RESEARCH RATIONALE / BACKGROUND

- Lack in work ethic.

- Lack of motivation.

- Boys today are born into a digital age – “Is our pedagogy relevant?”

- Need to harness the digital technology at our disposal, even if it does mean taking a step or two out of our comfort zones.
In 2014 Maritzburg College launched two iPad pilot classes. These pilot classes give me the opportunity to embrace the ‘maker world’.

- The revised Bloom’s Taxonomy points out that creation is at the highest order of learning.

- “New digital tools available to students have flung open the doors to creativity, imagination, and student directed learning.” (Donaldson, 2014).

- The ‘maker world’ allows educators to zone in on this creativity by allowing learners to learn in an exciting way by creating and making.
RESEARCH QUESTION

• How can the creation of digital tutorials on iPads enhance boys' understanding of Geometry?

Leading Questions:
• How can 'maker learning' enhance boys enthusiasm in mathematics.
• How does creating digital tutorials enhance boys understanding of Geometry.

Task:
• Design a digital tutorial by integrating various apps (App smashing) to illustrate geometrical concepts.

App Smashing:
• demands creative thinking
• demands more from the technology (value for money)
• turns the issue of not having a 'wonder app' into a positive
• removes any restrictions to take a topic as far as it can be taken.
• often results in more engaging learning products
I used one of the pilot iPad classes which consisted of 25 boys. I
RESEARCH ACTION

• Digital Tutorial
• Reflection – iMovie
• Interviews
• Online Survey
DATA COLLECTION

• Survey questionnaire using survey monkey was completed by each boy.

• Observation

• Individual interviews were conducted.

• Boys made a 1 minute iMovie recording their reflections on making the digital tutorial
Clip - Findings

https://drive.google.com/open?id=0B2Gj8s7B8Ma8LU44bkNEdGx5Vnc
Key Findings and Discussion

• A deeper understanding of geometric concepts was reached – the iPad allowed boys to source information from a variety of websites and YouTube videos. They were not confined to a textbook. Teaching the concept improved their understanding of the content.

• Using the iPads increased motivation – the project stimulated and motivated boys to show off their creative and technical skills.

• The iPad is a powerful learning tool – the various apps used (app smashing) in the making of digital tutorial makes the iPad a powerful learning tool for research, creation, collaboration, and learning.
Conclusion

• Loveless (2002:15) considers digital technologies as a tool useful for “developing new ideas, making connections, creating and making, collaboration and communication, and evaluation”.

• It is clear from the findings that creating and making a digital tutorial on the iPad stimulated motivation within the boys, helped them gain a deeper understanding of the concepts, and allowed them to communicate their tutorials with their fellow learners (shared creation and collaborative learning). Creating a digital tutorial on geometric concepts shifted the boys’ mind-sets of maths being laborious and tedious at times, to creative and exciting. We, as teachers, need to embrace the making process to stimulate creative and exciting learning opportunities.
REFLECTION

https://drive.google.com/open?id=0B2Gj8s7B8Ma8U2VaUjc3d3BCRXM