Measuring the Desirability of an Intelligent Advisor for Predicting the Perceived Quality of News Articles

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What is iQJournalism?

An intelligent advisor for predicting the perceived quality of news articles. Artificial intelligence methodologies are utilized, with the purpose of providing real-time recommendations to journalists looking to improve the overall quality and engagement of their articles (language quality, subjectivity level, emotionality, and entertainment).

Addressing:
- Absence of clear guidelines and tools for creating decent online news
- Emphasis on audience engagement and advertising revenue

Goal:
- Enhance article quality, while discouraging click-bait techniques

IQJOURNALISM

An Intelligent advisor predicting perceived Quality in Journalism

Get guidance to fine-tune distinct features of your article to attain the ideal quality and engagement.

Start writing

Watch demo

iQJournalism Prototype and Design Methodology

iQJournalism is designed using a user-centered iterative design approach, in order to facilitate the specific needs of the journalists and editors using it.

- State of the art research on online editors/writing assistants
- The system's 1st design prototype was created (via Drawio)
- Focus group with 10 MSc students and journalists
- Prototype refinement ➡ Interactive Prototype (via Figma)
- Desirability (light usability) study (20 participants)
- Iterative improvements ➡ Functional Prototype

user needs research | user needs definition | visuals design | prototype creation | prototype testing

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Pentagon says it is monitoring Chinese spy balloon spotted flying over US

Officials say balloon has been watched for a few days but has decided not to shoot it down for safety reasons

The Pentagon has said it is tracking a Chinese spy balloon flying over the United States but decided against shooting it down for safety reasons.

Defence officials said the balloon has been watched for a couple days since it entered US airspace, flying at high altitude. It has been monitored by several methods including manned aircraft, and has most recently been tracked crossing over Montana, where the US has some of its silo-based nuclear missiles. As a precaution, flights out of Billings Logan airport were suspended on Wednesday.

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Menu →

IQ Mode: ON OFF

81 **Performance Score**
See report >

Is Donald Trump going to jail?

Edit preferences >

Set article preferences

Performance score is calculated on the basis of your preferences.

Genre: Politics   Society   Health   Tech   Sports

Medium: News   Facebook   Twitter

Length: 0 - 300   301 - 1000   1001+

Photographs: Feature only   1   2   3   4+

Videos: No videos   1   2   3+

Set as default   Reset to default   **Done**

Language quality See details >
75%
Improve your vocabulary

Subjectivity   See details >
65%
Use less self-reflective pronouns

Emotionality   See details >
67%
Your text is very angry

impeached twice in his chaotic one-term reign in the White House, jetted into New York's La Guardia Airport in his personal Boeing 757 the day before the hearing, and returned to his Mar-a-Lago estate immediately after to give a speech railing against the indictment. Documents released by Mr Bragg's office after the arraignment accuse Mr Trump of 34 counts of falsifying

Entertainment   See details >
79%
Use more recognizable entities

iqjournalism

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4/2/2023

Pentagon says it is monitoring

86

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3/2/2023

Artificial intelligence

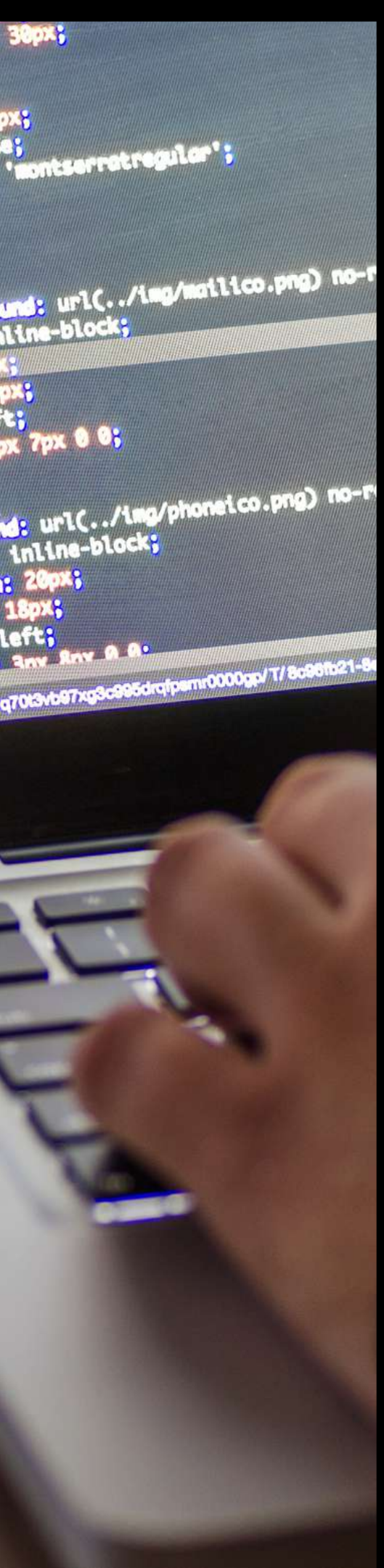**54**

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3/2/2023

Artificial intelligence

39

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User Study

- **Moderated desirability, light usability study**

- **Run for 2 weeks (3/5/2023 - 15/5/2023)**

- **20 participants: MSc students**

  18 Female, 2 Male

  20-35 years old

  4,7 average years of experience as article authors

- **Individual sessions, completing 3 situation specific tasks and providing feedback using the think-aloud protocol and research questions**

Study Hypotheses

- **Hypothesis H1 : There is a strong positive user experience when participants interact with the prototype**

- **Hypothesis H2 : The perceived usability score of all participants is higher than the standard average SUS score of 68**

- **Hypothesis H3 : Participants' NPS score is over 30, showing a clear tendency towards recommending iQJournalism system**

- **Hypothesis H4 : Participants' scores distribution with respect to their overall experience and satisfaction with the prototype show a central tendency towards the top values (strong attitudes) of the subsequent Likert scales.**

- **Hypothesis H5 : The majority of the participants performed faster and more effectively (i.e., SWA < 1)**

Table 1: Evaluation Methods and Research Hypotheses

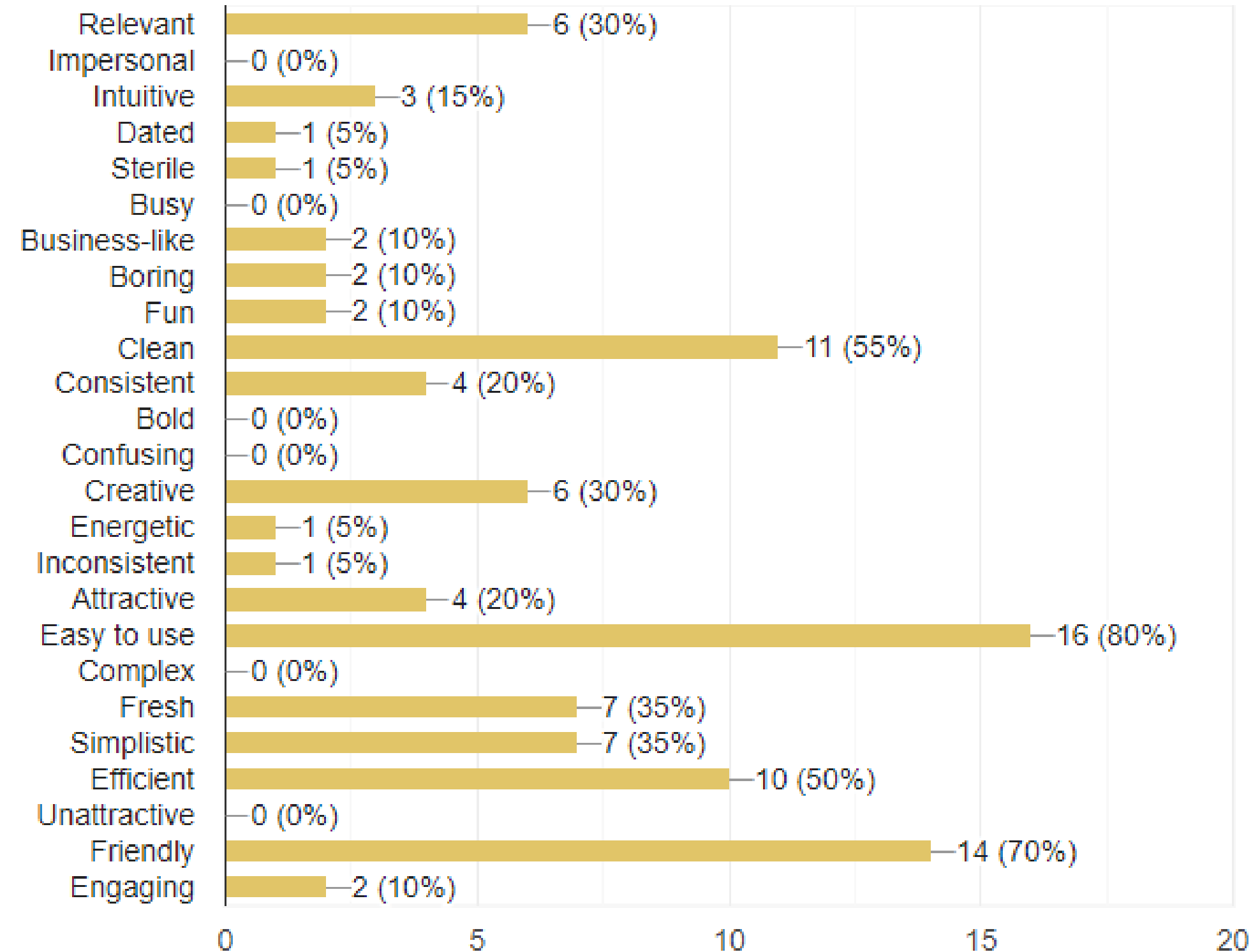| Evaluation Method	Hypothesis
UEQ, Product Reaction Cards	H1
SUS	H2
NPS	H3
Perceived Satisfaction (4 items)	H4
Tasks Performance	H5

Evaluation Results : User Experience - Acceptance of Hypothesis 1

Short User Experience Questionnaire (UEQ), 8 items:

- **Pragmatic quality: 1.81 (classified as "Excellent" and in the range of the 10% best results)**
- **Hedonic quality: 1.12 (classified as "Above Average", with 25% of results better and 50% of results worse)**
- **Overall user experience: 1.47 (classified as "Good", with 10% of results better and 75% of results worse).**
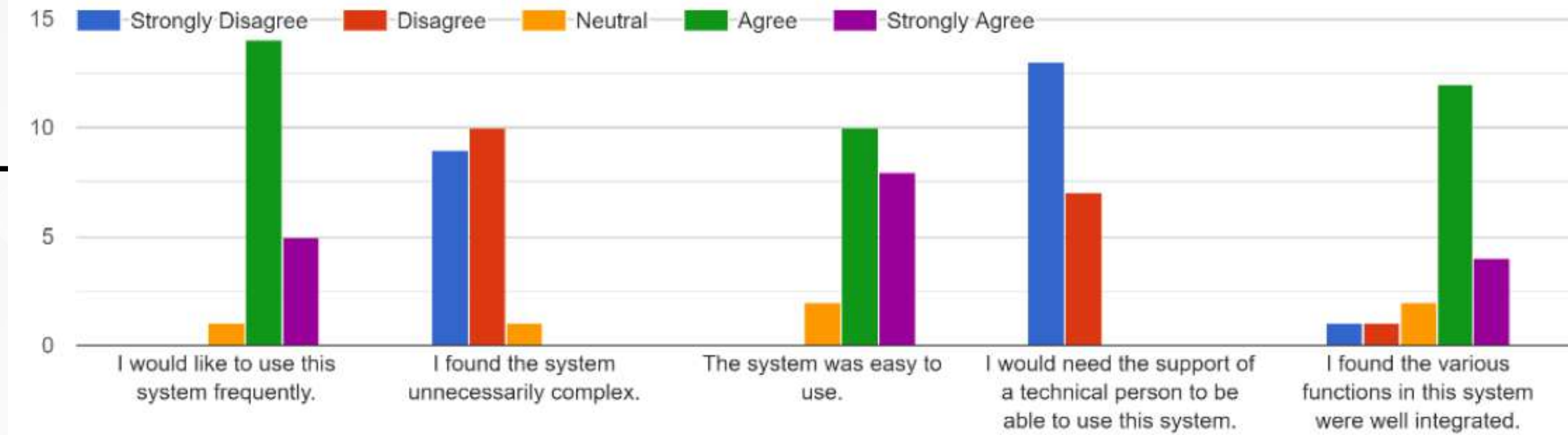
User Experience: Product Reaction Cards (Hypothesis 1)

Product Reaction Cards: 80% of users described the system as "Easy to use", 70% as "Friendly", 55% as "Clean" and 50% of users described it as "Efficient"
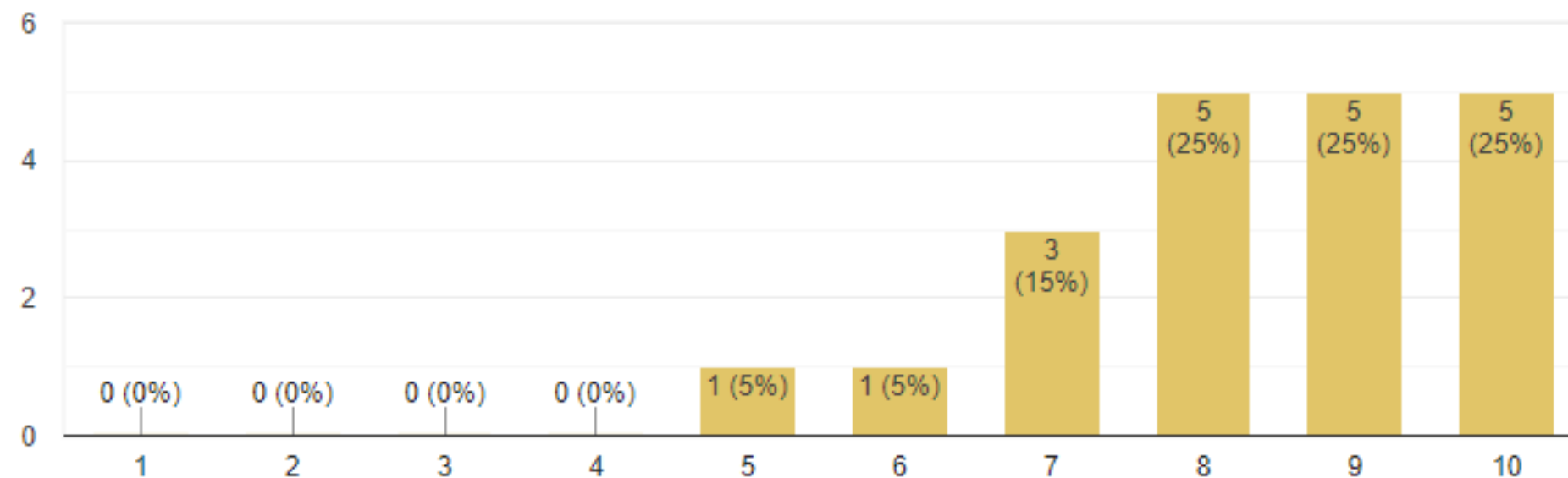
SUS (Hypothesis 2)

Baseline Score 82,5

Above threshold (68). Great to Excellent rating

NPS (Hypothesis 3)

Score 40

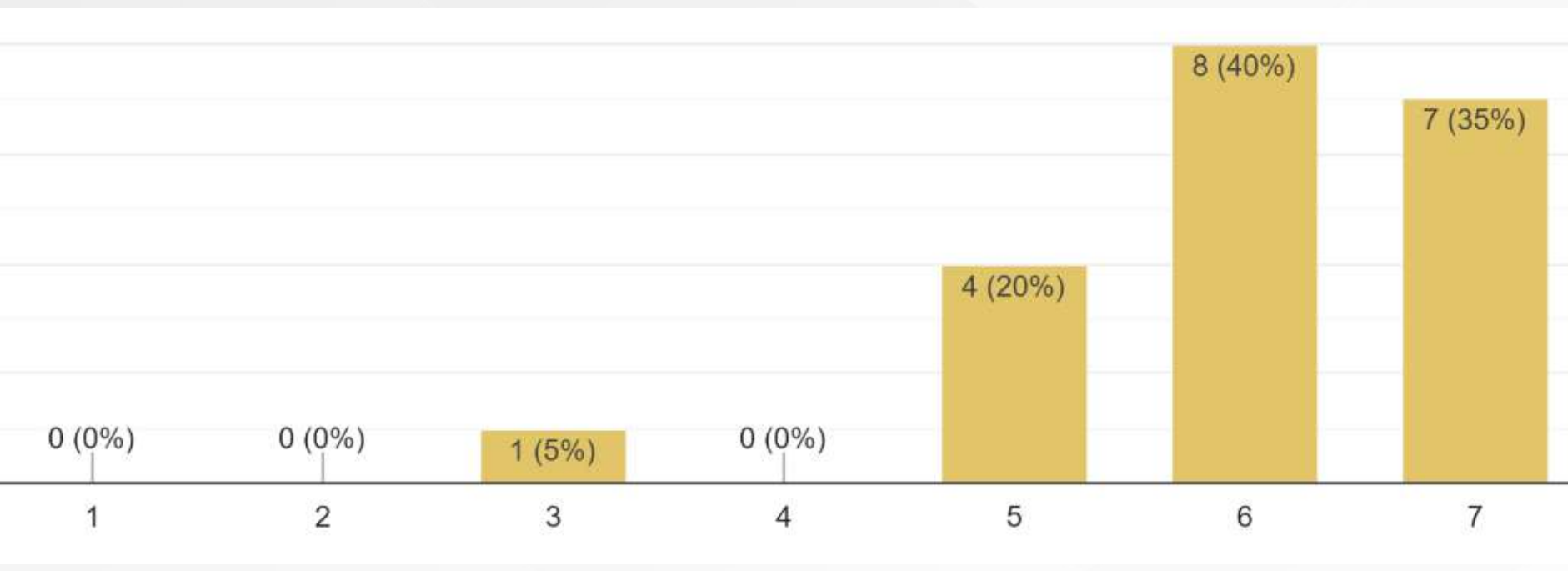Great rating. High likelihood of recommending the system

Satisfaction - Acceptance of Hypothesis 4

Perceived Satisfaction Questions (4 items): Overall there is a positive consensus and a central tendency towards the top values (strong positive attitudes) of the scales (i.e. 5, 6 and 7).
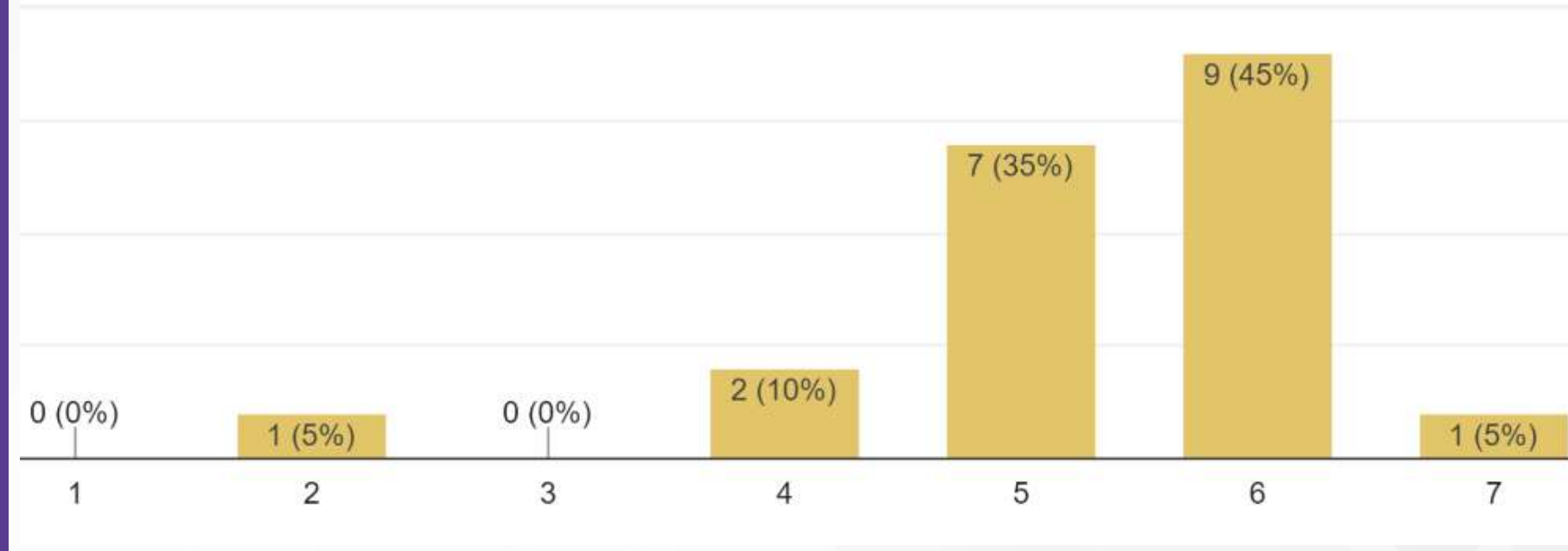
1. **95%* of the participants agreed that the system was easy to use.**

2. **85% can self-reflect and get a good understanding of their performance.**

3. **90% are overall satisfied with the iQJournalism prototype.**

4. **85% stated they usually do not feel uncomfortable and emotionally loaded (i.e., stressed-out/ overwhelmed) when interacting with the system.**
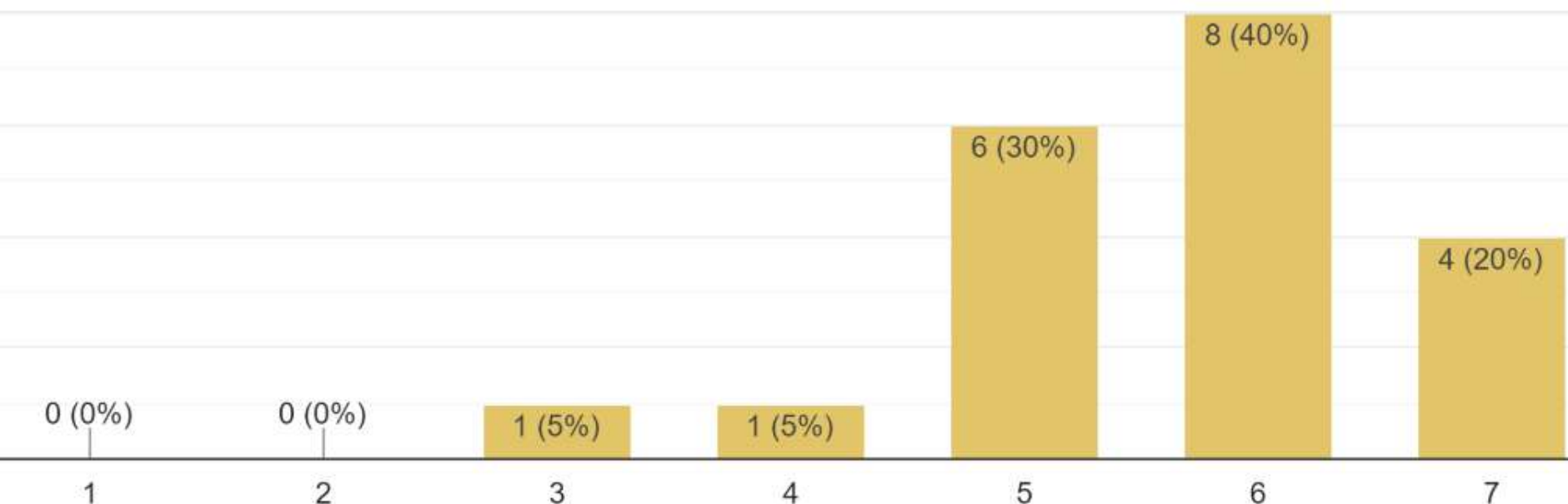
*Percentage of answers concentrated on values 5,6,7

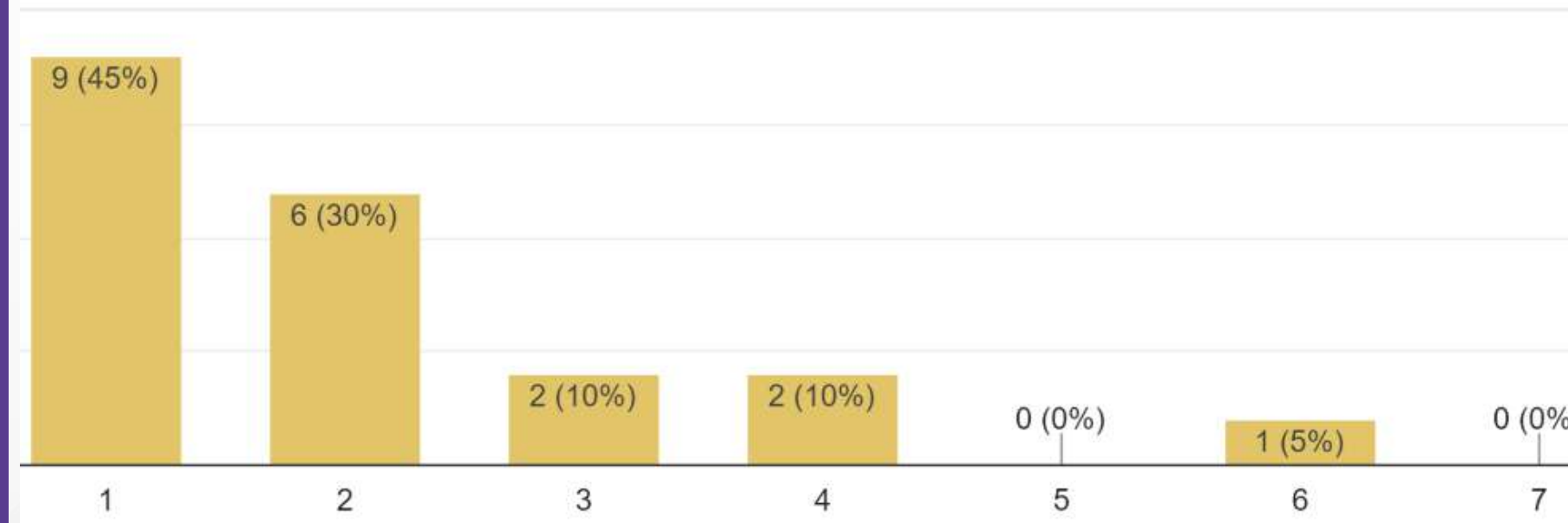**How easy is it to deal with iQJournalism for doing your job?**

Rating	Count (%)
1	0 (0%)
2	0 (0%)
3	1 (5%)
4	0 (0%)
5	4 (20%)
6	8 (40%)
7	7 (35%)

Using the data from the various system's views, I can self-reflect and get a good understanding of my performance.

Rating	Count (%)
1	0 (0%)
2	1 (5%)
3	0 (0%)
4	2 (10%)
5	7 (35%)
6	9 (45%)
7	1 (5%)

How would you rate your overall satisfaction with iQJournalism prototype?

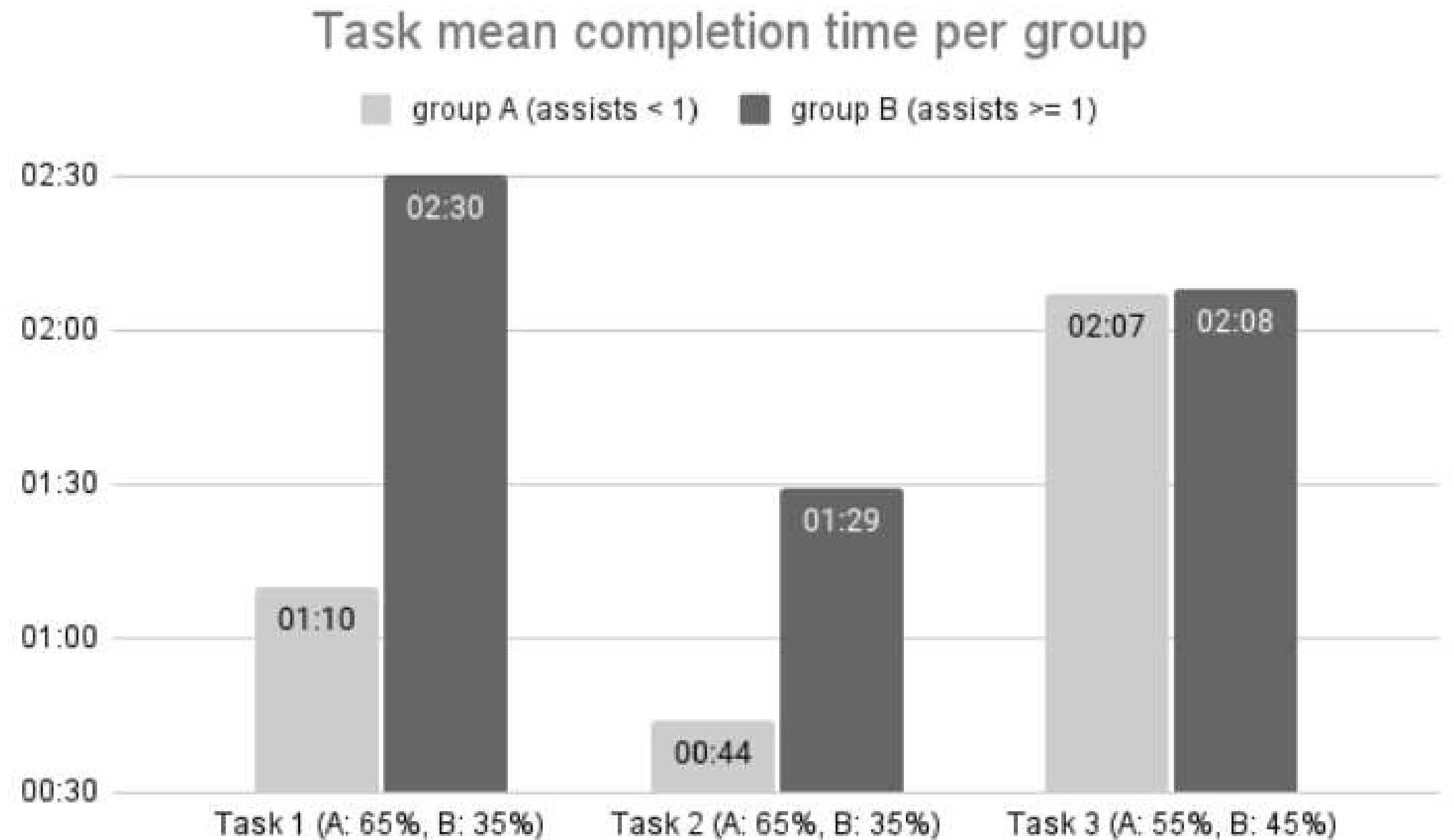| Rating	Count (%)
1	0 (0%)
2	0 (0%)
3	1 (5%)
4	1 (5%)
5	6 (30%)
6	8 (40%)
7	4 (20%)

When I interact with the various views of iQJournalism, I usually feel uncomfortable and emotionally loaded (i.e., stressed-out/ overwhelmed)
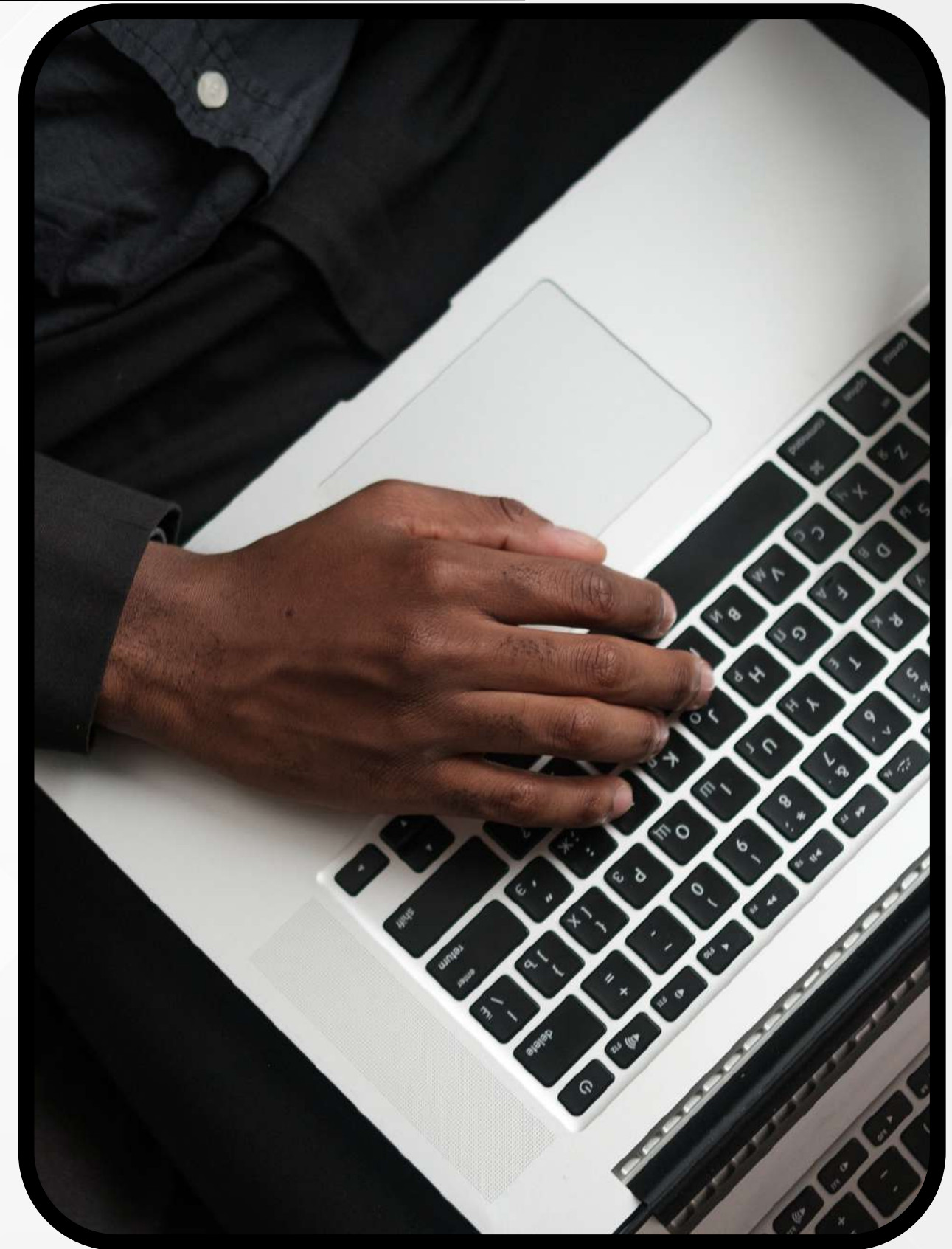
Rating	Count (%)
1	9 (45%)
2	6 (30%)
3	2 (10%)
4	2 (10%)
5	0 (0%)
6	1 (5%)
7	0 (0%)

Tasks - Acceptance of Hypothesis 5

- **3 Tasks**
- **Metrics: Success with Assistance, Completion time and open-ended feedback**
- **Group A performed faster and more effectively**

Task mean completion time per group

Important Feedback

- <u>Positive comments</u>: exploitation by junior editors, the user-friendly interface and the color selection, word-counter feature

- <u>Negative comments</u>: outdated, absence of tracking for the implemented changes

- <u>Suggestions</u>: keywords generation, synonym recommendations, visual recommendations. "spelling, grammar, syntax check always on", reading time indicator, "add-on for Word or WordPress".

Future Work - Closing Remarks

- **A positive user experience and acceptance of the first version of the system (prototype stage)**

- **Significant areas for improvements**

- **Iterative design based on users' feedback and testing**

- **Developing a fully functional version of the system.**