



Provost and Vice President For Academic Affairs

January 7, 2016

Dr. Ginger Durham
Assistant Vice Chancellor for Faculty Development
University System of Georgia

Dear Dr. Durham and Awards Selection Committee:

It is my great pleasure to nominate Dr. Vanessa Slinger-Friedman, Associate Professor of Geography at Kennesaw State University, for the 2016 Regents' Scholarship of Teaching and Learning Award. In addition to being an outstanding teacher, she has a distinguished record of scholarship in the areas of multimedia cognitive models for online Human Geography courses, writing across the curriculum, and the design and assessment of learning technologies.

As her application documents indicate, Dr. Slinger-Friedman's systematic examination of online learning and teaching is grounded in a well-articulated teaching philosophy steeped in comprehensive multimedia cognitive theories informed by a constructivist approach. Her commitment is to research questions that close gaps within the literature and provide results that can be used to improve her own teaching, her students' learning, and the teaching of Geography as a discipline. The existing literature is limited in its exploration of how students learn in online environments, especially in the Geography domain, therefore Dr. Slinger-Friedman's work is a needed contribution to fill this gap. The quality of her work is acknowledged well beyond our institution.

Her groundbreaking innovative work has consistently been published in well-respected academic venues, because her scholarship is data-driven and evidence-based, as you will realize in her materials. From that foundation, she has been able to make broadly interdisciplinary contributions, such as her model for the design and assessment of learning technologies, which benefits the entire academic community. Dr. Michele DiPietro, Executive Director of the Center for Excellence in Teaching and Learning, summarizes the rigor of her SoTL as Inquiry focused on student learning, Grounded in context, Methodologically sound, Conducted in partnership with students, and Appropriately public.

Dr. Slinger-Friedman's achievements are a point of pride for our campus and the state of Georgia, on the national and international stage. In fact, her excellence in SoTL has been recognized internationally in 2013 with the Best Paper Award, at the 5th International Conference on Mobile, Hybrid, & On-line Learning in France. We are confident the committee will be as impressed by her groundbreaking work as we are.

Sincerely,

W. Kenneth Harmon, DBA
Provost and Vice President for Academic Affairs



Regents' Scholarship of Teaching and Learning Award Selection Committee
Re: Recommendation letter for Dr. Vanessa Slinger-Friedman

I am very pleased to write a letter in support of Dr. Vanessa Slinger-Friedman's application for the Regent's Scholarship of Teaching and Learning Award for individual faculty. I have known Vanessa for eight years as her colleague and her chair and have been impressed with her commitment to teaching and, most importantly, student learning since we first met. She is an outstanding faculty member in the classroom, and a dedicated mentor for students outside the classroom as well. Vanessa is passionate about integrating her students into her research thereby stimulating active, critical, and creative thinkers, with the ability for life-long learning. Much of her scholarship has focused on documenting best-practices in teaching and her work in this area has been recognized for excellence both within and outside of the University.

I have been a reviewer of online courses at Kennesaw State University for 5 years, and have been part of the review leadership team for the past three years. I have had the opportunity to review more than 50 online courses in these two roles. I am able to speak directly to Vanessa's ability to create online courses, and to work with other faculty as they create their own classes. Vanessa's work in online education has been instrumental in encouraging our faculty to pursue developing high-quality online courses. She has served our department as an Online Coordinator and was such a success in this role that she was asked to apply to the Office of Distance Education in the College of Humanities and Social Sciences to be an Associate Director of Distance Education. She has served in this role for three years and has used her expertise to work with faculty who are participating in faculty development courses in online course creation. Her research in the scholarship of teaching and learning (SoTL) related to online learning has given her the expertise to guide faculty members through course development so that their courses have academic rigor and require active learning for the students.

Vanessa's groundbreaking and creative SoTL research has been recognized at national and international conferences, and her work includes both disciplinary research in geography as well as in online teaching. At an international conference, a paper on teaching won the best paper award and Vanessa and her co-author were requested to submit a longer version of their presentation paper for publication in a peer-reviewed invitation-only volume. This demonstrates to me the high quality of her work, not just at the university level, but also for an international audience.

Finally, I would like to comment on Vanessa's SoTL work related to using interactive learning modules. Her research with a faculty colleague in our department led them to recognize the value of having students engage with human geography content through interactive multi-media components. This research has been published widely in highly regarded peer review outlets and adds important research to this newly developing area of study.

When I learned of the Regent's Scholarship of Teaching and Learning Award, I knew immediately who in my department should be our college nominee. Vanessa was

nominated and voted for by her department peers and then went on to be chosen by the CHSS Chair's counsel and the University's Dean's counsel to be KSU's nominee for this BOR award for the second year running. Vanessa is dedicated to her craft as a teacher, and is able to communicate her knowledge of how to be an excellent teacher to others, both in writing and in the classroom. She is a scholar and educator of the highest caliber and would be an outstanding beacon of higher education for the University System of Georgia Board of Regents to hold aloft for the state to see.

Sincerely,

Susan Kirkpatrick Smith

Susan Kirkpatrick Smith, PhD

Chair, Department of Geography and Anthropology



Dr. Michele DiPietro
Executive Director
Professor of Statistics
mdipietr@kennesaw.edu

January 4, 2016

Regents' Teaching Excellence Award Selection Committee
Re: Recommendation letter for Dr. Vanessa Slinger-Friedman

It is my distinct pleasure to recommend Dr. Slinger-Friedman for the Regents' Scholarship of Teaching and Learning Award. In my position, I have worked with hundreds of faculty at multiple institutions in the last 15 years, and I count Vanessa as one of the most impressive. Of all the forms of scholarship, SoTL has the reputation of being soft and touchy-feely, driven by an "amateur culture"¹. Vanessa's research is anything but that. To paint the picture of how impressive her research is, I will use the five standards set forth by Dr. Peter Felten in his 2013 article.

Inquiry focused on student learning. A lot of SoTL research focuses on student satisfaction with a specific approach, as that is easier to measure. Vanessa's research goes further, exploring student learning. Moreover, it unpacks learning into the desired skills she is aiming to foster in her students, connects the teaching approaches she's trying out in her course to the learning objectives for the students. Beyond the skills, students comments reveal that they are also learning metacognitive outcomes, building good learning habits.

Grounded in context. Vanessa's approach is very specific to both her discipline, geography, and her online format. In discussing her teaching philosophy with Dr. Slinger-Friedman, I was very pleased to learn that she grounds her approach in Dr. Mayer's work. Geography is a very visual discipline, where in addition to the traditional text-based content, students need to make sense of maps, images, videos, and so on. Dr. Mayer's work on dual-coding theory and multimedia learning (how students process verbal and visual information and integrate them) provides the foundations on which she bases her interventions. Similarly, I note an awareness of her online context throughout her work, both in the teaching interventions she develops,

¹ Felten, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry*, 1(1), 121-125.

and on a meta level, in her research on how to develop and assess any learning technologies in a course setting. The model she developed for this purpose has become influential in her field.

Methodologically sound. As a statistician, I applaud Vanessa's use of quantitative methodologies to marshal evidence from her inquiries. The design of her studies is thoughtful. The data analysis uses the most appropriate statistical procedures. Even more importantly, she is very careful about what conclusions are warranted from her studies without overgeneralizing.

Conducted in partnership with students. This is an emerging standard, but it's becoming prevalent. Once again, Vanessa is a leader in this dimension. She understands that if SoTL is for the ultimate benefit of our students, they have a stake in the process and should be involved in it. She has involved both undergraduate and graduate students in significant ways, leading to co-authorships on publications and presentations. Some of the students she mentored received external funding and awards for their work with her.

Appropriately public. Scholarship must be disseminated to be valid and helpful, and Vanessa's record is sterling. She is a consistent producer of high-quality research, disseminated at prestigious conferences and in peer-reviewed venues. In addition, her research has been consistently funded and has received awards internationally.

These criteria help showcase the high quality of Dr. Slinger-Friedman's SoTL, but they do not tell the whole story. Vanessa is an inspiring teacher, and her students speak highly of her. It is her passion for student learning and the desire to see them succeed that fuels her research. She learns from her research and uses it to fine-tune her courses, but beyond that she uses it to mentor other faculty, particularly as Associate Director of Distance Education for her college. Vanessa is a key player in realizing strategic priorities of our university and of the University System of Georgia, such as academic excellence and degree completion, increased access through online education (both under Strategic Imperative 1), and our commitment to increasing international opportunities (under Strategic Imperative 2). I hope I have done Vanessa justice and conveyed the respect I have for her research on teaching. I give her my strongest recommendation. If I can answer other questions, please do not hesitate to contact me.

Respectfully,

A handwritten signature in black ink, appearing to read "Michele DiPietro". The signature is fluid and cursive, with the first name "Michele" being more prominent than the last name "DiPietro".

Michele DiPietro

3rd January, 2016

Regents' Scholarship of Teaching and Learning Award Selection Committee
Re: Recommendation letter for Dr. Vanessa Slinger-Friedman

It with absolute pleasure that I strongly recommend Dr. Vanessa Slinger-Friedman for the BOR for the Regents' Scholarship of Teaching and Learning Award. As her former student and a current teacher I have a unique perspective of and appreciation for Dr. Slinger-Friedman's work as both a professor (conveying knowledge) and as an educator, someone who is dedicated to the craft of effective teaching. Since graduating from Kennesaw State University I have taught full time at Hillgrove High School in West Cobb County. One of my responsibilities is that I teach world geography, including AP Human Geography. I did well at KSU, graduating with honors. I was the TOSS recipient for the Velma T. Wells Memorial Scholarship, which is awarded for outstanding Social Science TOSS performance. I was also the recipient of the Bagwell College of Education's student teacher of the year for secondary education.

Dr. Slinger-Friedman played an important role in my education and in my development as a teacher. She continues to be a huge inspiration to me. She is one of the reasons that I gravitated to the subject of geography, and she is responsible for heightening my love of the teaching in general. Dr. Slinger-Friedman is one of only a handful of instructors that I encountered during my collegiate experience that I felt were truly outstanding instructors. The geography courses that I took with her were my favorite courses, and I look back on them with great fondness. Not only did I love the classes, I loved the way she taught them. She is a truly gifted teacher, and in my own career I draw upon the methodology that she uses in her classes to gain inspiration in creating my own lessons plans and for insuring that I am an effective teacher for my own students. In the classroom, Dr. Slinger-Friedman uses varied approaches to teaching that directly focus on student learning on so many levels. Over the span of classes that I took from Dr. Slinger-Friedman at KSU I observed that she would take student feedback obtained through research on her teaching methods and come back into the classroom with adjustments to her teaching as needed. Because of her example I am thoughtful and discerning in the way that I convey knowledge to students, using active methods of teaching to engage students and always striving to improve my methods so that students can learn better. From the bottom of my heart I thank Dr. Slinger-Friedman for being dedicated to her work, and for being an outstanding role model.

I am forever grateful for all that Dr. Slinger-Friedman did for me in preparing me to teach geography and, more specifically, to be an passionate educator. There are few professors who take the time and care she gives to be continually honing her craft and positively influencing others through disseminating her research on teaching and learning. There is no doubt in my mind that she is strongly deserving of the recognition of the Board of Regents' Scholarship of Teaching and Learning Award. If I can help in any other way with your decision please feel free to contact me.

Kelly Lovely-Owens
Hillgrove High School
kelly.lovely-owens@cobbk12.org

Board of Regents' Scholarship of Teaching and Learning Award
Dr. Vanessa Slinger-Friedman
Kennesaw State University

Teaching Philosophy

During my first year as an Assistant Professor I participated in a CETL Book Club workshop on Parker Palmer's book, "The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life." This workshop reinforced for me the importance of the individuality and diversity of both the professor and students, as well as the need to recognize the role of the student in the learning process. This point of view also influenced how I structured my classroom in such a way to bring my knowledge and enthusiasm about my field to the students through teaching relevant, practical, and contemporary material in effective ways. Consequently, while I lead the classroom learning experience in an organized and professional manner, students are aware that they are also important contributors to presentations, discussions, and the learning process. I encourage student feedback to enhance my teaching and to provoke critical thinking. I also use a variety of teaching strategies to stimulate interest and learning in classes, and in recognition of the multiple ways in which students learn. For example, my teaching methods include community service learning, field trips, reflective and responsive writing, debates, in-class activities, journaling, interactive exercises, doing research, and showing artifacts from my research and travels. Additionally, I have hosted guest presenters to my classes to offer a different perspective or provide applied examples of various concepts and theories learned in the classroom. I take a student-centered approach to my teaching.

In an attempt to be involved in cutting edge and innovative pedagogy, I have completed a variety of workshops about improving teaching and incorporating new methods into classes. These include being a fellow in a semester-long Writing Across the Curriculum (WAC) Workshop designed to explore a variety of WAC methods which could be implemented into the curriculum to enhance student learning, and another semester-long professional development course for developing online courses focusing on online learning theory, andragogy, and best practices in course development. While it was not clear to me as a junior professor, over time my teaching philosophy has developed and my goal now is to make my classroom not just "a place of teaching, but a place of learning" (Boyer, 1990, pg. 15). Hence, it is equally important to me that I reflect on the pedagogy that I implement in my classes by researching the impact of these teaching methods on students' learning. My SoTL research leads me to ask questions like, what is going on when students approach knowledge in a different way? Do different approaches to knowledge impact students' experiences and the quality of their learning? The end goal of my research on teaching and learning is to inform my own teaching and to contribute to the field of teaching and learning in general through disseminating my research results in peer-reviewed outlets. Invariably, I go back into my classes to fine tune a teaching method or decide that a strategy is not working and needs to be modified or removed. In this way, I find that teaching and learning in my classroom is a very dynamic process that involves the participation of and feedback from students. I also conduct research with my students, which has led to a co-authored publication with two students and several students presenting research at conferences. Spronken-Smith et al. (2008) express that involving students in research and research-like activities supports them in developing more sophisticated conceptions of knowledge. Perhaps the most rewarding end result

of my investment in the development of my courses and the involvement of students in this SoTL process is that the improvement of my classes goes towards helping ensure that students are better prepared for the numerous professional challenges they will confront upon graduation and entry into the workforce or graduate school.

Narrative

In one of my early annual review documents at KSU, my supervisor noted that I was on my way to becoming a “master teacher”. While I am still on that journey, I believe that during my career as an educator I have made consistent and significant strides in working to accomplish this goal. I have no doubt that my Scholarship of Teaching and Learning (SoTL) research has been a major factor in my professional development and in my ability to make contributions to the area of teaching and student learning both within and outside of my discipline. In the following narrative I will:

(1) Explain how my SOTL research compliments my teaching philosophy and builds upon on established scholarship including constructivist learning theory and the cognitive perspective, and relates to my use of active pedagogies in classes.

(2) Describe and demonstrate the impact on student learning and faculty teaching of my SoTL work.

(3) Document how I have actively disseminated my research through peer-reviewed venues, and been a leader and advocate for SoTL in my roles on campus and through my SoTL publications which have involved creating a model for designing and assessing learning technologies.

(1) Narrative that is built on previous scholarship and that drives research questions

I believe that effective pedagogy can be reinforced through integrating scholarship into the classroom setting. Additionally, scholarship in the classroom should have a practical purpose and benefit. This benefit can be in the form of published work that advances the discipline and/or the practical application of research results to improve student learning. A consistent question that I have as a professor is, “What am I trying to accomplish in my teaching?” This question has led me to the examination, through detailed research, of the relationship between teaching and learning. While excellent teaching is often equated with teaching students to develop thinking skills and analyze ideas and issues critically, and teaching students to grasp principles, in reality, many instructors teach in way that produces students who have accumulated considerable volumes of detailed knowledge, and who can reproduce large quantities of factual information on exams, but who are largely unable to show that they understand what they have learned and who cannot apply their knowledge to new problems (Arseneau & Rodenburg 2005). My desire to have students come away from classes with the ability to apply concepts and knowledge learned to their practical lives and to the significant problems of the world has impacted my teaching philosophy, my teaching practice, and the way that I apply the results of research – my own and others – to improving my teaching and guiding my SoTL research. Consequently, the way that I teach and the focus of my research on the scholarship of teaching and learning is predicated on the theoretical perspective of learning and knowing termed constructivism (Martens et al. 2007). The constructivist learning theory draws from contemporary philosophical and neurophysiological views on cognitive learning and the way that the brain works (Arseneau & Rodenburg 2005), and is focused on the idea that knowledge, learning, and meaning is constructed by the learner through activity.

The integration of the constructivist learning theory and the cognitive perspective into my

teaching can be seen in the active pedagogies that I use in my classes, from the implementation of writing across the curriculum techniques to the use of interactive multimedia elements in courses. I apply innovative WAC techniques into my classes as a tool for student learning, thinking, and communication. Writing stimulates students to become active and engaged participants (e.g., McGuinness 2009). Additionally, using a cognitive theory framework, I co-developed interactive learning modules for introductory human geography courses. The cognitive theory framework supports a multimedia design of educational materials (Black et al. 2007, Maag 2004, Meyer 2002) through which students can engage in meaningful learning when they actively process material through “selecting relevant words and pictures, organizing them into coherent pictorial and verbal models, and integrating them with each other and appropriate prior knowledge” (Mayer 2002).

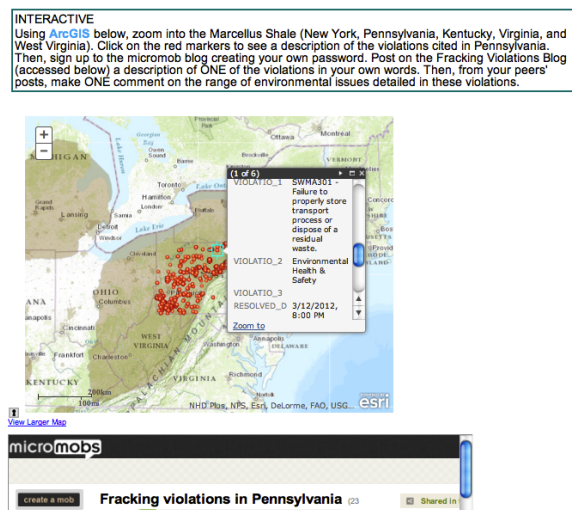


Fig. 1 Interactive exercise using ArcGIS



Fig. 2 Interactive exercise using Google Earth

The interactive multimedia elements are created using publically available software such as micromob, Scribblar, Google Earth, and ArcGIS (Figs 1 & 2). In this way they are easy for other instructors to replicate. The modules include imagery, custom videos, readings, discussions, animations, interactive exercises, and assessments. In the module, activities allow for theories and ideas to be applied to practical situations to answer real-world geographic questions, making the content relevant for students. The design of the interactive module was predicated on Mayer's research on cognitive theory-based assumptions regarding the way that people learn from words, pictures, and active processing of material (what Mayer considers the two elements of the “Dual Channel Assumption and the Active processing assumption”). This concept of knowledge transmission is based on a constructivist point of view where knowledge is constructed by the learner through activity (Martens et al. 2007) resulting in deeper understanding (Mayer 2002). This construction has led to the development of “new learning environments” or what Martens et al. (2007) call “constructivist e-learning environments” (CEEs) in which activities are created to challenge students and provide them with realistic contexts so that students become intrinsically motivated to explore and control their own learning process.

These interactive multimedia modules are an appropriate approach to teaching geography and to teaching this particular generation of students. By its very nature, geography is a visual and interactive subject (Jain & Getis 2003, Posey 1993, Rose 2003). Traditional resources for

classes in this subject area offer only limited interactive opportunities that challenge students to apply geographic concepts to real-world situations (Jain & Getis 2003, Posey 1993). Moreover, the Millennial generation of students who are currently entering College are familiar with and desire to be taught with multiple modalities and using active learning techniques. In face-to-face and online courses, new technologies and new course designs increasingly are being introduced to provide students with content and provide opportunities for students to interact with that content. As new technologies have emerged and become a more integral part of the learning environment they have impacted the distribution of content, learning tasks, and assignments. The ways by which information is presented and also the ways in which students interact with that material are important. The medium employed can motivate and engage students as active and collaborative learners rather than just providing information to them. However, there has been a gap in the assessment of these learning technologies of their impact on student learning. Designing new learning environments is challenging, and the center of attention tends to be on the delivery of new content through the technology rather than assessment of the impact of these new learning technologies on student learning (Slinger-Friedman & Patterson 2013). My collaborative SOTL research – through its systematic and empirically based approach – plays a role in filling this gap. Evaluating the impact of teaching practices on student learning and student perception of learning is a key focus of my research.

My SoTL research addresses the issue of how to create multimedia content elements that engage students in deeper understand, improved learning, and application of that learning to real world situations. In particular, my contributions to the constructivist learning theory and the cognitive perspective has been in the areas of developing innovative active teaching techniques, and in applying experimentally designed SoTL research to study the impacts of these techniques on actual and perceived student learning. With few exceptions (e.g., Hooey & Bailey 2005), quantitative research on active teaching techniques, like writing in geography, had been limited and had not focused on the relationship between the activity, such as writing, and test scores. Similarly, the constructivist approach to interactive course design offers a way for students to achieve learning outcomes in geography. However, analysis and evaluation of these new learning environments had been lacking, especially in the area of how interactivity with content impacts actual and perceived learning. I will now turn to the results of this research.

(2) Data/evidence of the impact of teaching techniques/pedagogies on student learning and potential impact on teaching and learning within and outside of the discipline.

In the fields of computer programming, nursing, and biology, modules with various levels of interactive ‘learning objects’ have been designed to improve student understanding and learning (Black et al. 2007, Bradley and Boyle 2004, and Maag 2004). Interactive learning objects are less commonly found in fields within the liberal arts and social sciences, such as geography, especially in human geography classes. In a Java programming course, Bradley and Boyle (2004) made their learning objects optional resources. They found that students accessed the learning objects in large numbers and, in a survey students indicated that the learning objects helped them to learn the concepts being addressed. While the authors experienced an increase in the percentage points achieved on the modules, the authors felt that the exact contribution of the learning objects was difficult to assess because they were used as components in larger pedagogical systems (Bradley & Boyle 2004). Maag (2004) found that while there were no statistically significant increases in math-test scores from the pre- and post-test with the use of interactive multimedia, those students who had used the interactive multimedia reported the highest satisfaction score. Finally, while

claims about the positive results obtained using these new learning environments have been made, strong empirical research regarding their influence on students' perceptions and the motivational impact of constructivist learning environments are lacking (Martens et al. 2007). My SoTL research has directly attempted to close that gap. The qualitative comments and quantitative results of my research show that students responding to the survey overwhelmingly (100%) believed that the interactive exercises helped them to learn more (Fig. 3). They also indicated that the interactive activities helped them to describe the process of the module topic (Fig. 4) and the activities helped them to use the geographic tools to explore the topic from a geographic perspective (Fig. 5). They were also positive that the interactive exercises helped them to apply the geographic perspectives to the topic (Fig. 6). Perhaps the largest endorsement of the online interactive exercises is that 93% of the student respondents strongly agreed or agreed that they would like to have more interactive exercises in their courses (Fig. 7).

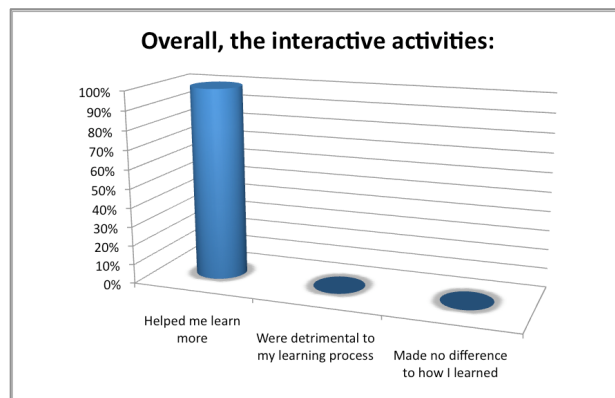


Fig 3. Overall, the interactive exercises _____.

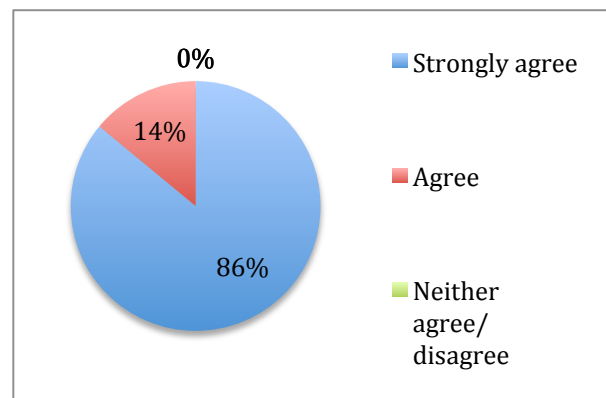


Fig 4. The interactive exercises helped me to describe the process of the module topic.

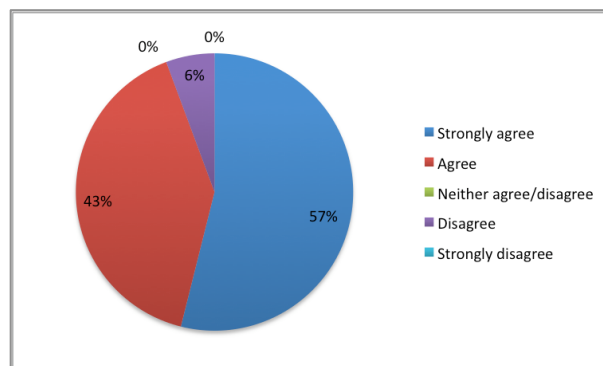


Fig 5. The interactive exercises helped me to use the geographic tools (visual, verbal, cognitive, mathematical, digital) in exploring the topic from a geographic perspective.

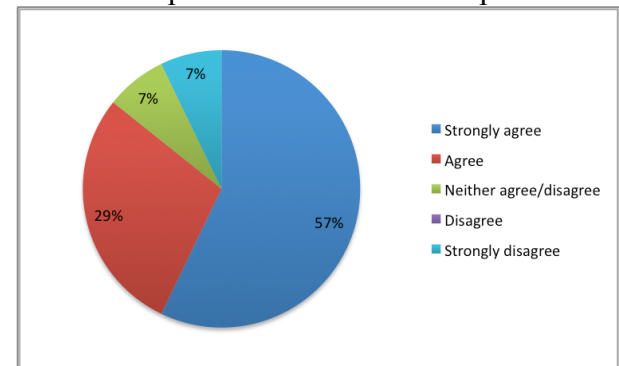


Fig 6. The interactive exercises helped me to apply the geographic perspectives (space, place, human-environment interaction) to the topic.

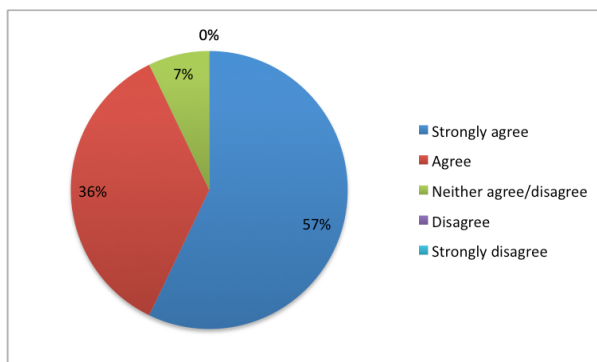


Fig 7. I would like to have more interactive exercises in my courses

In a comment section for each of the survey questions students could make remarks or observations on the question being addressed. The statements that were volunteered in this

section are illustrative of the level of understanding and deep learning that students perceived was taking place with the use of the interactive modules (please see comment box below).

Question: The interactive exercises helped me to describe the process of module topic.

Student remarks:

- I enjoyed the interactive exercise because it allowed me to fully understand the process.
- Having to do hands on activities kept me focused on the module and also made me understand the concepts better.

Question: The interactive exercises helped me to apply the geographic perspectives (space, place, human-environment interaction) to the topic

Student remarks:

- I think it hit on those components more so than you could in a normal classroom. My whole life teachers have told us there are various learning styles. Some people are audio, others are visual and some are kinesthetic learners. This module kind of hit on all three of those so just in case you cannot keep your focus to listen to a video, you have a map to draw to reinforce the concepts you may have not totally gotten from just listening.
- I really liked that you came at this from several different angles. I REALLY think that reinforces the information. Especially with the drawing.
- The examples from the module made sense and I remembered them.

Question: The interactive exercises helped me to use the geographic tools (visual, verbal, cognitive, mathematical, digital) in exploring the topic from a geographic perspective.

Student remarks:

- Before completing this module, I was a little lost on the mathematical tools but this module really allowed me to understand what it was.
- I was better able to see how the [tools] were applied.

Question: I would like to have more interactive exercises in my courses

Student remarks:

- I think interactive allow students to gain a better understanding of the information.
- I learn better by interacting and working with the material.
- It makes it more interesting and easier to learn.
- It made the material easier to understand and apply to real life situations.

Question: Overall, the interactive activities:

Student remarks:

- The activities engaged me and made me pay attention to the material so that I could apply it
- I am a visual learner and seeing everything play out made it much simpler.
- ..., I was better able to apply the traditions to actual situations.

My SoTL research on the use of Writing Across the Curriculum (WAC) techniques in classes was based on prior scholarship that asserted that writing can help students with deep learning rather than just surface learning (e.g., Thompson *et al.*, 2005; Dummer *et al.*, 2008). Whereas surface learning is characterized by memorization of facts, deep learning requires understanding and application of concepts and ideas (Biggs, 2003). The 2008 National Survey of Student Engagement (NSSE) showed a positive correlation between student writing in college and “active and collaborative learning, student-faculty interaction, and deep learning” (NSSE, 2008). In SOTL research related to assessing the impact of writing-to-learn exercises on student attitudes and performance in introductory level geography classes my co-PI and I designed an experimental design study with an intervention class and a control class. Overall, student surveys from both WAC studies revealed that writing is moderately valued as a mode to improve comprehension. The quantitative results from the WAC survey suggest that students in both

courses generally had positive perceptions of writing as a learning tool. Qualitative comments from the WAC Survey lent insight into its impact:

- “Current events that related to the material was [sic] unique and fun. Thank you...The writing was fun and kept my interest.”
 - “The discussion posts for each region were most helpful. I found them to be beneficial in way [sic] the textbook could not.”
 - “I do think it’s helpful to write about current events to reinforce the material.”
 - “I think it helps us learn and forces us to make connections.”
 - “I enjoyed the writing assignments in this class and I learned more about the geography of different areas [because] I had to do my own research on them.”
 - “I enjoyed the writing assignments. I felt like I learned a lot by all the writing we did.”
- (Slinger-Friedman & Patterson 2012)

Our survey data indicate that students who had been exposed to writing in these geography classes perceived writing across the curriculum as a mostly positive and helpful tool for learning geographical concepts and applications. A second research question sought to determine whether writing-to-learn activities helped to improve student exam performance in their respective geography courses. For both courses studied, our quantitative analyses showed no statistically significant difference in performance between the students that had the writing intervention and the control group. From these results, it cannot be asserted that writing activities helped students to better understand geographical concepts and applications as manifested quantitatively through improved student grades. However, importantly, as part of the pre- and post- semester survey conducted in both the intervention and control classes, students were asked their opinion on whether or not writing in a geography course can help them better understand geographical concepts and applications. At the end of the course, positive responses from students in the intervention class (strongly agree or agree) increased dramatically from 49% to 81%. A Fisher’s exact 2-sided test showed that the difference in the responses from the pre-survey to the post-survey were statistically significant ($p=0.0004$), while the increase in the control class was not statistically significant; the conclusion being that writing plays an important role for learning in geography courses.

Further review of WAC activities led to the following published insights for students and faculty: the writing encouraged students to cognitively reflect on their learning and provided students with an opportunity to identify areas of confusion or lack of understanding of the course material; the format allowed students to disclose more information with the comfort of confidentiality and without the fear of receiving a lower grade by expressing a lack of understanding; and the feedback tools promoted active engagement between the students and instructors. Equally important, the feedback tools offered timely feedback, which enabled the instructors to address unclear aspects of the course. Furthermore, they were low energy in terms of grading. Finally, based on the feedback method, class time can be more effectively used to address major concerns or clarify materials (Slinger, Forthcoming in *College Teaching* 2016).

Along with my discipline-specific research and creative activities, I have engaged consistently in SoTL based research connected to my teaching endeavors. My SoTL record is strong with a successful record of creating and implementing innovative pedagogies in the classroom to impact student learning, securing internal and external funds to support this research, and disseminating my SoTL research in peer reviewed journals and at conferences to expand the impact of my SoTL activities. It is to the topic of dissemination and impact that I will turn to next.

(3) Dissemination of scholarship results in peer-reviewed and critiqued outlets and other impacts of SoTL activities in the classroom

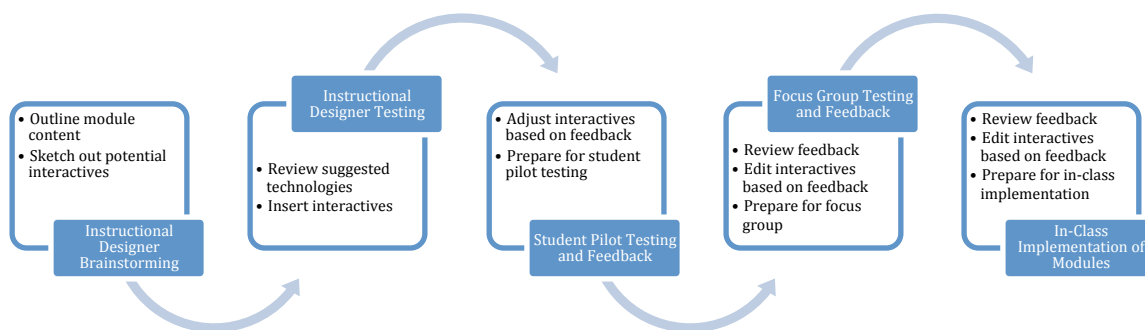
I have been fortunate to have received various grants to support my SoTL work, including the competitive and prestigious E. Willard and Ruby S. Miller Geography Education Research Grant award from the National Council for Geographic Education, a Holder Award, and, most recently, a significant Strategic Internationalization Grants Initiative award (\$42,000) for some new SoTL work involving a cross-campus collaboration with faculty and staff developers to create curriculum aimed at improving study abroad courses, specifically centered on intercultural competence and with a focus on the crucial pre-departure, in-country, and post-experience periods. Through my SoTL work, especially through presentations at conferences and my peer reviewed publications, my goal is to have an impact on the development of effective pedagogy and, more broadly, on the field of research associated with the connections between teaching and learning. To this end, my SOTL related research has been widely disseminated through nine peer reviewed publications, and nine international and national conferences. Refereed products of my SoTL research on writing across the curriculum (WAC) have included two co-authored manuscripts published in the following peer reviewed journals; “Writing in Geography: Student Attitudes and Assessment”, published in *Journal of Geography in Higher Education*, and, “Writing in Geography Classes: Faculty Rewards and Challenges”, published in *Journal of Geography*. Based on these publications, I was invited to present about my experiences with WAC in two separate Professional Development panels at the Annual meeting of the Association of American Geographers and the Writing Across the Curriculum Conference. My SOTL work related to the use of interactive modules for student learning has been presented at international and national refereed conferences and published in peer reviewed journals. In 2013 the paper we presented at the *International Conference on Mobile, Hybrid, and On-line Learning (eLmL)*, a peer-reviewed conference with an acceptance rate of 24%, won the best paper award and it was invited for submission and accepted as an extended peer reviewed paper in the *International Journal on Advances in Life Sciences*. Furthermore, this research was chosen and invited to be presented as a chapter in a book on Pedagogic Research in Geography Higher Education to be published by Routledge in 2016. The editors of the book stated the importance of the book in the following statement, “There are many books about teaching in Geography, but this is the first dealing specifically with Pedagogic Research, its methods and practices. Pedagogy research concerns the processes of learning and the development of learners.” (Martin Haigh, Debby Cotton, & Tim Hall - Editors).

In my prior role as Online Coordinator for my department, and my current role as Associate Director of Distance Education in the College of Humanities and Social Sciences (CHSS), I have led faculty development workshops and training sessions for the design and creation of online courses for my department, college, and other departments outside of my college. My focus during these faculty development workshops and training sessions has been on disseminating knowledge about and using techniques to demonstrate best practices in designing and teaching effective courses. The reality is that educational delivery models for college courses are being modified and contemporary educational delivery models include online and distance education. Today, almost one third of students in higher education institutions are taking at least one online course. However, research on the training of faculty to teach these online courses and the effectiveness of courses being designed related to student learning is only slowly catching up to the demand for the courses themselves. Outside of having an impact on the online courses

developed and taught at Kennesaw State University through the faculty development workshops and training, my collaborative SOTL research with department online coordinators from the College of Humanities and Social Sciences at KSU contributes to the nascent field of pedagogy associated with online education delivery. We developed an advanced Professional development workshop (“The Project”) for faculty teaching online courses and then assessed this program in relation to its impact at the university level. This research, presented as a paper at an international conference in 2014, was very well received and we were invited to submit an extended paper based on this research for publication in a peer-reviewed journal. It was one of only five papers from the conference to be invited to submit to this selective publication.

Another area where I am having an impact through SoTL work is in the development of a model for designing and assessing learning technologies prior to implementation in a course setting. Assessment of courses and teaching techniques is often inadequate, poorly timed, and limited in the effect it has on course or module modification and improvement. While considered important, feedback on course design before it is delivered to students within the structure of a formal class is uncommon (Donnelly & Fitzmaurice 2005). This is one of the reasons why this scholarship of teaching and learning research is seminal. My research concerns not only the assessment of new learning technologies on student learning, it has also addressed the development of a model (Fig. 8) by which new learning technologies go through an iterative process of development, involving input and feedback from course and instructional designers, student pilot testers, and a student focus group in order to optimize instructional design of course material to maximize learning opportunities. The details of this model, “The Four Stages of Creation and Evaluation” have been presented at an international conference and published in a peer reviewed journal (Slinger-Friedman & Patterson 2013).

Fig. 8. The Four Stages of Module Creation and Evaluation



Participation and feedback from students is a large part of my SoTL research. Additionally, research conducted with students has led to a co-authored book chapter with two students and to several students presenting (and winning awards) at conferences (see Slinger-Friedman CV). This type of activity is equally important for students to experience the research-teaching nexus and achieve improved understanding, more enjoyable learning, develop research skills, and perform better academically through the active learning process (Spronken-Smith et al, 2008).

In conclusion, I have a very personal reason for doing SoTL research. I use the results of my SoTL research to inform and improve my own teaching and to improve student-learning outcomes in my courses. Outside of this individual goal, I feel that knowledge about the outcomes of active learning techniques and interactive activities in courses is valuable for educators and researchers to make more informed decisions about future course development and implementation. My impact on teaching and learning in my discipline of Geography and other

disciplines has come with the dissemination of the results of my SoTL research in widely read peer reviewed journals, and through impacting faculty that I mentor as the Associate Director of Distance Education in CHSS when I teach them how to create online and hybrid courses using best practices. Finally, I hope that through my SoTL work I am an asset and contribute to the growing recognition of Kennesaw State University and the state of Georgia as locations where cutting-edge research related to the scholarship of teaching and learning are taking place.

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Slinger-Friedman, V. & Patterson, L. (2012) Writing in Geography: Student Attitudes and Assessment. *Journal of Geography in Higher Education*, Vol 36, Issue 2, 179-195.

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Education

1996 - 2002 Ph.D., University of Florida, Major: Geography
1994 - 1996 MA, University of Florida, Major: Latin American Studies
1990 - 1994 BA, University of Florida, Major: Geography. Valedictorian

Professional Experience

Kennesaw State University, Kennesaw, GA

Associate Professor of Geography (2011 – present)

Assistant Professor of Geography (2003 – 2010)

Kennesaw State University, Kennesaw, GA - Part Time Faculty (2002 – 2003)

University of Florida, Gainesville, FL - Instructor (1997 – 2001)

SOTL Related Peer-Reviewed Publications

1. Slinger-Friedman, V. Using Online Journals and In-Class note cards for Reflective and Responsive Teaching and Learning. *College Teaching*. Accepted. Forthcoming 2016.
2. Aust, P.J., Thomas, G., Powell, T., Randall, C.K., Slinger-Friedman, V., & Terantino, J., Advanced Faculty Professional Development for Online Course Building: An Action Research Project. *Internet Learning Journal*. Accepted. Forthcoming Fall 2015.
3. Slinger-Friedman, V., Powell T., Smith G., & Mitchelson, M., 2015. Lessons Learned and Future Prospects for Online Program Creation and Delivery: A Case Study From Geography. Peer-reviewed proceedings. International Conference on Electronic Learning. Bahamas.
4. Slinger-Friedman, V., Terantino, J. M., Randall, C. K., Aust, P. J., & Powell, T. M. 2014. Refining Advanced Professional Development for Online Teaching and Course Building: An Evaluation From the Faculty Perspective. *International Journal on Advances in Life Sciences*, 6(3 & 4)
5. Terantino, J.; Slinger-Friedman, V.; Thomas, G; Randall, C.K.; Aust, P. J.; & Powell, T., 2014. Faculty Perceptions of “The Project”: An Advanced Faculty Professional Development for Online Course Building. Peer reviewed Proceedings from the Sixth International Conference on Mobile, Hybrid, and On-line Learning.
6. Slinger-Friedman, V. and Patterson, L.M., 2013. Improving online interactive modules: An iterative design model. *International Journal on Advances in Life Sciences*. V 5, N 3&4. 137 – 146.
7. Slinger-Friedman, V. & Patterson, L.M., 2013. Student Learning and Student Perceptions of Learning from Interactive Modules. Peer reviewed Proceedings from the 5th International Conference on Mobile, Hybrid, and On-line Learning **Best Paper Award**.
http://www.thinkmind.org/index.php?view=article&articleid=elml_2013_1_10_50018
8. Slinger-Friedman, V. & Patterson, L.M., 2012. Writing in Geography: Student Attitudes and Assessment. *Journal of Geography in Higher Education*, V 36, Issue 2, 179-195.
9. Patterson, Lynn M. & Vanessa Slinger-Friedman 2012. Writing in Geography Classes: Faculty Rewards and Challenges. *Journal of Geography*. Vol 111, Issue 5, 184-193.

SOTL Related Book Chapters

1. Chapter in Pedagogic Research in Geography Higher Education. Martin Haigh, Debby Cotton, & Tim Hall (Eds). Routledge. Accepted. Forthcoming 2016. (From the editors: - "There are many books about teaching in Geography, but this is the first dealing specifically with Pedagogic Research, its methods and practices. Pedagogy research concerns the processes of learning and the development of learners".)
2. Slinger-Friedman, V., Diller, S. *, & Parkinson, L. *, "St. Lucia". In Landscapes and Landforms of the Lesser Antilles. Casey Allen (Ed). Springer publishers. Accepted. Forthcoming 2016.

SOTL Related Grants and Sponsorships

1. Online Intercultural Education and Training for Study Abroad Engagement. Strategic Internationalization Grants Initiative. 2015 **(\$42,000)**.
2. Learning Communities Mini-Grant Program. Funding for Intercultural competence building. 2015 **(\$325.00)**.
3. Learning Communities Mini-Grant Program. Funding for fieldtrip to KIA plant for learning community #41 Thrive Business Interest. 2014 **(\$900)**.
4. 2014 IGI Internationalization Project "The Cultural Landscape of Food" for the Interdisciplinary Teaching and Assessment of Intercultural Competence Project. 2014 **(\$1,000)**.
5. Scholarship of Teaching and Learning (SoTL) Retreat and stipend 2014. Provided by the Center for Excellence in Teaching & Learning at KSU.
6. Reinforcing Student Learning in Geography Classes using an Interactive Module Design. Recipient of the National Council for Geographic Education's 2013 E. Willard and Ruby S. Miller Geography Education Research Grant **(\$3,500)**.
7. Innovative Pedagogy Through Applied Content in a Geography GenEd Course. Holder Professional Development Award for Online module dev't 2012 **(\$3,000)**.

SOTL Related Awards, Fellowships, and Honors

Nominee, Regents Scholarship of Teaching and Learning Award, University System of Georgia, 2014 & 2015 - KSU nominee to the statewide competition
Distinguished Teaching Award Finalist, 2012, 2011, 2010, and 2007 College of HSS, KSU
President's 4.0 Luncheon 2014 - Chosen by an awarded student as faculty mentor
Best Paper Award, 2013, 5th International Conference on Mobile, Hybrid, & On-line Learning, France. Student Learning and Student Perceptions of Learning from Interactive Modules
Award to develop course modules for the Year of Ghana 2012 and the Year of the Atlantic World 2007, KSU
Mentoring Honors in 2010 and 2012 for the Outstanding Senior in Geography
Chosen to be honored as the faculty mentor at the University Scholars Awards
Fellow - Writing Across the Curriculum (WAC), Spring 2011 and Spring 2010 (semester long).
Faculty using WAC techniques with pedagogical support to explore the benefits of enhanced student learning and faculty scholarship using WAC innovations.
Mentor of an Undergraduate Scholar of Research and Creative Activities,
Recognized by The Center for Excellence in Teaching and Learning, Kennesaw State University for the following years: 2011, 2010, and 2009

* Denotes student researchers and co-authors

SOTL Related Conference Presentations and Invited Talks

Lessons Learned and Future Prospects for Online Program Creation and Delivery: A Case Study From Geography. ICEL International Conference on Electronic Learning. Bahamas, June 2015 (International – peer reviewed).

Developing a Fully Online B.A. in Geography: online education. Association of American Geographers Annual Meeting. Chicago, IL, Spring 2015.

An Iterative design model for improving online interactive modules in a human geography course. Association of American Geographers Annual Meeting. Tampa, FL, Spring 2014.

Faculty perceptions of 'The Project': An advanced faculty professional development for online course building. Sixth International Conference on Mobile, Hybrid, and On-line Learning (eLmL 2014) in Barcelona, Spain. (International – peer reviewed). Invited to submit an extended paper to the peer reviewed IARIA journal.

Student Learning and Student Perceptions of Learning from Interactive Modules. Fifth International Conference on Mobile, Hybrid, and On-line Learning (eL&mL 2013) in Nice, France. (International – peer reviewed). **Best Paper Award.**

Toward an Informed Future: Researching WAC as Teachers and Scholars. Writing Across the Curriculum Conference 2012 Savannah. (International – peer reviewed).

Writing Across the Curriculum in Geography: Learning Outcomes and Faculty Experiences. Association of American Geographers Annual Meeting. Seattle, WA, Spring 2011 (National).

Presentation on creative ways to teach K – 12 and college students about the Columbian Exchange. The Georgia Geographic Alliance Spring Geofest at KSU, 2009. (Local).

The Global Classroom: International Students as Supplementary Learning Resources, 11th Georgia Conference on College & University Teaching, 2004 (Regional)

SOTL Related Student and Professional Services

Associate Director of Distance Education for CHSS 2012 - present. Created and taught Advance Professional Development courses (the “Build a Web” course and “The Project”), including completing and publishing research addressing their effectiveness on teaching and learning.

Chair, Conference session for ICEL conference on Learning, 2015.

Reviewer for Discipline SoTL journal, The Journal of Geography 2012 – 2014.

Awarded and supervised a SALT (Student Assistance For Leadership in Teaching Program) student, 2015-2016.

Supervised 9 students (1 graduate & 8 undergraduates) in Directed Applied research courses related to my research or who expanded research begun in my courses.

Mentored five students to present at KSU’s Student Scholar Symposium.

Assisted 2 students to apply for and obtained funding to present at the Association of American Geographers conference and the Annual Conference on the Americas.

Mentored a student presenting at the URISA conference (for the Association for GIS Professionals) and presenting at the KSU Student Symposium. This student won first place awards for both the URISA conference and the 2012 Geography Award for the Student Symposium.