. https://doi.org/10.1097/NNR.000000000000297.

Our study:

As stated above, this Delphi survey yields to seek agreement through an international decision-making process, on what criteria should be taken into account when creating a new reading passage for speech/voice assessment. There also appears to be a lack of consensus regarding the terminology of speech-related concepts as well as the assessment methods, which in turn may influence the decisions taken when implementing new speech assessment materials.

This consensus survey will be structured as follows:

- 1) Definitions of speech-related concepts*
- 2) Perceptual and objective speech measures*
- 3) Criteria for creating standard reading passages

*questions in these sections will only be presented to participants with activities in speech and fluency disorders

In light of the investigated topic and the targeted expert group, we hope to achieve our goal within three (max. four) rounds, between July 2020 and not later than February 2021. Each online survey will be available for 2-3 weeks for you to complete at your convenience and the first round will take about 30-40 minutes to complete (the following rounds will be shorter). None of the surveys will have to be completed in a single sitting, as you will be able to save your answers at any time to resume the questionnaire later. It is very important that participants complete the survey in each round. The

reliability of the results could be compromised if participants drop out of the study before its completion. However, it is of course possible at any time to withdraw from the study. To reduce the likelihood of high drop-out rates affecting the outcome of this study, we ask you to only agree to participate if you think you will be available to complete all three to four rounds.

You may access the questionnaire via the following link:

https://enquetes.univ-tlse3.fr/index.php/623792?lang=en

The deadline for answering the first round of this survey is the 31st of August 2020.

This study was registered with the data protection officer of the *Center National de la Recherche Scientifique* (CNRS) and was also approved by the computer science ethics advisory board of the *Institut de Recherche en Informatique de Toulouse* (Comité consuLtatif d'Éthique concernant la Recherche en Informatique de Toulouse - CLERIT).

Rationale of this survey:

The purpose of this survey is to seek agreement, through an international decision-making process, on what criteria should be taken into account when creating a new reading passage for speech/voice assessment. It is part of the doctoral thesis entitled "Clinical relevance of speech intelligibility measures", by Mr Timothy Pommée, supervised by Dr Julien Pinquier, Senior Lecturer at the Institut de Recherche en Informatique de Toulouse (IRIT- UMR 5505), by Dr Julie Mauclair and by Dr Virginie Woisard, Associate Professor of the Octogone-Lordat Interdisciplinary Research Unit (UT2J, Octogone-Lordat - EA4156).

Any personal information you provide through this questionnaire will be recorded in a computerized file by the Institut de Recherche en Informatique de Toulouse (IRIT-UMR5505), located at 118 Route de Narbonne 31062 Toulouse Cedex 9.

The legal basis for this questionnaire is consent (cf. Article 6.1.a) of the European Data Protection Regulation.

Who will have access to your answers:

The recipients of the collected data are the IRIT (UMR5505) and the Octogone-Lordat (EA4156). The answers to the survey questions will be analysed only by Mr Timothy Pommée (IRIT doctoral student) and his thesis directors.

The data collected in this survey will not be published individually. If an example of an answer is used in the writing of the thesis or a report, it will be pseudonymized.

The data will be kept for 5 years after collection.

Your identity will only be known to the primary investigators and neither your participation nor your individual answers will be revealed to other participants or any other third parties.

What are your rights:

You can access your data or request their deletion. You also have a right of opposition, a right of rectification and a right to limit the processing of your data (see cnil.fr for more information on your rights).

To exert these rights or if you have any questions about the processing of your data, please contact: Dr Julien Pinquier, at the following address: Institut de Recherche en Informatique de Toulouse (IRIT) - 118 Route de Narbonne 31062 Toulouse cedex 9, or by e-mail (julien.pinquier@irit.fr).

If you feel that, after contacting us, your Data Protection rights are not being respected or that the access control system does not comply with data protection rules, you can file a complaint online to the CNIL or by post.

I would like to thank you for your consideration,

Feel free to contact me at any time for further information,

Kind regards,

Timothy Pommée

SLP and PhD student in computer science and telecommunications

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