Pilot Study of Structured Group Decision-Making with Decidio

Illustrating the significance of meeting structure on participant engagement and decision quality

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Problem

- Unstructured discussions risk limiting the quality of decision-making meetings and group collaborative processes.
- Valuable contributions are often missed because outcomes may fail to reflect of participants' creative input and relevant discussion points may not be fully understood by participants.
- To address these challenges and maximize productivity, decision-makers often structure interactions using meeting conventions and rules designed to promote meaningful and in-depth dialogue while maintaining balanced group participation.

Purpose

This study aims to examine how effective web-based tools are for structuring discussion.
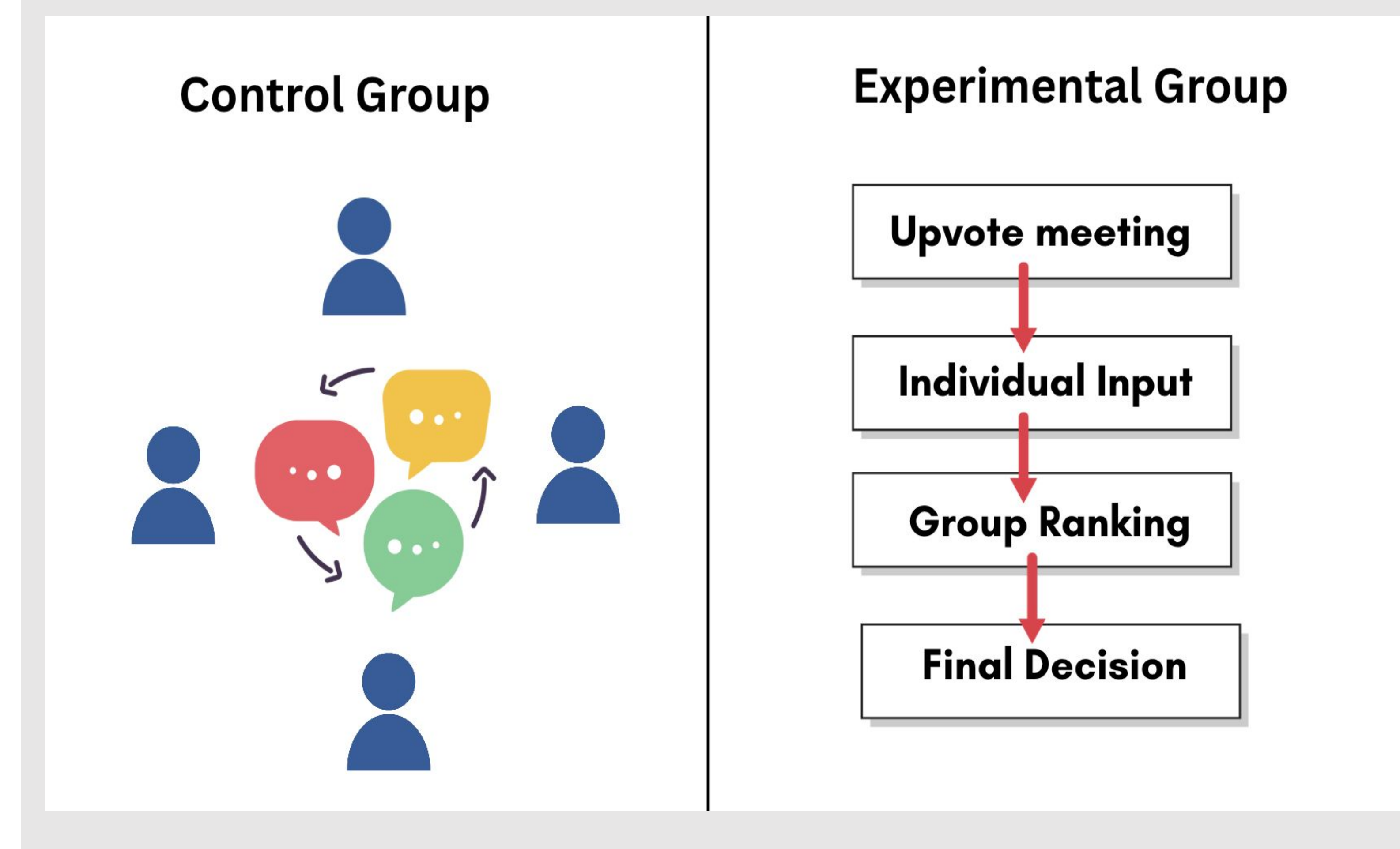
Research Question: To what extent does the use of a structured sequence of meetings through a web-based system such as Decidio influence the efficiency and quality of group decision making?

Decidio is a web-based Group Decision Support System that facilitates decision making through structured meetings. In this pilot study, we evaluate the impact of Decidio's structured meeting sequences on meeting outcomes.

Methods

Study Overview

- This pilot study examines structured vs. unstructured group decision-making through a debate case preparation task.
- Participants (N=8) were randomly assigned to unstructured collaboration (control) or structured collaboration with Decidio (experimental)
- Participants identified and ranked the top three arguments for one side of a Public Forum debate prompt.

Results

Data Collection	Control Group	Experimental Group
Observation	• Dominance by 1–2 voices • Participants were more focused on finding any three arguments to support their side	• Participants elaborated on their input • Increased questioning and clarification of choices • Broad participation with relatively equal contributions
Time to Decision(min)	05:41	26:16
Final Decision Observation	• Arguments were more generalized to the topic • Each argument contained 1-3 words	• Arguments were specific to the topic • Each argument was presented in full sentences or longer phrases

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Findings

Experimental Group

- Outcomes suggested that participants were more informed about their decision as key points were emphasized and revisited throughout their discussion.
- Their contributions reflected more detailed arguments, and most closely resembled statements in a debate case among the two groups

Control Group

- Group dynamics demonstrated uneven participation and limited new ideas shared, with most participants echoing the first two speakers
- Although the final decision was more time efficient, the results indicated a lack of depth and strong relevance to the broader prompt.

Conclusion

This pilot study offers a solid foundation for refining our approach to structured group negotiations. These initial results enable us to scale the study to larger groups and complex, real-world problems.

References

Acknowledgement