Augmented Reality Digital Technologies (ARDT) for Foreign Language Teaching and Learning

Summary of Original Proposal

Olga Scrivner and Julie Madewell (Spanish and Portuguese), Cameron Buckley (Fine Arts)

The proposed project is part of a larger quest to better understand emerging mobile technologies, such as virtual, mixed and augmented environments, and their role in language education. It has been often claimed that these technologies have a great potential for improving language learning and increasing learners' performance. While their digital capabilities are almost limitless, to our knowledge, no study has been conducted to measure their effectiveness on actual language learners.

The present study focuses on one aspect of emerging technologies, namely augmented reality. Given that this environment can be added to any physical object or space, we are able to measure the effect of augmented reality on learners by using a paperbased textbook for an elementary Spanish course and classroom objects.

The proposed project has a threefold purpose: 1) to explore the learning potential of mobile augmented reality in language instruction and statistically measure its effectiveness on learners' performance and motivation; 2) to contribute to our knowledge of digital technology and language instruction and 3) to provide a theoretical background to a larger multidisciplinary project V irtual Language Lab that involves Emerging Technology analyst UITS (Nitocris Perez), CeLT (Xiaojing Kou), computational linguist (Olga Scrivner), 3D game designer (William Emigh), virtual reality art (Cameron Buckley) and open source language database Openwords (Marc Bogonovich).

Augmented Reality Digital Technologies (ARDT) for Foreign Language Teaching and Learning

Principal Investigators:

Olga Scrivner - Department of Spanish and Portuguese

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Julie Madewell - Department of Spanish and Portuguese

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Research Team Member:

Cameron Buckley - Visual art, Virtual and Augmented Reality

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PROJECT DESCRIPTION

SUMMARY

The proposed project is part of a larger quest to better understand emerging mobile technologies, such as virtual, mixed and augmented environments, and their role in language education. It has been often claimed that these technologies have a great potential for improving language learning and increasing learners' performance. While their digital capabilities are almost limitless, to our knowledge, no study has been conducted to measure their effectiveness on actual language learners. The present study focuses on one aspect of emerging technologies, namely augmented reality. Given that this environment can be added to any physical object or space, we are able to measure the effect of augmented reality on learners by using a paper-based textbook for an elementary Spanish course and classroom objects. The proposed project has a threefold purpose: 1) to explore the learning potential of mobile augmented reality in language instruction and statistically measure its effectiveness on learners' performance and motivation; 2) to contribute to our knowledge of digital technology and language instruction and 3) to provide a theoretical background to a larger multidisciplinary project *Virtual Language Lab* that involves Emerging Technology analyst UITS (Nitocris Perez), CeLT (Xiaojing Kou), computational linguist (Olga Scrivner), 3D game designer (William Emigh), virtual reality art (Cameron Buckley) and open source language database Openwords (Marc Bogonovich).

Purpose and Research Objectives

The proposed study is a part of a broader interdisciplinary project that aims to advance our understanding of emerging mobile technologies, such as 3D virtual, augmented and mixed reality, and their role in language education. Recent advances in technology make it possible to add virtual components to nearly any learning environment. It has been also claimed that this 3D technology would help students learn more effectively, understand hard concepts and increase their retention compared to traditional 2D surfaces (Billinghurts et al. 2012). The proposed study focuses on one component of emerging technologies, namely augmented reality. Augmented reality is still relatively new to education, especially in the field of foreign languages. While augmented environments have recently received a lot of attention in experimental studies, many theoretical and methodological questions remain unanswered, such as how effective this technology is in classroom settings, how may it enhance learners' experience, what makes augmented reality superior to traditional technology and how it may affect teacher-student and student-student interactions, classroom dynamics and contextual relations.

The goal of this proposed study is to assess the effectiveness of mobile augmented reality as a teaching tool in language classroom settings. This assessment includes 1) exploring augmented reality learning potential in language instruction; 2) gathering statistical evidence to test previous claims; 3) comparing data with results obtained from traditional technology language classrooms; 4) developing methodological recommendation for language instructors

and 5) further contributing to our knowledge of mobile digital technology and language instruction.

In recent years, we have seen a significant increase in the use of mobile devices as tools in education. The 2014 NMC Horizon Report for K-12 and Higher Education has identified the use of mobile emerging digital technology as one of the key trends and has predicted its large impact on teaching and learning. Indeed, many schools have started implementing mobile apps to increase engagement of their "digital native" students (Prensky 2001). One of such apps is *Aurasma*, built for IOS and Android devices. According to its developers, the number of *Aurasma* customers has already surpassed 100,000.[1] While Augmented Reality (AR) is often associated with commercial use, this mobile technology is gaining popularity in education. This app allows educators to add new interactive visual dimensions to the learning process. Thus, this technology has a potential for improving language learning, since visualization and interactivity foster better memory retention, increase students' performance, as well as lower their anxiety (Butler-Pascoe and Wiburg 2003; Devi 2005; Kayaoglu 2011). However, despite growing interest in digital technology, only few studies examine its impact on language learners (see a recent SOTL project *Comparing interaction in traditional and innovative classroom spaces*). This grant will provide us with an opportunity to address the following research questions:

1) Does the emerging technology positively affect students' motivation and performance?
2) How do students and instructors respond to AR interaction?
3) How does AR change the language classroom dynamic?
4) What AR design best supports language learning?
5) What are the best practices for AR in language classroom settings?
6) Is there any significant difference found between teaching with traditional technology versus teaching with emerging technology (AR) in language classes?

Augmented Reality in Education

1.1 Augmented Reality definition. Augmented Reality can be defined as "a real time direct or indirect view of a physical real world environment that has been enhanced/augmented by adding virtual computer generated information to it" (Carmigniani et al. 2011:1). Equipped with cameras, apps and internet, today's mobile devices make it possible to superimpose virtual graphics and media over a physical object, such as an image, object or place. By viewing this object through a mobile device camera, the user is exposed to enhanced virtual layers placed on top of the real object. As soon as the user's camera points at the predefined trigger, namely an image or object, augmented media (e.g. video, 3D and animation) are sent to the mobile device from an online database. That is, this technology can transform a classroom setting to a virtual learning environment: for example, real cultural artifacts triggering images or videos of their history, wall maps displaying geographical locations, portraits bringing to life real interviews.

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[1] source
https://www.aurasma.com/news/hp-aurasma-accelerates-momentum-passes-100-000-customer-milestone/
accessed 10/29/15

1.2 Augmented Reality in education. While Augmented Reality is often associated with marketing and entertainment, AR use has started gaining its momentum in education. Within the next four to five years this technology will be adopted by K-12 educators, according to the 2012 NMC Horizon Report. Several recent studies have also demonstrated its values for learning environments. According to these studies, AR enhances problem solving, critical thinking and collaboration (Wasko 2013), students have a more authentic learning experience (Klopfer 2008), increased motivation, face-to-face and remote collaboration (Dunleavy et al. 2009, Billinghurts et al. 2012), better performance and learning attitude (Jerry and Aaron 2010). In addition, it is argued that AR portability and context sensitivity make this mobile technology ideal for all educational environments, from elementary school to university levels (Klopfer 2008). AR applications have already been successfully used in science, biology, math as well as in literary and poetry development (Lin, 2012, Billinghurts et al. 2012, Bower et al. 2013). The field of foreign language instruction has, however, been slow to embrace this emerging technology. It should be noted that various practical limitations exist that act as barriers to AR advancement, such as budget, time constraints, WiFi, teacher interest and involvement, and an initial learning curve.

Project Overview and Methodology

The research team is made up of two faculty members from the Department of Spanish and Portuguese (CVs attached), one graduate student in Visual Arts (CV attached) and two recruited Associate Instructors (for one semester of assistance). Given the lack of research on this topic in the field of foreign languages, this project examines various methodological and theoretical questions regarding AR development, use, interaction and evaluation. Questions addressed in the proposed project have been developed during our pilot AR project in Summer 2015 and Fall 2015. Students from two different language courses were exposed to various assignments in the classroom using their mobile devices with a free augmented reality app. While there are many existing AR mobile apps, we have selected *Aurasma*, which "offers the best augmented reality (AR) experience for classrooms", according to an independent study (from Ann Elliott's report, November 11, 2014).[2] Indeed, this app was user-friendly and only a couple of students had technical issues. The following two images demonstrate a sample Aurasma used this Fall in one of the classes. Students were instructed to point their mobile devices at certain images and interact with augmented 2D video layers (e.g. listen, answer questions, repeat). At that stage we were not able to utilize all the features of Aurasma that require a commercial account.

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[2] source http://www.edudemic.com/aurasma-for-your-classroom/ accessed 10/29/15
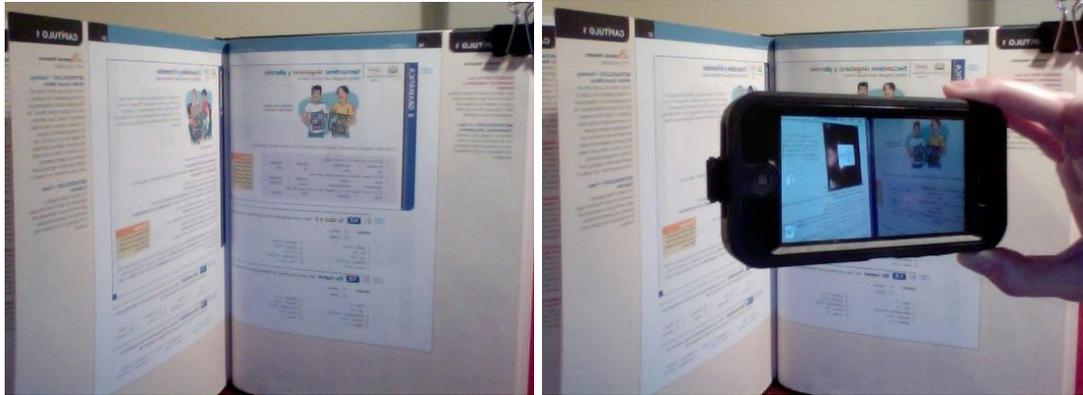
A sample of Aurasma used in Fall 2015 (Spanish 100): left - a textbook with illustrations, right - a mobile device pointing to the image which triggers an embedded video (seen on the left side of the phone screen).

At this time, our research will concentrate only on the beginner level.[3] This level uses the textbook *Anda! Curso elemental,* which provides many simple illustrations and images that will be used as triggers to our mobile AR application. Furthermore, this methodological decision helps us avoid biased data, where students have various levels of Spanish at the beginning of the experiment. Students' performance from two traditional classes will be used as a base-line to assess the effectiveness of AR techniques. While conducting a pilot study, we were able to use only a non-commercial free AR application, which significantly limited our options. For this project, and with the help of the grant ,we hope to include a broad variety of AR options. In the classroom setting. We plan on compiling the following learning modules 1) listening comprehension; 2) pronunciation practice; 3) animated 2D and 3D vocabulary introduction; 4) vocabulary quizzes; 5) role-play dialogues where students interact with an avatar[4] and 6) videos with cultural content, geography,and history. In contrast to other digital technologies available at IU, such as embedded videos in *Canvas,* we will be able to bring real objects into language classrooms, such as cultural artifacts, culinary samples, maps and other objects, and connect them virtually to an augmented world. The prepared scenarios will be used as a part of classroom activities, as well as additional resources. Script recordings will be provided by graduate students who are native Spanish speakers from the Spanish Department. These recordings will expose learners to various Spanish varieties and will enhance their understanding of different pronunciations, intonation and vocabulary.

To evaluate the AR effectiveness, we plan to administer questionnaires to students and instructors, collect statistics directly from the *Aurasma* app (number of users, frequency of use and time spent using the app, etc.) and conduct a comparative assessment of a traditional class of the same level. By using students' and teachers' feedback, real analytical statistics, and the comparison with a traditional class, we hope to provide a robust evidence to our AR study.

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[3] There are five basic undergraduate language levels in the Basic Language Program for Spanish at Indiana University [100, 150, 105 (combination of 100/150), 200, 250].

[4] This student-avatar interaction is not supported yet with speech recognition tools, however, it provides a "real-life" conversation training between a student and an avatar, ex. at the store between a customer and a vendor. The questions are recorded and there is a pause in the scenario for a student's answer.

Significance and Impact

We anticipate a two-fold impact of this research. First, this study will add to our understanding on the role of emerging technologies in language instruction. Using the results from this study and previous studies on digital technologies in the classroom (Gurzynski-Weiss 2015) we can improve our teaching and learning experiences in the 21st century. As our world is changing, "with each new era, educators must examine the cultural and technological changes that define the times in order to reflect or incorporate them into teaching practice" (Catherine Black 2010). Second, we will provide methodological recommendations for AR design and use in language classroom settings and its educational benefits as an additional teaching tool offering powerful virtual learning experiences.

Short-and Long-Term Influence of the Project

A central outcome of this research involves improving students' language learning. The data will help us understand the role of emerging digital technology in language classes. In addition, it will contribute to the field of language instruction by providing statistical analysis of students' engagement in traditional versus AR class environments. Furthermore, we hope to establish best practices for the use of this emerging technology that can be shared with other language departments. A second outcome includes publishing research results and providing novel modules in language instruction. In the long-term (beyond the scope of the requested funding) we plan to continue this project and expand it to other language courses in the Basic Language Program within the Department of Spanish and Portuguese. In addition, we would like to invite other language departments to participate in this emerging technology project in the future. Finally, the findings of this study will serve as a theoretical background to our larger on-going interdisciplinary project for virtual language learning. We will also be able to use models created in this proposed study for our larger project.[5]

REFERENCES

Billinghurts, M. and A. Duersner. 2012. Augmented Reality in Classrooms. Computer 45(7):56-63

Bower M., Howe, C., McCredie, N., Robinson, A., and D. Grover. 2013. Augmented reality in Education - Cases, places, and potentials. In Educational Media (ICEM), p.1-11

The Dynamic Classroom: Engaging Students in Higher Education. Edited by Catherine Black. Madison, Wis.: Atwood Publishing, 2010

Colorado, J. and Patrick Resa. 2014. Using and creating augmented reality in education. In Proceedings of the European Conference on Social Media

Gurzynski-Weiss, L., Long, A. Y. and M. Solon. 2015. Comparing interaction and use of space in traditional and innovative classroom spaces. Hispania, 98(1), 61-78

Motteram, Gary. 2013. Innovations in learning technologies for English language teaching. Innovation Series. London:British Council

Prensky, Marc. 2001. Digital Natives, Digital Immigrants. On the Horizon, MCB University Press, Vol. 9 No. 5

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[5] The interdisciplinary project remains unfunded - our recent grant application was unsuccessful.

BUDGET NARRATIVE

Phase II funding is $5,000. We anticipate using this funding for the following purposes:

Project Allowance

1. Language recording - selected graduate students (15/hr) $500
2. Scenarios, questionnaires, directing recording sessions, image scanning and editing - Julie Madewell $1000
3. AR preparation, video, audio, data analytics - Olga Scrivner $500
4. 3D models, AR, visual concepts - Cameron Buckley $1400
5. Software platforms - $1050 (estimate - prices yet to be confirmed)
   a.) Animation platform - https://goanimate4schools.com/
   b.) Video platform -https://www.wevideo.com/highered
   c.) Purchase of 2+ year aurasma account for unlimited features and storage - https://www.aurasma.com/
6. Two Associate Instructors - $50 ($25 each - training workshop)

Conference Allowance - $500 (travel expenses to publish in a scholarly conference on digital technologies and language instruction)

RESEARCH PLAN AND TIMELINE

Time	Project Stage	Responsable
Summer 2015	Initial Stage - Preparation a) Learning AR application b) Literature review on virtual and augmented reality	Scrivner Buckley
Fall 2015	Stage One - Planning - Completed: a) Application to CITL Faculty Media Integration group - Accepted c) Pre-testing and gathering initial information in three Spanish classes (S100 and S200) - In process d) Consulting with with CITL (Matt Barton) and UITS (Nitoctis Perez)	Scrivner

	e) Writing complete project plan	
Spring 2016	Stage Two - Design and Development a) Audio recording and video recording b) AR application, video, audio, 3D and animation editing c) Developing questionnaires, Image selection and scanning, Write-up scripts for videos (narrations, dialogues, interviews), storyboard	graduate students Scrivner, Buckley Madewell
Summer 2016	User Experience Testing a) Final testing AR textbook and classroom objects b) Recruiting of two instructors for Fall 2016 and conducting AR workshop for instructors	Scrivner Madewell Buckley
Fall 2016	Stage Three - Academic use-case evaluation a) AR in classroom b) Data collections via online statistics and questionnaires c) Data analysis	 two AIs Scrivner Madewel Scrivner Madewell
Spring 2017	Stage Three - Report and Presentation a) Presenting results at Spanish Brown Bag series/ NTT series/EDUCAUSE/Language Fair b) Sharing results with other language departments c) Writing an article on the study	Scrivner Madewell

OLGA SCRIVNER

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314, West 4th Street, Apt.112, Bloomington, Indiana, 47404

EDUCATION

PhD French Linguistics and Computational Linguistics, Indiana University, 2015

Minor in Spanish Linguistics

Dissertation title: *A Probabilistic Approach in Historical Linguistics. Word Order Change in Infinitival Clauses: from Latin to Old French*

Dissertation Committee: Barbara Vance (advisor), Sandra Kübler (advisor), Auger Julie, Markus Dickinson, Marco Passarotti

MA French Linguistics, Indiana University, USA, 2009

MA Romance Philology, State University of Saint-Petersburg, Russia, 1998

Thesis title: *Expressions of disagreement in Modern French*

Thesis Committee: Ludmila Bogolubova (advisor)

CURRENT POSITION

Visiting Lecturer Department of Spanish and Portuguese, Indiana University   2015-present

TEACHING EXPERIENCE

Associate Instructor Department of Spanish and Portuguese, Indiana University   2014-2015

– Instruction of lower division language courses

– Design and preparation of lesson plans and exams

Associate Instructor Department of General Linguistics, Indiana University   2013-2014

– Introduction to the Study of Language - leading discussion sections

– Introduction to Generative Syntactic Theory - grading

Associate Instructor Department of French and Italian, Indiana University   2007-2012

– Instruction of lower division language courses and a course for graduates

– Design and preparation of lesson plans and exams

– Design of promotional videos for French Courses and French Conversation Club

RESEARCH EXPERIENCE

Research Assistant Department of Spanish and Portuguese, Indiana University   Jan-May 2015

– Analyzing sociolinguistic corpus of Venezuelan Spanish

– Extracting and annotating in PRAAT various phonetic phenomena

– Writing scripts to process extracted data

Research Assistant Department of General Linguistics, Indiana University   Feb-Sep 2013

– Constructing co-reference annotation

– Correcting parsing and writing xml conversion scripts

WORK EXPERIENCE

Hourly Assistant EMT-basic course, School of Public Health, Indiana University   2012-2014

Financial Coordinator Honors Program in Foreign Languages, Indiana University   Jun-Aug 2009

- – Coordinated high school students in France, Brest
- – Managed daily financing in France

Interpreter Contract Medical and Court Interpreter, Louisville, KY   2004-2007

Volunteer Kosair Children's Hospital, Louisville, KY   2004-2007

- – Helped to improve relationship between patients and healthcare providers

Senior Receptionist World Cruise Company - Ocean Explorer I   1999-2000

- – Assisted passengers and crew members to solve issues

RESEARCH INTERESTS

Primary areas: Corpus Linguistics, Probabilistic Linguistics, Data Visualization, Historical Linguistics, Language Variation, Digital Humanties

Secondary areas: Parallel Alignment, Sentiment Analysis, Language Technology

PUBLICATIONS

Olga Scrivner. To appear. **L'évolution de l'ordre des mots dans les constructions infinitivales du latin à l'ancien français**. Editions Classiques Garnier. Ed. by Sophie Prévost and Wendy Ayres-Bennett

Olga Scrivner and Sandra Kübler. 2015. **Tools for Digital Humanities: Enabling Access to the Old Occitan Romance of Flamenca**. In Proceedings of the Workshop on Computational Linguistics for Literature, Denver, Colorado

Olga Scrivner. 2015. **Tools for Digital Humanity: Parallel Corpus and Emotion Visualization**. In Proceedings of Corpus Linguistics 2015, Saint-Petersburg, Russia

T.M. Rainsford and Olga Scrivner. 2014. **Metrical Annotation For a Verse Treebank**. In Proceeding of the 13th International Workshop on Treebanks and Linguistic Theories (TLT13), Tübungen, Germany, pp. 149-159

Tim Gilmanov, Olga Scrivner and Sandra Kübler. 2014. **SWIFT Aligner, A Multifunctional Tool for Parallel Corpora: Visualization, Word Alignment, and (Morpho)-Syntactic Cross-Language Transfer**. In Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC'14), Reykjavik, Iceland

Olga Scrivner. 2014. **Vowel Variation in the Context of /s/: A Study of a Caracas Corpus**. New Directions in Hispanic Linguistics, Ed. by Rafael Orozco, pp. 162-183

Olga Scrivner, Sandra Kübler, Barbara Vance and Eric Beuerlein. 2013. **Le Roman de Flamenca: An Annotated Corpus of Old Occitan**. In Proceedings of the Third Workshop on Annotation of Corpora for Research in the Humanities (ACRH-3), pp.85-96

Olga Scrivner and Tim Gilmanov. 2013. **SWIFT Aligner: A Tool for the Visualization and Correction of Word Alignment and for Cross Language Transfer**. In Proceedings of Corpus Linguistics 2013, Saint-Petersburg, Russia

Olga Scrivner and Sandra Kübler. 2012. **Building an Old Occitan Corpus via Cross-Language Transfer**. In Proceedings of the First International Workshop on Language Technology for Historical Text(s), Vienna, Austria, pp. 392-400

AWARDS

Faculty Learning Community Center for Innovative Teaching and Learning, Indiana University, 2015 - $750

Travel grant Fourth Workshop on Computational Linguistics for Literature, Montclair State University, 2015 - $1,100

Conference Travel Grant Department of General LInguistics, Indiana University, 2015 - $300

HASTAC Scholar Award Institute for Digital Arts and Humanities, Indiana University, 2014-2015 - $300

Recognized with Distinction Associate Instructor Department of Spanish and Portuguese, Indiana University, 2014

Graduate Student Conference Travel Award College of Art and Humanities Institute, Indiana University, 2013 - $1,000

Grace P. Young Graduate Award Excellent Achievement in French Studies, Department of French and Italian, Indiana University, 2011 - $500

Teaching Award Outstanding Performance as Associate Instructor in French, Department of French and Italian, Indiana University, 2010 - $200

President's Volunteer Award Kosair Children's Hospital, Louisville, Ky, 2005 - Bronze Award

SELECTED PRESENTATIONS

Humanities, Arts, Science, and Technology Alliance and Collaboratory Conference HASTAC, Michigan State University, Michigan, 2015 - "Medieval Literature in Modern Times"

New Ways of Analyzing Variation NWAV 43, Chicago, IL, 2014 - "A New Look at Word Order Change: Constant Rate Hypothesis, Logistic Regression and Bayesian Statistics"

The 11th International Congress for Occitan studies, Barcelona, Spain, 2014 - "A mas novas vos torn / Now I take you back to my tale: Parallel Old Occitan-English Annotated Corpus - The Romance of Flamenca" (with E.D. Blodgett, Sandra Kübler and Michael McGuire)

Faculty Colloquium on Excellence in Teaching, Indianapolis, IN, 2014 - "Anatomy of the Classroom: You and Them" and "Class Resuscitation by Animation"

Corpus Linguistics 2013, Saint-Petersburg, Russia - "SWIFT Aligner: A Tool for the Visualization and Correction of Word Alignment and for Cross Language Transfer" (with Tim Gilmanov)

American Association of Computational Linguistics AACL, San-Diego, California, 2013 - "Building a Parallel, Annotated Corpus: English and Late Latin" (with Eric Baucom)

The First International Workshop on Language Technology for Historical Text(s), LThist, Vienna, Austria, 2012 - "Building An Old Occitan Corpus via Cross-Language Transfer" (with Pr. Sandra Kübler)

Faculty Colloquium on Excellence in Teaching, Indianapolis, IN, 2012 - "Class Resuscitation By Animation: Bringing Your Classroom Back To Life"

New Ways of Analyzing Variation NWAV 41, Indiana University, 2012 - "A Variationist Investigation of Vowel Sequences: The raising of /e/ and /o/ in Spanish" (with Díaz-Campos)

XXVIII Biennial Hispanic Louisiana Conference, LSU, 2012 - "What Happens To the Vowels Preceding /s/ in Venezuelan Spanish?"

Faculty Colloquium on Excellence in Teaching, Indianapolis, IN, 2011 - "Lights, Camera, Action: The Next Step In Your Future Presentations"

New Ways of Analyzing Variation NWAV 40, Washington DC, 2011 - "A New Look at Aspiration and Vowel Formants: Corpus of Caracas"

American Association of Computational Linguistics AACL, Atlanta, Georgia, 2011 - "Multi-level Corpus of Old Occitan"

New Ways of Analyzing Variation NWAV 39, San Antonio, Texas, 2010 - "The White is More Firm, the Yolk is Rounder: Comparative Variation in American English"

Minority Languages in Europe, Indiana University, 2010 - "Rhotic Variants in Northern Catalan" (with Tanya Flores)

WORKSHOP AND PANEL ORGANIZATION

Panel at HASTAC 2015 Conference (with Lisa Tagliaferri) "Digital Humanities: Exploration in Ancient and Medieval Studies", 2015

Panel for undergraduate IU women students "IU Computational Linguistics graduate program", 2015

Panel for undergraduate IU women students (with Sandra Kübler) "IU Computational Linguistics graduate program", 2014

Lecture by invited speaker T.M. Rainsford "The Syntactic Reference Corpus of Medieval French (SR-CMF): A Dependency Treebank for Old French", Catapult seminar, Indiana University, 2014

Conference Committee New Ways of Analyzing Variation NWAV 41 Conference, Indiana University - housing committee, 2012

REVIEWER

Peer reviewer for two articles on digital humanity and visualization, 2015

Book Proofreader "Corpus Linguistics and Linguistically Annotated Corpora" by Sandra Kübler and Heike Zinsmeister, 2014

Abstract reviewer New Ways of Analyzing Variation 42, 2013

Abstract reviewer New Ways of Analyzing Variation 41, 2012

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Linguistic Society of America - member of women mentoring group

Association for Computational Linguistics

Humanities, Arts, Science, and Technology Alliance and Collaboratory

Center of Excellence for Women in Technology - leader in Digital Technology and Visualization Faculty Circle

Société Internationale de la Diachronie du Français

Association Internationale d'Etudes Occitanes

SKILLS AND CERTIFICATIONS

Programming : Python, Java, Unix, R, HTML, XML, Latex

Technology : Audio and Video Editing, Game developing, Web Publishing, Unity, Maya

Certification : EMT-Basic certification, CPR Healthcare provider

LANGUAGES

Native - Russian; **Fluent** - English, French, Spanish, Catalan, Greek; **Basic** - German, Latin

JULIE ANN MADEWELL

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<u>EDUCATION</u>

Indiana University, Bloomington, IN
M.A. Hispanic Linguistics   **2006 - 2008**
- Honors and Awards: Full Scholarship and Teaching Assistantship, National Scholars Honor Society
- Extensive work in Hispanic Sociolinguistics, Pragmatics, Second Language Acquisition, Phonology and Phonetics; Portuguese language courses

Middle Tennessee State University, Murfreesboro, TN
B.S. Spanish (cum laude)
B.S. Photography (cum laude)   **2001 – 2005**
- Honors and Awards: Academic Scholarship 2001 and 2002, Dean's List, Golden Key National Honor Society
- Study Abroad: Kentucky Institute of International Studies (KIIS) Summer Program (2003).
- Extracurricular activities: Photographer for school newspaper Sidelines; photography published in school magazine Collage; art work shown in student art galleries (2003, 2004 & 2005)

Chattanooga State Technical Community College, Chattanooga, TN
A.S. Basic & Applied Science (cum laude)   **1999 – 2001**
- Honors and Awards: Golden Key National Honor Society
- Extracurricular activities: Photography Club, Alpha Omega Club

<u>TEACHING</u> <u>EXPERIENCE</u>

Indiana University, Bloomington, IN
Core Lecturer of Spanish & Course Supervisor of S105   **2011 - current**
- *Course Supervisor of S105, Fall 2013 - present*: Supervision of several instructors (10 - 24) of multiple sections of S105; Lead orientation meetings at the beginning of each semester; Organize and oversee material development and AI review teams; Create and edit administrative materials to be used for the department; Serve as mentor and liaison for instructors; Manage all student and instructor needs; Conduct instructional workshops for In-Class Writings and Exams for instructors; Observe teaching abilities of several instructors & provide constructive feedback to them; Perform instructor check-outs at the end of the term; Write a full semester report
- *Instructor of first and second year Spanish courses*: Daily class planning and instruction of language and culture; Share lessons/teaching ideas with other instructors; Evaluate student progress; Monitor online homework; Administer class grades; Provide assistance to students outside of class time; Collaborate with colleagues in the preparation of Department Rubrics, Exams and In-Class Writings; proctor of Make-Up Exams
- *Instructor of S315*: El español en el mundo de los negocios (Fall 2012 & Spring 2013): Design syllabus, objectives, assignments and course schedule; Daily class planning and instruction of course material; Evaluate student progress; Provide assistance to students outside of class time; Collaborate with colleagues for oral exams; Collaborate with Spanish speaking professionals in the Kelley School of Business for guest lectures
- *Interim Course Supervisor of S250, Spring 2012*: Supervision of 26 instructors of 38 sections; see *Course Supervisor of S105* description above for further details
- Designed quiz material for use in the department online instructional project site ANCLA for S250 (Spring 2011)

Visiting Lecturer of Spanish   **Jan. 2009 – Aug. 2011**
- Please refer to *Instructor of first and second year Spanish courses* description above for further details

Assistant Instructor, Spanish   **Aug. 2006- Dec. 2008**
- Instructor of Beginner Spanish courses at University level (Fall 2006, Spring 2007, Fall 2008)
- Instructor of Intermediate Spanish courses at University level (Fall 2007, Spring 2008)

Ramiro de Maeztu, Escuela Primaria, Comunidad de Madrid, Madrid, Spain
Auxiliar de Lengua y Cultura   **Sept. 2005- Jul. 2006**
- English Language/Culture Assistant in Bilingual Primary School
- Co-instructed English courses for 1st and 2nd grade students and co-lead school excursions, plays, recreational activities, and performances
- Assisted with selection of effective teaching materials, class preparation, and student evaluation
- Lead adult Conversational English groups for instructors at the school

STUDY ABROAD EXPERIENCE

Indiana University Honors Program in Foreign Languages, Bloomington, IN
Instructor, Viña del Mar, Chile   **2015**
- Summer 2015: Instructor of Introduction to Linguistics, Student Coordinator
- Developed course material and plan daily lessons; Instructed three sections daily; Supervised afternoon activities (sports, choir, theatre, and community work); Collaborated with other instructors and Onsite Coordinator regarding student and program needs; Liaison for students, students' families, and host families

Austin Peay State University, Clarksville, TN
Instructor, Galapagos Islands, Ecuador   **2014**
- Summer 2014: Co-coordinator, Instructor of Beginner and Intermediate Language courses (4 total courses)
- Developed syllabus, course material, and daily lessons; Instructed two sections daily; Planned and supervised morning/afternoon activities for students; Planned weekly excursions for students; Collaborated with co-instructor regarding student and program needs; Implemented service learning component for the program via an official agreement with the Scalesia Foundation through Conservation International; Oversaw student volunteer work at local school *Tomás de Berlanga*

Indiana University Honors Program in Foreign Languages, Bloomington, IN
Instructor, Mérida, México   **2011 - 2012**
- Summer 2012: Instructor of Introduction to Linguistics, Student Coordinator
- Summer 2011: Instructor of Grammar & Introduction to Linguistics, Financial Coordinator & Public Relations Co-coordinator
- Developed course material and plan daily lessons; Instructed three sections daily; Supervised afternoon activities (dance and theatre); Collaborated with other instructors and Onsite Coordinator regarding student and program needs; Managed program finances (2011); Liaison for students, students' families, and host families (2012)
- Spring 2009 - 2015: Assisted the Director of IUHPFL with the student selection process for summer study abroad programs; Read and evaluate student application materials (resumes, letters of recommendation, personal statements, etc.); Conduct student interviews on-site and off-site.

Global Village Living and Learning Center, Indiana University, Bloomington, IN
Instructor, IUB   **2011-2012**
- GLLC-G291: Study Abroad: Before You Go, Spring 2012

  The course stimulated students both to think about and to openly discuss their primary goals/concerns with overseas study. The course is structured around four major topics: 1) pre-departure considerations; 2) life in the host country; 3) strategies for recognizing obstacles and overcoming challenges; and 4) integrating study and daily personal experiences with post-travel educational goals
- GLLC-G491: Study Abroad: When You Return, Fall 2011

  Guided students through the "re-entry" process through personal reflection, structured discussions, group work, brainstorming exercises and a final Poster and Portfolio presentation; Organized workshops for students to help them culminate their experiences into a CV and cover letter for future professional and academic endeavors

Committee on Institutional Cooperation (CIC), Summer Study Abroad Program
Program Assistant, Guanajuato, México   **2010**
- Organized logistics of program and served as mentor and liaison for students
- Supervised students on excursions, extracurricular activities, and class trips
- Arranged additional service learning opportunities for the students within the local community

Indiana University Honors Program in Foreign Languages, Bloomington, IN
Instructor, Oviedo, Spain   **2008 - 2009**
- Summer 2008 and 2009: Instructor of Culture, Logistics Coordinator
- Developed course material and plan daily lessons; Instructed three sections daily; Supervised afternoon activities; Collaborated with other instructors and Onsite Coordinator regarding student/program needs; program logistics

INDIANA UNIVERSITY COMMITTEES

Indiana University Honors Program Advisory Committee
Committee Member for Dpt. of Spanish & Portuguese   **2012-current**

Indiana University Department of Spanish and Portuguese
AI Probation Policy Committee Member   **Fall 2015**

Indiana University Department of Spanish and Portuguese
NTT Representative for the Departmental Faculty Meetings   **Fall 2013**

Indiana University Department of Spanish and Portuguese
Undergraduate Scholarship Committee   **Spring 2013 & 2015**

Bloomington Faculty Council's Educational Policy Committee (EPC)
Committee Member   **2012-2013**

WORKSHOPS PRESENTED

IU World Language Festival, CeLT   **Fall 2015**
*¿Eh vo' ahí?¿Querí o querés un matecito?-Learning about Argentinian and
    Chilean culture over tea*
Discovering the mythology of Northern Spain: duendes, gigantes y hadas

AI Orientation Week Workshops for new instructors (Fall and Spring)   **Fall 2013-current**
Effective teaching methods (vocabulary)
Course Orientation for new instructors

AI Pedagogy Workshop for Dpt. of Spanish & Portuguese (Co-presenter)   **March & Sept. 2012**
Implementation of Oral Skills in the Classroom

IUHPFL Workshop for IFSA-Butler instructors of language, Mérida, México   **July 2011**
La enseñanza de la fonética (a los aprendices de español)

CONFERENCES AND WORKSHOPS ATTENDED
Faculty Colloquium on Excellence in Teaching, Indianapolis, IN   **November 2014**

IU Department of Spanish and Portuguese, SLA workshop   **September 2013**
Dr. Lourdes Ortega: Why does SLA need a bi/multilingual turn?

Faculty Colloquium on Excellence in Teaching, Indianapolis, IN   **November 2012**

Pragmatics Festival, Bloomington, IN   **April 2012**
Pragmatic Development in Study Abroad Contexts
Variation in Cross-Cultural & Intercultural Pragmatics: Service Encounters
Development of pragmatic competence in the FL classroom through film
Explicit Pragmatic Teaching

CITL session, Indiana University, Bloomington, IN   **January 2012**
Discussion Techniques for Engaged Learning

Faculty Colloquium on Excellence in Teaching, Indianapolis, IN   **October 2011**

RECOGNITIONS AND AWARDS
IU Department of Spanish and Portuguese   **2014 - 2015**
Recognized as Outstanding NTT Faculty Instructor with High Distinction

SERVICE AND OUTREACH EXPERIENCE
Indiana University Honors Program in Foreign Languages, Bloomington, IN
Paid Translator/Editor   **2015**
- Translated and edited official documents from English to Spanish

AATSP, Indiana State Spanish Academic Competition
Volunteer Judge   **2015**
- Judge for students' performance at the *Concurso Académico*
- 6 leadership hours & 6 hours of service awarded

Habitat for Humanity of Monroe County, Bloomington, IN
Volunteer   **2011-current**
- Act as Spanish/English interpreter and provide document translation services as needed
- May 2012 & 2013: Women's Build, assist in the construction of a Habitat home

Kelley Summer Institute, IU CIBER, Bloomington, IN
Mentor   **Summer 2013**
- Served as a mentor, tutor, and interpreter for a Spanish speaking foreign exchange student studying global business in the Kelley summer institute (CIBER Program).

Agua Viva Children's Home, Chimaltenango, Guatemala
Volunteer   **2009-2010**
- January 2010: Acted as interpreter (Spanish/English) for group members in a variety of settings; Organized group activities for volunteers and children; Lead and participated in activities with children that live at the home; Assisted with manual labor and community service needs on and off grounds
- March 2009: Assist IU Professor Rebecca Martinez in Spanish language presentations of a variety of educational Counseling & Psychology modules to Home "parents" and school instructors at Agua Viva in Chimaltenango; Presented modules to instructors at a local school in Chichicastenango. Modules included: Early Reading, Classroom Management, Gifted Students, Montessori Sensory Learning Philosophy, Depression/Post Traumatic Stress Assessment and Intervention

CONTACT

Phone – (918)269-9188

Email – cabuckle@indiana.edu

Education

2014 - Current

Indiana University - Master of Fine Arts Digital Art

2010 - 2014

University of Tulsa - Bachelor of Arts Film Studies ; Bachelor of Arts African American Studies ; Certificate Creative Writing

Art and Film

2015 – Current

Ring Worm – An Exhibition at Paper-Thin by Alan Resnick

Curator and Editor

Paper-Thin.org – A Virtual Exhibition Space

Co-Founder and Designer

Virtual Environments Student Exhibition, Spring

Okla

MFA Non-Graduating Show Grunwald Gallery

The Cave – **FOA Best in Show Award**

2014

CAVE Virtual Environments Student Exhibition

The Cave

Alexandre Hogue Gallery

Beneath, Starved Amygdala, Public Domain

University of Tulsa Senior Film Festival

Tall Tales - Director

46th Annual Gussman Juried Student Exhibition - Juried by Seth Lower

Beneath - **Best in Show Award**

The House I Built, Starved Amygdala

University of Tulsa 6th Annual Spring Film Festival

Tall Tales - Director

2013

45th Annual Gussman Juried Student Exhibition - Juried by Vince Pitelka

Public Domain - ***1st Place Undergraduate Award***

Forget that Time is All That Exists

University of Tulsa 5th Annual Spring Film Festival

Unlawful - Director of Photography

2012

Oklahoma Dance Film Festival

Lovers' Dance - Director

University of Tulsa 4th Annual Spring Film Festival

The Poison of Friendship - Director, Writer

2011

Tulsa Performing Arts Center

Aha! - Writer

Teaching

2015 - Current

Associate Instructor - Indiana University

FINA-D318, D418, D510, D710 3D Computer Graphics

An undergraduate and graduate level course covering Autodesk Maya, Mudbox, Unity 3D, Oculus Rift development, and MiddleVR development. Additionally, I provide a history of 3D Computer Art.

2014 - 2015

Associate Instructor - Indiana University

FINA-D210, D510 Digital Art: Survey and Practice

An undergraduate and graduate level course covering Photoshop, Flash, and HTML. Additionally, I provide a history of New Media.

2011 - Current

Head Instructor - University of Tulsa

Residential Screenwriting and Filmmaking Camps

I teach students how to develop narrative concepts for films, explain and manage equipment, and build and lead teams of students.

Publications and Conferences

2015

Engineering Reality of Virtual Reality

Paper-Thin: A Virtual Platform for Art Exhibition

2014

Internet 2 Technology Exchange

Metaverse Working Group - Oculus Rift

Thesis for African American Studies BA

Self-Aware Mondo Film: Addio Zio Tom as Metacinema

2013

Research Article for African American Studies BA

Marriage in African Theater: Rotimi and Aidoo

2012

Oklahoma Film and Video Studies Society Conference

The Obscuring of Desire in Buñuel's Cet obscur objet du désir

2011

University of Tulsa Student Research Colloquium

Family Horror: Silent Hill, Texas Chainsaw Massacre, and The Devil's Backbone

2010

University of Tulsa Student Research Colloquium

Linear vs. Non-linear: How Structure Affects Perception in New Media

Second Place Prize

Skills and Interests

Digital Fabrication – I create printable 3D sculpture for installation. I am familiar with Rhino 3D, 123D Make, MeshMixer, MakerBot, and CNC Routing.

Virtual Reality - I develop art installations for Oculus Rift, MiddleVR, CAVE systems, Leap Motion, and other VR equipment. I am experienced with Maya, Unity, Mudbox, C#, and Java.

Interactive Multimedia - I have created many interactive art pieces, including equipment such as Arduino, Flash, camera triggers, Processing, Internet Art, and touch applications.

Video Art and Film - I am very experienced with photo and video programs, like After Effects, Photoshop, Cinema4d, Red Giant Suite, Final Cut, Premiere, Audition, Nuke, and equipment including numerous cameras, lights, microphones, etc.

Great French skills

Mr. George Rehrey, Coordinator
Scholarship of Teaching and Learning Program
Center for Innovative Teaching and Learning
Indiana University Bloomington
Herman B Wells Library
2nd Floor, East Tower
1320 East Tenth Street
Bloomington, IN 47405

November 4, 2015

Dear Mr. Rehrey,

I am pleased to nominate Olga Scrivner and Julie Madewell for the Scholarship of
Teaching and Learning (SOTL) grants offered by The Office of the Vice Provost for
Undergraduate Education through the Center for Innovative Teaching and Learning.
Dr. Scrivner currently holds a visiting lecturer position but she has taught for us for
many years as a graduate student prior to defending her dissertation. Ms. Madewell
is one of our permanent lecturers and she has a long-term record of excellence in
the language classroom. She is also a course supervisor, meaning that she has the
potential to influence multiple sections through her action research and the training
she provides to instructors working under her supervision. Her MA degree in
linguistics also gives her the essential tools of analysis so that she will be able to
design and carry out a valuable project. I believe together they make an excellent
team and are meritorious of support.

Their proposed project *Augmented Reality Technologies for Foreign Language
Teaching and Learning* is part of a larger quest to better understand emerging
mobile technologies, such as virtual, mixed and augmented environments, and their
role in language education. In particular, they focus on augmented realities, which
although highly praised, have not been evaluated with language learners.
Technology has advanced significantly in recent years and augmented reality
environments are available on many mobile devices. Given that this environment
can be added to any physical object or space, it promises great potential for
enhancing learning across learning contexts. In their study, they will measure the
effect of augmented reality on learners by using a paper-based textbook for an
elementary Spanish course and classroom objects. Their goal is to assess the
effectiveness of mobile augmented reality application as a teaching tool to enhance
learners' performance and motivation. I believe that this project does, indeed, stand
to enhance our understanding of the learning process and the quality of instruction
we are able to provide.

In sum, I am delighted to nominate Ms. Madewell and Dr. Scrivner. Please feel free to contact me should you have any questions at kgeeslin@indiana.edu.

Sincerely,

Kimberly L. Geeslin
Professor & Interim Chair
Department of Spanish & Portuguese
Indiana University Bloomington
GISB, 2West, 2176
355 N. Jordan Ave.
Bloomington, IN 47405

Mr. George Rehrey, Coordinator
Scholarship of Teaching and Learning Program
Center for Innovative Teaching and Learning
Indiana University Bloomington
Herman B Wells Library
2nd Floor, East Tower
1320 East Tenth Street
Bloomington, IN 47405

November 9, 2015

Dear Mr. Rehrey,

I write this letter in support of Cameron Buckley, who is a MFA candidate in Digital Art in the School of Fine Arts. I have worked with Cameron for one and a half years. Currently he is working on a collaboration with Dr.Olga Scrivner and Dr. Julie Madewell who have applied for the Scholarship of Teaching and Learning (SOTL) grant offered by The Office of the Vice Provost for Undergraduate Education through the Center for Innovative Teaching and Learning.

The proposed project Augmented Reality Digital Technologies (ARDT) for Foreign Language Teaching and Learning is part of a larger quest to better understand emerging mobile technologies, such as virtual, mixed and augmented environments, and their role in language education. This team will use their expertise with technologies for improving language learning and increasing learners' performance. The team will study and measure the technology's effectiveness on actual language learners. The present study focuses on one aspect of emerging technologies, namely augmented reality. Given that a virtual object can be added to a space, they will measure the effect of augmented reality on learners by using a paper-based textbook for an elementary Spanish course and classroom objects. The proposed project has a threefold purpose: 1) to explore the learning potential of mobile augmented reality in language instruction and statistically measure its effectiveness on learners' performance and students' motivation; 2) to contribute to the knowledge of digital technology and language instruction and 3) to provide a theoretical background to a larger multidisciplinary project *Virtual Language Lab* that involves Emerging Technology Analyst UITS (Nitocris Perez), CELT (Xiaojing Kou), 3D game designers (William Emigh), and open source language database Openwords (Marc Bogonovich).

Sincerely,
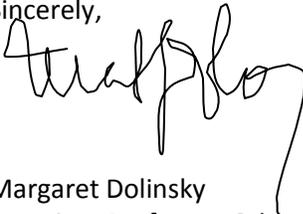
Margaret Dolinsky
Associate Professor, School of Fine Arts
Indiana University