



# USING LOG FILES TO IDENTIFY SEQUENTIAL PATTERNS IN PIAAC PROBLEM SOLVING ENVIRONMENTS BY US ADULTS' EMPLOYMENT STATUS

DISCUSSION

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# Summary of the paper

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- Three empirical exercises:
  1. Identify consistent action sequences in different subgroups
  2. Cluster respondents on the basis of action sequences
  3. Check consistency of action sequences across different items
- Three papers?
- Useful characterization in terms of background characteristics of groups of respondents undertaking similar strategies



## Results

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1. Higher-performing groups more likely to use purposeful actions, lower-performing groups more likely to use redundant/useless actions. Peculiar behaviour of young adults
2. Three clusters, correlated with effort and rate of success
3. About 2/3 of sample showed inconsistent behaviour. Very diverse group



# 1. Identification of consistent actions in different groups

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- Wording: why “employment status”?
- Kitchen-sink approach: what’s the logic?
  - Statistical significance vs. predictive power
- Categories not mutually exclusive
  - Are they all policy-relevant?



## 1. Identification of consistent actions in different groups

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- Why don't simply group respondents according to PSTRE proficiency/success rate in U02?
- Good discussion of the link between actions and underlying cognitive processes. More of that would be even better



## 2. Identify and characterize clusters of respondents based on their actions

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- Part of the paper I liked the most
- Careful how you interpret presence of skilled respondents in each cluster
  - Clustering algorithm is “blind”
  - Only unigrams are used
  - How order of actions is accounted for?



## 3. Consistency

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- Are the items really comparable?
  - Show first that actions are similarly related to outcomes. Actually, some evidence this is not the case
- First step should be to look at characteristics of same groups in the two items
  - You work directly with consistency groups



### 3. Consistency

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- What if you exclude No. actions and time from previous cluster analysis?
- Why four consistency groups and just one inconsistent group?