

# Do Great Minds Think Alike? Leveraging Social Annotation to Promote Critical Thinking in Scientific Papers

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## Objective

To evaluate the effectiveness of implementing social annotation in pharmacy literature course readings to enhance pharmacy students' critical reading skills.

## Methods

A survey-based study assessed 2PD pharmacy student attitudes and perceptions of the effectiveness of social annotation in improving critical literature appraisal skills.

Social annotation was implemented through Perusall to engage students with journal articles on infectious diseases.

Students read an assigned ID article (out of 5 total) and annotate online to engage and learn with their peers

Students' attitudes towards using Perusall were measured using a Likert scale. Those who scored 'disliked' or below (1-2) were categorized as having an unfavorable attitude, while those who scored positively (4-5) were categorized as having a favorable attitude. A "3" value represents neutral.

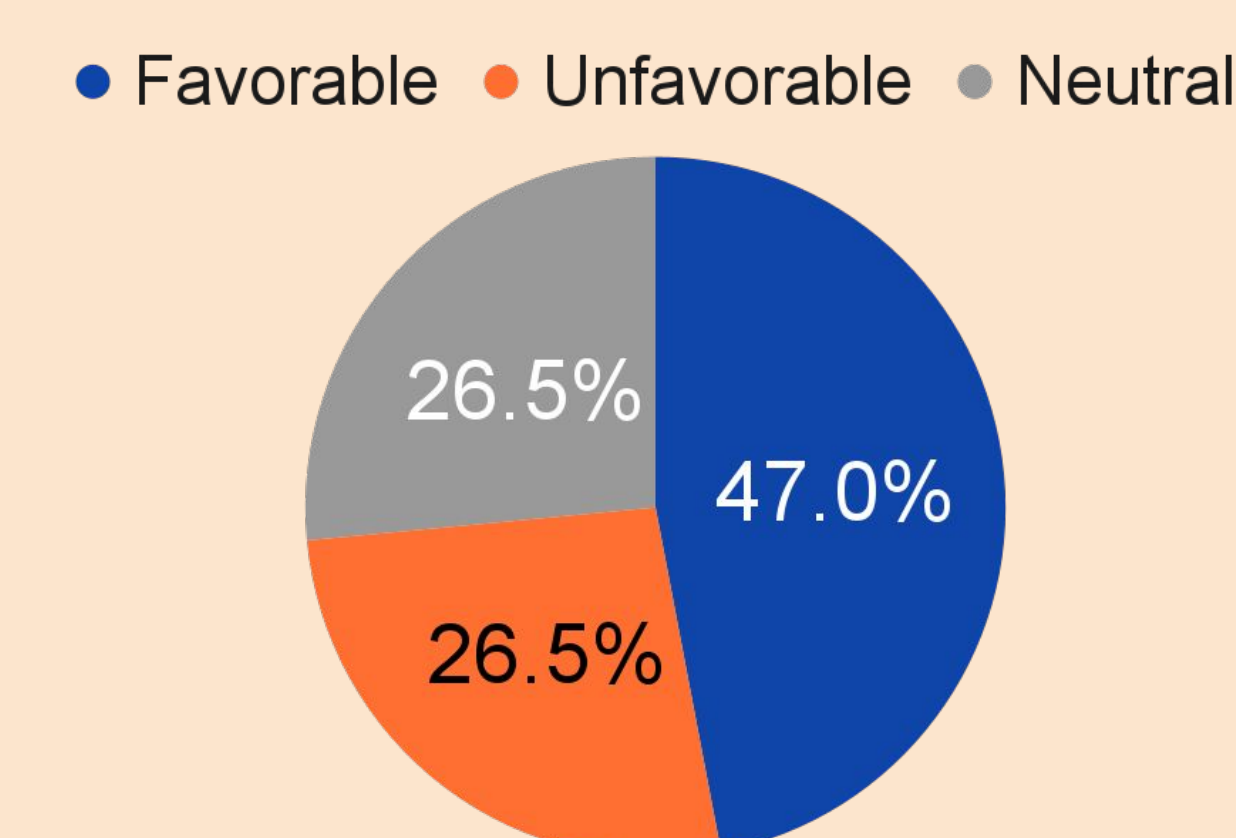
Confidence was evaluated in their ability in critical literature appraisal and researching further into the topic.

## Results

### Response Rates and Overall Findings:

- ❖ **Total Class Participation:** 71% (166/235) responded
- ❖ Perception of making annotations made 78.3% of students believe it was **intellectually stimulating and rewarding**
- ❖ 83.7% felt **challenged** by annotating and critically evaluating the article

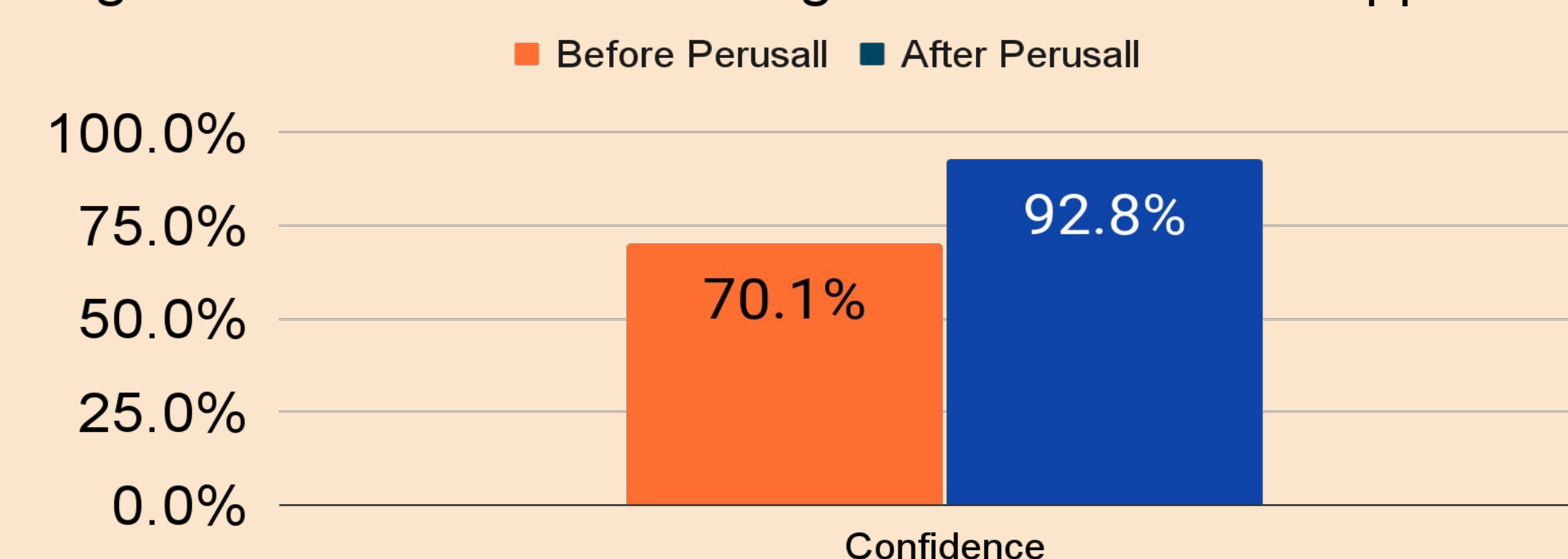
Figure 1. How did the student favor Perusall?



### Overall Improvement in Confidence in Critical Literature Appraisal Skills:

- A 22.7% increase in confidence was observed in students' ability to critically evaluate literature.
- We saw a higher proportion of confident students favoring Perusall and were intellectually stimulated

Figure 2. Confidence in doing Critical Literature Appraisal



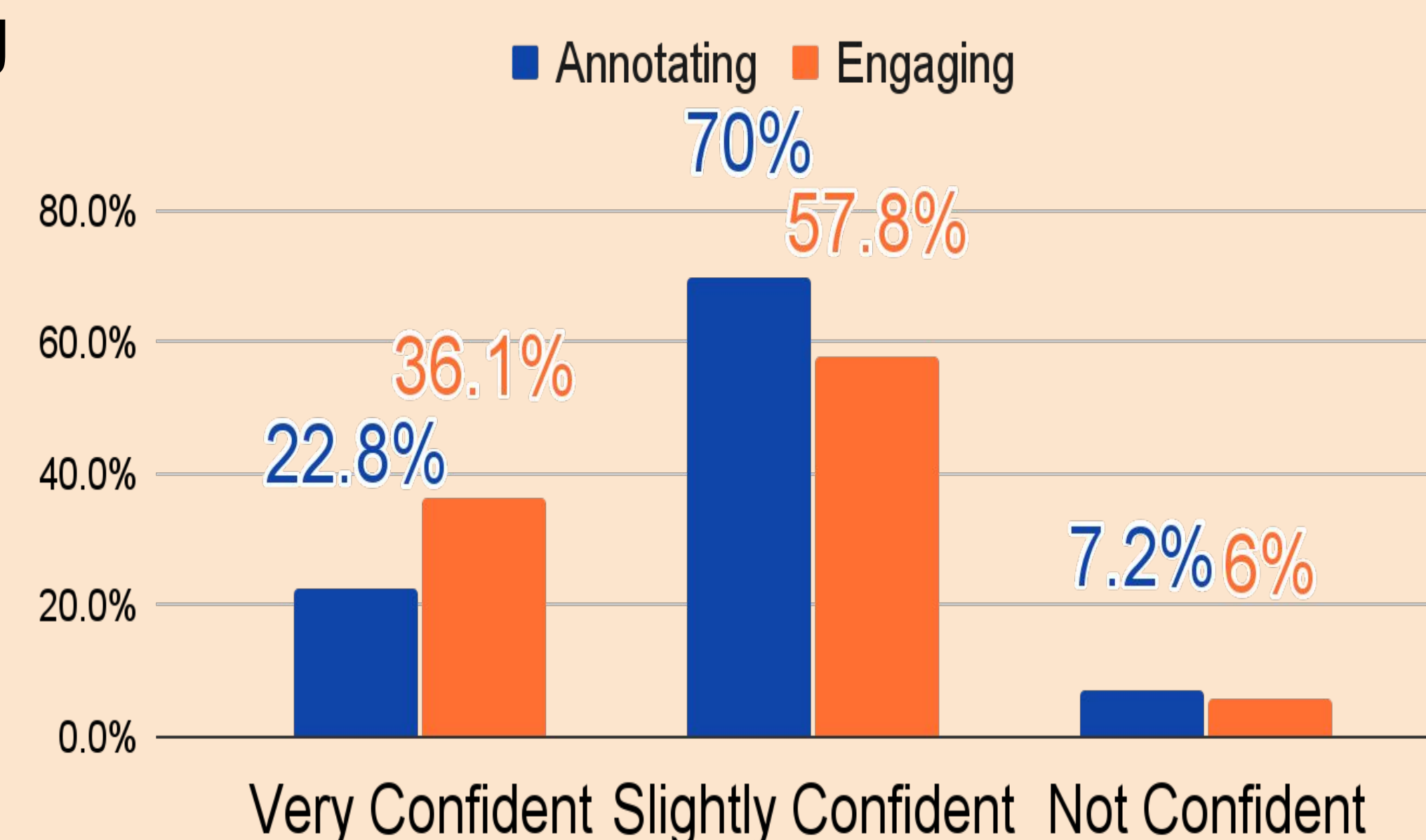
### Research Skills:

- 78.3% of students felt more confident in researching pharmacy topics to inform their expertise and knowledge after using Perusall.
- 47.6% of students felt inspired to conduct research on their own after using Perusall.

### Confidence in Understanding the Article:

- 92.8% of students felt confident understanding the article after making annotations
- 94% of students felt confident understanding after engaging with their peers
- The level of confidence rose after engaging with peers

Figure 3: Rise in Confidence after Engagement



## Conclusions

- ❖ The findings of increased confidence in doing critical literature appraisals suggest that incorporating social annotation into pharmacy literature courses effectively fills the gap in critical reading skills necessary for pharmacists.
- ❖ Social annotation fosters a challenging yet intellectually stimulating and rewarding learning experience, improving student engagement, critical thinking abilities, and greater satisfaction with the learning process.
- ❖ These results underscore the importance of innovative approaches, such as social annotation, in promoting critical reading skills among pharmacy students.

## References

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- Lemanski, M. & Venneman, S. *Journal of Educators Online* 2023.
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