

ASSESSING THE IMPACT OF TECHNOLOGICAL SKILLS ON STUDENTS' PERFORMANCE

understanding critical digital literacy and overconfidence bias

Marta Samokishyn,
Saint Paul University



LITERATURE REVIEW

Overconfidence has been defined by Moore and Healy (2008) as: "1) overestimation of one's actual performance; 2) overplacement of one's performance relative to others, and 3) excessive precision in one's beliefs". It has been demonstrated that most of the people rank their abilities in simple tasks above the average, but below the average in more complex assignments (Dubra & Benoit, 2011). According to Merkle and Weber (2011), the overconfidence is a "consequence of a psychological bias".

This study examines the relationship between students' perceived level of confidence in technology and their research skills performance. The primary goal of this study is to determine if and how does students' confidence level in technology may affect learning and what is the correlation between the perceived confidence level in technology and students' abilities to critically evaluate information sources.

STUDY DESIGN



Measurement of the perceived confidence level through self-assessment at the beginning of the information literacy workshop in several areas of competencies.



Students' performance was evaluated through the search strategy assignments.

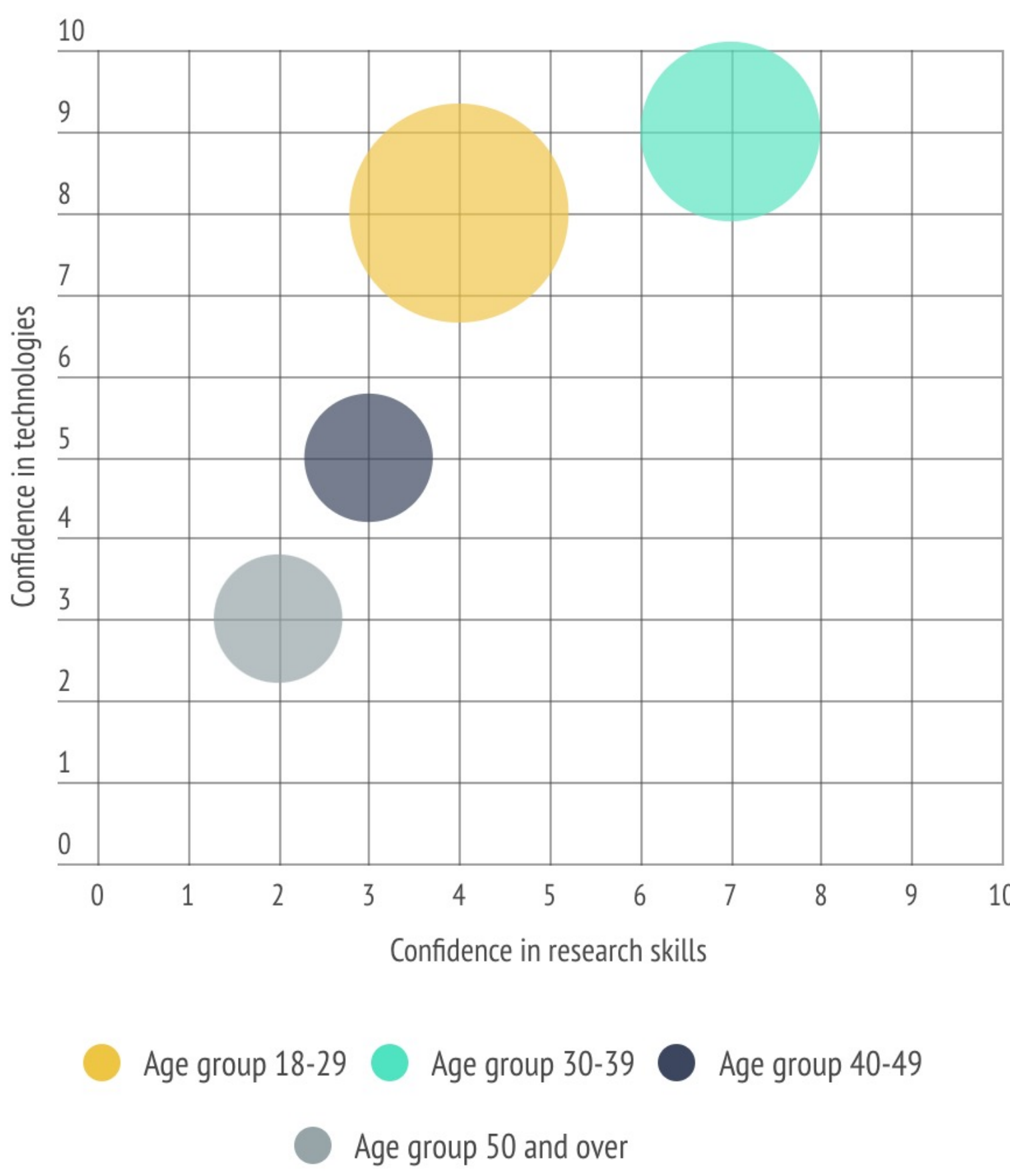


Measurement of the perceived confidence level post-instruction in the same competencies areas.

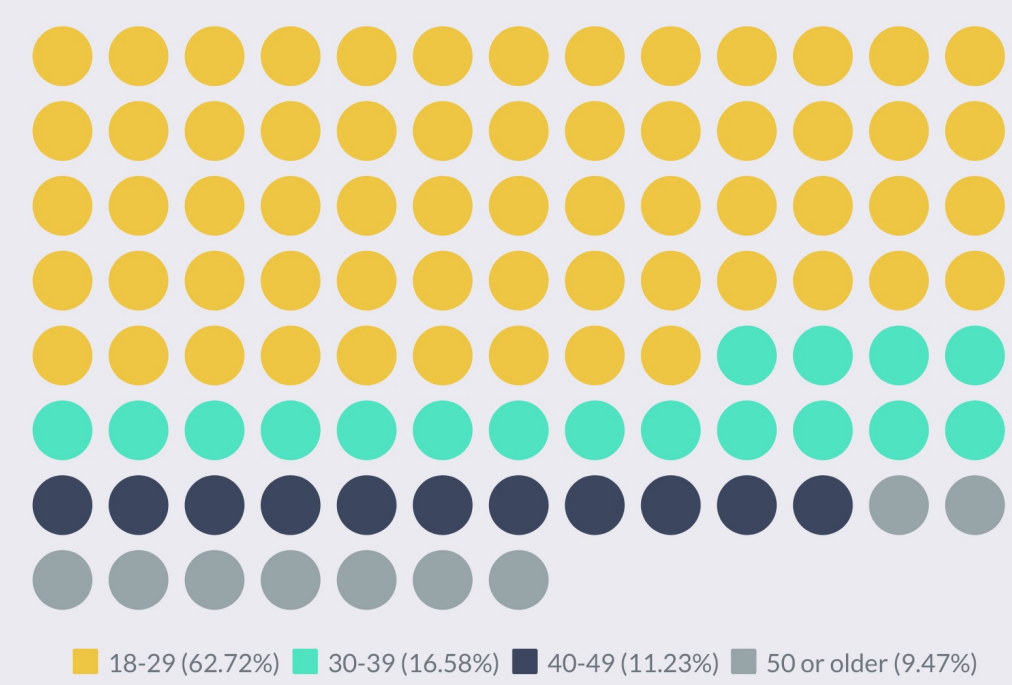


Analysis of the results according to the different variables, such as students' age, previous library experience, etc.

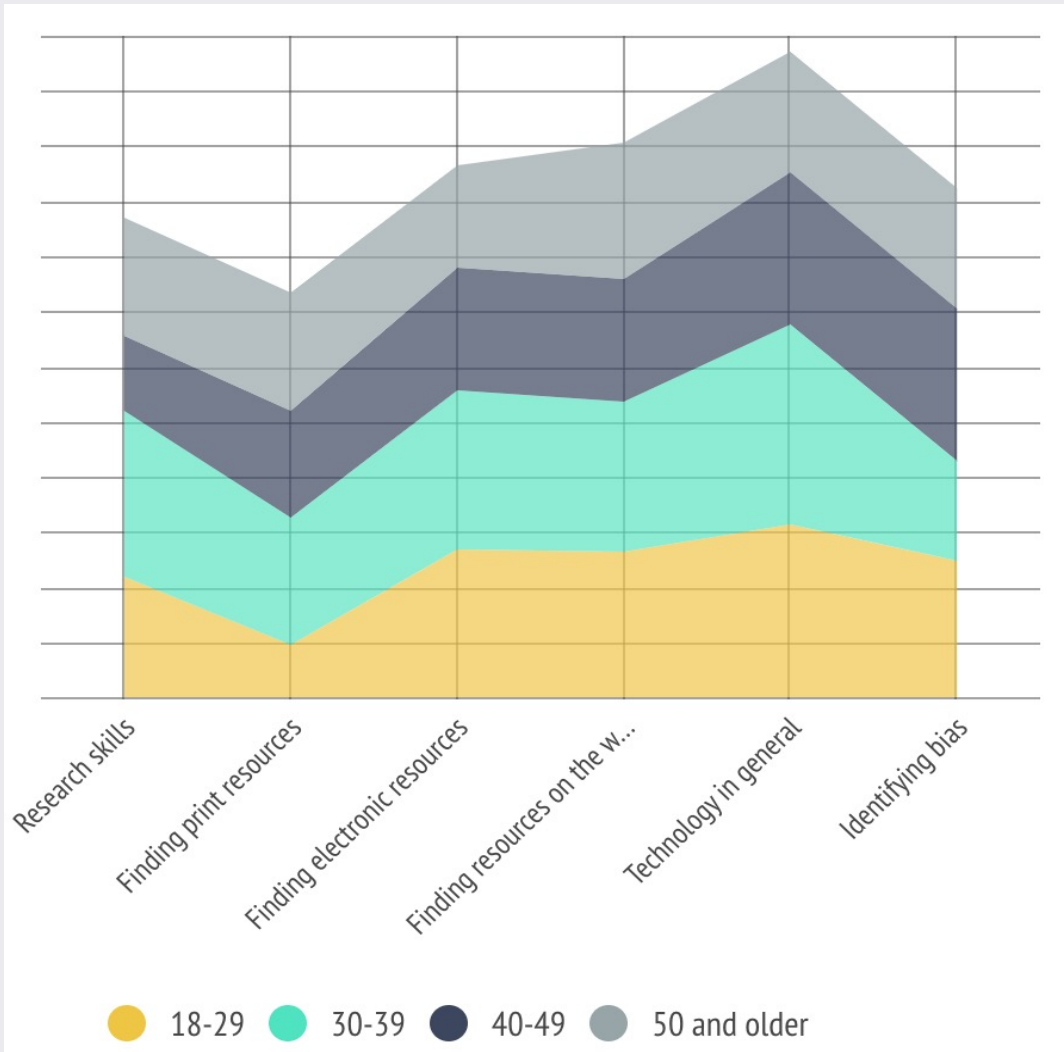
STUDY RESULTS



Confidence levels in technology vs. research skills before the workshop



Age of the participants



Confidence levels prior to the workshop in different competencies

CONCLUSION

While working on this study, we have reached several conclusions with regards to digital literacy and overconfidence bias:

01

Perceptions of the confidence level in digital domain is overrated by younger student population.

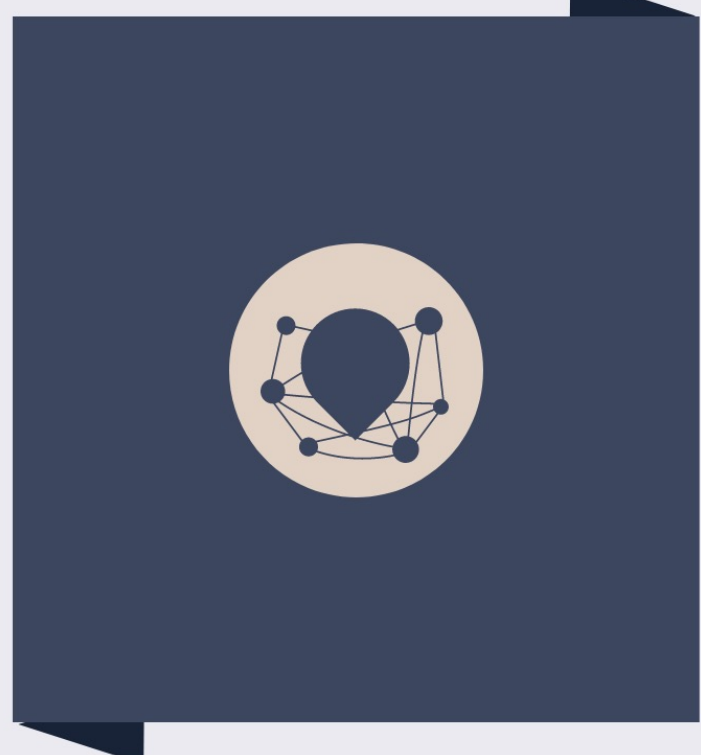
02

Students' average grade of 6.4/10 indicates that overconfidence bias is detrimental to their overall success.

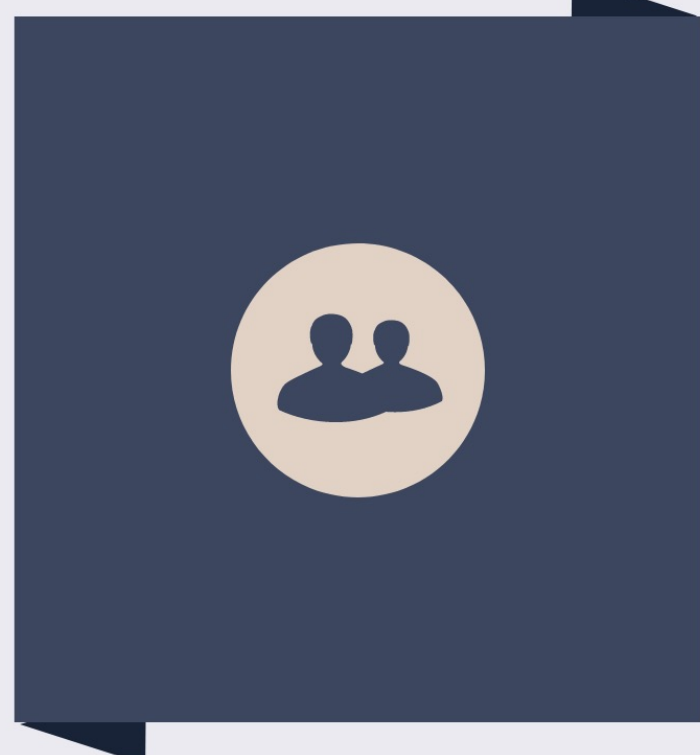
03

Students often identify their confidence in technology with their ability to navigate electronic sources.

Some strategies to consider:



Embedded digital literacy education



Personalized approach



Integral view of the library

BIBLIOGRAPHY

Benoit, J.-P., & Dubra, J. (2011). Apparent overconfidence. *Econometrica*, 79(5), 1591–1625.
Clayson, D. E. (2005). Performance overconfidence: Metacognitive effects or misplaced student expectations? *Journal of Marketing Education*, 27(2), 122–129.
Kruger, J., & Dunning, D. (2009). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Psychology*, 1, 30–46.
Merkle, C., & Weber, M. (2011). True overconfidence: The inability of rational information processing to account for apparent overconfidence. *Organizational Behavior and Human Decision Processes*, 116(2), 262–271.
Moore, D. A., & Healy, P. J. (2008). The trouble with overconfidence. *Psychological Review*, 115(2), 502–517. <https://doi.org/10.1037/0033-295X.115.2.502>