Assessing the Efficacy of a Pre-Matriculation Information Literacy Online Tutorial for Graduate Students

BACKGROUND
The Harvard Graduate School of Education (HGSE) 9-month master’s programs demand student research competency early on and faculty expectations are high. In addition:
- the library lacks an instruction program
- 30-minute orientations only address first 2 weeks’ needs.

There are few studies on evaluating the effectiveness of online tutorials/guided asynchronous modules designed for graduate students in professional schools.
- Library outreach and instruction methods for graduate students vary.
- Library orientations offered to graduate students are ineffective in preparing them for advanced level of academic research work.
- Asynchronous instruction and online tutorials are emerging - studies mainly focus on design principles, tools, theories, and applications.

METHODS
Online Tutorial
Three modules embedded in pre-matriculation course on Canvas:
1. Orientation to the library spaces and services
2. Introduction to evidenced-based research; essential terms used in library literature searching; types of information sources; and the information cycle
3. Key strategies for conducting searches and organizing sources effectively and efficiently

The tutorial was open for 4 days and estimated total time of completion was under 2.5 hours.

Participants
- Recruited via email in 2 waves in summers 2018 & 2019
- Incoming master’s students
- Quasi-experimental design: Treatment group (saw tutorial) & Control group (no tutorial)

Assessment
- Pre- and post-test survey, days 1 & 5
- 25 multiple choice questions, open for 24 hours
- Final module assignment scored by rubric (Treatment group only)

RESULTS

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<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Assignment (N = 21)</th>
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<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SD</td>
<td>MEAN</td>
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<tr>
<td>Treatment (N = 25)</td>
<td>84.18</td>
<td>7.83</td>
<td>90.93*</td>
</tr>
<tr>
<td>Control1 (N = 26)</td>
<td>82.55</td>
<td>7.74</td>
<td>82.95†</td>
</tr>
<tr>
<td>Control2 (N = 26)</td>
<td>82.49</td>
<td>7.69</td>
<td>83.98†</td>
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* Effect of group on post-test scores: F(2, 47.87) = 4.93, p = .005
† Effect of group on post-test scores: F(2, 47.87) = 10.95, p = .000; Control1, p = .002, d = .83; Control2, p = .001, d = 1.05

DISCUSSION & CONCLUSIONS
Overall support for effectiveness of the tutorial:
- Significant differences between Treatment group’s pre- and post-test scores
- No differences in pre- and post-test scores for either Control group
- Treatment group’s post-test scores significantly different from both control groups

However, overall participants in the Treatment group scored poorly on the module assignment:
- Scores covered wide range (36% to 93% out of 100) with no discernible pattern with post-test scores
- Responses showed basic grasp of concepts but not deeper mastery
- Superficial responses made it difficult to assess level of understanding

This study demonstrated that targeted pre-matriculation instruction on information literacy for graduate and professional students helped increase their knowledge.

- The research added new insights to the literature on evaluating the effectiveness of library online tutorials.
- Our students found value in the program - anecdotal feedback later in the academic year.
- Students from other graduate programs noted during usability testing their desire for similar modules.

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