

Using Micro Learning in Teaching Technology

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Background

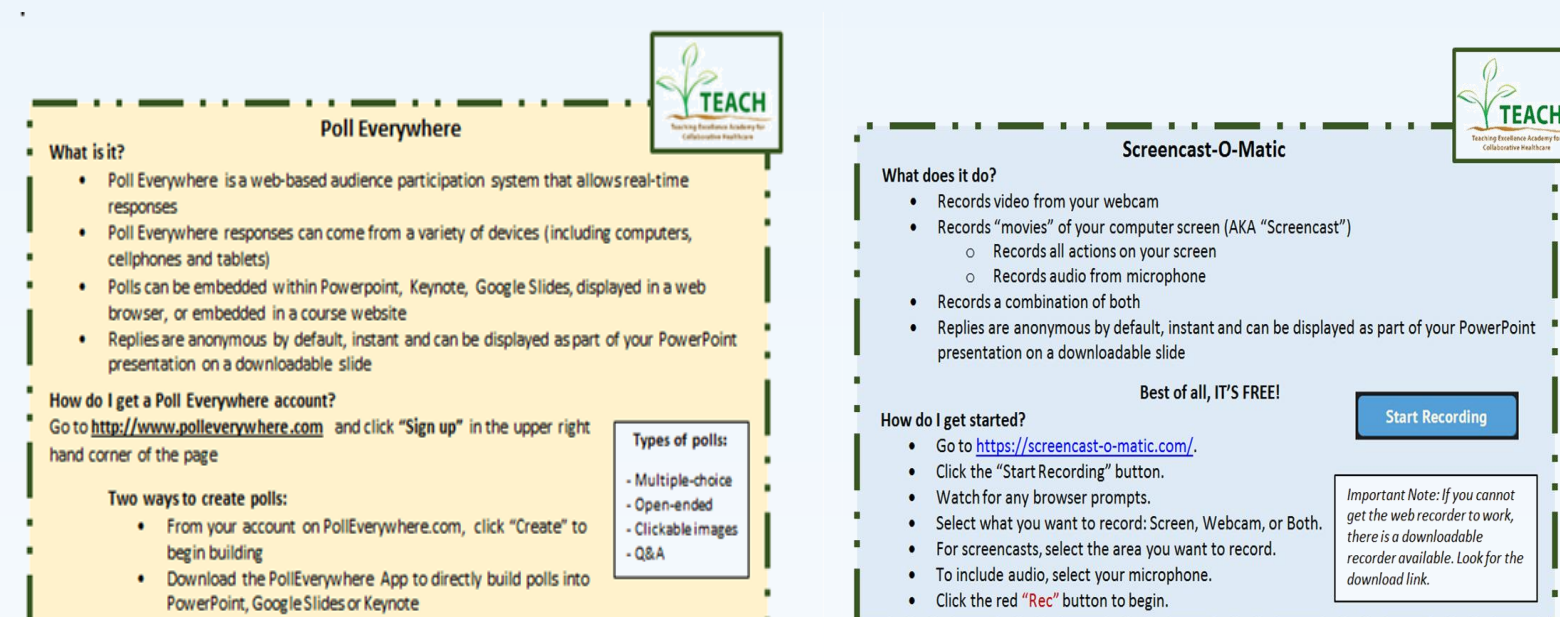
Although health professions learners are usually adept at incorporating technologies into their learning and patient care, health professions educators often find it difficult to implement new teaching technologies into their teaching methods. The benefits of incorporating teaching technologies include allowing learners to actively participate, pace learning, space content, and otherwise tailor their learning experience (1,2). To ease and foster learning by reducing cognitive overload, Buchem & Hamelmann recommend using microlearning (3). Microlearning is a teaching strategy in which learners receive small doses of content within a sequence of interactions periodically spaced over a specific period of time.

By applying the microlearning technique, different teaching technologies can be learned in short, bite-sized, lessons. We seek to study the effectiveness of applying microlearning concepts to a faculty development curriculum focused on teaching technologies and their uses within an pilot group of VTCSOM faculty.

Hypothesis: By creating a teaching technology curriculum for faculty using a micro learning approach, we will increase retention of these skills and lead to curricular transformations.

Method

- Six brief (10-15 minute) presentations on unique teaching technologies were developed:
 - Kahoot
 - Nearpod
 - Quizlet
 - PollEverywhere
 - Google Drive
 - Screencast-o-matic

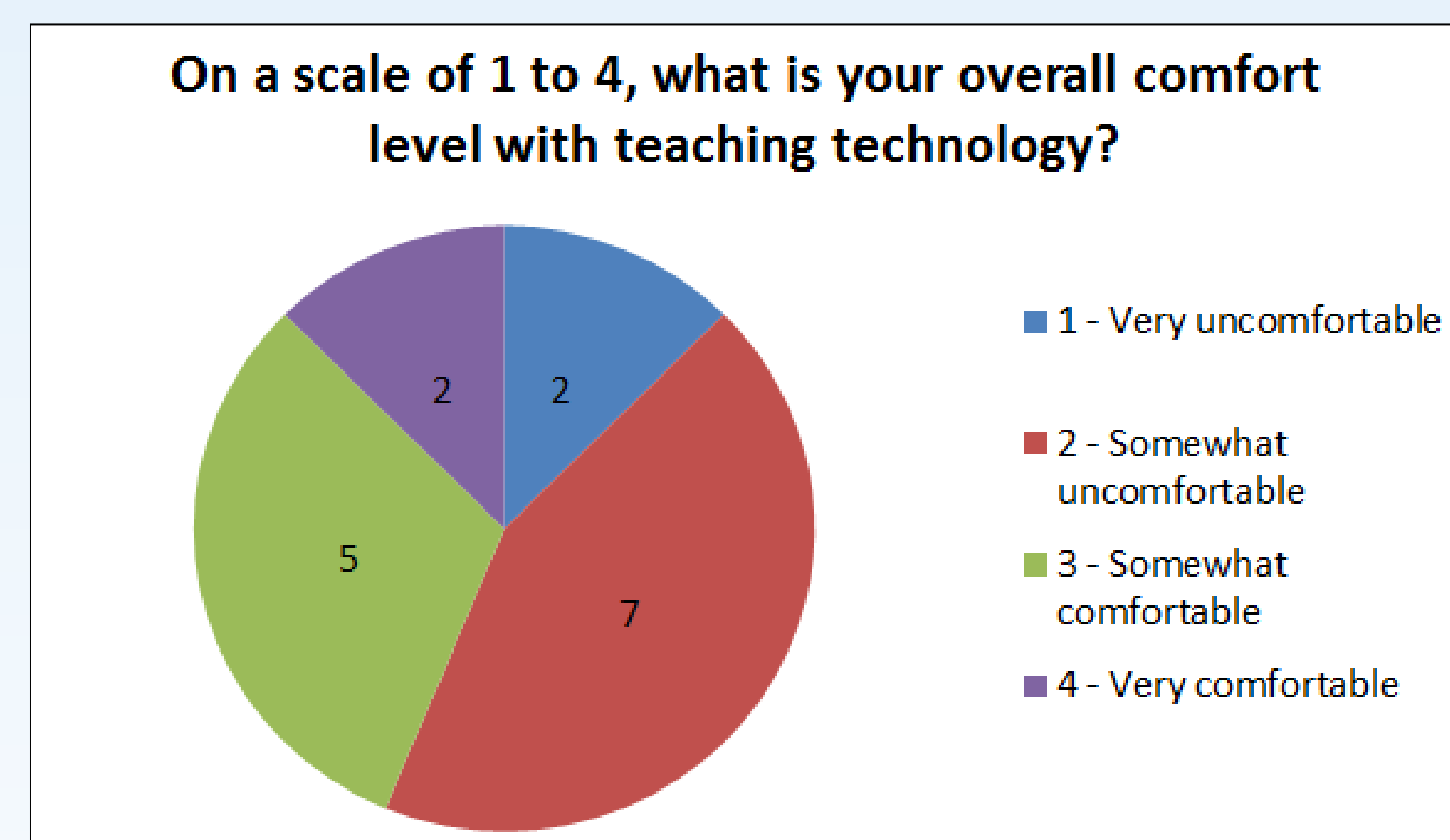


- Presented at midpoint of each monthly Block Integration Committee (BIC) 2 meeting
- Facilitators developed brief take-away resource cards for each teaching technology
- Weekly “quick tip” emails were distributed between each session to reinforce the concepts discussed and share practical implementation strategies for success.
- The pre-post survey consists of:
 - Self-reported confidence using each technology
 - Written “commitments to change” for each technology
 - Self-reported identification of how technologies will be shared with colleagues

Results

- Two successful micro learning sessions have been held at this point.
- Sixteen completed pre-surveys were collected at the beginning of our first micro learning session.
- Participants are clerkship directors, associate deans, and instructors from Virginia Tech Carilion School of Medicine.
- Years of experience teaching in medical education:
 - less than 5 years: 31.25%
 - between 6–10 years: 31.25%
 - between 11–15 years: 6.25%
 - more than 16 years: 31.25%
- Majority of respondents (11/16) indicated using lecture style predominately. Only 1 indicated using online format and 2 using the flipped classroom.
- Majority of participants (9) indicated they were “somewhat” to “very” uncomfortable when asked to rate their “overall comfort with technology”.
- Majority of pre-tests indicated low comfort levels with the technologies being introduced as part of the curriculum.

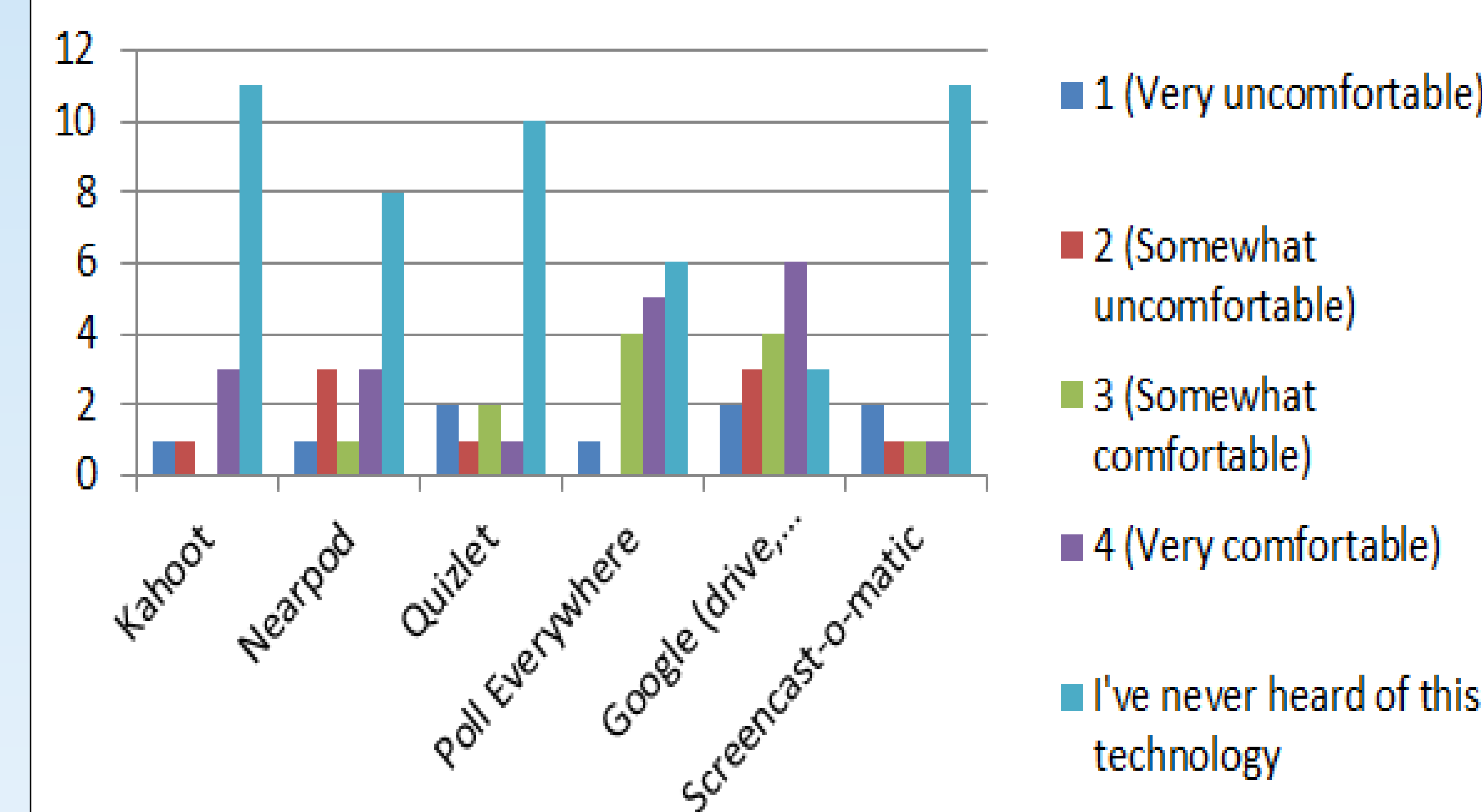
- Themes identified when participants were asked why they were interested in teaching technology included:
 - to improve teaching skills
 - to enhance instruction
 - to increase learner engagement/interactivity
 - to enhance efficiency



- “Sharing with colleagues” and “integrating within teaching “ were among the most commonly indicated ways participants anticipated sharing and/or using the teaching technologies described during this curriculum.
- We are at the half-way point of the curriculum, so no post-assessments have been collected at this time.
- Two participants have shared that they already integrated at least one of the technologies into their teaching since attending the sessions.

Pre-Survey

Please indicate your level of comfort with each of the following teaching technologies.



Discussion

By providing bite-sized, practical instruction on implementing a diverse range of teaching technologies, we hope to engage faculty members in realigning their didactic curricula to incorporate teaching technology techniques. We hope to see improved confidence using the technologies, increased inclusion of the technologies within their teaching, and increased sharing of technologies with colleagues.

References

- 1.Chodorow, S. (1996). Educators must take the electronic revolution seriously. *Academic Medicine*, 71(3), 221-6.
- 2.Ruiz, J. G., Mintzer, M. J., & Leipzig, R. M. (2006). The impact of e-learning in medical education. *Academic medicine*, 81(3), 207-212.
- 3.Buchem, I., & Hamelmann, H. (2010). Microlearning: a strategy for ongoing professional development. *eLearning Papers*, 21(7).