



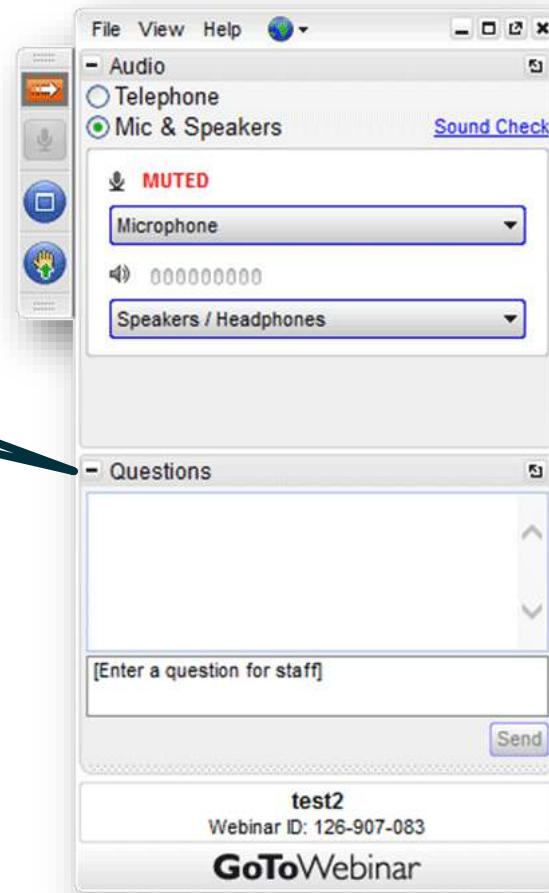
Equal Access to Testing Now.

Gavin Cooney
John Kleeman
October 26, 2021

To ask questions,
use the “Questions”
feature

**Watch for an email after the
webinar:**

- Download slides (PDF)
- View a recording





Learnosity CEO, Gavin Cooney

- Co-founded Learnosity in 2007
- Acquired Questionmark in June 2021
- Learnosity Assessment Engine - delivered via modern APIs - powering assessment excellence



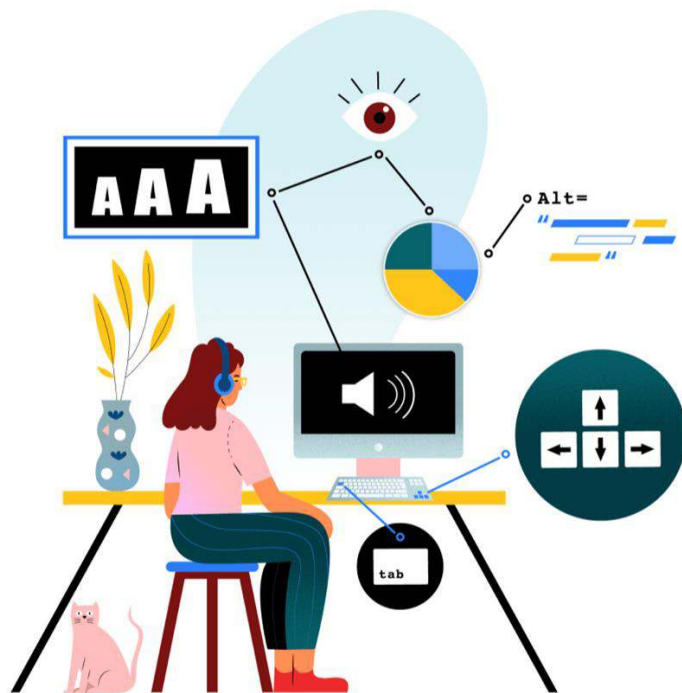
Questionmark Founder, John Kleeman

- Founded Questionmark in 1988
- Assessment management system provider
- Now EVP External Relations and Bus Dev, Learnosity & Questionmark
- 2021 Chairperson of ATP

Agenda



- **Our manifesto**
- **Our combined experience**
- **Assessment Excellence Gap**
- **Practical steps**
- **What does the future bring?**



Our Manifesto



Education is a human right. We believe that education and learning opportunities should be equitable, inclusive, and accessible to all. Our mission is to advance education and learning worldwide with best-in-class technology.



Do the right thing. Fairness is the bedrock of our business. We're open, honest, and take full responsibility.



Aim higher. We keep raising the bar by not shying away from tackling the biggest challenges.



Success is best shared. Great things happen when everyone pulls in the same direction. We win together by working together.

Our Combined Experience



1.5M+

Developer hours
and counting

750+

customers

17B+

questions delivered p.a.

40M+

Learners

50+

question types

Assessments
delivered to almost
every country in
the world



Fairness and inclusivity
in assessment do not
come automatically

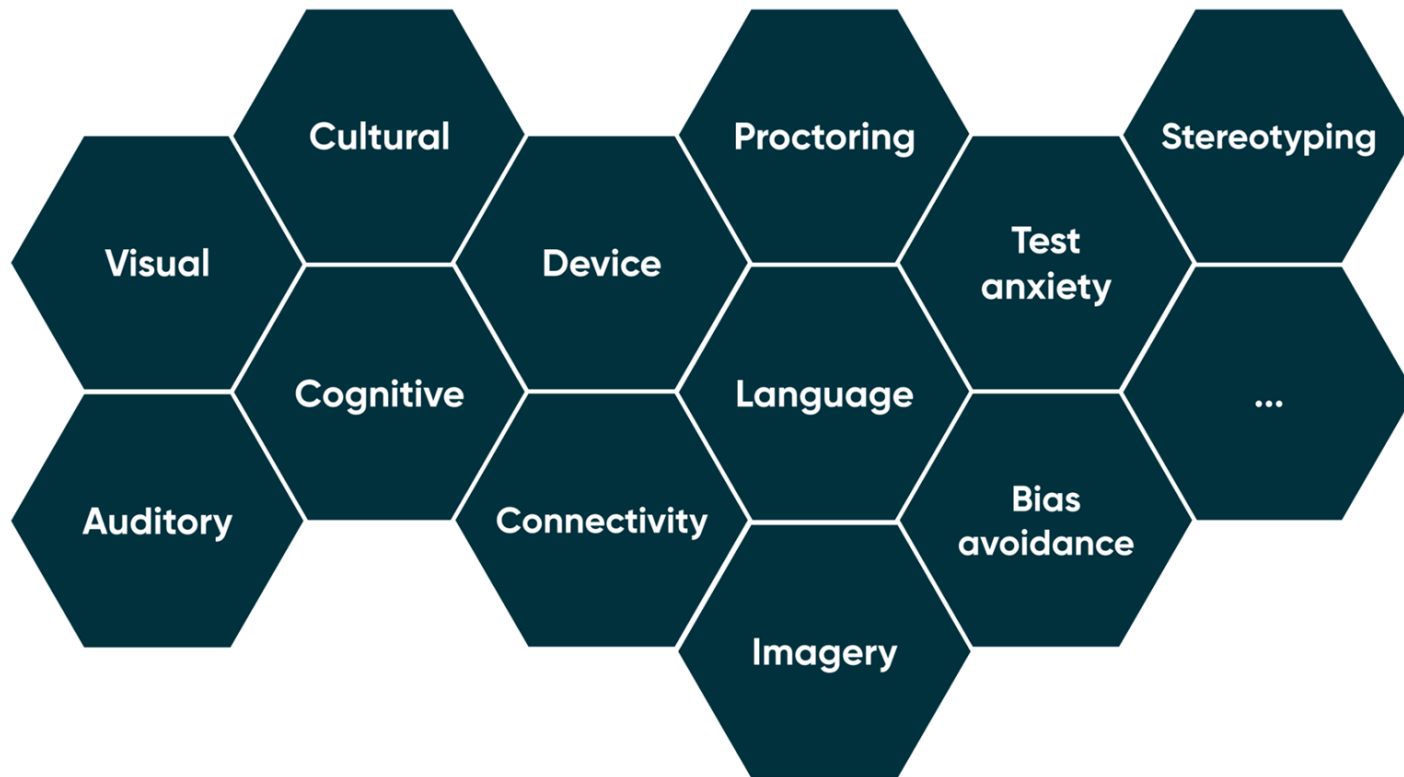
**“Those with similar
abilities and skills should
have similar life
chances”.**

(Rawls)

**“A fair test does not
advantage or
disadvantage some
individuals because of
characteristics irrelevant
to the intended
construct”.**
(The Standards)



Inclusivity involves myriad of decisions




Learning from serving 40M+ learners annually

- Standards are a start, not a destination
- By design is better than by exception
- Retrofitting is expensive
- It's a multi-disciplinary effort
- Accessibility and inclusivity are never done
- Test taker and stakeholders expectations
- Changing assessment landscape



Changing assessment landscape



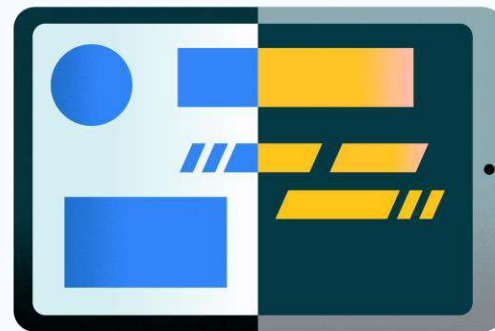
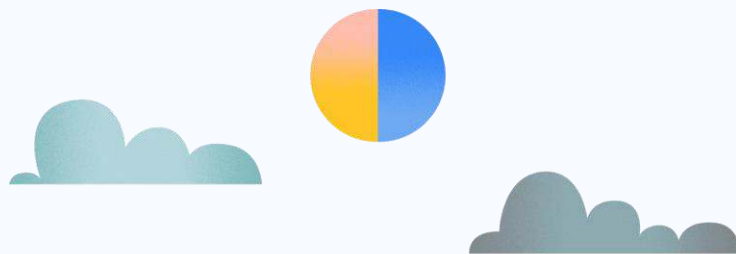
Traditional yesterday	Assessment Excellence Gap 	Modern today
Siloed	Experience	Embedded in learning experience
Static: multiple choice	Question Types	Dynamic: multiple choice + multimedia + technology-enhanced + math + authentic
Periodic	Frequency	Continuous
Basic online	Medium	Fully digital and interactive
Controlled, standard	Devices	Uncontrolled, mobile, varying OS
Static	Instruction approach	Personalized, differentiated, adaptive
Manual	Analysis	Automated
Exception	Accessibility	Regulatory requirement, commercial imperative

Practical Steps

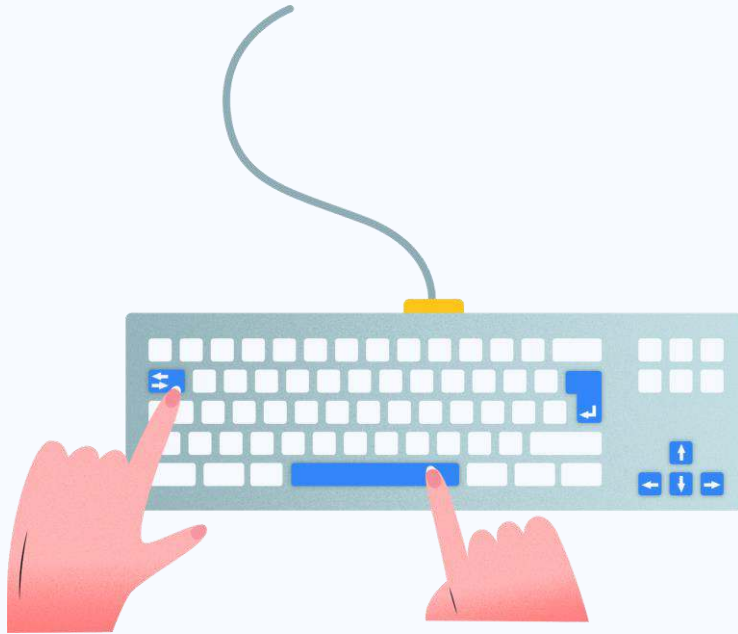
A journey of a thousand miles
begins with a single step

Color contrast designed for color-blind and low vision users

- Test usability in grayscale
- Cater for specific color blindness variants where necessary
- Include iconography, text, or other accessible alternatives, so color alone never conveys information
- For item types such as drawing and hotspot questions, authors must be capable of selecting default drawing, fill, stroke, and focus colors that contrast appropriately with the background.



Keyboard usability for accessible input and navigation



- All features should be usable with a combination of Tab, Space, Escape, Enter and arrow keys
- Provide important information in hover states and tooltips
- Ensure keyboard navigation and focus is intuitive
- Offer keyboard interaction instructions where non-standard keyboard controls are implemented

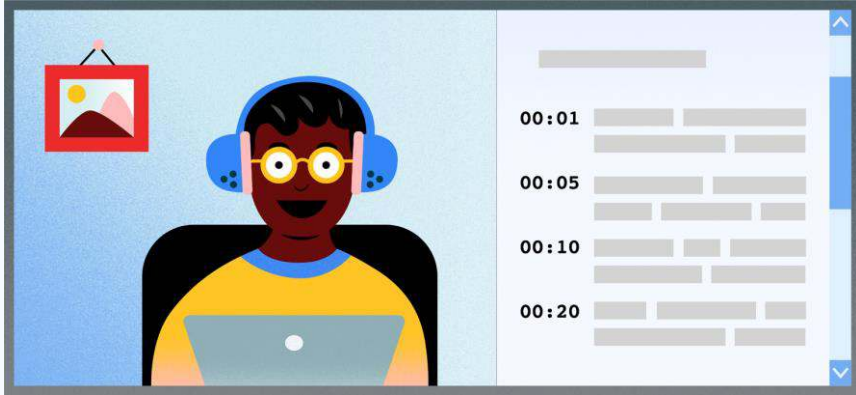
Screen reader support for the leading tools on each platform



- **ChromeVox** for Google Chromebooks
- **JAWS** for Chrome on Windows
- **NVDA** for Firefox on Windows
- **VoiceOver** for Safari and Mac OS X



Transcripts, closed captions and alternate videos for audio content




- Audio features should also have the ability to provide a transcript
- Enable closed captions to an assessment's video player
- Use third-party services to host video: Youtube, Brightcove, Vimeo, etc
- Enable the option to add sign language videos in the stimulus of any question

An accessible math experience



- Visually impaired math learners need their responses read back to them
- Auto-annotate math responses with ARIA labels in plain English for screen readers
- Allow learners to listen in real time and navigate the interface to construct, review, and submit their answers

A screenshot of a web interface for a math problem. It features three main input areas: a 'Method' dropdown menu currently showing 'equivSymbolic' with a trash icon to its right; a 'Value' text input field containing the letter 'I'; and an 'ARIA label' text input field. A checkbox labeled 'Edit ARIA label' is checked and positioned between the Method and Value fields. The entire interface is enclosed in a light gray border.

Method 

equivSymbolic ▼

☒ Edit ARIA label

Value

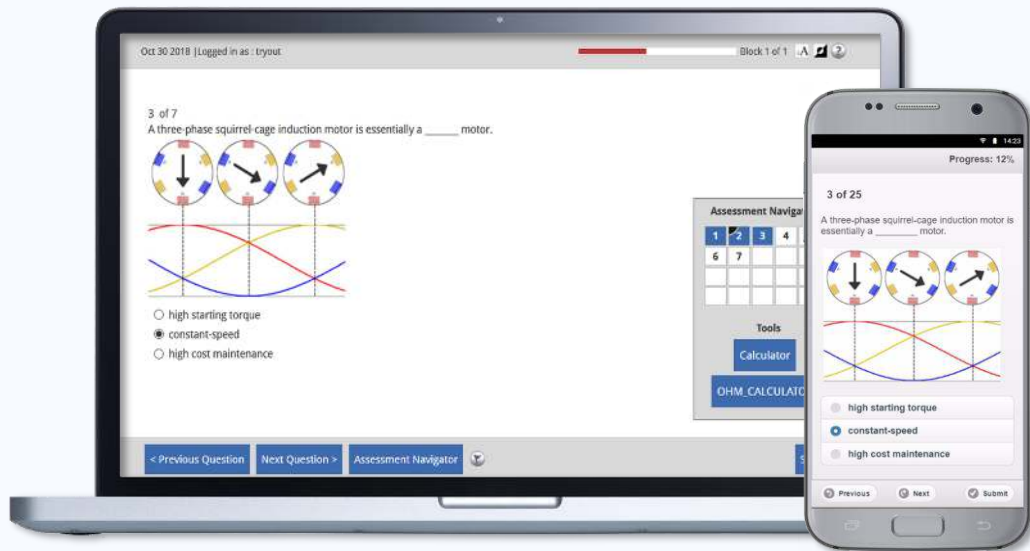
I

ARIA label

Responsive design



Author once...



...deliver to many devices and browsers

Tips for avoiding bias / stereotyping



1 Use neutral terms (sales agent instead of salesman)

2 Standard, formal language

3 Avoid references to race, ethnicity, gender, age, etc.

4 Avoid idioms and colloquialisms

5 Avoid obscure language, ambiguous acronyms, etc.

Item review, versioning & rollback



**Audit trail and option
to “rollback”**

History Rollback

All Revisions

<input type="checkbox"/>	Revision	Version ID	Modified On	Modified By	Change Type	Comments
<input type="checkbox"/>	3	3750560	Jun 28 2018	Brian McNamara	Edit	Fixed formatting and item properties
<input checked="" type="checkbox"/>	2	3750559	Jun 28 2018	Brian McNamara	Edit	Added video to the question.
<input checked="" type="checkbox"/>	1	3750558	Jun 28 2018	Brian McNamara	Add	New question created

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Revision 1

As load weight increases, the center of gravity

Revision 2

Watch the following video and answer the question below:

Forklift Load Stability

2 0

As load weight increases, the center of gravity

**Compare revisions
side by side**

Managing Multilingual Assessments



**Translate within
Questionmark**



On the fly

Translation management

Manages translation process
....does not do translation

Select items & assessments

**Export/Import for
third-party translation**

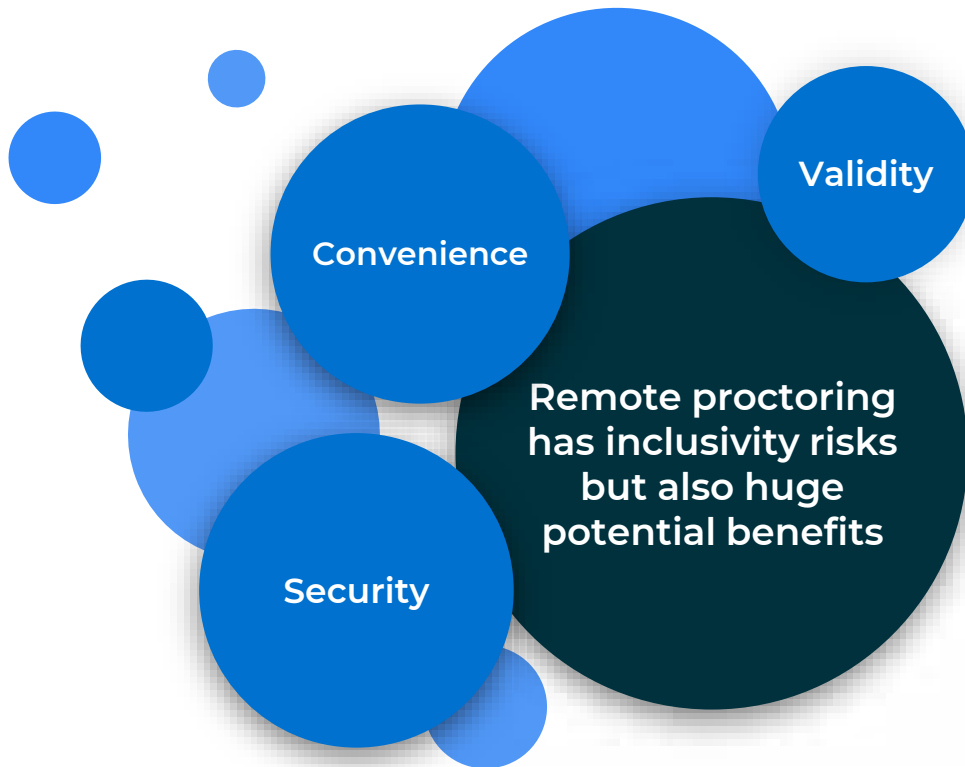
**Export to XLIFF
(XML)**



**Import from
XLIFF (XML)**

**Translate using
third-party tools**

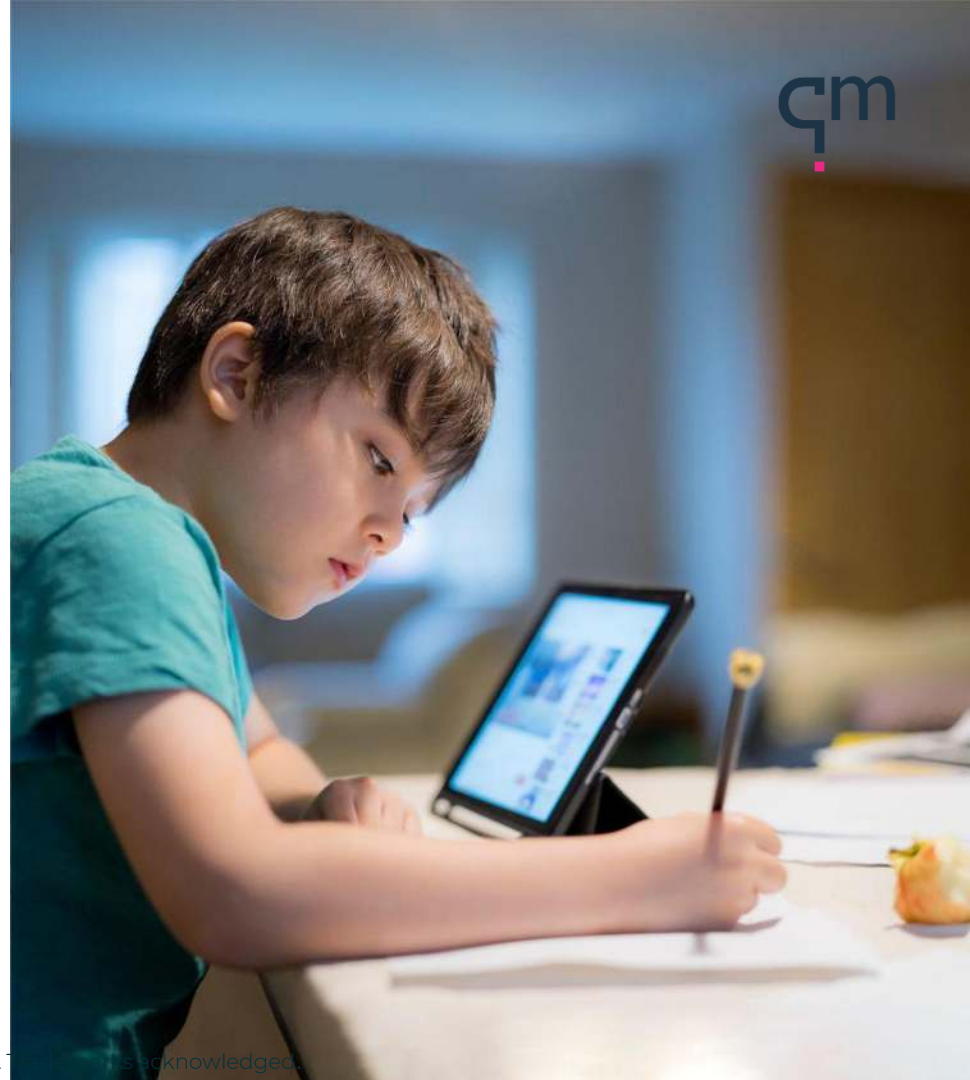
Remote proctoring flexibility



Offline assessments

Two thirds of the world's school-age children do not have internet access in their homes*

** Report: How Many Children and Youth Have Internet Access at Home?*





The bar keeps on getting higher



Inclusivity Requires Continuous Investment

- Digital, remote & hybrid assessments
- Evolving accessibility requirements
- Increasing regulation
- Pressures to scale
- Globalization
- Higher expectations
- More devices & platforms
- More frequent content updates

What does the future bring?

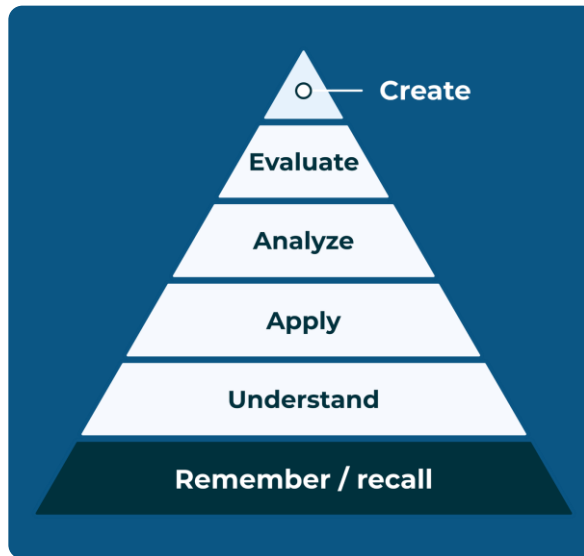
Some trends



Hybrid assessment



Testing beyond recall



Geographically disparate

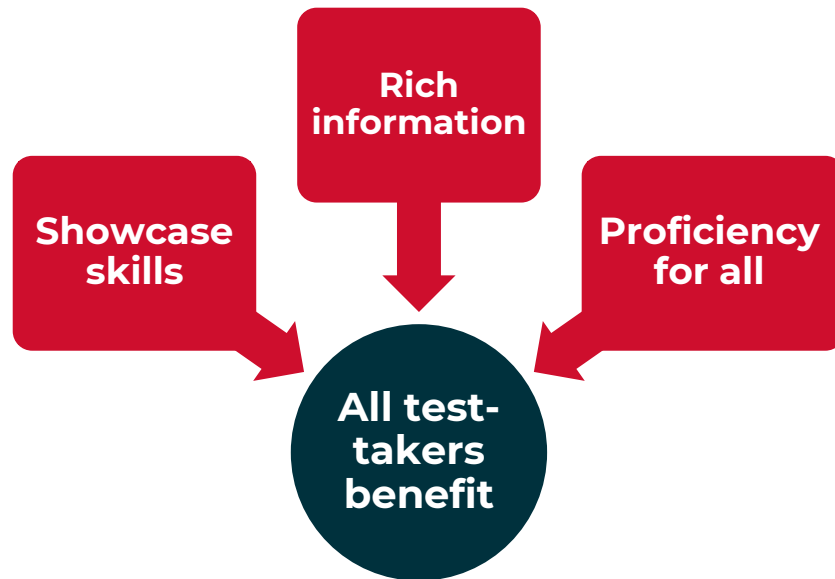
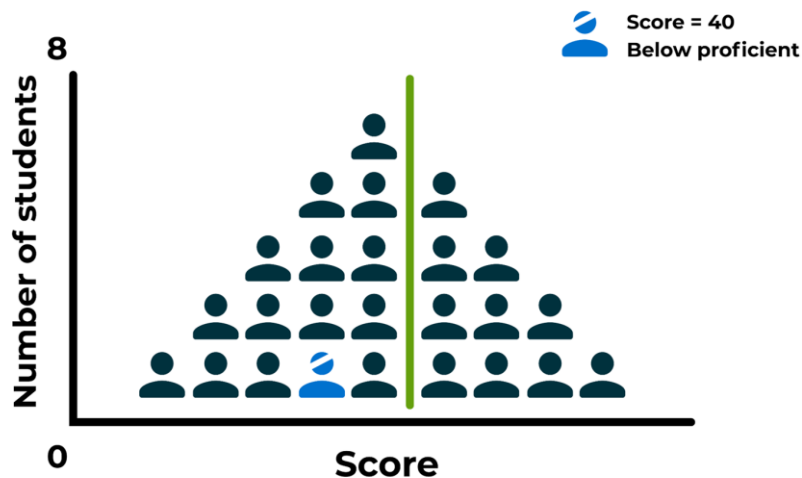


One vision of the future



Do assessments divide us?

Or can they bring us together?



Questions?

Resources



Download best practices guide on accessibility

<https://learnosity.com/building-accessible-learning-products>



Upcoming webinars and more



Introduction to Questionmark's Assessment Platform

Oct 28th – 10:00 am EDT | 3:00 pm BST



www.questionmark.com/resources

Justifying the Value of a Certified Business Partner

Nov 10th – 11:00 am EST | 4:00 pm GMT



Legal Considerations for Workplace Testing

Dec 1st – 11:00 am EST | 4:00 pm GMT

Request a one-on-one demo:

www.questionmark.com/request-a-demo

Thank you for attending!

If you want to discuss how to deliver inclusive assessments or would like a deeper demo, we'd be glad to help.

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john@questionmark.com