

Online Information Ecosystems: Teens, Social Media, Algorithms

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Background

Existing Facts:

Social media algorithms shape what students see on platforms such as TikTok, Instagram, and YouTube. Research shows these systems personalize content based on likes, searches, shares, and watch time, influencing information exposure and identity development among adolescents and young adults.

Shortcomings in Current Research:

Although many studies explain how algorithms function, fewer examine how students understand and experience their influence in everyday life. There is limited research comparing high school and college students or exploring whether students feel aware of and in control of their feeds.

Purpose and Hypothesis:

This study examines how educational level relates to algorithmic awareness and perceived control over social media content. It is hypothesized that college students will report greater awareness of algorithmic influence and more intentional efforts to shape their feeds compared to high school students.

Methods

Participants and Recruitment

Participants included undergraduate students at Florida State University who were recruited via campus posters and Anne's College Study Pool. Students voluntarily participated in an online study examining how they interact with and perceive social media algorithms. Informed by Bronfenbrenner's ecological systems theory, the survey included Likert-style items and open-ended responses.

Conceptual Framework

The survey was organized around three factors: (1) Algorithmic Social Boundary Blurring, which evaluates how algorithms shape overlap between academic, social, familial, and hobby-related domains; (2) Cross-Platform Algorithmic Synchronization, which investigates perceptions of coordination across digital platforms; and (3) Algorithmic Awareness and Control, which measures students' understanding and control of algorithmic influences on their feeds.

Data and Analysis

Participants provided samples from their "For You" pages and recent search activity to examine algorithmic tendencies. Data were analyzed using descriptive statistics to identify patterns between engagement behaviors and perceived algorithmic effects. Ongoing studies continue to compare high school and college students.

Results

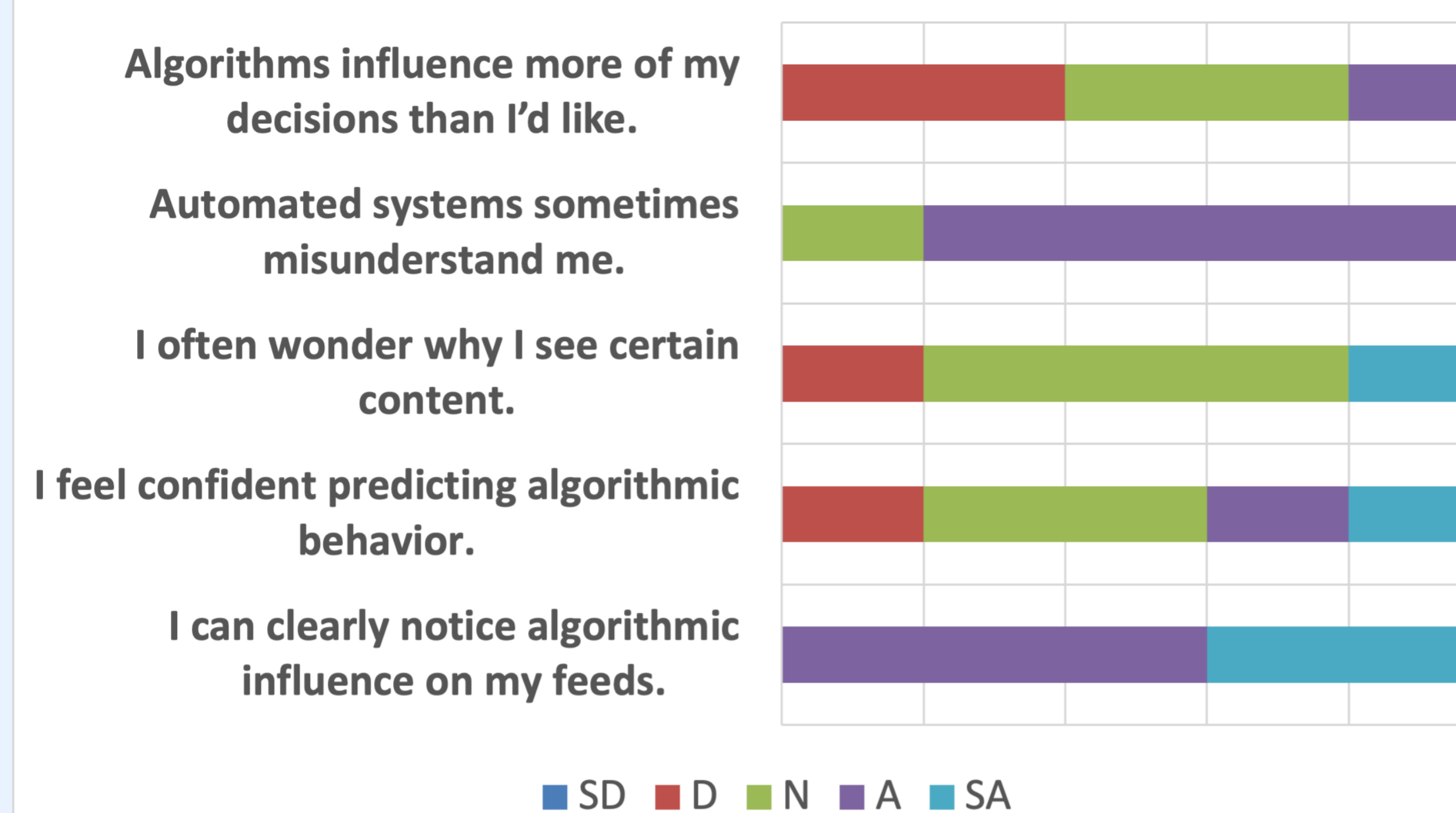
Facts:

Preliminary results show that students' likes, searches, and shared content strongly influence the videos recommended on their social media feeds. Participants submitted examples of videos from their "For You" pages and recent search activity, which allowed us to identify patterns between engagement and recommendations. Many students noticed more content related to hobbies, academic interests, or trending topics after interacting with similar posts.

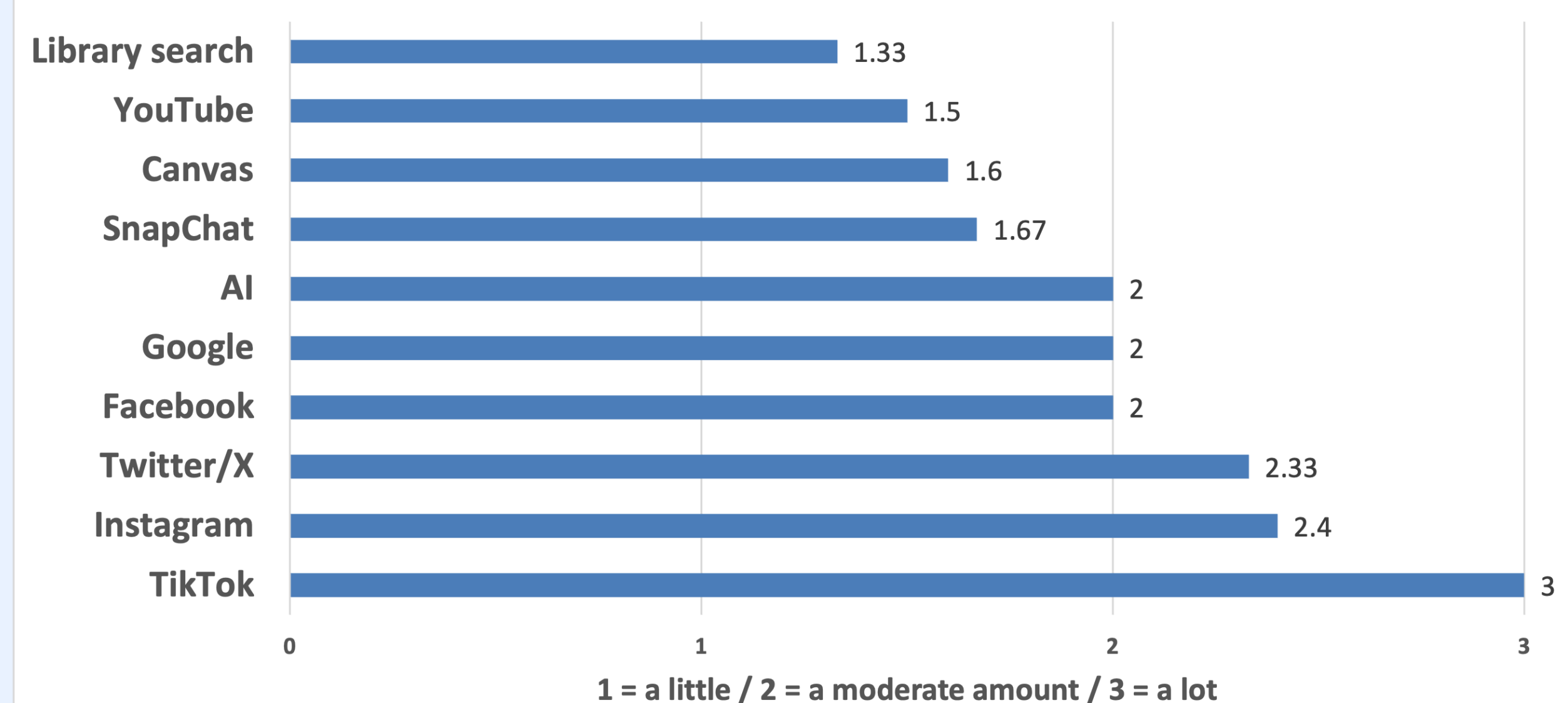
Ongoing Research:

Differences between high school and college students are still being analyzed, with early patterns suggesting that college students' feeds may be more influenced by academic-related searches, while high school students' feeds reflect social and hobby interests. Engagement behaviors, such as liking, sharing, or watching videos completely, were closely connected to content shown. Even small actions, like partially watching a video, appeared to influence recommendations. Data collection is still ongoing, and final comparisons between educational levels are not complete.

Algorithmic Effects



How Much Does the Algorithm Shape Experience



Conclusion

Significance of Results:

These findings highlight the importance of understanding how algorithms respond to user behavior. Even small online actions can shape the information students see daily, emphasizing the value of digital awareness.

Strengths and Limitations:

Strengths of the study include combining survey responses with real examples of students' social media activity. Limitations include reliance on self-reported perceptions and a geographically limited sample.

Future Considerations:

Future research will complete data collection, expand to a more diverse student population, and further analyze differences in awareness and control between high school and college students. These steps aim to inform strategies for improving algorithmic literacy and promoting intentional and responsible use of social media.

Discussion

Comparison to Prior Findings:

Our results match previous studies showing that likes, searches, and shares shape social media feeds.

Interpretation:

Students influence their feeds through small interactions, with high school students seeing more social content and college students more academic content.

Implications and Future Work:

Understanding these patterns can help students use social media more intentionally. Future research will expand the sample and explore strategies for improving algorithmic literacy.

References

