

Meet the research team behind Linguaskill ▶▶



Simplify your English language testing

Linguaskill ▶▶



Dr Nick Saville

Research and Thought Leadership Director

Dr Nick Saville has worked for Cambridge Assessment since 1987, becoming Director of the newly formed Research and Thought Leadership Division in 2015. Prior to moving to Cambridge he worked at the University of Cagliari (Facoltà di Magistero) teaching English, and managed a test development project for Cambridge English in Tokyo based at the British Council. He holds a PhD in Language Assessment from the University of Bedfordshire, a degree in Linguistics and an MA TEFL (both from the University of Reading), and an MA Cantab.

▶▶ When did you become involved in Linguaskill?

The origins of Linguaskill go back to the mid-1990s when we began working on the idea of online, automated, modular tests. The aim was to democratise testing, making it quicker and more efficient. Since then Linguaskill has developed to provide a generic, multilevel test that serves the needs of all audiences, from education to business.

▶▶ What makes Linguaskill different from other tests?

Linguaskill is used to measure what has been learned, as opposed to score-driven alternatives, which can measure how well you have practised for the test. This means it is much more consistent and mission specific across the four skills of listening, reading, writing and speaking.

▶▶ What have you learned when developing Linguaskill?

That ease of use is key. Many of the features within it, such as computer assisted testing, automated writing and automated speaking testing are not necessarily new to us at Cambridge Assessment English, but we've learned how to deploy them in ways that are simple to administer, and can scale to hundreds of thousands of people, reliably and seamlessly.

▶▶ How do you see Linguaskill developing over the next 2–3 years?

It is clearly early days for the product – we have successfully launched it, and we have created a stable and reliable platform. The holy grail of language testing is being able to personalise tests for each client group, so that they measure what matters to them. Through Linguaskill's flexibility we are able to move towards this personalisation, so we now have to work with our partners and customers to develop and modify it to meet individual needs.

▶▶ How do you see computer-based testing changing in the future, particularly with the use of artificial intelligence (AI)?

AI will help close the gap between the actual situations where we use language and the context of taking a test. Test conditions are not real life, so the ideal for language testing is being able to observe people doing the real thing, creating much more specific tests, personalised to them. AI can assist here, particularly when coupled with the mobile devices we all carry around with us. First-generation testing technology just migrated tests from pen and paper – AI lets you go much further and deliver more adaptive, personalised and efficient testing.

▶▶ Are there other key trends that you see impacting language learning and testing over the next five years?

I see two key trends. Firstly, merging language testing into learning, so that you can see how people perform in a real-world context will give a greater richness, delivered in a more effective way.

Secondly, use of AI means we're going to see a virtuous combination of teachers and machines. We will always need teachers to provide human guidance and support, but we can use the robotic strengths of machines to help them deliver more effective learning. For example, if you have a class of 40 people, a teacher clearly can't mark 40 writing tasks every day. A computer can. The teacher can then look at the analytics and enhance content and support either for the whole class or at an individual level, improving learning outcomes.



Dr Ardeshir Geranpayeh

Head of Automated Assessment and Learning

Dr Ardeshir Geranpayeh is Head of Automated Assessment and Learning at Cambridge English, which he joined in 2001. Since 2009, he has been leading on the development and implementation of the automated assessment of writing and speaking. He has 29 years' experience of test validation and has contributed to the design, development, validation, revision and evaluation of almost all Cambridge English language proficiency tests. Additionally, he is a regular presenter at international conferences where he has led workshops on statistics, computer-based testing, listening tests and test security. He holds a PhD in Applied Linguistics from the University of Edinburgh on the comparability of language proficiency testing.

▶▶ When did you become involved in Linguaskill?

I was involved at the initial conceptual design stage, dating back to 2002. More recently Linguaskill was re-invented, putting automatic assessment at the heart of the product.

▶▶ Describe your role and involvement in Linguaskill.

I was involved at the design stage for the technical model, creating the Computer Adaptive Test (CAT) for Reading and Listening. I was also responsible for preparing the automated assessment engine for marking Linguaskill's Writing and Speaking components.

▶▶ What were the needs you were looking to solve with Linguaskill?

A valid, reliable, quick and cost-effective test of proficiency that could be delivered online to candidates with immediate reporting of results, all at an affordable price.

▶▶ In your opinion, what makes Linguaskill different from other tests?

There are two main features. Firstly, its adaptiveness, which means that each candidate receives a different set of test items, personalised to their true ability level. Secondly, using AI technology to deliver immediate marking of the Writing and Speaking tests.

▶▶ What have you learned while developing Linguaskill?

It is important to keep the customer at the heart of planning any new test. We learned how to use sophisticated technology to improve candidates' experience of taking the test, while ensuring that results are reported to stakeholders in a fast and efficient way. Everyone in the team has been working towards that goal of meeting customer needs and making the product simple to use.

▶▶ Now that Linguaskill is in the market, what are you most satisfied with in terms of the product and market adoption?

The ease with which candidates can sit the test, and the simplicity to run the test locally are the most satisfying features we managed to achieve in Linguaskill. We've had lots of positive feedback around these areas, which is extremely rewarding for us.

▶▶ How do you see Linguaskill developing over the next 2–3 years?

The Linguaskill family tests will grow rapidly in terms of its use by multiple stakeholders and will become, I hope, the default benchmarking proficiency test of choice for various test purposes.

▶▶ What are you working on now?

I'm continuing to work on the improvement of the automarker for writing and speaking, introducing new diagnostic features to provide efficient feedback to candidates to improve their English.

▶▶ How do you see computer-based testing changing in the future, with the increasing use of AI?

I believe AI will become part and parcel of any computer-based test in the future. We are happy that we are leading in this area.

▶▶ Are there other key trends that you see impacting language learning and testing over the next five years?

It is very clear that AI will have a big impact on language learning and testing moving forward. The Cambridge Learning Oriented Assessment (LOA) approach, which has AI at its heart, will significantly change language learning and testing by bringing these two areas closer, helping drive more effective, individual learning.



Martin Robinson

Assistant Director, Assessment

Martin Robinson joined Cambridge Assessment in 2002 and is responsible for the development and production of its automated, adaptive assessments, including Linguaskill and BULATS. In addition, Martin manages the Cambridge English Benchmarking service and through his work in these areas he has led national projects for ministries of education in countries including Malaysia, Chile and Malta, as well as managing language test production for the European Commission's European Survey on Language Competences. Before joining Cambridge English he gained extensive experience in English language teaching and school management in Spain and Japan. He holds an MA in Applied Linguistics, specialising in language assessment, from the University of Reading.

▶▶ Describe your role and involvement in Linguaskill.

As product owner, I'm responsible for taking customer requirements and developing an end-to-end solution that satisfies those needs. This includes developing the tests, the delivery platform, the automated marking capability, right through to delivering the results to the customer.

▶▶ What were the needs you were looking to solve with Linguaskill?

Our customers would like assessment that is under their control, is totally on demand and can be taken 24/7/365, and where results are delivered almost instantly.

▶▶ What makes Linguaskill different from other tests?

The adaptive element is very different from traditional testing. Some organisations provide adaptive testing but the Cambridge English technology is more advanced. We not only provide one test that covers all levels but the algorithm also ensures coverage of the entire test construct. This means we are testing all the different sub-skills that we need to test, and that different candidates and even the same candidate taking the test more than once receive different tests. We also automark extended writing, such as 200-word pieces, and provide results in terms of the Common European Framework of Reference for Languages (CEFR).

▶▶ Now that Linguaskill is in the market, what are you most satisfied with in terms of the product and market adoption?

The fact that our customers can buy tests and arrange all their own test sessions, and access reports through one platform. In traditional testing this all takes many months and huge numbers of people across the world. So, when customers say that they can do all this themselves and it's all really easy, that's great feedback. We've also had lots of comments from students telling us that this is the future of testing. They want to know why all their tests aren't like this! That's fantastic to hear.

▶▶ How do you see Linguaskill developing over the next 2–3 years?

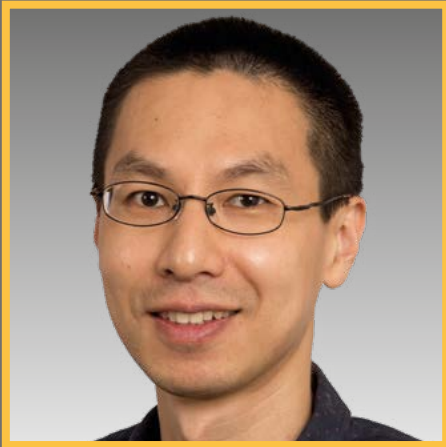
We'll automate even more so that it's even easier and quicker for customers, and we'll provide them with more choice. We'll also be delivering more feedback to learners and teachers that will help them learn English better.

▶▶ How do you see computer-based testing changing in the future, particularly with the use of AI?

This is going to be very exciting. We're going to be doing research into AI-based dialogue systems so that in a few years we might be able to start having learners converse with a computer rather than just answer questions. This is very early days in the concept, and will require a lot of research, but AI does make it potentially possible.

▶▶ Are there other key trends that you see impacting language learning and testing over the next five years?

Yes. People often talk about 'localising' testing, meaning that tests are specially created for a particular country or other group. This is a good first step, but I think we can look to go beyond that. I see personalised learning and testing as the future, so every individual, whether they're in a classroom or at home, receives a test or a piece of learning that is especially created solely for them as part of a personalised learning path that takes them to where they need to get to. This is all possible with adaptive technologies, machine learning and data (lots and lots of data!).



Dr Jing Xu

Senior Research Manager

Dr Jing Xu is a Senior Research Manager at Cambridge English, which he joined in November 2015. He began his career as an English language teacher and before moving to Cambridge worked as the Program Assistant for the Oral English Certification Test at Iowa State University and as a summer research intern at the Educational Testing Service. His current research focuses on automated speaking assessment, validity theory and computer-assisted language learning. He received his doctorate in Applied Linguistics and Technology from Iowa State University.

▶▶ Describe your role and involvement in Linguaskill.

I am particularly involved in the new Linguaskill Speaking test. In this role, I design and conduct empirical research to investigate potential threats to test validity and collect validity evidence (or counter-evidence) that supports (or disproves) the interpretations and uses of the Linguaskill test scores in various contexts. Based on this research, I advise on test design and ensure the accuracy of public information about Linguaskill.

▶▶ What makes Linguaskill different from other tests?

Linguaskill is unique in terms of its application of cutting-edge technologies in language assessment. The Linguaskill combined Reading and Listening test is computer adaptive, meaning that test content is tailored to a candidate's performance in order to obtain a precise estimate of their language ability. The Linguaskill Writing test is enhanced by its automarking technology that performs nearly instantaneous evaluation of free writing.

▶▶ What have you learned when developing Linguaskill?

I've learned about the importance of increasing stakeholder understanding of the technologies applied to language assessment. For example, the concepts of computer-adaptive testing and automated scoring in Linguaskill are not immediately understandable to teachers, learners and other test users. This means we need to explain and demystify the 'black box' behind the scenes to ensure that the test will be used appropriately and that it will have a positive impact on language teaching and learning.

▶▶ Now that Linguaskill is in the market, what are you most satisfied with in terms of the product and market adoption?

I was happy to hear from many English language learners who participated in Linguaskill trials that the test assessed the essential English language skills necessary for daily communication, and that taking the test on a computer did not affect their performance.

▶▶ How do you see Linguaskill developing over the next 2–3 years?

Linguaskill will keep seeking innovative ways to integrate cutting-edge technologies with English language assessment.

▶▶ What are you working on now?

I am currently working on research projects related to the quality assurance of automated scoring. I am also writing a research paper about a prototype automated speaking test.

▶▶ How do you see computer-based testing changing in the future, particularly with the use of AI?

With the increasing use of AI, computer-based testing will become more personalised and learner centred. In addition to indicating levels of proficiency, AI will be capable of making an accurate diagnosis of language learners' strengths and weaknesses, and therefore enable the creation of tailored teaching materials and learning activities.

At the same time it will help computer-based testing become less intrusive. For example, low-stakes assessment may be performed by AI while learners are studying the target language on the computer. In short, it is foreseeable that language learning and assessment will become seamlessly blended in the near future.

▶▶ Are there other key trends that you see impacting language learning and testing over the next five years?

Rapid advances in technology are likely to have an enormous impact on the way that language learning and assessment products are designed. A high-profile trend that is likely to emerge in the next five years is AI teachers. These will greatly reduce a human teacher's workload by helping them grade homework, design classroom and extracurricular activities, perform formative and summative assessments, and track student progress.



Dr Kevin Cheung

Principal Research Manager

Dr Kevin Cheung has worked for Cambridge Assessment since 2015 and is now a Principal Research Manager. Prior to joining Cambridge English, he lectured in Social Psychology and Research Methods at Loughborough University, Birmingham City University and the University of Derby, as well as working for the Probation Service. He is a Chartered Psychologist with research specialisms in academic writing, scale development and assessment. He holds a PhD in Psychology and is an Associate Fellow of the British Psychological Society.

▶▶ Describe your role and involvement in Linguaskill.

I oversee research on writing across all Cambridge English products. I became involved in Linguaskill in November 2017 and I am currently working on the product's Writing component.

▶▶ What were the needs you were looking to solve with Linguaskill?

Many language proficiency tests do not include a written component because it is logistically challenging to mark. Many tests consequently rely solely on multiple-choice questions that focus on reading and grammar. However, writing is one of the most important skills that employers and education institutions are interested in. Linguaskill therefore offers an option to include writing, without compromising on cost, efficiency and speed of results delivery. This means that writing skills can be included when they previously wouldn't have been.

▶▶ In your opinion, what makes Linguaskill different from other tests?

The fact that the writing automarker uses machine learning research from the University of Cambridge to deliver instantaneous results. Because of the collaboration between researchers at ALTA, Cambridge English and Cambridge University Press, we have a unique automarker tailored to the context of English for speakers of other languages (ESOL) exams. These have allowed development of the writing automarker to use the Cambridge Learner Corpus, a collection of genuine exam scripts submitted by ESOL test takers. ALTA's research uses novel techniques and this means that the technology we have is cutting edge.

▶▶ What have you learned while developing Linguaskill?

That some people are resistant to the idea of a computer marking their writing, even if you present evidence that it performs as well as (if not better than) human examiners. It is therefore part of my job to present evidence that demonstrates this to stakeholders, in a way that is easy for them to understand.

▶▶ Now that Linguaskill is in the market, what are you most satisfied with in terms of the product and market adoption?

The enthusiasm that we have had from centres about a test that is quick, efficient and easy to use. It is great to see stakeholders responding positively to improvements in user experience (UX) and ease of use – this makes the testing and development of the platform feel worthwhile.

▶▶ How do you see Linguaskill developing over the next 2–3 years?

It will possess greater adaptivity so that it offers a more personalised and targeted testing experience, linked to the test taker's level. Additionally, it will provide more feedback on performance for candidates and institutions.

▶▶ How do you see computer-based testing changing in the future, with the increasing use of AI?

More widespread use of AI will make our tests quicker and more resistant to attempted subversion of the results.

▶▶ Are there other key trends that you see impacting language learning and testing over the next five years?

I see more personalised learning experiences being made possible through more granular assessment information. Being able to link test-taker data together will help us tailor support across the learning journey and manage expectations around progression. Knowing more about how particular groups of test takers improve their language proficiency will also allow us to advise on the best way to progress in specific circumstances. Finally, there will be more assessment happening outside of the exam hall, facilitated by mobile and wearable devices.


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All details are correct at the time of going to print in November 2018.

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