

Exploring the Benefits of Collaborative Two Stage Exams in a Large Introductory Biology Course

Gaston I. Jofre Rodriguez
“Profe Jofre”
Department of Biology
jofrerodrig@vcu.edu



Individual exams

- Allow students to demonstrate their individual understanding of the material.
- Provide an opportunity for students to work independently and develop critical thinking skills.
- Encourage thorough preparation and understanding of the material on an individual level.

Individual exams with a group

discussion

- Promote collaboration and teamwork skills among students.
- Foster a sense of community and shared learning experience.
- Decrease test anxiety.
- Can generate long-term concept retention.

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- Decrease test anxiety.
- **Can generate long-term concept retention?**

Logistics for 75 min. session

Individually
25 questions
50 minutes



Logistics for 75 min. session

Individually
25 questions
50 minutes

5 minutes



Logistics for 75 min. session

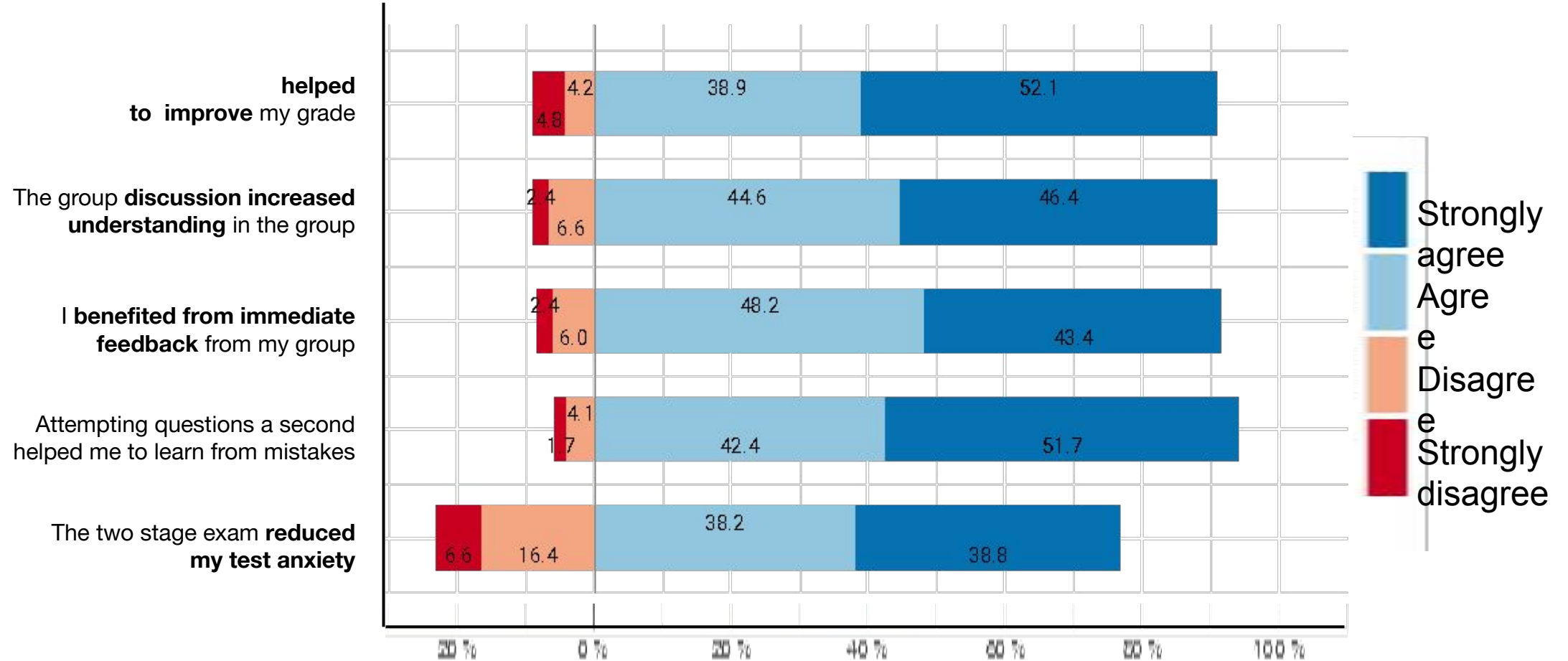
Individually
25 questions
50 minutes

5 minutes

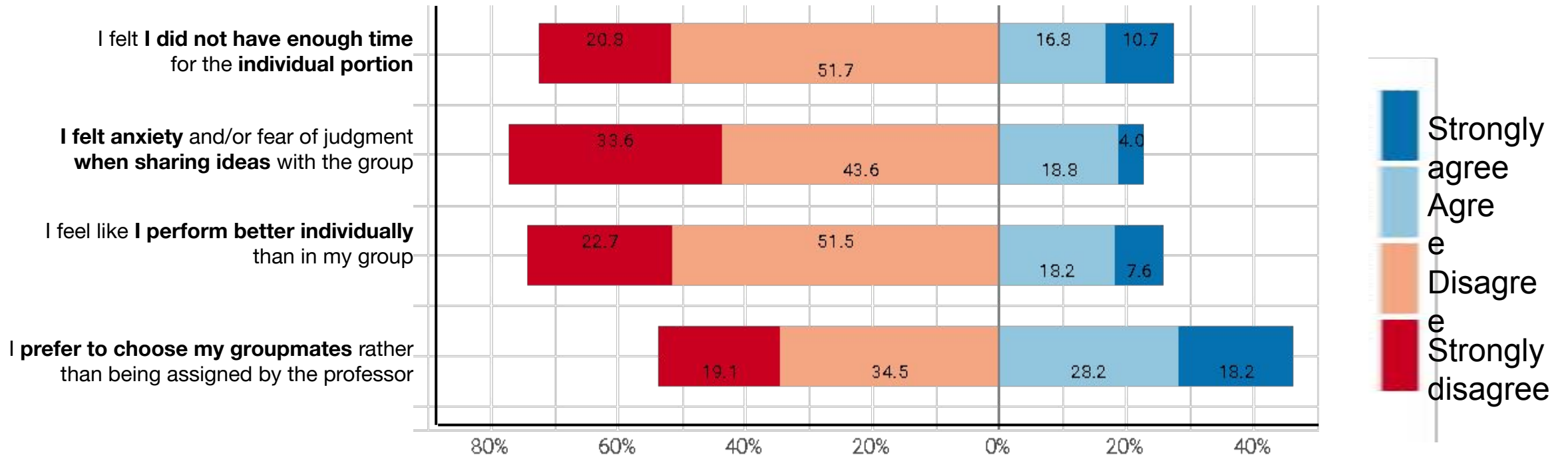
Group
10 questions
20 minutes



Survey BIOL 151 Fall 2023



Survey BIOL 151 Fall 2023



Does it help with retention?

EXAM 3

5 Qs. Individually

5 Qs. Groups

Does it help with retention?

EXAM 3

Vs

EXAM 4

5 Qs. Individually

5 Qs. Groups

5 Qs. Individually

5 Qs. Individually

Does it help with retention?

EXAM 3

Vs

EXAM 4

5 Qs. Individually

5 Qs. Individually

5 Qs. Groups

5 Qs. Individually

Does it help with retention?

EXAM 3

Vs

EXAM 4

5 Qs. Individually

5 Qs. Groups

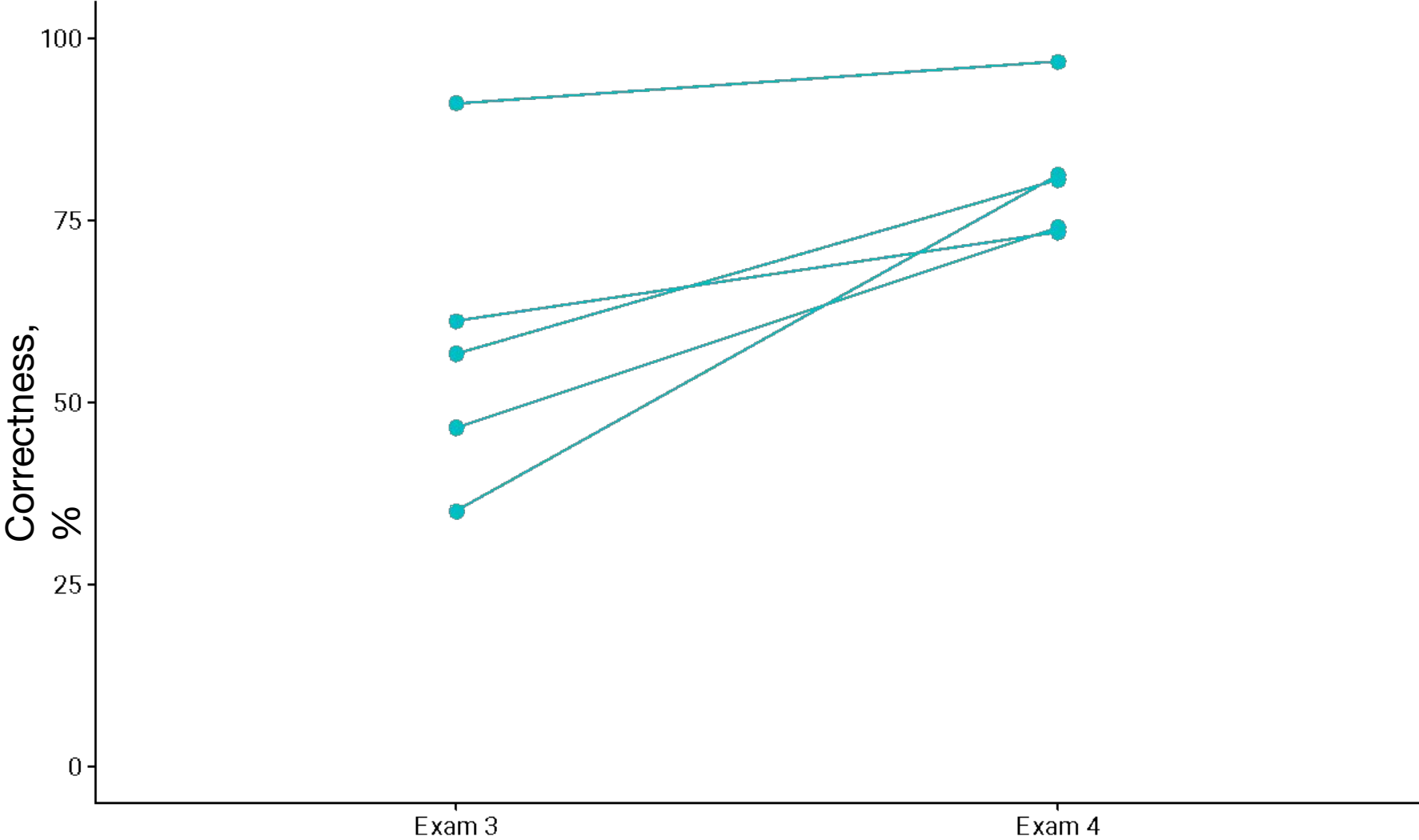
5 Qs. Individually

5 Qs. Individually

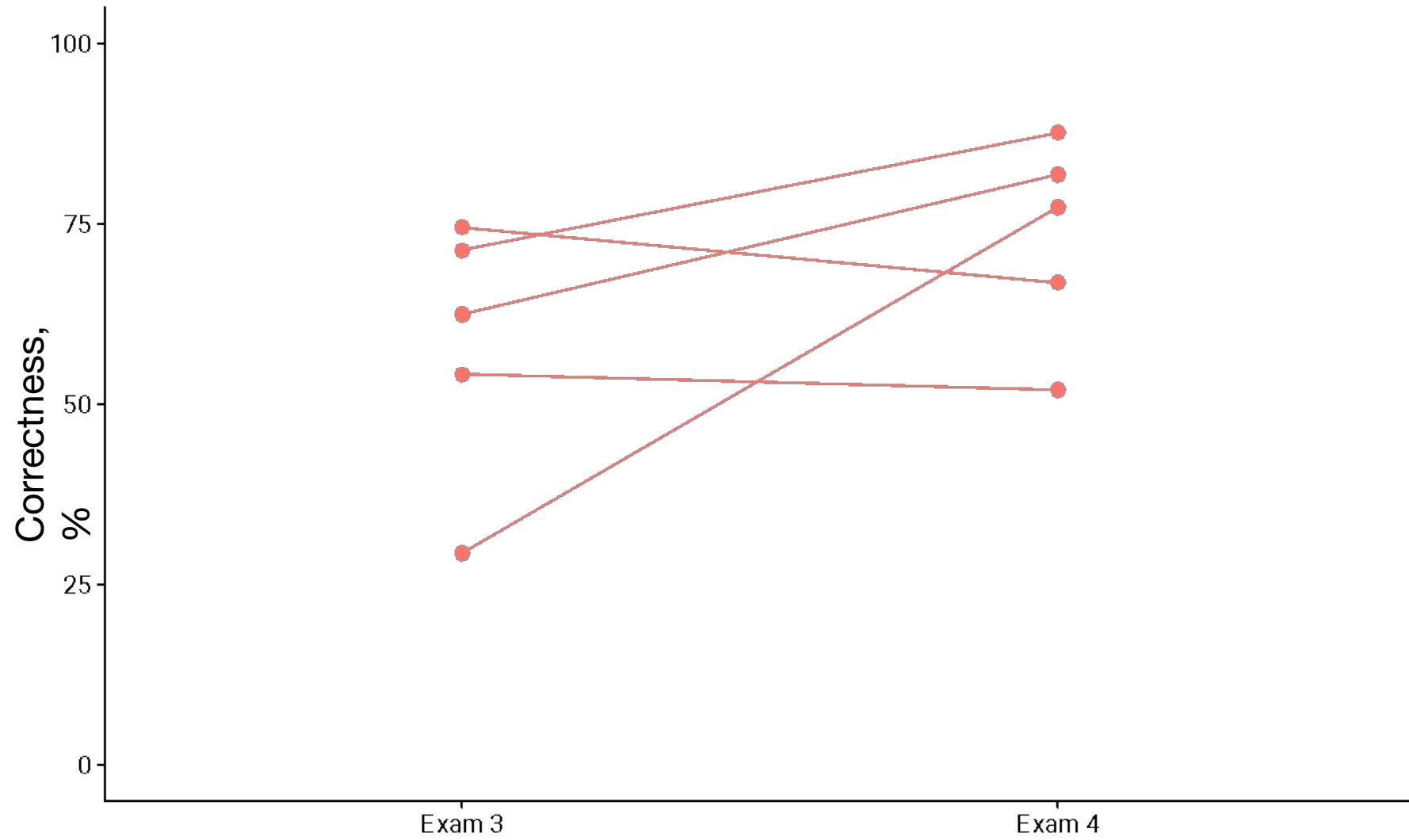
Questions?



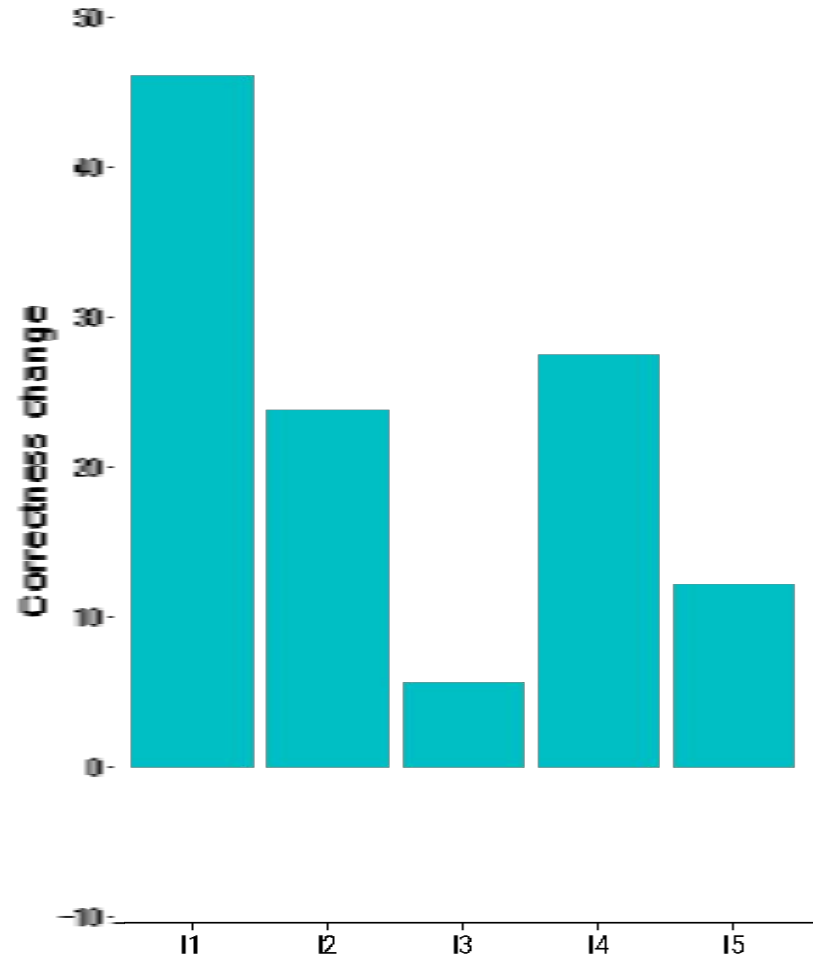
Answered only Individually



Discussed in Group



Answered only Individually



Discussed in Group

