

Cultivating

DIGITAL LEADERSHIP

in pre-service teachers:

The case of #psuaged18

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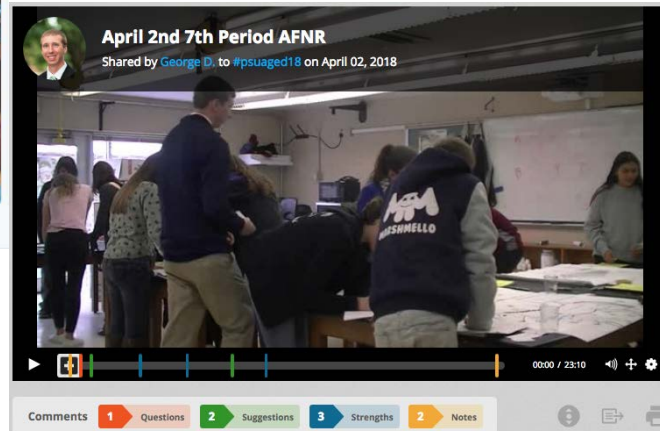
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What is digital leadership?



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Operational Definitions



Digital Citizenship

Development of the skills and knowledge to effectively use the Internet and other digital technology to participate responsibly in social and civic activities and to become a person who uses the Internet regularly and effectively (**Casa-Todd, 2018**).

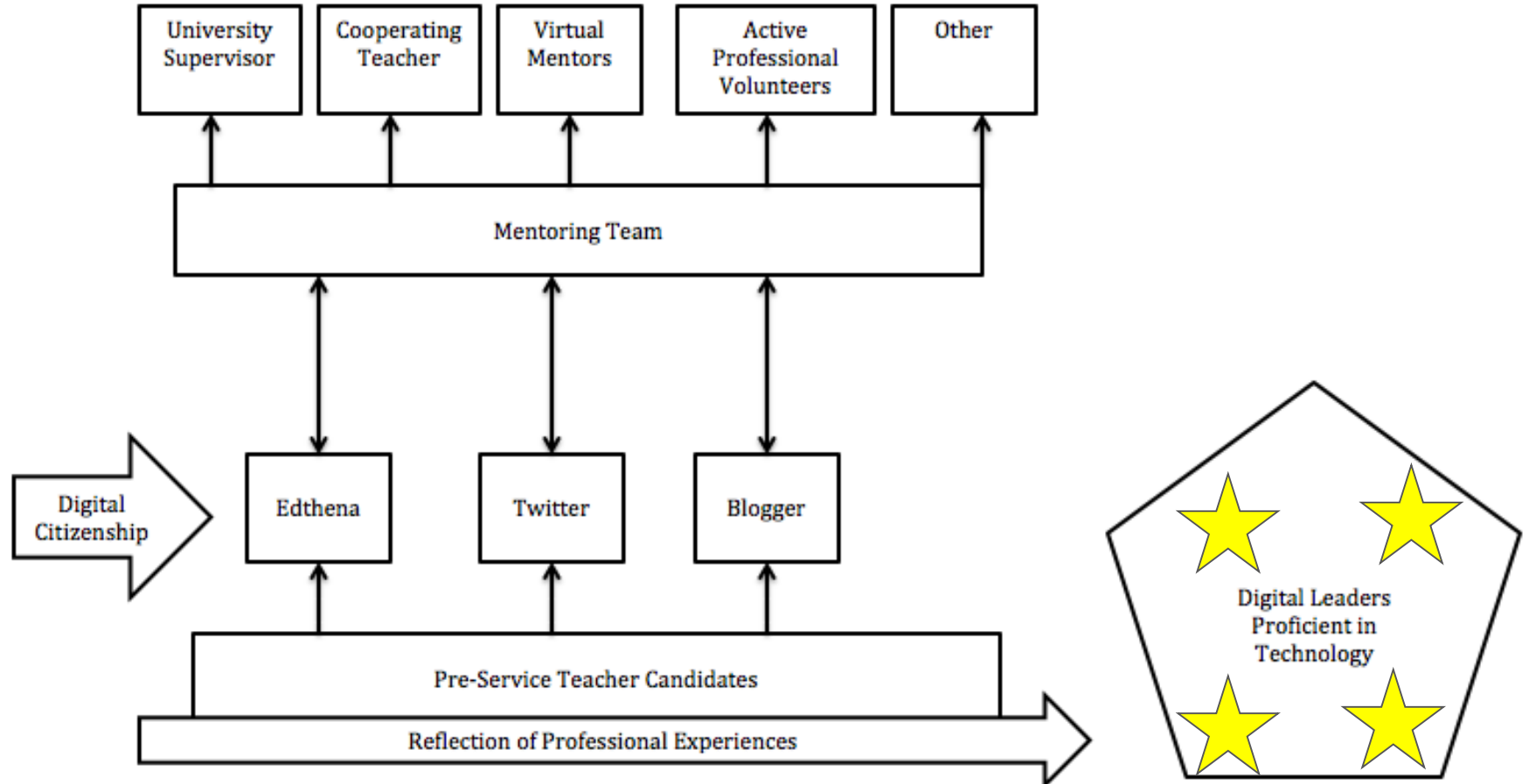
Digital Leadership

A process of exerting social influence through the usage of digital technology, which maximizes the efforts of others, towards the achievement of a goal (**Franciosi, 2012**).

Digital Ecosystem

Interdependent group of people that share an established group of digital platforms for a mutually beneficial purpose, such as a common interest, and that is based off of the adaptive and sustainable processes from natural ecosystems (**Brisco, Sadedin, & De Wilde, 2011**).

Conceptual Framework



Virtual Mentoring Team

What:

Each member of the @TeachAGPSU cohort of #psuaged18 will have a strong, multi-medium, multi-perspective mentor team scaffolded around them during their critical #TeachAg Journey.

Who:

- @TeachAgPSU Faculty
- Cooperating Teacher
- A Recent @TeachAgPSU Graduate (1 to 4 years of experience)
- A Pennsylvania #TeachAg Star not currently serving as a cooperating teacher
- A #TeachAg Thought Leader from outside of PA

How (Engagement Examples):

- Digital Comments/Feedback
- Social Media
- Summer Book Club

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Purpose and Research Questions

The purpose of this study is to examine the engagement in a digital ecosystem by pre-service teacher candidates.

1. What is the level of engagement by pre-service candidates on the three selected platforms of the @TeachAgPSU program?
1. What types of interactions occurred between teacher candidates and virtual mentors within the digital ecosystem?



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Research Question 1

What is the level of engagement by pre-service candidates on the three selected platforms of the @TeachAgPSU program?

What the literature says re: Research Question 1

- Online communities of practice (CoPs) facilitated by digital networks result in increased social interaction among users after participating in sharing of ideas, resources, and knowledge. (Gunawardena, Hermans, Sanchez, Richmond, Bohley, & Tuttle, 2009)
- Blogging allows for the development of a digital community in order to empower the process of learning (Farmer, 2006)
- Participating in video observations allow pre-service the capability to watch and reflect on their lessons. It also enables them to experience virtual mentoring and practice giving/receiving virtual peer feedback (Murphrey, Rutherford, Doerfert, Edgar, & Edgar, 2014)
- Electronic community of practice via Twitter can provide pre-service teachers with an opportunity to build relationships and learn from each other (Wenger, 2007)

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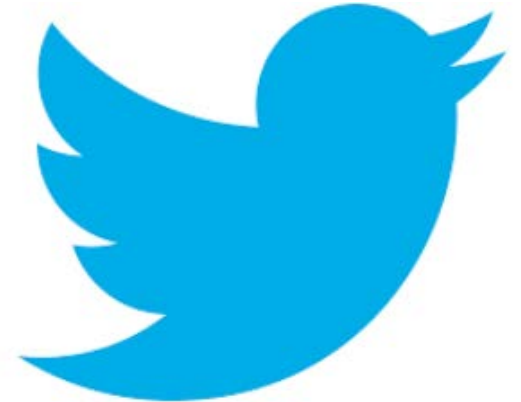
What are the platforms?

Blogger



Edthena

Twitter



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Findings for Research Question 1

Semester	No. of Blog Posts on Blogger	No. of Video Lessons Uploaded to Edthena	No. of Tweets
Fall	271	125	1,047
Spring	268	32	979
Total	539	157	2,067



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Implications of Research Questions 1

- Pre-service teachers are willing to communicate with other agricultural educational professionals using Blogger, Edthena, and Twitter in an electronic CoP
- Provide a digital ecosystem comprised of relevant platforms where pre-service teachers are able to support each other and interact with their mentoring teams
- Evaluate platforms used within the digital ecosystem on an annual basis to see if they are still viable and relevant, or if they need to be replaced by a new platform

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Research Question 2

What types of interactions occurred between teacher candidates and virtual mentors within the digital ecosystem?

What the literature says about Research Question 2

- Online CoPs through Twitter can provide teachers with an opportunity to build relationships and learn from each other (Wenger, 2007)
- Twitter has been shown to help enhance the educational technology usage of teachers at all stages of their career, and has been used a forum for professional communication (Risser, 2013)
- Both pre-service teachers and mentor teachers developed professionally in relation to technology integration when they engaged through different digital platforms (Liu, Tsai, & Huang, 2015)
- Electronic CoPs, such as those created by digital ecosystems, can be helpful to pre-service, novice, and veteran teachers (Paulsen, Anderson, & Tweeten, 2015)

Findings for Research Question 2

Semester	No. of Video Lesson Comments on Edthena	No. of Twitter Users	Twitter Reach	Twitter Impressions
Fall	541	103	291,236	1,301,684
Spring	284	84	195,401	1,056,144
Total	825	152	454,459	2,357,828



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Implications for Research Question 2

- Both pre-service teachers and mentor teachers develop professionally in relation to technology integration when they engage through different digital platforms
- Examine “richness” of interactions between pre-service teachers and virtual mentors
- Measure quality of interactions between members of the digital ecosystem



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Where do we go from here?

Actions to take (recommendations for practice)

1. Cost efficient measures for engagement (current cost per student: \$525)
2. Onboarding volunteers
3. Integration as opposed to addition: Creating culture & expectation

Things to learn (recommendations for future research)

1. Measuring growth of digital leadership?.
2. Longevity-enduring nature of behavior changes with digital platforms (potential longitudinal study)?
3. Perceptions by Employers? Does it matter?
4. Job Satisfaction/Retention: Implications of strong digital mentor networks?

Costs

Platform/Device	Cost
iPad	\$250
iPad Protective Case	\$15
iPad Tripod	\$70
Edthena Account (Student)	\$190
Edthena Account (Mentors)	Free
Blogger	Free
Twitter	Free
Total (per student)	\$525



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