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Preservice Teachers' Knowledge of Learning Technologies

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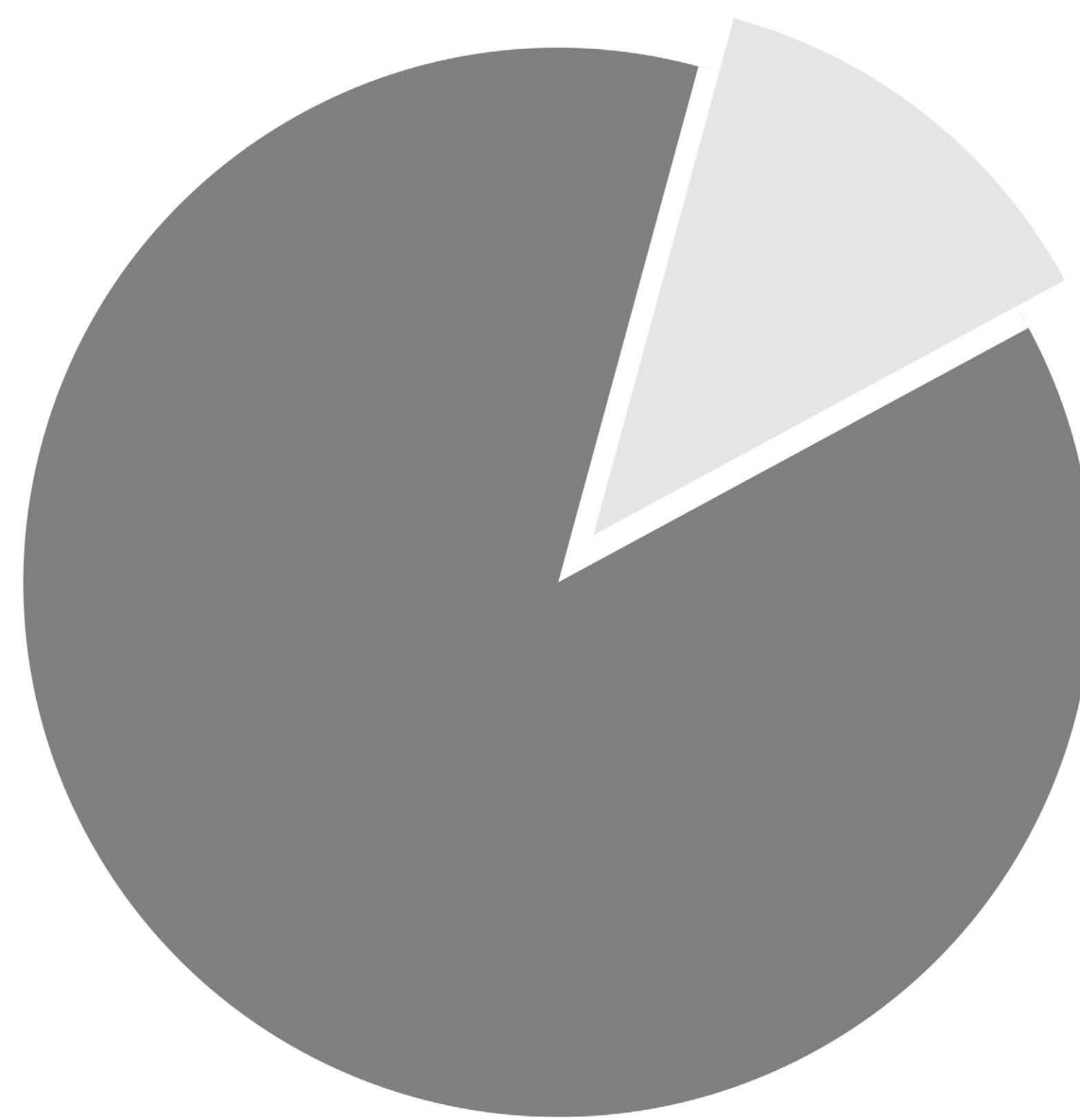
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PRESERVICE TEACHERS' KNOWLEDGE OF LEARNING TECHNOLOGIES

INTRODUCTION

The question driving my research is as follows: What kind of knowledge do preservice teachers have dealing with learning technologies, and specifically evaluating learning technologies (mobile applications) for classroom use? Learning technologies as defined by Krajcik and Mun (2014), "can involve multimedia, Web-based learning, computer assisted learning, e-books, and other new technology that supports student learning" (p. 337). My goal is to better understand if preservice teachers are prepared to appropriately select mobile applications that will support and enhance student learning their classrooms. This idea is something that has not been addressed to any large degree by current literature or current research.

87.5% of preservice teachers surveyed are currently using mobile applications with students, but are they using strategies that allow them to choose effective learning technologies?

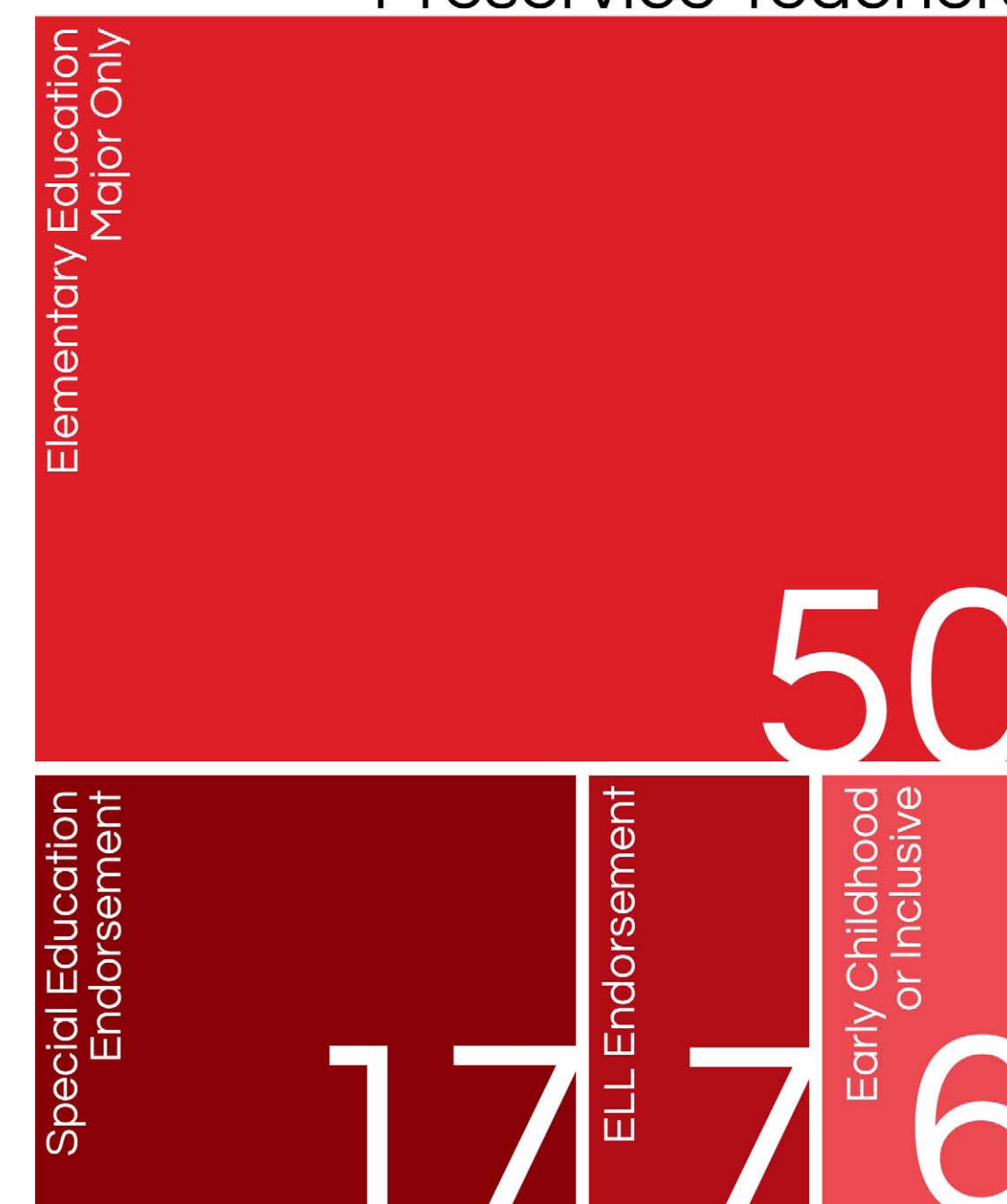


My study was a mixed-methods project that focused on examining pre-service elementary teachers' knowledge of instructional strategies through use of learning technologies.

Process: Pre-survey; Intervention --> Workshop; Post-Survey.

Data: The data I collected was a mix of quantitative and qualitative data. Some of the data collected from the pre-survey was quantitative data such as demographic information; other data was qualitative such as responses to open response questions. Workshop data was qualitative (workshop notes) and quantitative (response to a yes/no evaluation rubric). The post survey was all qualitative data (open response questions).

Research Participants:
80 Elementary Ed
Preservice Teachers



The pre-survey attempted to understand how preservice teachers are currently determining which mobile applications to buy for their students, and why they consider these applications to be effective learning technologies.

The workshop was used to introduce students to a research based way of evaluating learning technologies. This research based method was in the form of a rubric created by Drs. Adams, Golick, and Hong. The workshop also helped students compare and contrast their current evaluation techniques to a research based method.

The post-survey was to assess the difference in pre-service teachers' thoughts on learning technologies and evaluation of these technologies after taking part in the workshop. Their thoughts were compared to their answers from similar questions on the pre-survey. These questions addressed what the teachers thought about the E.MATRS rubric, as well as, how their own mobile application evaluation practices would change after attending the workshop.

RESULTS AND CONCLUSIONS

Pre-Survey Results

Most participants evaluated apps in some form, but there was no precise method. Some of the common reasons participants mentioned for downloading apps were as follows:

- Ease of use of the app
- Good review of the app or recommendations from other teacher/professor
- Appeal to students

The most frequently mentioned characteristic that determined whether or not a participant was likely to download an app was: Cost effectiveness – if the app was free.

As a result of this study, our understanding of preservice teachers' knowledge of evaluation technologies has increased. Additionally, preservice teachers have begun to change the way they choose learning technologies for their classrooms. They have started making technology decisions based on research and based on what will best impact their students, rather than simply relying on recommendations of tools to use in their classroom. This is a trend that will hopefully continue – for as teachers begin to consider apps more critically, the types of technologies that students use in the classroom will be more effective and better support and enhance student learning.

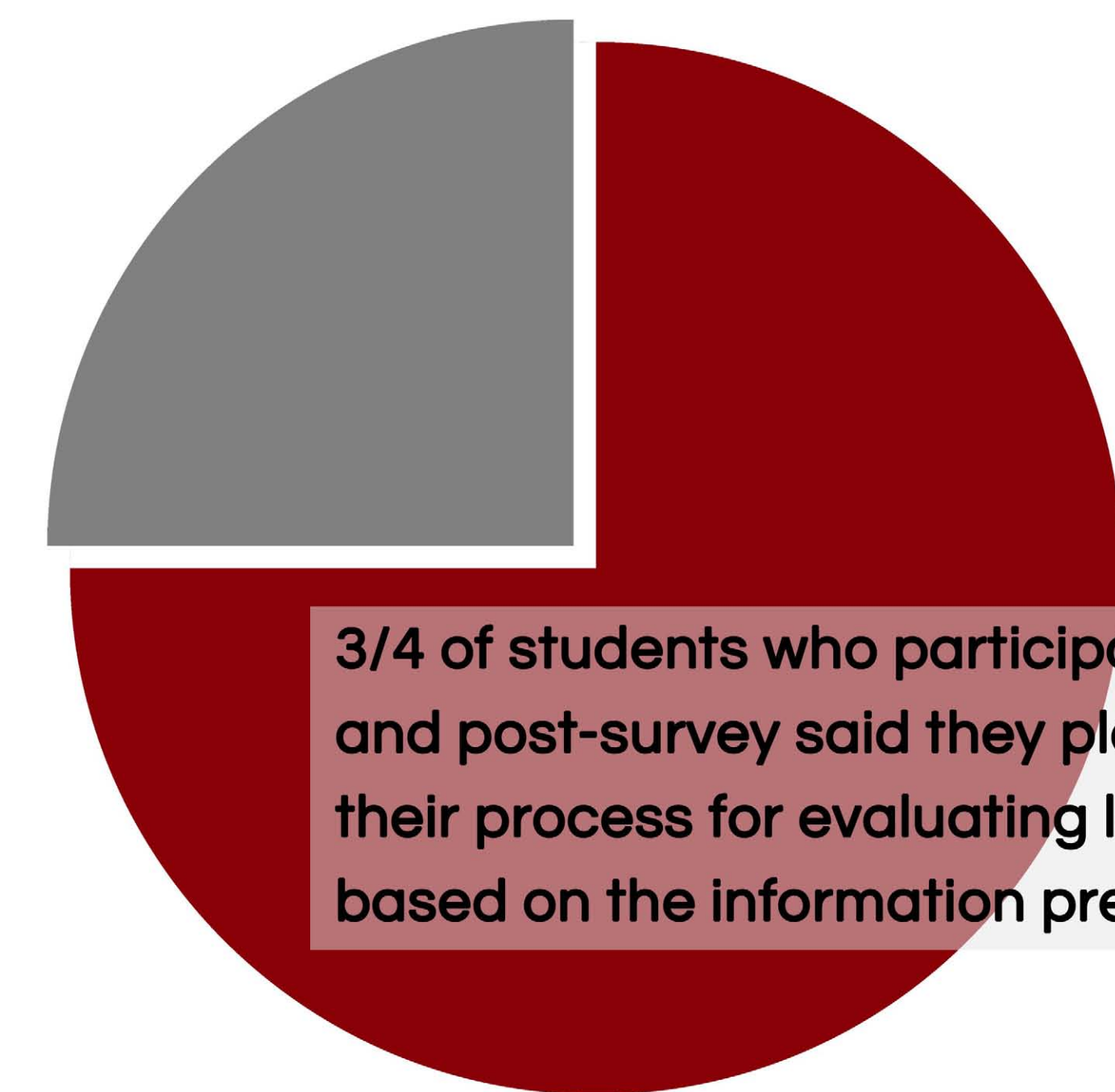
Post-Survey Results

Participants stated that they looked forward to using the E.MATRS rubric or a similar method for future learning technology evaluation. After the workshop, participants also noted that they would make sure to look for other characteristics when evaluating or choosing apps for their classroom, such as the following:

- Developmental appropriateness
- Connection to standards
- Assessment tools within the app

After the workshop, the most frequently mentioned characteristics that will help participants determine whether or not to download an app were: developmental appropriateness and connections to standards.

Workshop



3/4 of students who participated in the workshop and post-survey said they planned on changing their process for evaluating learning technologies based on the information presented during the workshop

CONTACT INFORMATION AND ACKNOWLEDGEMENTS



Interested in more information? Contact us!
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