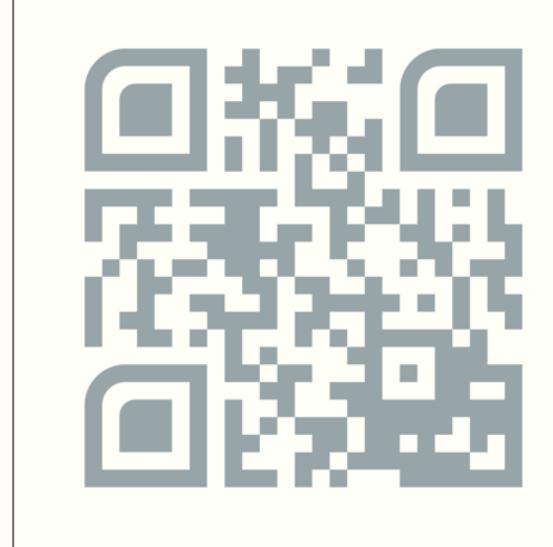




OVERCOMING AN OVERCONFIDENCE BIAS

MEASURING THE IMPACT OF EMBEDDED INFORMATION LITERACY INSTRUCTION ON THE PERCEIVED CONFIDENCE LEVEL OF FIRST-YEAR UNDERGRADUATE STUDENTS AND ITS EFFECTS ON STUDENTS' LEARNING



STEP
1

INTRODUCTION

When dealing with the younger student generation, overconfidence is usually a feature that is often assigned to Millennials and that is considered to be detrimental to the learning process. In this study, we have examined the effect the overconfidence bias has on student learning in the context of embedded information literacy instructions.

STEP
2

LITERATURE REVIEW

Overconfidence can be defined as "a cognitive bias in which someone believes subjectively that his or her judgement is better or more reliable than it objectively is" (Overconfidence Effect, 2013). The research on the overconfidence bias has been originally developed in the field of psychology (Gustavson & Nall, 2011), and only recently has begun to be researched by Information Scientists. Kruger and Dunning's (1999) study is the cornerstone of research on overconfidence and establishes the relationship between overconfidence and the inability to recognize one's lack of knowledge (p. 1121). Many subsequent studies in information science have built on their work to show that "confidence does not appear to be a reliable indicator of competence" (Molteni & Chan, 2014, p. 6). In fact, most students who rate their own skills above average demonstrate a skill level that is below average (Kruger & Dunning, 1999; Gustavson & Nall, 2011). According to many studies, a lack of knowledge prevents individuals to accurately self-assess the skills that relate to it and to recognize who holds the expertise in the field (Kruger & Dunning, 1999; Gross & Latham, 2009). Students' inability to understand expertise also affects their willingness to take part in information literacy session since they fail to see the gaps in the knowledge that they have and the value these sessions could provide (Molteni & Chan, 2014).

STEP
3

STUDY DESIGN



Perceived confidence level
was measured through students' self-assessment on the scale of 1-10 before the beginning of the workshop



Students' performance
was measured in the classroom through search strategy assignments



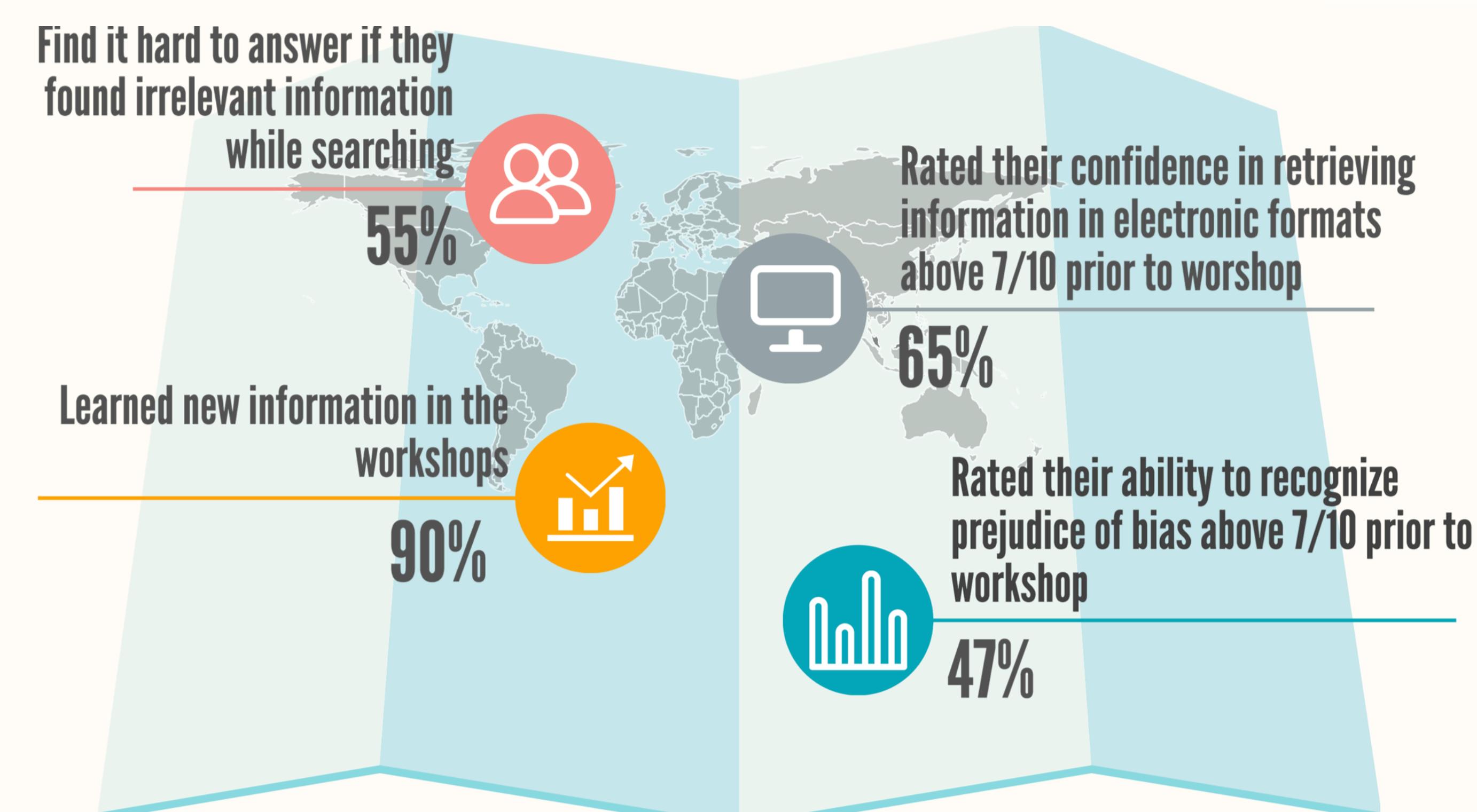
Analysis of the results according to different variables
such as students' age, previous library experience, perceived confidence levels, etc.



Feedback and post-workshop assessments
assessed confidence level in the same areas as prior to the workshop

STEP
4

STUDY RESULTS



Do those who know more also KNOW MORE about how much they know?

Lichtenstein & Fischhoff, 1977

STEP
5

LESSONS LEARNED

1

A high percentage of students have not received information literacy training prior to the workshops but rate their research skills highly.

2

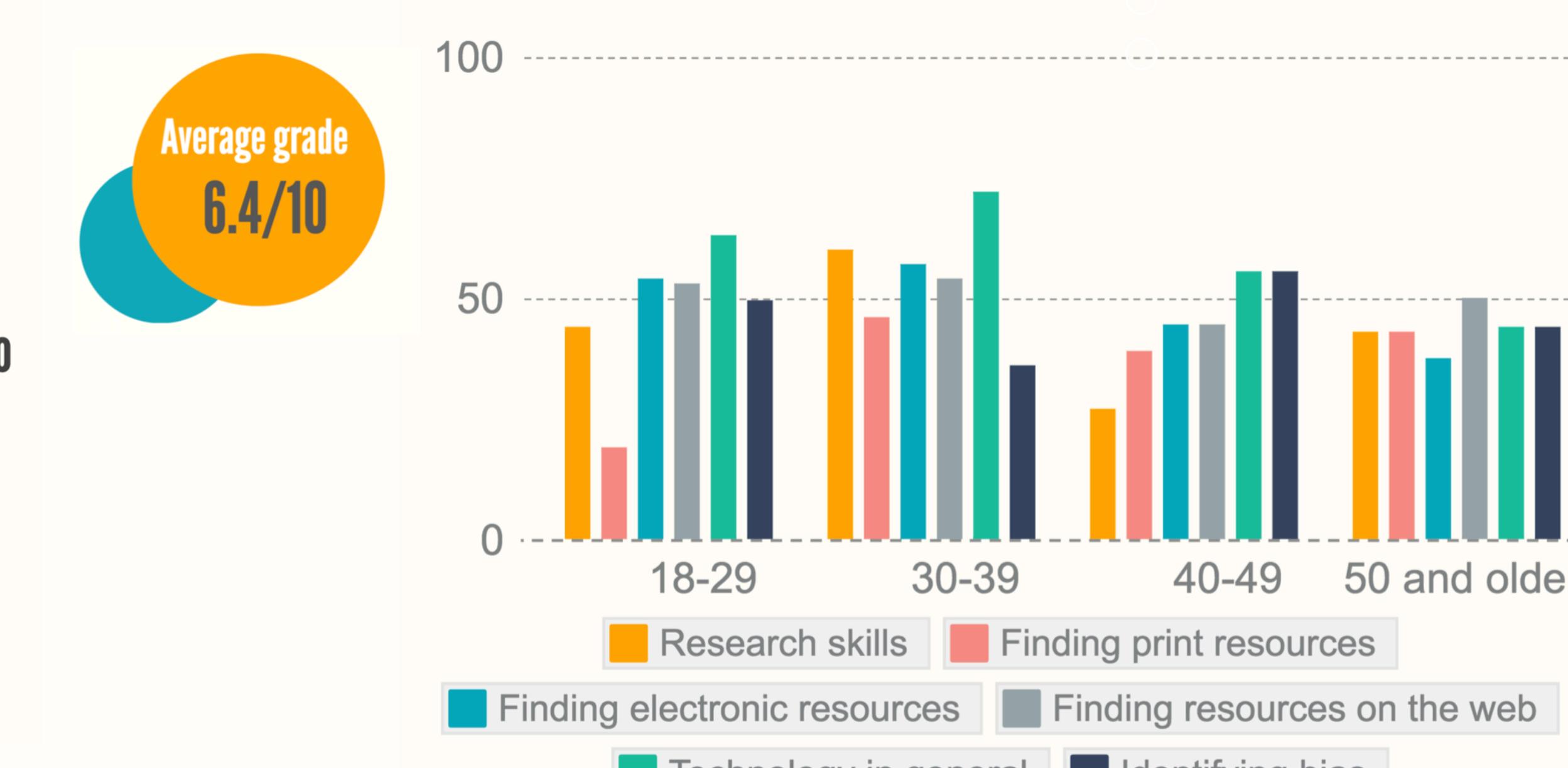
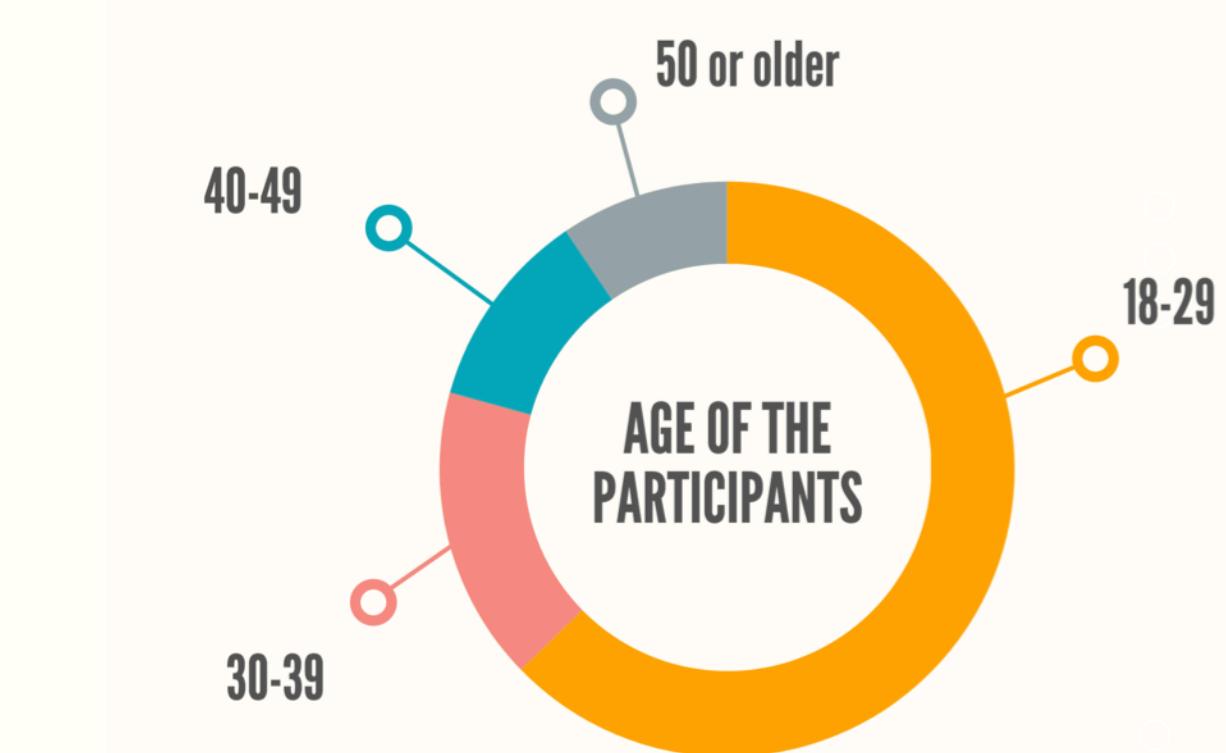
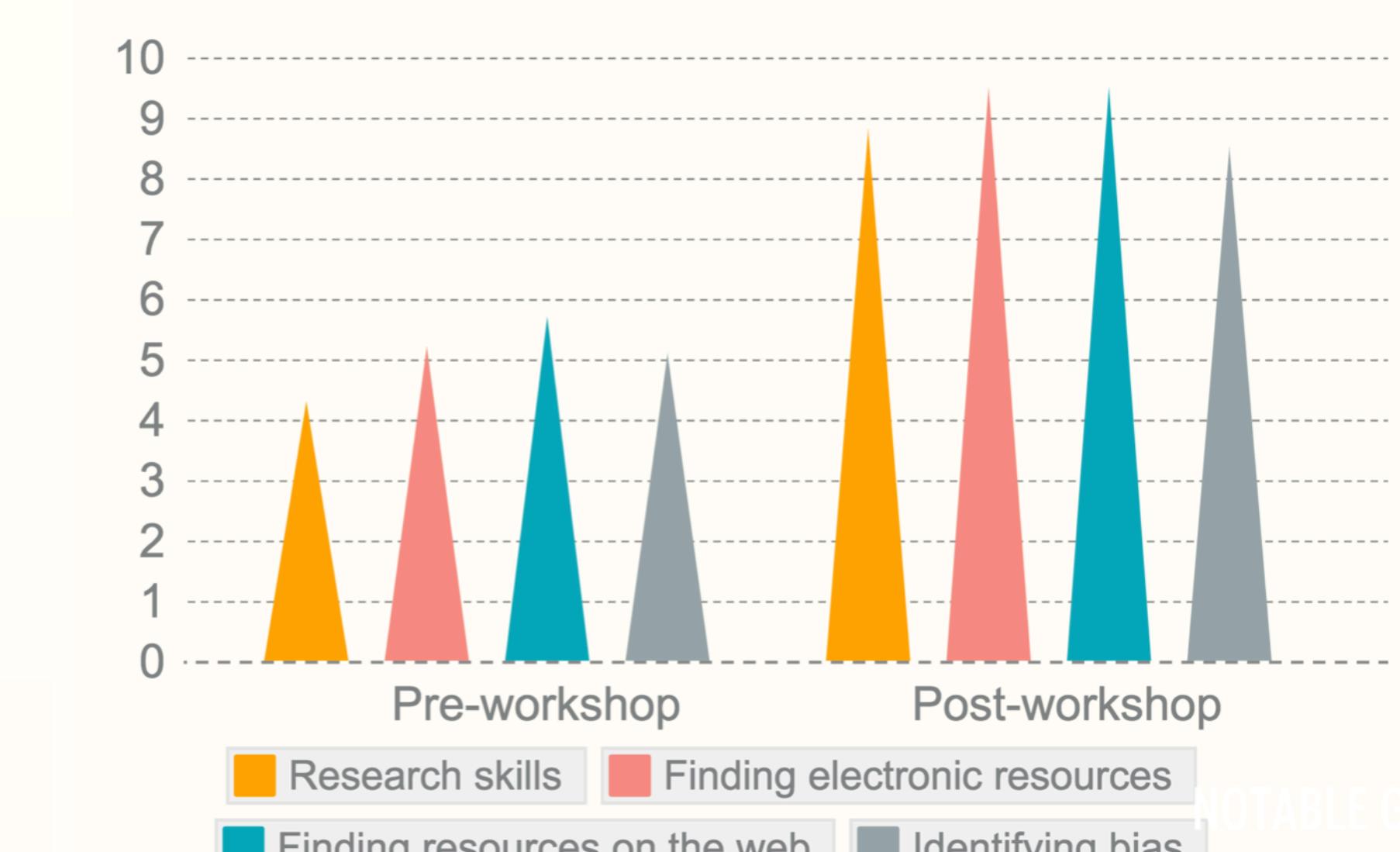
A high percentage of students have a difficult time identifying bias but still consider their research skills above a 7/10

3

Familiarity with the web translated into a high degree of confidence in web searching

4

The percentage of students who identified that they learned new material signify that they recognized a gap in their knowledge after the workshops



OVER 57% of students HAVE NOT RECEIVED LIBRARY INSTRUCTION PRIOR TO THESE WORKSHOPS

Pre-workshop perceived confidence levels above 7/10

STEP
6

CONCLUSIONS

After carefully evaluating the self-assessment data and the performance of the students, it has become clear that our results confirm the theory put forth by Kruger and Dunning (1991) that individuals with a lack of knowledge often fail to recognize that a gap exists. While overconfidence is a new topic of research, its implications for the success of information literacy are important. Our own study leads us to believe that it is important to not only find ways to engage students in information literacy sessions, but also find new opportunities to attract them to the sessions and help them overcome an overconfidence bias by opening the horizons of their perspectives and offering relevant material to meet students needs.

STEP
7

BIBLIOGRAPHY

- Gross, M., & Latham, D. (2009). Undergraduate perceptions of information literacy: Defining, attaining, and self-assessing skills. *College & Research Libraries*, 70(4), 336–350.
- Gustavson, A., & Nall, H. C. (2011). Freshman overconfidence and library research skills: A troubling relationship? *College & Undergraduate Libraries*, 18(4), 291–306. <https://doi.org/10.1080/10691516.2011.624953>
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121–1134. <https://doi.org/10.1037/0022-3514.77.6.1121>
- Lichtenstein, S., & Fischhoff, B. (1977). Do those who know more also know more about how much they know? *Organizational Behavior and Human Performance*, 20(2), 159–183.
- Molteni, V. E., & Chan, E. K. (2015). Student confidence/overconfidence in the research process. *Journal of Academic Librarianship*, 41(1), 2–8. <https://doi.org/10.1016/j.acalib.2014.11.012>
- Overconfidence Effect (2013). Psychology Concepts. Retrieved from <http://www.psychologyconcepts.com/overconfidence-effect/>