

Cheating behavior in Large-scale assessment

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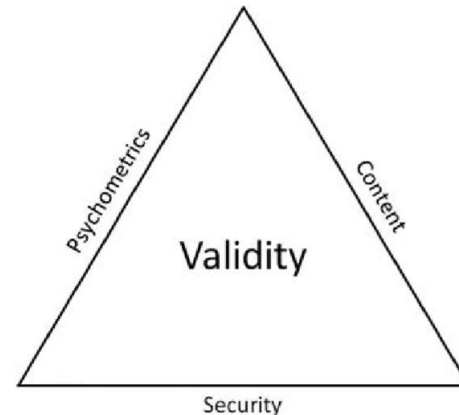
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Cheating and its significance

- Cheating: A purposeful unauthorized behavior to achieve questionable advantages over other examinees in tests (Cizek & Wollack, 2017; Kim, Woo, & Dickison, 2017).
 - Answer Change (Test Tampering)
 - Answer Copying (Unusual similarity)
 - Pre-knowledge (Item Compromise)
- Validity Triangle (Kim, Woo, & Dickison, 2017)





Cheating Detection Methods

- Psychometric-Based Approach (Person-fit statistics)
 - Item Response Model (IRT)
 - Analyze the deviation of the suspected examinee's score from the IRT assumption.
 - Response Time Models (RT)
 - Analyze the Response Time of the suspected examinee.
- Machine Learning-based Approach (ML)
 - Supervised ML
 - Aim to predict and classify suspected examinees through predictive models.
 - Unsupervised ML
 - Aim to describe characteristics of the suspected through data mining and pattern displaying.



Future Direction

- Examining causal factors of cheating in high-stake testing for a holistic perspective on the issue.
 - E.g., ecological context, associated stakes.
- Approaches to reduce the occurrence of cheating
 - Balance the stake in the accountability testing, which could lead to a better change in policy (Martineau, Jurich, Hauger, & Huff, 2017).
 - Educate individuals why cheating is not a preferred course of action (Murdock, Stephens, & Grotewiel, 2016).

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Thank you very much for your attention!



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