

Introduction

- One popular method of self-testing is by using flashcards • 40% of students report using flashcards to study material (Karpicke, Butler, & Roediger, 2009)
- There are many different tools available for creating flashcards • Students can use electronic tools to make them (e.g., Quizlet, StudyBlue, Cram, etc.) and can make cards on physical paper
- Students may use electronic and physical flashcard differently
- On one hand, electronic flashcards may produce more learning benefits because learners are able to type information on a card more quickly
- On the other hand, physical flashcards may produce more learning benefits because learners are writing higher quality information on a card to compensate for time
- **The present research:** We examined whether there are differences in how students create flashcards when using electronic tools versus physical index cards

Materials & Procedure

Participants & Design: 88 Texas Christian University undergraduate students participated. Method of making flashcards (index cards or Quizlet) was manipulated between-participants.

• Materials & Procedure:

1. Participants read a text and made flashcards over the content in the text (Rawson & Kintsch, 2005).

2. In the electronic condition, participants made flashcards using Quizlet

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Subject,	chapter, unit					
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3. In the physical condition, participants made flashcards with 3' x 5' index cards 4. Participants reported how often they make flashcards to study for material in their classes, how often they make electronic flashcards, and how often they make physical flashcards.

Electronic group instructions

Physical group instructions

You have been given the article about how Hollywood films portray history. Read the text and make flashcards on Quizlet like you would for an upcoming exam over the material.	You have been given the article abo portray history. Read the text and index cards like you would for an u material.
<u>Take as much time as you need</u> and <u>make as many</u> <u>flashcards as you want</u> . Your goal is to make flashcards to do well on a test over the material. Press continue when you are finished reading these instructions.	<u>Take as much time as you need</u> <u>flashcards as you want</u> . Your goal is well on a test over the material. Pres finished reading these
Continue	Continue

Exploring Differences in Flashcard Quality Nikki P. Romena, Paige E. Northern, & Sarah K. Tauber



Self-Reported Use of Flashcards to Study for Classes

	Never	Sometimes	Most of the time
Condition			
Electronic	11.9	52.4	35.7
Physical	16.3	48.8	34.9
Total	14.1	50.6	35.3

Note. Values shown are percentages

Self-Reported Use of Electronic/Physical Flashcards



Conclusions

- physical condition
- physical condition
- learners in the physical condition
- flashcards

Future Directions

- flashcard type over the other
- quality and quantity of flashcards

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Flashcard Type

Learners constructed more cards in the electronic condition relative to the

Learners in the electronic condition made more cards than did learners in the

Learners in the electronic condition spent more time making flashcards than did

The majority of participants report using flashcards to study for material in classes, with more participants using electronic flashcards than physical

Examine the quality of the information that participants put on flashcards • Evaluate memory performance and if there is a learning benefit for one

Investigate whether examples of well constructed flashcards influences the