



Exploring a different approach to standardising the difficulty level of new MCQ questions

AO Forum - 9th May 2017

Digital Assess' Evidence-Based Assessment Tools



Capture evidence of learner knowledge, capability and progress



Measure open-ended learner performance with high levels of reliability



Centralised delivery and management of assessment workflow



Scalable peer-to-peer assessment to enhance engagement & attainment



Annotate any digital file and contextually reference assessment criteria



AI facilitated independent learner enquiry and problem-solving

Revolutionising Assessment



Powered by Adaptive Comparative Judgement



Solving Assessment Problems



Marker Subjectivity = Poor Assessment Consistency



Illustrating the Issue



Can you arrange these in order – lightest to heaviest?



Increasing Assessment Reliability



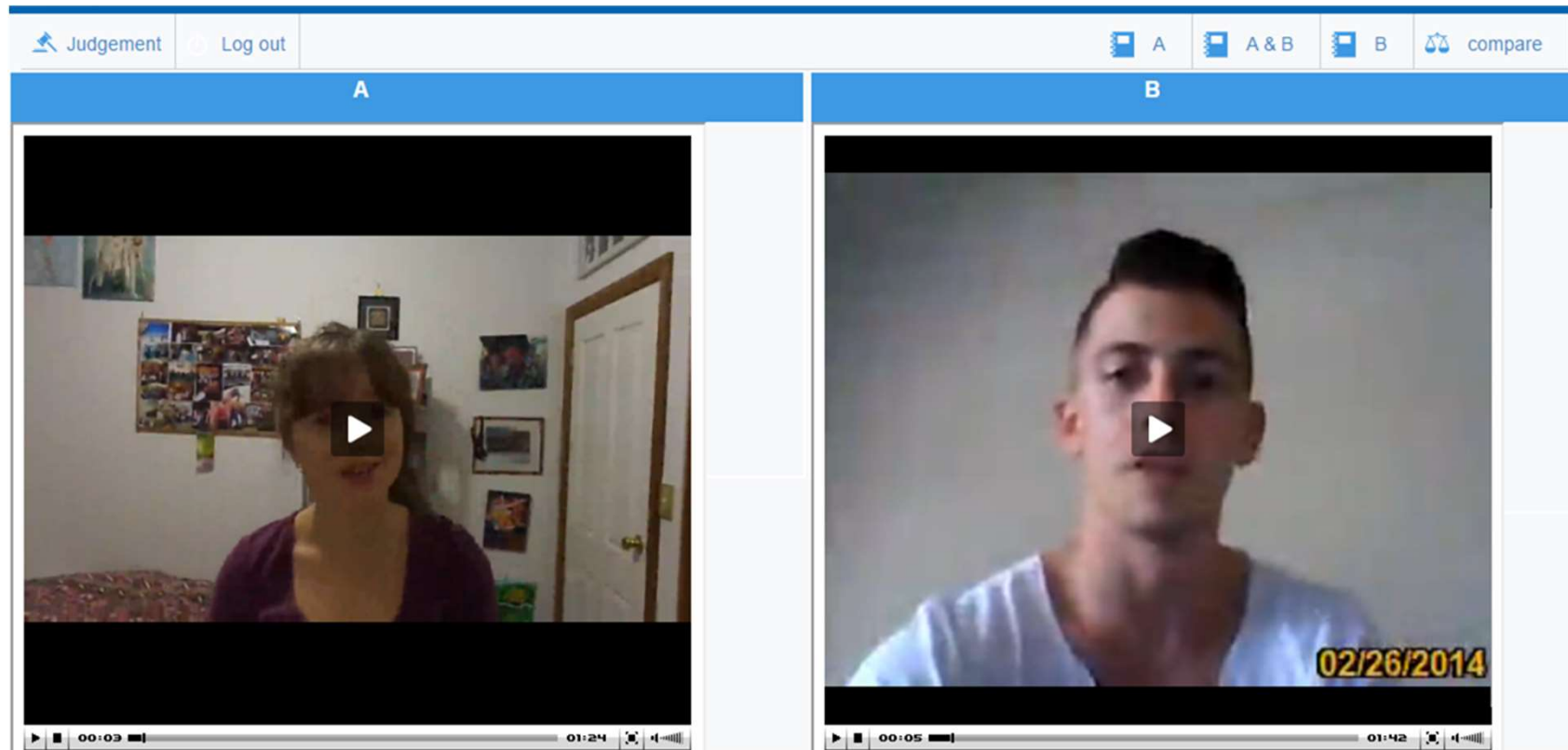
Comparative Judgement

- Measuring without subjectivity – adaptive scaling without needing scores;
- Presents a pair of items and asks – which is ‘better’?
- Repeat this through all possible combinations, and record the results to create a rank order;
- Based on The Law of Comparative Judgement (L. Thurstone - 1927).





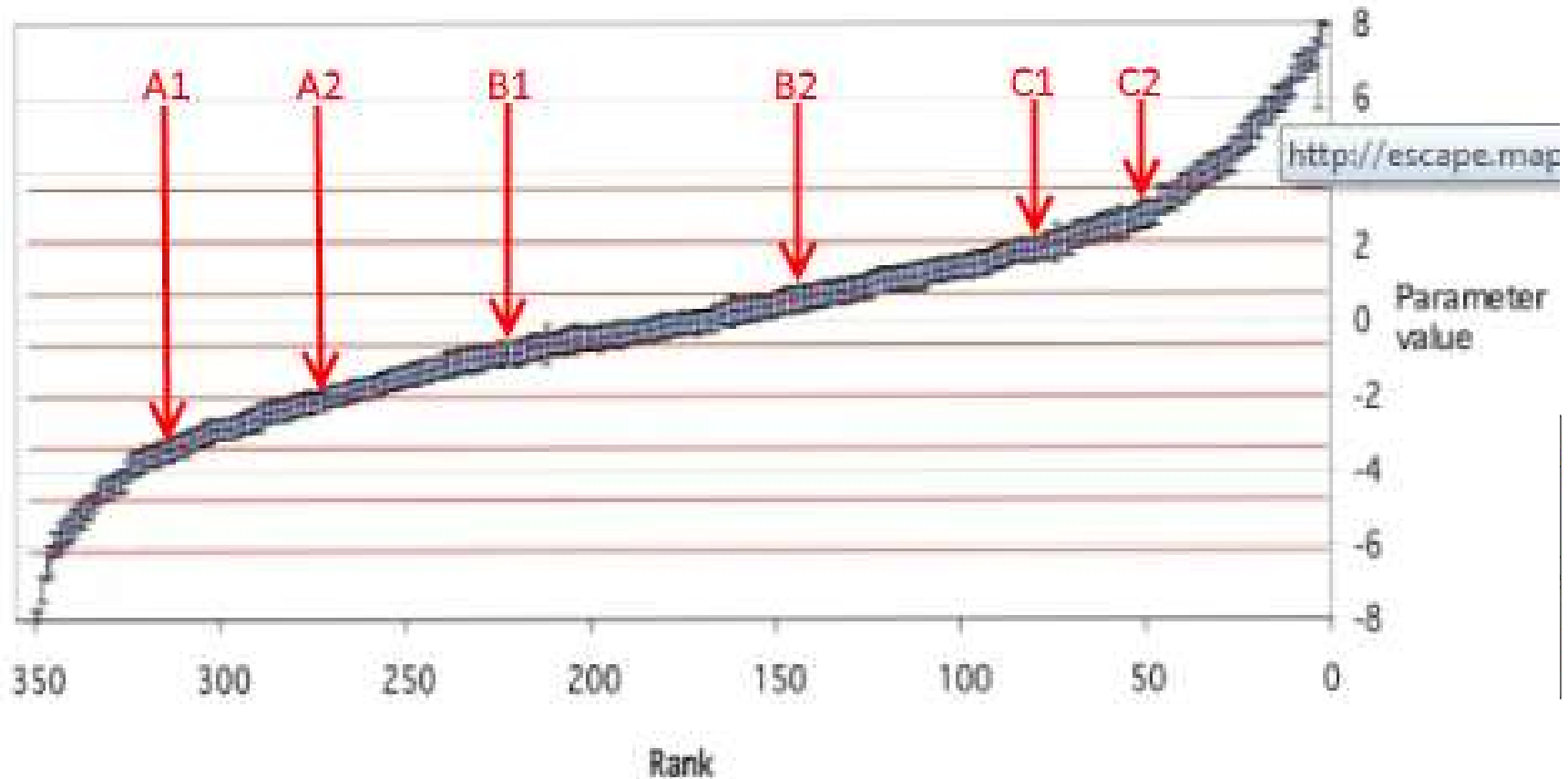
How it Works



Web browser-based Adaptive Comparative Judgement approach, presents successive pairs of learner work



How it Works



Creates a scaled rank order of the work – with exceptional reliability



The Benefits



Measure Provides:

- Scalable, cost effective deployment/management of summative assessment of open-ended evidence
- Simplified training requirements as ACJ embraces professional judgement
- Significantly improved assessment reliability – better than ~ 0.93
- Enhanced standardisation and dynamic identification of out of kilter assessors
- Reduction of operating costs – removes the need for re-marks and fewer appeals



The Chartered Insurance Institute



- Brief introduction to the CII
- Look at the background
- How we went about the proof of concept
- Provisional results –The examiners
- Provisional results – The stats
- Provisional results – Usability
- Conclusions

The Chartered Insurance Institute



CII

Background to the Proof of Concept



Standard maintenance

- Undertook work with Alphaplus 15/16
- Current approach – Modified Angoff
- Utilise a panel of experienced examiners
- As part of CII's continued commitment to enhance our processes we were keen to explore the potential for using ACJ as an alternative

Background to the Proof of Concept



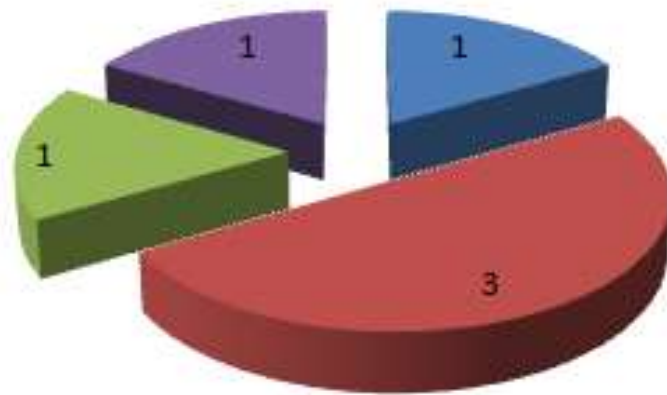
How we went about it

- Chose a unit
- Trained examiners
- Importance statement
- Examiners made their judgments
- Conducted a survey
- In the process of analysing the results

What we found



**How intuitive was it for the examiners
(compared to Angoff)?**

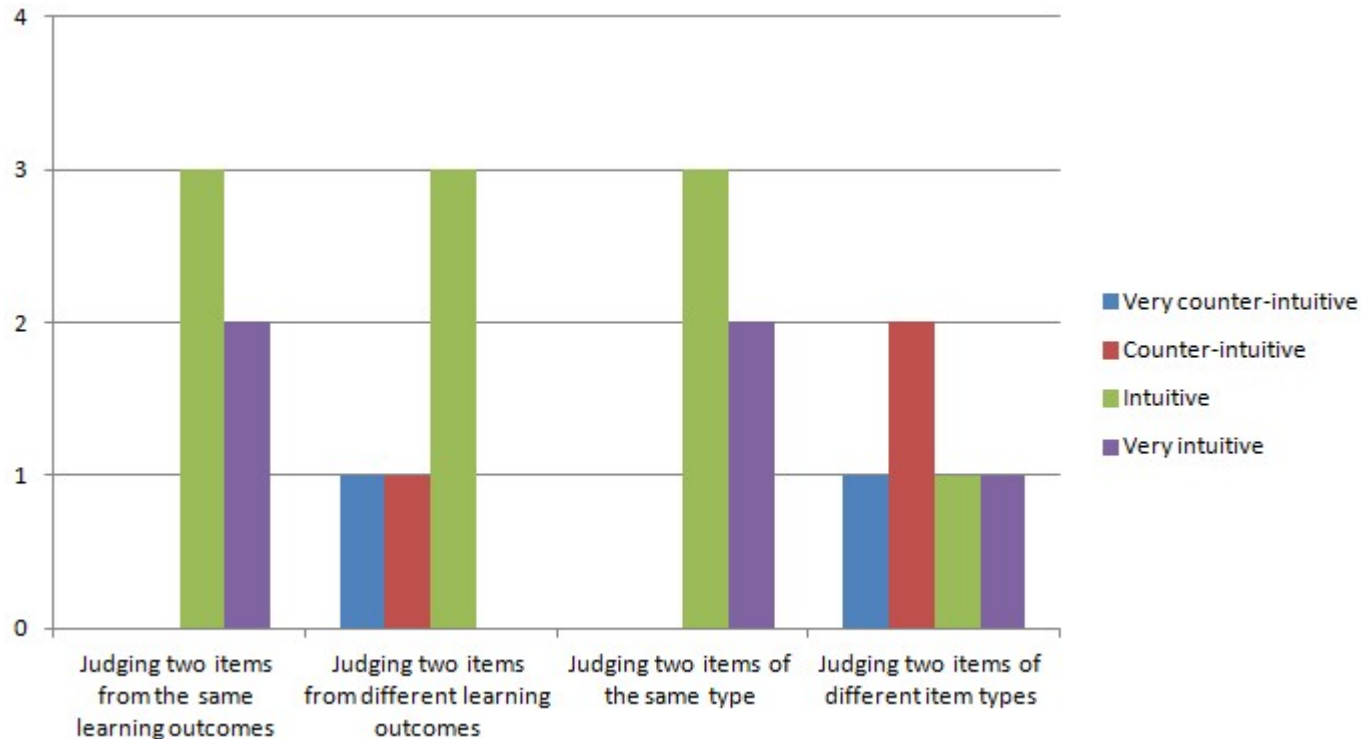


- ACJ as far less intuitive than Angoff
- ACJ is slightly more intuitive than Angoff
- ACJ is far more intuitive than Angoff
- There is no difference

What we found



**How intuitive was it for the examiners
(across learning outcomes and item types)?**



What we found



Examiner comments

“There were some occasions when it was extremely difficult to judge between 2 questions”

“I for sure would seek some further training in ACJ and practice”

“The difficulty is basically one of non- insurance versus insurance questions and both against four and five option multiple response and four option multiple response versus five option multiple response”

“This has been interesting and I would be keen to see more of the results”

“ACJ has huge advantage in that no group pressure as per Angoff”.

What we found



The stats

- Similar results to Angoff in terms of consistency of judgements between examiners
- Similar results to Angoff in relation to candidate performance
- Can find equivalent passing point on the scale across test instances

What we found



The usability

- Individual items can be judged
- Flexible, remote
- A potential new option

In Conclusion



- Statistically both ACJ and Angoff seem to produce similar results
- The amount of time taken to undertake the work was similar with both approaches
- Overall the examiners who formed the panel found the ACJ approach to be more intuitive than Angoff
- A flexible tool
- Potentially another option

Thank you

Liam Simington

Examinations and Assessments Systems Manager

Tel: 0207 417 3592

Mob: 07769143643

e-mail: liam.simington@cii.co.uk



Matt Wingfield

Chief Business Development Officer

Tel: +44 203 176 0394

Mob: +44 7850 488 502

e-mail: matt.wingfield@digitalassess.com

