Creating Educational Technologies to Assist Refugee Learners: Project Education for All

1. Participating Investigators

Number	Name	Primary Role	Title	Home Dept. and College
1	Mythili Menon	PI/Co-director	Assistant Professor of Linguistics	Fairmount College of Liberal Arts and Sciences, Department of English
2	Karissa Marble-Flint	Co-PI/Co-director	Assistant Professor of Communication Sciences and Disorders	College of Health Professions, Department of Communication Sciences and Disorders
3	JaeHwan Byun	Co-PI	Assistant Professor of Curriculum and Instruction	College of Applied Studies, Department of Curriculum and Instruction
4	Zhiyong Shan	Senior Personnel	Assistant Professor of Computer Science	College of Engineering, Department of Electrical Engineering and Computer Science
5	Janet Twomey	Senior Personnel	Associate Dean and Professor of Industrial, Systems, and Manufacturing Engineering	College of Engineering, Department of Industrial, Systems, and Manufacturing Engineering
6	Andrew Bowman	Senior Personnel	Senior Educator	Intensive English Learning Center
7	Kelly Johnson	Senior Personnel	Assistant Educator and Program Coordinator of Game Design	School of Digital Arts, Shocker Studios
8	Jason Vandecreek	Support Personnel	Special Projects Associate	Community Engagement Institute
9	Hong Tien Vu	Intra KBOR collaborator	Assistant Professor of Journalism and Mass Communication	William Allen White School of Journalism and Mass Communication, University of Kansas

2. Theme

This proposal falls outside of the three core areas of the President's Convergence Sciences Initiative and we are submitting this proposal as a wildcard entry. The main theme of the project is to create free and accessible digital K-12 educational technologies using innovative game-based design for the under-represented refugee and asylee population in Wichita. Thus, the broad theme associated with this project is to provide education for all.

3. Introduction, relevance, and need

3.1 The Problem to be Addressed

This project addresses the issue of "providing inclusive and equitable quality education" (Sustainable development goal 4, UNESCO 2030) for refugee and asylee learners in the United States. The project, titled 'Project Education for All' will proceed in four phases, piloting in Wichita. The first phase will involve creating a signed collaboration partnership between Wichita State University and community partners who assist refugee resettlement in Wichita. This partnership will entail the creation of the 'Refugee Learning and Resettlement Team', comprising of a team of faculty, staff, and administrators from WSU and a team of community members, such as the International Rescue Committee, St. Francis Ministries, and the City of Wichita. The second phase will involve conducting a community research survey to understand and study the personalized needs and requirements of refugee learners. The survey will be administered in the native language of the refugee learners and results of the survey will benefit the creation of a digital, game-based learning intervention for K-12 students which constitutes phase three of the project. The last phase of the project involves piloting the prototype to learners in Wichita and studying the effectiveness of game-based learning through controlled experiments. At the end of the fourth phase, the project team will submit a grant proposal for additional funding to implement and extend the project to Lawrence and Kansas City in collaboration with University of Kansas and beyond Kansas.

Refugees and asylees, migrants fleeing persecution and violence, are often underserved in their host countries due to lack of learning and teaching resources, language barriers, exclusion in the host society, and inadequate health care opportunities. Social capital creates a pathway necessary for the exchange of knowledge and resources between individuals (Woolcock 1998, Putnam 2000). Therefore, it is essential that institutions of higher education work together with resettlement agencies, community members, and providers of English as second language classes (ESL) to create opportunities for refugee learners. Addressing this gap in Wichita is the goal of phase one of the Project Education for All. Wichita State University is uniquely situated to reach out and create a mutually beneficial partnership that includes expanding our service-learning offerings, creating opportunities to increase public awareness of refugee issues, and creating appropriate applied-learning opportunities for refugee and other WSU students. A full draft of the proposed memorandum of agreement as well as the goals of the 'Refugee Learning and Resettlement Team' can be found in Appendix A[1].

The United Nations estimates 70.8 million people have been forcibly displaced worldwide (UNHCR, 2019) and the United States led the world in being the largest resettlement program until 2016. African refugee admissions to the US has steadily increased from 1975 to 2016 (Krogstad, 2017). In 2016, the largest group of refugees arriving in the US was from the Democratic Republic of Congo. Approximately 16,370 refugees came from the Congo in 2016, followed by 12,587 refugees from Syria. From 2012-2019, approximately 500,000 refugees were resettled in the U.S, out of which 1,913 of them arrived in Wichita (U.S State Department, 2019). The majority of them came from the Congo (858), followed by Eritrea (247), and Somalia (243).

The incoming refugee population is expected to integrate into the American society. However, this integration is challenging for a number of reasons. First, integration is affected by past experiences of the refugees. Many of them have fled from war and conflict zones and adjusting to a new way of life in a short span requires overcoming PTSD and other mental health issues, often without adequate access to resources that help combat these issues. Secondly, due to language barriers and lack of proper documentation, children of refugees may not be enrolled in local school districts. It is estimated that more than half of school age refugee children (3.7 million out of 7.1 million) are out of school (UNHCR, 2018). It has been demonstrated that once refugees parents meet the basic needs of food, water, and

[1] A final version of the memorandum of agreement will be put in place with the assistance of WSU's General Counsel if the grant is awarded.

shelter, their primary concern is to ensure their children can go to school (UNHCR, 2001). The percentage of refugee children who are likely to be out of school is five times higher than children who are not refugees. With regard to higher learning, refugees on average attend college at a rate of one percent, with the international average being 34% (UNHCR, 2016). These dire statistics show the need to create easier access to education. Phases 2 and 3 of the project address this gap as illustrated below.

In phase 2, in collaboration with the community partners, an IRB approved Qualtrics survey will be created and disseminated to study the refugee demographic population in Wichita. This survey will attempt to understand the refugee community's access to technologies, such as the number of users who have access to mobile devices, computers and laptops, and stable internet connection. In addition, the survey will also have open-ended questions regarding what the community members see as pertinent to learning, what resources would be more beneficial, and the survey will also make them aware of the creation of our prototype for digital game-based learning. The results of the survey will enable us to create game-based learning strategies personalized to the learner. In addition, one of the core goals of the project is to educate teachers and other educational professions in the Wichita Public Schools on the refugee population. This will aid in integrated teaching skillsets which in turn leads to better learning. Year-end reports of this project will be disseminated at the end of each year to the school districts, as well as the community partners.

In phase 3 of the study, we use an innovative digital game-based learning approach to create a platform (both mobile and desktop) for teaching elementary and middle grade science and arts to refugee children. In the game, students will take on various roles such as detective, spy, tourist etc. and they will be given various situations to play out. The aim of the game is to create a more engaging interface that fosters deep learning as well as literacy. The content of the game will be created according to Kansas Science Standards and the Next Generation Science Standards, as well as the Kansas State Department of Education's English Language Arts and Literacy Common Core Standards. The game-based learning approach combines critical thinking skills with literacy skills. The language of the content will integrate English, in combination with the native language of the refugees, such as Swahili. This will entail faster learning of concepts. Additionally, there will be an interface for teachers and educators, to immerse them in the cultural expectations of the refugee population. One core goal of the project is to improve intercultural competency among educators.

In the last phase of the project, the game-based prototype in collaboration with USD 259 and USD 385 will be rolled out to the refugee students at these schools. As of 2016, Wichita had at least 332 refugee children enrolled in schools (Wichita Public Schools, 2017) in 12 newcomer programs that includes 6 elementary and 3 middle schools. In addition, in collaboration with the City of Wichita, International Rescue Committee and the Breakthrough community church[2], the survey will be sent to refugee populations whose children are currently not enrolled in a school district.

Beyond phase 4 of the project, the results of this three year pilot study will be used to create funding proposals furthering the game-based learning prototype to be a test bed for studying Intelligent Tutoring Systems (ITS), the use of artificial intelligence techniques for performing adaptive tutoring to learners according to what they know about the domain (Sleeman and Brown, 1982) and the Generalized Intelligent Framework for Tutoring (GIFT) that allows authoring of ITS software by training learners in a variety of domains and environments (Sottilaire et al., 2012).

3.2 The Significance of the Problem

Traditional educational systems in the U.S are based on a "one-size-fits-all" philosophy. Recently there have been advances in designing personalized systems, addressing the needs of individual students (Gordon et al. 2016, Andallaza et al. 2012, a.o). However, these systems are currently being tested on

[2] The Breakthrough Community Church is one of the primary churches for the Swahili-speaking refugees from Democratic Republic of Congo, Rwanda, Burundi, and Kenya. Their pastor is from Kenya and the primary language used in the church is Swahili.

people from western, educated, industrialized, rich, and democratic (WEIRD) populations who represent only 12% of the world's population. We know very little about the effectiveness of these models and systems on special, underrepresented populations such as refugee learners. Education is a fundamental human right and there is a huge number of refugee children who are unable to attend elementary and middle school, thereby leading to increase in world poverty.

The significance of this project is that it will help create free and accessible digital, educational technology for refugee learners thereby improving their opportunities for education and as a correlate help in alleviating poverty. It will serve as a tool to empower refugee children and make them successful and help in integrating them into the U.S society. As lack of education and poverty go hand in hand, increasing educational opportunities leads to a decrease in the world's percentage of poverty. Providing personalized game-based learning opportunities for refugee children will provide better lives and better standards of living. Education is a form of empowerment, especially for young girls. In addition, it reduces hunger, fights HIV/AIDS, spurs economic growth and provides a foundation for peace-building (UNICEF, 2015).

By providing a free, accessible, digital game-based learning platform, this project will change the lives of thousands of refugees. During these uncertain COVID-19 times, the use of digital technologies is beneficial as formal school settings require money, time, and resources that they might not have access to. In addition, school districts can be spared from creating, staffing, and finding interpreters and translators which very often can be costly. By allowing refugees to become responsible for their own learning, they can begin to learn much faster, quicker and at their own pace. With the current models of refugee education, refugees must wait for the government or an NGO to come in and set up paperwork, get materials, and staff the schools. Very often this causes unnecessary delays in providing quick access to these special populations. Access to laptops, desktops, and mobile phones will be assessed in Phase 1, thereby ensuring that the educational platform will truly be accessible to the demographic population it is targeting.

The long-term benefits of this project include providing a safe social setting to learn thereby helping relieve refugees of emotional trauma. Offering a digital platform for a child to learn also gives their parents time to do activities they need to do, such as searching for a job, or applying for a driving license, thereby allowing for better integration into the U.S society.

In today's current volatile world, it is important to note that many of these refugees are Africans and they are subjected to racial discrimination, similar to African-Americans who are U.S. citizens. There is an urgent need to address this issue given what is happening in the world today. This growing gap in education among refugee children and American children will create a divide that will be too hard to close if the problem is not addressed immediately. Thus, there is an urgency in creating accessible educational tools and provide equitable education for all, a goal UN hopes to achieve by 2030.

3.3 How the Problem Relates to the Identified Theme

The project qualifies as a wildcard entry as the main line of inquiry is not related to sustainability, health disparity and health delivery, or digital transformation. The primary focus of the project is in addressing the fundamental human right for education and educational opportunities for all communities.

3.4 Why the Convergence Research Cluster is Necessary to Effectively Address the Problem

Research related to learning in K-12 public schools has typically only been a focus of researchers in the field of education. However, a concern is that current curriculum and approaches to learning have resulted in creating curricular content that benefits one community over another, in other words, current existing state models of education bias learning in WEIRD populations to the exclusion of any other population. The refugee population is a special, minority population that creates additional challenges for already severely underfunded state programs of education. Thus, traditional ways of thinking have failed to solve this issue of providing engaging content to speakers with limited English proficiency. Therefore, the current research cluster is necessary in order to address new modes of learning, finding unique ways of

personalizing existing curriculum to these minority populations, and using the power of information technology to provide accessible and equitable education for all.

The existence of new and emerging technologies in the fields of computer science, linguistics, game design, health sciences and literacy, and artificial intelligence provide a platform for researchers in various disciplines to come together to solve the issue of providing equitable educational access to all. Our interdisciplinary team has a wide array of skillsets that integrate well together to propose a unique and innovative solution to the issue of providing equal access to education for all. These will be outlined in the next section.

4. Research Cluster

Our interdisciplinary team of nine members has the relevant skill sets needed to create educational technologies for this pressing societal problem. These include and are not limited to quantitative and qualitative data collection, experimental design, working with under-represented populations and minorities, conducting literacy camps for children, working with children with autism, learner engagement/interaction in an online learning environment, digital game-based learning, developing language learning software for ESL students, digital arts production, creating data analysis software, creating literacy opportunities for low-income communities, mobile phone security and natural language processing. In addition, our intra-KBOR collaborator has worked on digital literacy in immigrants' and refugees' integration to new communities in the U.S.

4.1 Profile of the Members of the Research Cluster

PI Menon has established relationships with the African refugee community of Wichita through her LING 668: Field Methods of Linguistics class offered in Spring 2020. Through this class, she learned Swahili from two refugee language consultants who are undergraduate students of WSU. These refugee language consultants will continue to aid this project through the next three years. As a Service- Learning Faculty Scholar 2019-2020, she has established several community partnerships, including the International Rescue Committee (IRC), Saint. Francis Ministries, and the Kansas Leadership Institute. See attached letters of support from these institutions in Appendix B. PI Menon's expertise includes working with under-represented populations such as the refugee population in Wichita, the Potawatomi tribe in Mayetta KS, and conducting research among these populations by quantitative and qualitative data collection. She has supervised a senior honors thesis, submitted May 2020, titled "Intercultural Competency in TESOL: A Study of Immigrant English Leaners" where data was collected from 48 immigrant students at WSU. In addition, she has published an article with an undergraduate student in Applied Studies on the effects of war and displacement on Palestinian Arabic. She has also supervised several IRB-approved student final projects investigating attitudes towards immigrants on the Wichita State Campus. This presentation was part of the Tilford Workshop at University of Kansas in 2019. Since 2015, PI Menon has been the Linguistics Advisor and Company Mentor of 'Subverses Inc.', an early-stage language learning startup building a suite of language learning tools around their interactive spy video game.

Co-PI Marble-Flint's major research, teaching, and clinical interests include language and literacy in childhood, literacy and autism spectrum disorder, and technology for language-literacy assessment and intervention. Dr. Marble-Flint is the coordinator of the Literacy in Kansas (LinKS) Lab at WSU. As a nationally credentialed and state-licensed speech-language pathologist, Co-PI Marble-Flint has served a diverse population of children and adolescents with speech, language, and language-literacy disorders. She has provided language-literacy assessment and intervention to children in kindergarten through third grades through a Summer Literacy Camp at WSU's Speech-Language-Hearing Clinic since the summer of 2018. This summer camp provides instruction to children who are struggling readers to avoid the "summer slide" or loss of skills that can occur in children who do not receive instruction during the summer months. Of relevance to this proposal, prior to her employment at WSU, Co-PI Marble-Flint conducted survey research on adult-child home literacy practices of Mexican American families in rural Central Nebraska, which culminated in a poster presentation at the American Speech-Language-Hearing Association Convention. In addition, Co-PI Marble-Flint gained experience working with migrant

children and families as a preschool teacher and teacher's aide for the Summer Migrant Program at Head Start in Hastings, Nebraska.

Co-PI Byun has set his career goal as seeking ways to create a learning environment where learners can learn through aesthetic learning experiences, which are engaging, infused with meaning, and felt as coherent and complete. In the journey to pursue the goal, he has studied the factors affecting learner engagement in online learning environments in collaboration with the other faculty members in the School of Social Work at WSU. Also, he has participated in an NSF grant writing project titled, Innovative Technology Experiences for Students and Teachers (ITEST) Grant. Project title: Generation STEAM: Cultivating the Creativity of Underrepresented Students as the Next Generation of STEM Innovators through Art Integration. NSF 19-583 (not funded), in 2019. His research interest in digital game-based learning has been developed since he was a Ph.D. student at Southern Illinois University Carbondale. During the period, he joined a digital game-based learning project and the game his team created became one of the finalists for the 2nd Serious Game Showcase and Challenge, Inter-service/Industry Training Simulation and Education Conference (I/ITSEC, 2007). As an expert in instructional design and technology, he has skills and knowledge in designing digital games with educational content.

Senior Personnel Shan's research expertise lies in the field of software security and reliability. In the recent years, his research interests focus on mobile app security and reliability. He applies Natural Language Processing and program analysis techniques to find security and reliability vulnerabilities in Android apps.

Senior Personnel Bowman manages the Learning Laboratory at the Intensive English Language Center (IELC). He teaches Lab classes and develops ESOL applications for IELC. All of the students in the program are either international students or immigrants who attend IELC in order to improve their English skills to further their academic or professional careers. The language-learning software he develops for IELC classes uses a variety of coding languages, including PHP, MySQL, JavaScript, HTML5, etc. Bowman has served on various committees for TESOL (Teachers of English to Speakers of Other Languages) and manages its computer expo at the yearly conferences. Prior to coming to WSU, Bowman was the Adult Basic Education Coordinator at the Wichita Indochinese Center where he also taught classes for immigrants and refugees. He worked abroad in Paraguay for several years before that, serving as a Spanish/English interpreter, teaching English at a British Council school, and developing software for language learning.

Senior Personnel Johnson is the Program Coordinator of Game Design for the School of Digital Arts. He teaches video game programming, design and development at Shocker Studios. Johnson has a long history of media arts production. He has spent six years as a commercial video producer and animator. He was a partner in Quickdraw Studios and helped them transition their business to the mobile games space. Johnson is also responsible for producing several independent games applications.

This project partners with Support Personnel Vandecreek, a special projects research associate, at WSU's Community Engagement Institute (CEI). CEI's goal is to promote best practices in organizations and communities interested in improving people's lives, as well as fostering connections with community partners looking to create positive change. Vandecreek's skillset aligns with the proposals needs as he has expertise in building teams, software architecture, strategic communications, product development, design, and user experience. Vandecreek also serves on the board of Teach for Life, International who have been working for many years to refine a model of bringing educational opportunities to the poorest of the poor. This organization has a history of birthing grass roots social movements that allow space for self-growth and empowerment.

Senior Personnel Twomey is currently the Associate Dean for Research, Graduate Studies, and Faculty Development. In that role she works closely with faculty to locate sources of funding and develop their research programs. She has organized faculty development seminars focusing on research, assigns new faculty mentors, and travels to NSF with new faculty to meet program offices. As a Program Officer at the National Science Foundation, Dr. Twomey, together with two other NSF Program Officers, developed and delivered two workshops - NSF Proposal Writing and CAREER Proposal Writing.

This project will be the first collaboration among this group of researchers (see Appendix C for bio sketches of the researchers) and it creates the possibilities of several new partnerships of sub-projects and problems that could arise from the implementation of this project. For example, Co-PI Marble-Flint's interest in typically developing children and children with autism could evolve into a project with respect to refugee children who have been diagnosed with autism. Co-PI Bowman can create policy recommendations on the implementation of ESL classes to refugee students of WSU. The team will use existing software and laboratory space, including Menon Lab, LinKS lab, Shocker Studios, resources at the Community Engagement Institute and the Intensive English Language Center, and the Software and Intelligence Lab.

We are fortunate to have Dr. Janet Twomey as our senior personnel and external funding mentor. Dr. Twomey has been successful in procuring external funding from several agencies, such as the NSF and the Directorate of Engineering. Dr. Twomey brings to this project over 25 years of faculty mentorship and she will assist the PI and the Co-PIs in preparing full grant proposals to be submitted at the end of the three year grant funded period.

4.2 Organizational and Management plan for the Cluster

Project Education for All: Organizational Plan for the Cluster

Investigator	**Primary Role(s)**
PI Menon	1. Organize team meetings to discuss research plan and outcomes. 2. Establish partnerships with community members. 3. Communicate with WSU's administration team to implement the 'Refugee Learning and Resettlement Team'. 4. Submit and obtain IRB application before implementing the study. 5. Develop curriculum content for the game. 6. Data analysis of the survey. 7. Beta testing the game prototype and sending it out to other testers. 8. Supervise a graduate research assistant, and two undergraduate refugee contractors.
Co-PI Marble-Flint	1. Establish and maintain partnerships with community members. 2. Work with PI Menon on IRB approval for the study. 3. Organize workshops regarding literacy among the refugee population. 4. Data analysis of the survey. 5. Develop curriculum content for the game.
Co-PI Byun	1. Work with Senior Personnel Johnson on designing the game. 2. Creating curriculum content for the game. 3. Creating the survey for Phase two. 4. Data analysis of the survey.
Senior Personnel Bowman	1. Establish and maintain partnerships with community members. 2. Assist Co-PI Byun and Senior Personnel Johnson in designing the game. 3. Creating curriculum content for the game.
Senior Personnel Johnson	1. Create the game-based learning platform. 2. Implement the prototype in Phase four. 3. Supervise an undergraduate student in Year 2.
Support Personnel Vandecreek	1. Establish and maintain partnerships with community members. 2. Assist Senior Personnel Johnson, Co-PIs Byun and Bowman in the design of the game. 3. Assist Co-PI Marble-Flint in organizing workshops regarding literacy among the refugee population. 4. Creating reports of the project for dissemination to the community partners.

Senior Personnel Shan	1. Assist Senior Personnel Johnson, Bowman, Co-PI Byun in the design of the game. 2. Creating curriculum content for the game. 3. Integrating ITS and GIFT software into the next phases of the study.
Senior Personnel Twomey	1. Mentoring the PI and Co-PIs 2. Assisting the PI and Co-PIs in procuring external funding
Graduate Research Assistants and Undergraduate Research Assistant	1. Assist in establishing partnerships with community members. 2. Assist PI in communicating with WSU's administration team to implement the 'Refugee Learning and Resettlement Team'. 3. Assist in IRB application 4. Assist in developing curriculum content for the game. 5. Data analysis of the survey. 6. Beta testing the game prototype and sending it out to other testers.

See Appendix C for a Gantt Chart for Project Education for All: Management Plan for the Cluster.

5. Budget and Return on Investment

The project requests funding of $100,000 per year for three years. A detailed budget and a justification for the budget can be found in Appendix D, prepared with the help of David Melgren at the Office of Research.

The data collected from phase 2 of the study and the prototype of the game designed in phase 3 of the study will serve as pilot data for a full proposal to the be submitted to the National Science Foundation (NSF). In addition, Jacob's Foundation regularly funds proposals related to educational opportunities for children. Extensions of the study include proposals that can be submitted to the National Institute of Health, United Nations, Microsoft and Google.

The project supports two graduate research assistants in Years 1 and 2 of funding, one graduate research assistant in Year 3 of funding, as well as an undergraduate research assistant in Year 2 of funding. The graduate research assistants will be from LAS and CHP. The undergraduate research assistant will be a part of the School of Digital Arts.

Microsoft and Google are pioneers in the industry for creating educational technologies. Creating partnerships with these industries will be beneficial to WSU's mission of applied learning. It will lead to additional internship opportunities for students.

In addition, the project has potential to be designated as an NSF-REU (research engaging undergraduates) site under either migration studies or applied linguistics.

6. Identifying gaps in expertise

We live in a highly displaced world. At Wichita State, the faculty, staff, administration is composed of people who have migrated from other states, immigrated from other countries, leading to diversity. Having a diverse set of people brings new ways of thinking, interdisciplinary opportunities for collaboration, and forward-thinking strategies. It is our belief that this proposal by nature will lead to hiring diverse candidates, thereby increasing our African-American, Latinx, Asian, and other minority faculty representation.

Currently, Wichita State does not have a dedicated faculty member whose research primarily focuses on refugee and immigrant populations. A new faculty hire in the area of refugee studies could assist in the setting up of an interdisciplinary 'Center for Migration Studies' which encompasses interdisciplinary faculty working on studies related to immigrants, refugees, and asylees. This faculty could be hired in the Colleges of Applied Studies and Fairmount College of Liberal Arts and Sciences. This faculty member will be responsible to lead cluster hires in the area of migration, and forced displacement.

Having a leading faculty expertise in this area of migration and forced displacement would help the cluster by identifying availability of funding, and bringing new perspectives to creating solutions to the problem. This faculty member will also be experienced in understanding the traumatic experiences of refugee families and children, which will be key to supporting language learning and identifying language

differences and disorders in this population. Thus, this faculty could also have a joint appointment in the College of Health Professions.

In addition, these are some specific, potential hires relating to gaps in expertise.

a. Forced Migration and International Affairs
   The Center for Migration Studies will benefit from a global thinker and leader. This hire could help lead collaborations with the world-renowned 'Refugee Studies Center', a part of the University of Oxford. This will lead to increased study abroad opportunities, as well as internships and post-doc opportunities. LAS and the School of Business could collaborate in hiring this person.
b. Refugee and Migration Law
   This faculty member will be an expert in migration law and could hold positions in Criminal Justice and the School of Applied Studies.
c. Gender and Forced Migration
   Studying the effects of gender on displacement is crucial when researching forced displacement and migration. This faculty member could hold positions in Women's Studies and the College of Health Professions.
d. Artificial Intelligence expert
   We currently have a gap in an expert in artificial intelligence. This person could inform us regarding new directions to take when applying for external funding, especially related to GIFT and ITS software, mentioned in the introduction section. This faculty member could hold positions in linguistics and the College of Engineering.
e. Game development researcher
   Although we have an expert on game design on our team, the Center for Migration Studies would benefit from having a game development researcher. This person would test and conduct experiments using game-design based learning and hold appointment in the Colleges of Fine Arts, Applied Studies, and LAS.
f. A speech-language pathology expert in diversity and minority populations
   As noted in personal communication with USD 259 speech pathologist, Natasha Reyes, there is a need for a faculty member with expertise in offering courses relating to cultural and linguistic diversity and inter-cultural competency. This faculty member could hold positions in the College of Health Professions and LAS.

7. Curricular Implications

There are several curricular implications resulting from this project. First is the need to set up an interdisciplinary 'Center for Migration Studies'. This center will host faculty working on research on immigrants, refugees, and asylees. Once set up, the center can offer certificate courses on 'Migration Studies'. International migration is one of the most pressing issues facing the global community in the 21st century. Wichita State, similar to other institutions of higher education, relies on international student enrollment. The 'Center for Migration Studies' will contribute to WSU's pledge for diversity and inclusion. The certificate on Migration Studies can be offered at both the undergraduate and graduate levels. The Center can also offer an undergraduate major in 'Migration Studies'. This major will be highly interdisciplinary with courses taught in several departments and colleges such as, English, History, MCLL, Anthropology, Sociology, Psychology, Business school, Applied Studies, and Health Professions. In addition, several existing programs can be updated when new courses are offered on migration studies, such as the course offerings in English which can be made more diverse. Thus, in addition to new course and degree proposals, the Center can also contribute to revamping and updating existing program structures. Once student interest is established, the Center can also develop a Masters in Migration Studies. This program could include a study abroad program, such as summer fieldwork in an international setting, or immersion trips such as trips to India, Africa, or Latin America. Similar study abroad programs can be incorporated into the Bachelors in Migration Studies major as well. This will be in accordance with the LAS Dean's vision of having a study abroad option for every student of WSU.

One of the positive outcomes of this new center will be its emphasis on creating new service-learning and applied-learning opportunities. With respect to service-learning, the creation of the 'Refugee Learning and Resettlement Team' will create new partnerships with local community partners. In addition to service-learning, students will also have access to internships in these community organizations, thus strengthening WSU's commitment to the local Fairmount community and Greater Wichita community. These internships will provide a platform for students to meet applied-learning requirements. The students will have opportunities to work with a different cultural community, such as the Congolese community, thereby providing a "study abroad experience at home". Letters of support from community partners for the creation of the 'Refugee Learning and Resettlement Team' can be found in Appendix C. There are several grants that are available for the creation of the Center and to create scholarships for students traveling to fieldwork locations. Some of these include Andrew W. Mellon Foundation, MacArthur Foundation, Knight Foundation, Ford Foundation, and the Gates Foundation.

A wide range of topics and programs can be included in the Center's research and teaching agenda. These include, Language Access: Translation and Interpretation Policies and Practices, Migration Data Hub, Immigrant Integration Policies, Education and Language Learning, Employment and the Economy, Immigration Policy and Law, Migration and Development, and Refugee and Asylum Policy. Several of these topics are related to two new degree proposals PI Menon has been working on, the Applied Linguistics Major and the American Sign Language Major. In addition, the English department is in the planning stages of a new Digital Humanities Initiative and several of these topics could contribute to this initiative as well. The new course offerings in the Center can be created as 'First Year Seminars' and the research opportunities arising from the Centre's offerings can contribute to the Honors College's FYRE: First Year Research Experience in STEM. Therefore, the Center integrates well with already existing programs, and enhances the applied-learning and service-learning mission of Wichita State. The programs offered in the Center will lead to increased enrollment and contribute to the LAS's mission of internships and study abroad for all.

A curriculum gap has been identified in the Communication Sciences and Disorders (CSD) department by a community partner. Recent graduates of WSU's CSD master of arts (MA) in speech-language pathology program have indicated that cultural and linguistic diversity and cultural competency is an area where they feel overwhelmed without much background information to rely on in their new positions[3]. While the topic of cultural and linguistic diversity is covered across the curriculum, a new course in cultural and linguistic diversity and working with refugee families will broaden the students' depth of knowledge in this area and open enrollment to community partners. New badge courses will be developed and cross-listed in CSD and Linguistics. Initial badge course offerings will include working with children from Culturally and Linguistically Diverse Populations, and with Language Learning in Children from Refugee Families. By implementing these courses as badges, they will be available to interested community partners in the fields of speech-language pathology, education, special education.

8. Sustainability and Impact

The CSI funding will provide seed money to collect pilot data for the creation of a prototype to be tested before a full proposal submission to the National Science Foundation (NSF). NSF has regularly funded proposals dealing with refugee and forced migration through the Division of Behavioral and Cognitive Sciences (BCS), and the Division of Social, Behavioral, and Economic Sciences (SBE) both in the linguistics program as well as in the office of Multidisciplinary Activities (SMA). Funding has also been available through the Division of Research on Learning (DRL) and RAPID grants. In addition, occasional funding opportunities arise through the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Refugee Resettlement. The funding proposal preparation will start in Year 2, under the mentorship of Senior Personnel Twomey. See below for a timeline.

[3] (Personal communication with Natasha Reyes, USD 259 speech-language pathologist and program specialist for the cultural and linguistic diversity team, 4-8-2020 and 6-2-2020).

Project Education for All: Expected timeline for Submission of External Funding Proposal

Date/Year	Task	Personnel
August 2022	1. Start planning NSF proposal 2. Identify programs with specific calls 3. Contact program managers	PI Menon, Co-PI Marble-Flint, and Co-PI Byun and Collaborator Tien Vu meet with Senior Personnel Twomey
August 2022-August 2023	1. Analyze results of the effectiveness of the prototype 2. Write a draft of the proposal for NSF	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Collaborator Tien Vu
January 2024	1. Full proposal submission to NSF	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Collaborator Tien Vu

In addition to the NSF proposal, the cluster will monitor for other funding calls throughout the August 2022-August 2023 funding cycle. If any appropriate calls for proposals or DCLs are available, the cluster will plan on submitting proposals to these calls.

The following are the goals and expected outcomes of the project.

Project Education for All: Phases 1-4 and beyond goals and expected outcomes

Goals	Outcome	Year	Personnel
Establish a working partnership with local community partners Sub-goals: More applied-learning and service-learning opportunities for WSU students.	Creation of the 'Refugee Learning and Resettlement Team'	By December 2020 (Mid-Year 1 of funding)	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Senior Personnel Bowman, and Support Personnel Vandecreek, and 2 graduate research assistants
Understand the needs and requirements of refugee learners in Wichita	Conduct a demographics and assessment of refugee learners survey	By August 2021 (End of Year 1 of funding)	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Collaborator Tien Vu, 2 graduate research assistants, and 2 undergraduate research refugee contractors.
Provide equitable and accessible education to all	Creation of a game-based learning platform for refugee learners in Wichita	August 2021-August 2022 (Year 2 of funding)	Co-PI Byun, Senior Personnel Bowman, Senior Personnel Johnson, Support Personnel Vandecreek, Senior Personnel Shan
Testing the effectiveness of game-based learning	Making the game-based learning platform available to students in USD 259, USD 385, and others	August 2022-August 2023 (Year 3 of funding)	PI Menon, 1 graduate research assistant and 1 undergraduate research assistant
Procure external funding for expansion of study to Kansas City and surrounding areas	Submit NSF proposal	January 2024 (Post funding)	PI Menon, Co-PI Marble-Flint, Co-PI Byun, and Collaborator Tien Vu with

			mentorship from Senior Personnel Twomey
Provide additional course offerings and applied-learning opportunities to WSU students	Creation of the 'Center for Migration Studies'	Fall 2024 (Post funding)	Entire cluster
Disseminating reports to the discipline and community	Creating reports at the end of every year, and publications in top journals and conference submissions	At the end of every year; beyond funding period	SupportPersonnel Vandecreek (for end of year reports); entire cluster for publications/ conferences

The creation of the 'Center for Migration Studies' will benefit the research cluster with the possibility of adding additional faculty members with expertise in the gaps outlined in Section 6. In addition, the new programs that will come out of the creation of this center will increase enrollment for the Fairmount College of Liberal Arts and Sciences.

One of the primary benefits of this project to the local economy of Wichita and Kansas is the creation of a free, accessible tool available to the teachers of K-12 system. The tool will aid the teachers in providing quality education to all students of Wichita and Andover Public Schools, among others. It will be a valuable resource supplementing the Multilingual Education Services (MES) offered by the Wichita Public Schools. By creating this digital game-based learning platform, Wichita State can be a pioneer in the regents' institutions, as well as other institutions in the I-35 corridor. It will make WSU stand apart, and enforce WSU's commitment to the local and greater Wichita community. By creating an educational tool benefiting under-represented and minority students, WSU will uphold its commitment to being "an essential educational, cultural, and economic driver for Kansas and the greater public good".

9. Intra-KBOR collaborations

The research cluster will be collaborating with Collaborator Hong Tien Vu, an Assistant Professor in the William Allen White School of Journalism and Mass Communication at the University of Kansas. Collaborator Vu brings expertise related to text mining, machine learning, social network analysis, and sentiment analysis. His community-based intervention approach involves finding solutions to issues that underserved communities are facing. He has worked in the areas of helping refugees with integration, aiding advocacy organizations in improving gender equality, and advising nonprofits on how to more effectively communicate their works to various audience groups.

Collaborator Vu successfully completed a diversity research project titled "Digital media, social support and adjustment: Effects of digital literacy on immigrants' and refugees' integration to new communities in the U.S" between 2017-2018. His latest project, funded by the University of Kansas, Center for Migration was completed in 2018-2019. His experience in completing these projects will prove valuable to the 'Project Education for All'.

In particular, Vu's projects offered training courses on digital technologies to refugees from African countries and Myanmar. There are several types of digital skills Vu's projects provided his clients through numerous training courses. They include (1) basic computer skills for beginners (e.g., using Microsoft Word, searching for information, using google applications such as translation services, maps, and emails among others); (2) digital literacy skills with regards to misinformation (e.g., credibility evaluation, password creation and protection as well as information source differentiation, among others), and; (3) social media for small business (e.g., basic social media marketing, advertising, interacting with customers). The curriculum was designed based on the results from a series of focus groups with potential participants and extensive consultations with community leaders. The objectives of these activities included helping refugees who were information and communication technology (ICT) beginners learn how to use computers and the internet in their everyday life in the U.S. confidently and safely, as well as

equipping those who were interested in farming digital marketing skills to start and develop their businesses.

The research components of his projects, however, aimed to examine the adoption and use of digital technologies by refugees in their integration process. Specifically, they sought to investigate how refugees use digital technologies to seek social support and adapt to different aspects of their new life in the U.S. The projects were based on empirical evidence of positive impacts of the internet and digital skills on users' online social support seeking and adjustments (Costanza-Chock, 2011; Tsai, 2006). They also stemmed from the fact that technology use varies widely among different population groups. In particular, migrants/immigrants, especially refugees, have been on the far end of the digital divide, where both digital literacy and access to the internet are real challenges for these users (Alarm & Imran, 2015; Kluzer, Hache & Codagnone, 2008). Vu's projects have, therefore, contributed to finding the solutions to bridging the gap in digital use by refugees, hence providing support to this underserved population group in their integration into new communities.

In implementing his projects, Vu recognized one of the major obstacles for the training programs was participants' insufficient English language skill. This problem soon became a barrier to achieving the project goal in increasing participants' digital literacy. This barrier made learning ICT skills more challenging for participants as the language of instruction was English, which had to be translated to their native languages. Additionally, the language barrier prevented participants from applying the knowledge and digital literacy skills they had acquired from the projects into their everyday life in the U.S. as most contents related to their new local communities are in English.

In these projects, Vu worked closely with local institutions including Kansas City's Kansas Public Library and several other local nonprofits (e.g., Catholic Charities of Northeast Kansas) that provide support services to refugees. Vu's background as a communications professional for nonprofits working on projects fighting social injustice and campaigning for sustainable development will also be useful in helping to develop networks with local community leaders. Furthermore, Vu has been involved in a project that provided digital and online health information literacy training to seniors in Kansas City, MO. A research study based on the results from this project has been accepted for publication in *New Media & Society,* a top journal in the field of media studies. But most importantly, through this project he has gained extensive experience working with different underserved populations who have different needs for education and different expectations.

Vu's expertise in social scientific research will be helpful for many of the project activities. In his research, Vu frequently uses traditional social scientific methods including focus groups, in-depth interviews, surveys, and experiments. His two recent projects that are closely related to the present one here were conducted using a community-based intervention approach. Apart from these traditional methods, Vu has also collaborated with computer scientists from Boston University in an interdisciplinary project to develop AI systems that enable quantitative studies of media coverage and public discussion of climate challenges and disaster response.

The role(s) of Collaborator Vu will include attending meetings with the cluster, helping in preparing the IRB-approved assessing personalized needs of refugee survey, providing expertise during creation of curriculum content and game design, meetings with PI, Co-PIs, and Senior Personnel Twomey on preparing the NSF draft proposal, and submitting the NSF proposal funding along with the PI and Co-PIs. Thus, collaborating with Vu and the University of Kansas will highly benefit the research team at Wichita State, leading to new opportunities for funding and publishing joint papers.

10. Innovation campus involvement

The proposal also collaborates with two other partners in the innovation campus, Sedgwick County Wichita and City of Wichita. The PI is in touch with Mayor Brandon Whipple regarding the creation of the 'Refugee Learning and Resettlement Team', as well as the digital game-based learning platform, see attached letter of support in Appendix B. The successful integration of the educational technology into the Wichita school system will require resources and cooperation with the City of Wichita. The Mayor has given full support to the project and this will ensure the success of the project.

For the creation of the app version of the digital game-based learning platform, the cluster is exploring partnering with another innovation campus partner, namely Deloitte. Graduate research assistants in Year 2 of funding could intern at Deloitte and assist in the creation of the app. In addition, the project could reach out to Cybertron PCs to offer additional computers in Year 3 of the project. Partnerships with MidWest e-Sports are also being explored. In addition, the research cluster could partner with YMCA on campus in exploring possibilities of conducting literacy and health related workshops for refugee members. Lastly, collaborations could be created with Dassault Systemes, especially with their 3D experience platform located on the innovation campus. It would be highly innovative to use their 3DExcite software and integrate it with our unique game-design platform. Graduate research assistants could intern with Dassault Systemes while helping us in creating the game-design platform. These exciting opportunities will be pursued if funding is awarded.

In addition, we are also pursuing collaboration opportunities with Boston Consulting Group (BCG). BCG has education consultants and industry experts who partner with leading companies, institutions, governments, and organizations. BCG recognizes that innovation and digital transformation will help solve difficult challenges that the education sector is facing. Our proposal and BCG are in alignment as we are both looking to evaluate how digital learning can improve access to education, achievement, and equity. This also includes studying how models can be replicated and adapted for the needs of a community. Additionally, a new approach to how we communicate about educational policy and funding is at play. Often spending on education is seen as a cost or loss, when in reality a strong case can be made for framing the discussion in terms of a return on investment. Similar research to this has been established in early childhood funding called the Heckman equation in early childhood which states that for each dollar invested into early childhood, society gets a net gain of 13%. BCG can help us demonstrate that our project will empower the lives of the refugee population and also reduce the potential social burdens placed upon the communities in which they now call home.

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Appendix A: Proposed Memorandum of Agreement for the Creation of the 'Refugee Learning and Resettlement Team'

Agreement of Cooperation/Collaboration between
Refugee Resettlement Community Partners and Wichita State University, 2020

Wichita State University (WSU) and Refugee resettlement community partners (RRCP) such as International Rescue Committee, St. Francis Ministries, desire to develop a mutually beneficial partnership.

WSU and RRCP share common interests and a commitment to assisting refugees and asylees rebuild successful lives in Southcentral Kansas and to educating our students and our Wichita community toward these efforts.

WSU and RRCP agree that cooperative activities under this MOA may consist of (but are not limited to) the following:

1) Expand existing service-learning opportunities for WSU students to work with refugee and asylee populations.

2) Explore the possibility of RRCPs hiring WSU students who can advance refugee-centered initiatives, thereby advancing applied-learning opportunities for WSU students.

3) Explore the possibility of RRCP and WSU jointly sponsoring an annual conference on refugee issues that would address the needs of governmental agencies, school districts, health care organizations, social service agencies, employment programs, and others.

4) Explore collaborative research projects regarding refugee issues using mutually developed protocol for considering potential research studies; pursue grants that might be available for such research.

5) Explore the possibility of WSU creating a credit-granting certificate program in refugee/migration studies.

6) Explore joint ventures that provide a venue for refugees to share their cultures with WSU students and faculty as well as other Greater Wichita residents.

7) Assemble a team of WSU and RRCP individuals that will meet quarterly to pursue the above initiatives. This group will serve as the nexus for discussing research, seminars, symposia and other similar activities that explore issues surrounding refugee resettlement: acculturation, language acquisition, economic self-sufficiency, child and adult education, health and mental health well-being, and integration.

8) Advance the vision that RRCP and WSU together can become an important resource for addressing refugee resettlement issues, serving Kansas and beyond.

_____	_____
Richard Muma Date	TBD Date
Provost, Wichita State University	

Appendix B: Letters of support

Number	Letter of support organization/consultant name	Role in the project
1	Dr. Francis Connor, Wichita State University	Chair of PI's home department
2	Dr. Andrew Simpson, University of Southern California	Senior consultant and expert
3	Dr. Murtuza Jadliwala, UT San Antonio	Senior consultant and expert
4	Dr. Katherine Cramer, Wichita State University	Senior consultant and expert
5	Dr. Frehiwot Wuhib, Media Resource Center, WSU	Senior consultant and expert
6	Justin Rorabaugh, Shocker Studios, WSU	Senior consultant and expert
7	Dr. Emily Fedele, Institute for Defense Analyses, VA	Senior consultant and expert
8	Dr. Chinyere Okafor, Wichita State University	Senior consultant and expert
9	Community Engagement Institute, WSU	Community Partner
10	International Rescue Committee	Community Partner
11	Saint. Francis Ministries	Community Partner
12	Dr. Brandon Whipple, Mayor of Wichita	Community Partner
13	Rev. Anthony Macari, Breakthrough Community Church	Community Partner
14	KMUW	Community Partner
15	Kansas Leadership Center	Community Partner

WICHITA STATE UNIVERSITY
FAIRMOUNT COLLEGE OF LIBERAL ARTS AND SCIENCES
Department of English

May 29, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Hippisley:

I write this letter to strongly support Dr Mythili Menon's 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All', a program she is submitting as a wildcard entry in the Convergence Sciences Research Cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. Speaking as Dr Menon's colleague in the English department, her talents for and commitment to interdisciplinary teaching and research, especially her enthusiasm for engaging and mentoring undergraduate and graduate students in original research, make her the perfect person to lead this project.

Dr. Menon's proposal corresponds with the English department's proposed Applied Linguistics major, which together would make Wichita State the most innovative center for the study of linguistics in the Great Plains. Its game-based learning program will strengthen other digital humanities initiatives in the English department and LAS generally. The interdisciplinary 'Center for Migration Studies' will offer new degree programs and enhance course offerings in English and several other departments, while at the same time it will provide new opportunities for WSU to collaborate with community partners.

Therefore, on behalf of the English department I offer my and the department's enthusiastic support of Dr. Menon's program. Feel free to contact me with any further questions or concerns.

Sincerely,

Francis X. Connor
Associate Professor and Interim Chair
Department of English
Wichita State University

USC Dornsife
Dana and David Dornsife
College of Letters, Arts and Sciences

DEPARTMENT OF LINGUISTICS
Andrew Simpson
Professor

From: Andrew Simpson,
Professor of Linguistics,
Chair of the Department of Linguistics,
University of Southern California,
GFS 301D, Los Angeles, CA 90089-1693

May 21, 2020

To: Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount, Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

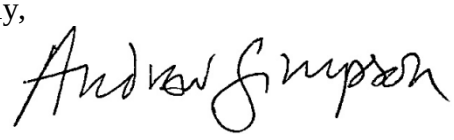
Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. Dr. Menon graduated from the Linguistics Department at University of Southern California in 2016 and I was part of her dissertation committee. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Yours sincerely,



Andrew Simpson, USC Linguistics

University of Southern California
GFS 301, Los Angeles, California 90089-1693 • Tel: 213-740-3674 • Fax: 213-740-9306

UTSA The University of Texas at San Antonio™

College of Sciences | Department of Computer Science

May 21, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

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This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Murtuza Jadliwala, PhD
Assistant Professor of Computer Science
Department of Computer Science
University of Texas, San Antonio

WICHITA STATE UNIVERSITY
COLLEGE OF APPLIED STUDIES
School of Education

May 22, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

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I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Dr. Katherine Mason Cramer
Professor and Program Chair, Middle/Secondary English Education
School of Education
Wichita State University
Katie.Cramer@wichita.edu

May 22, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

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I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Dr. Frehiwot Wuhib
Senior Instructional Designer- STEM
Media Resources Center
Wichita State University

WICHITA STATE UNIVERSITY
COLLEGE OF FINE ARTS
Shocker Studios

June 03, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

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I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Justin Rorabaugh
Director, School of Digital Arts and Shocker Studios
Assistant Educator of Media Arts
Wichita State University

June 05, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I have known Dr. Menon in a professional capacity since 2010. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Emily Fedele

Dr. Emily Fedele
Research Staff Member
Institute for Defense Analyses
4850 Mark Center Drive
Alexandria, VA 22311
efedele@ida.org

WICHITA STATE UNIVERSITY
FAIRMOUNT COLLEGE OF LIBERAL ARTS AND SCIENCES
Center for Women's Studies

June 08, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Hippisley,

I write in strong support of the proposal, "Creating Educational Technologies to Assist Refugee Learners: Project Education for All," for the wildcard entry in the Convergence Sciences research cluster. This is a game-based learning platform for refugee learners in Wichita, Kansas. It is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. Led by Dr. Menon, the team of nine consists of interdisciplinary researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, and Community Engagement Institute, as well as a collaborator from University of Kansas' School of Journalism. Many of these team members have previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners. This team converges diverse scholarly knowledge and skills that will facilitate success of this interdisciplinary project

My confidence in the team's capability and the expected educational outcome of the project for an educationally disadvantaged group motivated my willingness to serve as a senior consultant and expert for the research cluster. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. It has a very good chance of securing external funding from agencies such as the National Science Foundation. I unequivocally support this proposal.

Sincerely,

Professor Chinyere G. Okafor, Ph.D.
Chair, Department of Women's Studies
Director, Center for Women's Studies
Wichita State University, Wichita, KS 67260, USA
VP, Association of African Women Scholars (AAWS)
Phone: (316) 978-7164; E-mail: chinyere.okafor@wichita.edu
URL <http://soar.wichita.edu/dspace/handle/10057/1222>
<http://webs.wichita.edu/wmstudy/faculty.html><http://www.chiwrite.com/>

WICHITA STATE UNIVERSITY
COMMUNITY ENGAGEMENT INSTITUTE

May 29, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies for Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Teresa L. Strausz

Teresa L. Strausz, LMSW, MSOD
Director, IMP*ACT* Center
WSU Community Engagement Institute
WSU Old Town
238 N. Mead
Wichita, KS 67202

International Rescue Committee
1530 S Oliver
Wichita, KS 67218
TEL +1 316.351.5495

www.Rescue.org/Wichita

May 26, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Michele Green

Michele Green
Executive Director
International Rescue Committee

Saint Francis MINISTRIES

Yeni Telles
Director
International Ministries USA
Providing healing and hope to children and families

May 26, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies for Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners. Saint Francis Migration Ministries provides services to refugee families and we are willing to serve as a senior consultant and expert on the project.

Sincerely,

Yeni Telles, LMSW
Director of International Ministries USA
Saint Francis Ministries
Wichita, KS 67218

CITY OF
WICHITA

Office of the Mayor

May 27, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster competition. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am fully supportive of this project and The City of Wichita will be a community partner of the research cluster.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations in the City of Wichita.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project. The City of Wichita will partner with the team to ensure the educational platform will reach the thousands of refugee families in Wichita and surrounding areas.

Sincerely,

Dr. Brandon Whipple
Mayor of Wichita
City Hall

City Hall • First Floor • 455 North Main • Wichita, Kansas 67202-1622
T 316.268.4331 • F 316.858.7743
www.wichita.gov

Letterhead

May 28, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project. When the project team is ready to disseminate the survey among refugees in Wichita, I will put Dr. Menon in touch with members of my church.

Sincerely,

Pastor's name Rev. Anthony Macari
Affiliation Breakthrough Community Church.

Pastor Anthony Macari
Breakthrough Community Church
06-04-2020.

Generated by CamScanner

June 08, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Debra Fraser

Debra Fraser, General Manager of KMUW

KANSAS LEADERSHIP CENTER

June 07, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am willing to endorse the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

This proposal aligns well with the Kansas Leadership Center's mission to foster leadership for stronger, healthier and more prosperous communities in Kansas. I am especially interested to utilize my organization's approach to community development and civic engagement – based on the notion of leadership as an activity available to anyone -- to help this team of interdisciplinary researchers and community partners develop trustworthy processes for both collaboration and for listening, engaging and building trust with the learning populations they endeavor to serve.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Sam Smith
Communications Manager
Kansas Leadership Center
ssmith@kansasleadershipcenter.org | 316.712.4955

Appendix C: Bio sketches of the research cluster

BIOGRAPHICAL SKETCH

NAME: Menon, Mythili

eRA COMMONS USER NAME (credential, e.g., agency login): NIL

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Mahatma Gandhi University, India	BA	05/2004	Mass Communication
Central Institute of English and Foreign Languages, India	MA	05/2006	Linguistics
The English and Foreign Languages University, India	MPhil	05/2008	Linguistics
The English and Foreign Languages University, India	ABD	08/2010	Linguistics
University of Southern California	MA	08/2012	Linguistics
University of Southern California	PhD	08/2016	Linguistics

A. Personal Statement

My research expertise lies in the field of theoretical and experimental linguistics, with three research focus areas. My primary research focus area is in the interface of syntax-semantics and morphology, solving issues related to a variety of empirical phenomena in language such as expression of degree modification, predication, and comparison, argument ellipsis, expression of color terms across languages, and notions of finiteness within the clausal domain. My secondary research area is in psycholinguistics, specifically the intersection of linguistics with music, artificial language learning, vision, narrative, accessibility, and other cognitive domains. My third research area is language documentation and revitalization. My research methodologies combine tools from linguistics and psychology to understand better how human cognition works. My approach combines formal modeling with quantitative experimental data and fieldwork focusing on several problems in the syntax-semantics-morphology interface, as well as across modalities. Recently, my research interests have expanded to include healthcare equity and accessibility issues for minorities and refugee populations in Wichita, specifically refugee population from Africa, in addition to the development of linguistic technologies aiding these vulnerable populations.

B. Positions and Honors

Positions and Employment

2016-present	Assistant Professor, Wichita State University
2016-present	Linguistics Program Director, Wichita State University

Other Experience and Professional Memberships

2010-present	Linguistics Society of America (LSA)
2013-present	Society for Music Perception and Cognition (SMPC)
2013- present	Women in Cognitive Science (WiCS)
2014-present	Cognitive Science Society (CSS)
2015-present	Linguistics Advisor and Company Mentor, Subverses LLC, a language learning start up.
2018-present	Undergraduate Research Mentor, Honors College, Wichita State University
2018- present	Member of 'Super Linguistics' global network

Honors

2019-2020	Finalist for Wichita State President's Interdisciplinary Program Award

C. Contribution to Science

Select articles:

1. Menon, M. (accepted). Association with Focus and the Morphological Focus Markers in Malayalam. *Journal of South Asian Linguistics*.
2. García-Pardo, A and Menon, M. (forthcoming in August 2020). The Aspectual Structure of the Adjective: Spanish *Ser* and *Estar*. In, Alfonso Morales-Front, Michael J. Ferreira, Ronald P Leow, and Cristina Sanz (eds.) *Hispanic Linguistics: Current Issues and New Directions*. John Benjamins Publishing.
3. Menon, M and Pancheva,R. (2019). Degree Achievements of Color. In, Mónica Cabrera and José Camacho (eds.) *Exploring Interfaces.* Cambridge: Cambridge University Press.
4. Sleiman, J and Menon,M. (2019). The Changing of Arabic Terminology in Times of War and Displacement. In Temkin Martinez et al. eds, *WECOL Proceedings*.
5. Menon, M and Showstack,R. (2019). Measure Phrases in Spanish Second Language Learners and Heritage Speakers. In Temkin Martinez et al. eds, *WECOL Proceedings*.
6. Menon, M. 2018. Domain General Representations shared across Music and Language. *Studies in Humanities and Social Sciences* 23 (2), 64-86.
7. Menon, M. 2017. Building Superlatives from Property Concepts. In, *Proceedings of LSA 2*, 34:1-9. http://dx.doi.org/10.3765/plsa.v2i0.4086.
8. Menon, M. 2017. The Standard Marker in Malayalam encodes Comparative Semantics. In *Proceedings of the 34th West Coast Conference on Formal Linguistics*, ed. Aaron Kaplan et al., 379-386. Somerville, MA: Cascadilla Proceedings Project.
9. Menon, M. 2016. Reevaluating Standard Analyses of Comparison: The View from Malayalam. In M. Menon and S. Saurov (eds.) In, *Proceedings of FASAL 6*.
10. Menon, M, and Pancheva, R. 2016. Decomposing color expressions in Malayalam. In S. Sundaresan and R. Balusu eds. In, *Proceedings of FASAL V*, pp. 3-20.
11. Wang, F.H, Menon, M, Kaiser, E.K. 2015. Statistical Structures in Artificial languages Prime Relative Clause Attachment Biases in English. In D. C. Noelle, R. Dale, A. S. Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
12. Menon, M and Pancheva, R. 2014. The grammatical life of property concept roots in Malayalam. In U. Etxeberria, A. Fălăuș, A. Irurtzun, B. Leferman eds., *Proceedings of Sinn und Bedeutung* 2013, pp. 289-302.
13. Simpson, A, Choudhury, A, Menon, M. 2013. The derivation and licensing of covert nominals in Bangla, Hindi, and Malayalam. *Lingua* 134, 103-128.
14. Menon, M. 2014. Property Concepts and the Apparent Lack of Adjectives in Dravidian. In, Pritha Chandra and Richa Srishti (eds.) *The Lexicon-Syntax Interface: Perspectives from South Asian Languages*. pp 25-52.
15. Menon, M. 2013. The Apparent Lack of Adjectives in Malayalam and other Related Languages. In Nobu Goto, Koichi Otaki, Atsushi Sato, Kensuke Takita eds. *Proceedings of Glow-in-Asia IX 2012: The Main Session*. Mie University, Japan, pp. 157-171.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1. **PI**: (Pending) Wichita State University, University Research/Creative Projects Award (URCA): "Languages of Wichita.".
2. **PI**: Wichita State University, Dean's Startup Fund. "Language and Cognition Project".

Select Completed Research Support

1. **PI**: Wichita State University, Award for Research/Creative Projects in Summer (ARCS): "Documenting the Language and Culture of Jewish People in Cochin." Award: $4,000; 05/2019-08/2019.
2. **PI**: Wichita State University, Multidisciplinary Research Project Award (MURPA): "Investigating the Spread of Misinformation on the Web." Award: $7,500; 01/2018-06/2018.
3. **PI:** Wichita State University, University Research/Creative Projects Award (URCA): "Documenting Indigenous Food and Language of Potawatomis in Kansas." Award: $4,500; 12/2016-12/2017.
4. **PI:** University of Southern California, Del Amo Fellowship: "Language and Music Research in Madrid, Spain." Award: $5,000; 05/2013-08/2013.

BIOGRAPHICAL SKETCH

NAME: Marble-Flint, Karissa Joy

eRA COMMONS USER NAME (credential, e.g., agency login): KMARBLE-FLINT

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Hastings College, Hastings, Nebraska	Bachelor of Arts	05/2007	Special Education K-12
University of Nebraska at Kearney, Kearney, Nebraska	Master of Science in Education	07/2010	Speech-Language Pathology
Wichita State University Wichita, Kansas	Doctor of Philosophy	05/2017	Communication Sciences and Disorders

A. Personal Statement

My research expertise is in the areas of language and literacy development and disorders across the lifespan, and interprofessional education/interprofessional practice. My primary research line relates to this proposal as I have published articles on technology for language-literacy assessment and intervention in children with autism spectrum disorder. I am interested in expanding this line to include technology supports for other populations. In my secondary line of research in interprofessional education and interprofessional practice, I have been interested in supporting university students in their evolution from the classroom into clinical practice. Additionally, I bring ten years of clinical experience as a state licensed and nationally credentialed speech-language pathologist in both school and university clinic settings to inform this project.

B. Positions and Honors

Positions and Employment

2007-2008	Preschool Teacher, Summer Migrant Program, Head Start, Hastings, NE
2010-2012	Speech-Language Pathologist, Grand Island Public Schools, Grand Island, NE
2013-2015	PRN Speech-Language Pathologist, Quantum Health Professionals, Wichita, KS
2012-2017	Graduate Teaching Assistant, Wichita State University, Wichita, KS
2017-Present	Assistant Professor, Wichita State University, Wichita, KS

Selected Professional Memberships and Certificates

2010-2012	Nebraska Dept. of Health and Human Services Speech Language Pathology License
2010-2012	Nebraska Speech-Language-Hearing Association, Member
2010-Present	American Speech-Language-Hearing Association, Member
2011-Present	American Speech-Language-Hearing Association, Certificate of Clinical Competence
2012-Present	Kansas Dept. for Aging and Disability Services Speech Language Pathology License
2012-Present	Kansas Speech-Language-Hearing Association, Member

2019-Present	Member, Task Force for Speech Language Pathology-Assistants (SLP-A), Kansas Speech, Language, Hearing Association

Honors

2009	Nebraska Speech-Language-Hearing Association Foundation Scholarship
2013, 2014	Pilot International Founders Fund Scholarship
2014	Second Place in Oral Presentations, Wichita State University Graduate Research and Scholarly Projects Symposium
2016, 2020	Alpha Eta Inductee as a Student, Alpha Eta Inductee as a Faculty Member
2013-2021	Award for Continuing Education, American Speech-Language-Hearing Association

C. Contributions to Science

Articles:

- **Marble-Flint, K.,** Strattman, K., & Schommer-Aikins, M. (2020). Comprehension scores among young neurotypical children and children with ASD: Paper and iPad® storybooks. *Journal of Special Education Technology.* https://doi.org/10.1177/0162643420924197
- Musaji, I.Y., Self, T., **Marble-Flint, K.,** & Kanade, A. (2019). Moving from interprofessional education toward interprofessional practice: Bridging the translation gap. *Perspectives of the ASHA Special Interest Groups. 4*(5), 971-976. https://doi.org/10.1044/2019_PERS-SIG10-2018-0020d
- **Marble-Flint, K. J.,** Strattman, K. H., & Schommer-Aikins, M. A. (2019). Comparing iPad® and paper assessments for children with ASD: An initial study. *Communication Disorders Quarterly. 40*(3): 152-155. https://doi.org/10.1177/1525740118780750
- Self, T. L., Mitchell, L. M., Hess, S., **Marble, K. J.,** & Swails, J. (2017). Developing a university-based interprofessional education diagnostic team to identify children with possible autism spectrum disorder. *Communication Disorders Quarterly*. *38*(3): 185-192. doi: 10.1177/1525740116655774

Selected Refereed Presentations:

- **Marble-Flint, K.** Strattman, K., Self, T., Schommer-Aikins, M., Scherz, J. & DiLollo, A. (2017, November). *Comprehension Scores Among Young Typically Developing Children & Children with Autism: Traditional & Tablet-Based Storybooks.* American Speech-Language Hearing Association Annual Convention, Los Angeles, LA.
- **Marble, K.J.,** & Crowe, L.K. (2011, November). *Adult-child literacy practices in Mexican American families of rural central Nebraska.* Poster presented at the American Speech-Language-Hearing Association Annual Convention, San Diego, CA.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

Marble-Flint, K. (Under Review, Submitted April 15, 2020). *Self-Regulated Strategy Development for Writing using Technology with Elementary Children with Autism Spectrum Disorder.* 2020 New Investigators Research Grant. American Speech-Language-Hearing Foundation. (Role: PI, $10,000).

Nkanata, J. & **Marble-Flint, K.** (Awarded May 14, 2020). *Enhancing reading comprehension skills for children with learning disabilities.* Wichita State University Foundation/Dollar General Literacy Foundation. Summer Reading Grant. (Role: Project Director, $3,000).

Selected Completed Research Support (Funded only)

Marble-Flint, K. & Novak, C. (April 2018). *Summer Literacy Camp.* Award for Research/Creative Projects in Summer (ARCS). Wichita State University Office of Research and Technology Transfer. (Role: PI, Funded for summer, $4,000).

Marble, K. (May 2015). *Comparison of iPads and paper tests for assessment of children with autism spectrum disorders (ASD).* Clifford W. & Leah E. Gaulter Memorial Grant. Wichita State University College of Health Professions. (Role: PI, Funded for 1 year, $3,941).

BIOGRAPHICAL SKETCH

NAME: Byun, JaeHwan

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Hanyang University, Seoul, Republic of Korea	BA	02/2001	Educational Technology
Hanyang University, Seoul, Republic of Korea	MA	02/2004	Educational Technology
Southern Illinois University, Carbondale, IL	PhD	12/2012	Education

A. Personal Statement

My career goal is to seek ways to design and develop a learning environment where learners can learn through aesthetic learning experiences that are engaging, infused with meaning, and felt as coherent and complete. In the journey to pursue the goal, I have studied digital game-based learning during the period at Southern Illinois University Carbondale. I noticed the potential of digital games on learner engagement in learning environments and investigated the factors of digital games that can possibly engage learners in a virtual learning environment. Since starting at Wichita State University, I have been expanding my research interests from the digital game-based learning to the factors influencing students' engagement in various learning environments and how to measure the students' engagement level in more objective and quantitative methods. In addition to such areas, I have recently given my attention to learning analytics to see how data collected from students' activities in online learning environments can be used to improve their learning experience. Especially, I have been looking for ways to use learning analytics techniques to improve the quality of the experience of online students who have accessibility issues.

B. Positions and Honors

Positions and Employment

Aug. 2015 - present	Assistant Professor, Wichita State University
Aug. 2012 - Aug. 2015	Post-doctoral Researcher, Southern Illinois University Carbondale
Jan. 2014 – May. 2014	Lecturer, Adjunct

Other Experience and Professional Memberships

2007-present	Member, Korean Society for Educational Technology (KSET)
2007-present	Member, Association for Educational Communications and Technology (AECT)
2007-2012	Member, Association of Teacher Educators (ATE)
2015-present	Member, School Science and Mathematics Association (SSMA)
2016-present	Member, Summer Institute of Distance Learning and Instructional Technology (SIDLIT)
2017-2018	State Advisor, Kansas Technology Student Association

Honors

May. 2019	Technology & Innovation Award, College of Applied Studies, Wichita State University
Aug. 2017	Online Learning Faculty Fellowship (OLFF), Wichita State University
Oct. 2016	NSF/AECT Early Career Award, Ass. for Edu. Communications and Technology (AECT)
Nov. 2007	Finalist for the 2nd Serious Game Showcase and Challenge, Inter-service/Industry Training Simulation and Education Conference (I/ITSEC)

C. Contribution to Science

1. Byun, J., Kang, S. P., Law, V., Jeon, S., & Seo, Y., (Accepted) Students' Citizenship Behavior in Collaborative Learning Environment: Exploring Dual Mediation Model with Emergent Leadership and Group Cohesion. International Journal of Teaching and Learning in Higher Education (IJTLHE).
2. Joung, E., & Byun, J. (Accepted) Content Analysis of Digital Math Games Connecting to the NCTM standards.
3. Kang, S. P., Byun, J., Seo, Y., Law, V., & Ferris, K. (Accepted) Adaptation and Validation of the Measure of Organizational Citizenship Behavior in Collaborative Learning (OCB-CL)
4. Byun, J., & Joung, E. (2018). Digital game-based learning for K-12 mathematics education: Ameta-analysis. School Science and Mathematics Journal.
5. Byun, J., & Loh, C. S. (2015). Audial Engagement: Effects of game sound on learner engagement in digital game-based learning environments. Computers in Human Behavior. 46. 129-138. doi: 10.1016/j.chb.2014.12.052.
6. Byun, J. (2015). Chapter 5. Practical and ethical issues on using social media for educational purpose. In S. Kwon, W. Eom, S. You, Y. Seo, K. Kang, S. Park, H, Shim, S. Shin, H. Kim, J. Byun, S. Kim, J. Lee, & M. Seoung, Social Media and Education. ISBN 978-89-994-0352-1 (Invited, Written in Korean)
7. Byun, J. (2013). Book Review: Pedagogical and andragogical teaching and learning. International Journal of Web-Based Learning and Teaching Technologies(IJWLTT), 8 (2). 106-108.
8. Loh, C. S., & Byun, J (2009). Modding Neverwinter Nights into serious games. In D. Gibson &Y. K. Baek (Eds.), Digital Simulations for Improving Education: Learning Through Artificial Teaching Environments (p. 408-426). Hershey, PA: Information Science Reference.
9. Loh, C. S., Anantachai, A., Byun, J., & Lenox, J. (2007). Assessing what players learned in serious games: in situ data collection, information trails, and quantitative analysis. In Q.Mehdi (Ed.), Computer Games: AI, Animation, Mobile, Educational & Serious Games(CGAMES 2007). Wolverhampton, UK: University of Wolverhampton.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Scholastic Performance

1. Investigation of the Trends and Issues in Learning Analytics in Higher Education
2. Case study: lesson learned from the challenges and experiences of a blind student in online learning
3. Using learning analytics approach to improve accessibility for online learning environments

Select Completed Research Support

1. PI: Wichita State University, University Research/Creative Projects Award (URCA):"Interactions and engagement in Online Learning Enviornments. Award: $4,498 Dec. 2017-Dec. 2018

BIOGRAPHICAL SKETCH

NAME: Zhiyong Shan

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Zhejiang University, China	BS	07/1997	Computer Science
Zhejiang University, China	MS	03/2000	Computer Science
Chinese Academy of Sciences, China	Ph.D	03/2003	Computer Science
Stony Brook University, US	Postdoc	02/2009	Computer Science
University of California, US	Postdoc	08/2015	Computer Science

A. Personal Statement

My research expertise lies in the field of software security and reliability. In the recent years, my research interests focus on mobile app security and reliability. I am applying Natural Language Processing and program analysis techniques to find security and reliability vulnerabilities in Android apps. My recent research results about an important bug in Android operating system was acknowledged by Google and will be fixed soon. The papers are published on top tier computer science conferences like MobiCom, ICSE and OOPSLA.

B. Positions and Honors

Positions and Employment

2017-present	Assistant Professor, Electrical Engineering and Computer Science, Wichita State University
2015-2017	Assistant Professor, School of Computing, University of Central Missouri
2003-2013	Associate Professor/Assistant Professor, Renmin University of China

Other Experience and Professional Memberships

2002-2004	Project Manager/Senior Engineer (Part time), Beijing Rising Anti-virus Software Company

Honors

2004	President Award of Chinese Academy of Science (for top Ph.D. students)
2005	Beijing Science & Technology Achievement Award (for secure operating system)
2007	Science & Technology Award of Chinese Ministry of Public Security (for network security management system)
2010	National Information Security Contest Award of China (third grade, awarding rate 15%) awarded by the Education Ministry of China.
2010	National Information Security Contest Award of China (second grade, awarding rate 7%) awarded by the Education Ministry of China.
2016	Nominee of UCM's Learning to a Greater Degree Award (for teaching)

C. Contribution to Science

Select articles:

[1] Zhiyong Shan, Raina Samuel and Iulian Neamtiu. Device Administrator Use and Abuse in Android: Detection and Characterization. In Proceedings of the 25th Annual International Conference on Mobile Computing and Networking (**MobiCom '19**). ACM, Oct 21-25, Los Cabos, Mexico, pp. 1-16.

[2] Zhiyong Shan, Iulian Neamtiu, Raina Samuel, Self-Hiding Behavior in Android Apps: Detection and Characterization, In Proceedings of the 40th International Conference on Software Engineering (**ICSE 2018**). ACM, May 2018, Gothenburg, Sweden, pp.728-739.
[3] Zhiyong Shan, Tanzirul Azim, Iulian Neamtiu. *Finding Resume and Restart Errors in Android Applications*. ACM Conference on Object-Oriented Programming, Systems, Languages & Applications (**OOPSLA'16**), November 2016. pp.864-880.
[4] Jin, Xinxin, Soyeon Park, Tianwei Sheng, Rishan Chen, Zhiyong Shan, and Yuanyuan Zhou. "*FTXen: Making hypervisor resilient to hardware faults on relaxed cores*." In 2015 IEEE 21st International Symposium on High Performance Computer Architecture (**HPCA'15**), pp. 451-462. IEEE, 2015.
[5] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh: *Shuttle: Facilitating Inter-Application Interactions for OS-Level Virtualization*. **IEEE Trans. Computers** 63(5): 1220-1233 (2014)
[6] Zhiyong Shan, Xin Wang: *Growing Grapes in Your Computer to Defend Against Malware*. **IEEE Transactions on Information Forensics and Security** 9(2): 196-207 (2014)
[7] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh: *Malware Clearance for Secure Commitment of OS-Level Virtual Machines*. **IEEE Transactions on Dependable and Secure Computing**. 10(2): 70-83 (2013)
[8] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh: *Enforcing Mandatory Access Control in Commodity OS to Disable Malware*. **IEEE Transactions on Dependable and Secure Computing** 9(4): 541-555 (2012)
[9] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh, Xiaofeng Meng: *Facilitating inter-application interactions for OS-level virtualization*. In Proceedings of the 8th ACM Annual International Conference on Virtual Execution Environments (**VEE'12**), 75-86
[10] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh, and Xiaofeng Meng. "*Safe side effects commitment for OS-level virtualization*." In Proceedings of the 8th ACM international conference on Autonomic computing (**ICAC'11**), pp. 111-120. ACM, 2011.
[11] Zhiyong Shan, Xin Wang, and Tzi-cker Chiueh. 2011. *Tracer: enforcing mandatory access control in commodity OS with the support of light-weight intrusion detection and tracing*. In Proceedings of the 6th ACM Symposium on Information, Computer and Communications Security (**ASIACCS '11**). ACM, New York, NY, USA, 135-144. (full paper acceptance rate 16%)

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

- PI: Wichita State University, Dean's Startup Fund.

Select Completed Research Support

- Aug 2017 ~ Sep 2018, Models for Enabling Continuous Reconfigurability of Secure Mission. Army Research Lab and NJIT. (PI)
- Nov 2015 ~ Nov 2016, *Binary analysis on the first popular iOS malware*. Professional Development Assistance Grant from Missouri, United States. (PI)
- Jan 2009 ~ Dec 2012, *Flash Disk Based Database Management System*. Supported by National Natural Science Foundation of China as a key project. Number 60833005. (Co-PI)
- Jan 2008 ~ Dec 2010, *Research on Survivability Mechanisms of Operating System by Control Theory*. Supported by National Natural Science Foundation of China. Number 60703103. (PI)
- Jan 2008 ~ Dec 2008, *Research on Static Method for Detecting Security Vulnerability in System Software*. Supported by National Natural Science Foundation of China. Number 60703102. (Co-PI)
- Jan 2007 ~ Dec 2007, *PDCA Cycle based Network Security Management System*. Supported by the Research Foundation of Renmin University. (PI)

BIOGRAPHICAL SKETCH

NAME:Janet (Jan) Twomey

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Engineering Associate Dean for Research, Graduate Studies, and Faculty Development

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION		DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Duquesne University	Pittsburgh, PA	BA	1977	Sociology
University of Pittsburgh	Pittsburgh, PA	BS	1990	Industrial Engr.
University of Pittsburgh	Pittsburgh, PA	MS	1992	Industrial Engr.
University of Pittsburgh	Pittsburgh, PA	PhD	1995	Industrial Engr.

A. Personal Statement

Record of Faculty Mentorship: Dr. Twomey is currently the Associate Dean for Research, Graduate Studies, and Faculty Development. In that role she works closely with faculty to locate sources of funding and develop their research programs. She has organized faculty development seminars focusing on research, assigns new faculty mentors, and travels to NSF with new faculty to meet program offices. As a Program Officer at the National Science Foundation, Dr. Twomey, together with two other NSF Program Officers, developed and delivered NSF Proposal Writing and CAREER Proposal Writing two workshops. Since leaving NSF she has participated in over ten NSF sponsored CAREER proposal writing workshops.

Embracing Diversity: Dr. Twomey has been working to increase the number of underrepresented students in the WSU College of Engineering since she was hired. Dr. Twomey is WSU PI for a current subaward under Kansas State University for the NSF Louis Stokes STEM Pathways Implementation-Only Alliance: Kansas Pathways to STEM program, the PI for the NSF ADVANCE Catalyst award. She has participated nationally and internationally in events to improve the status of women faculty: Invited day long advisor and presentation to North Dakota State University ADVANCE Program on Research Program development: Short and long term strategies, September 30, 2014; Twomey, J. (2009), Research Program in Sustainability, Poster Session, Women's International Engineering Research Summit, Barcelona, Spain, June 1 – June 4, 2009; US-Turkey Workshop: Empowering Women in Industrial Engineering Academia - International Collaborations for Research and Education, Ankara, Turkey, March 2012, Smith (Auburn) and Twomey (Co-PI), NSF, $60K.; Twomey Keynote: "A Path to Full Professor" ADVANCE Workshop, Auburn Alabama, April 2010.

B. Positions and Honors

Positions and Employment

2015-Present	Associate Dean for Research, Graduate Studies and Faculty Success, College of Engineering, Wichita State University
2008-Present	Professor, Industrial and Manufacturing Engineering, Wichita State University
2000-2008	Associate Professor, Industrial and Manufacturing Engineering, Wichita State University
2001-2004	Program Officer, Manufacturing Enterprise Systems, Division of Design, Manufacture and Industrial Innovation, Engineering Directorate, National Science Foundation
1994-2000	Assistant Professor, Industrial and Manufacturing Engineering, Wichita State University
1997-1990	Research Specialist: Data Analyst/Manager. Built and managed data analytic team. Department of Child and Adolescent Psychiatry, University of Pittsburgh School of Medicine

Other Experience and Professional Memberships

Just named	Ulrich Advisory Board Member
2012 -2014	VP for Academics, Board of Trustees, Institute for Industrial Engineering

1998-present	NSF Proposal reviewer

Honors

1998	National Science Foundation (NSF) CAREER Award,
2011	Named by AD ASTRA as one of the 150 Kansas Famous Scientists
2007	Boeing Faculty Fellow
1997, 1999, 2000	Nominated Board of Trustees Excellence in Teaching (BOT)

C. Contribution to Science (most recent)

- Alshqaqeeq, F., Esmaeili, M. A., Overcash, M., & Twomey, J. (2020). "Quantifying hospital services by carbon footprint: A systematic literature review of patient care alternatives." Resources, Conservation and Recycling, 154, 104560.
- Alshqaqeeq, F., C. McGuire, M. Overcash, K. Ali, J. Twomey, (2020) Choosing Imaging Modalities to Meet Patient Needs with Lower Environmental Impact, Resources, Conservation and Recycling, 155, April, 2020, 6 p.
- Esmaeili, A., McGuire, C., Overcash, M., Ali, K., Soltani, S., & Twomey, J. (2018). "Environmental impact reduction as a new dimension for quality measurement of healthcare services." International journal of health care quality assurance.
- Mason, C., Twomey, J., Wright, D., & Whitman, L. (2017) Predicting Engineering Student Attrition Risk Using a Probabilistic Neural Network and Comparing Results with a Backpropagation Neural Network and Logistic Regression. Research in Higher Education, 1-19.
- Esmaeili, A., Twomey, J. M., Overcash, M. R., Soltani, S. A., McGuire, C., & Ali, K. (2015). "Scope for energy improvement for hospital imaging services in the USA." Journal of health services research & policy, 20(2), 67-73.
- Soltani, S. A., Overcash, M. R., Twomey, J. M., Esmaeili, M. A., & Yildirim, B. (2015). "Hospital Patient-Care and Outside-the-Hospital Energy Profiles for Hemodialysis Services: Report of Two Cases." Journal of Industrial Ecology, 19(3), 504-513.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

- NSF ADVANCE Catalyst: A Catalyst to Increase the Representation and Advancement of Women and Underrepresented Minorities in Academic STEM Careers at Wichita State University, PI: Twomey, $299734, (7/19 – 8/21).
- NSF Louis Stokes STEM Pathways Implementation-Only Alliance: Kansas Pathways to STEM; PI: Twomey, WSU Sub-award, $813,257 (9/18 - 8/23).
- NSF Workshop to Scope an Effective Environmental Genome Mapping Initiative, PI: Twomey, $49,850, (6/17 – 12/20).

Select Completed Research Support

- NSF: Sustainable Energy Pathways: Collaborative: Achieving a Sustainable Energy Pathway for Wind
- Turbine Blade Manufacturing ; Twomey and Overcash (PIs), collaborative with U. Mass-Lowell 9/12-9/16, $390,302/$1,800,000
- Workshop: Energy/Materials Dimensions of Engineering in Evidence-Based Healthcare, Twomey and Overcash (PIs); NSF, 8/10-8/12, $29.5K
- US-Turkey Workshop: Empowering Women in Industrial Engineering Academia - International Collaborations for Research and Education, Ankara, Turkey, March 2012, Smith (Auburn) and Twomey (CoPI), NSF, 9/1/-8/12, $60K.

BIOGRAPHICAL SKETCH

NAME: Andrew Philip Bowman

eRA COMMONS USER NAME (credential, e.g., agency login): n/a

POSITION TITLE: Senior Educator

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
University of Kansas	B.A.	05/1986	History
Rutgers University	M.A.	05/1993	History

A. Personal Statement

In addition to teaching lab classes at IELC, as the Learning Laboratory Coordinator at IELC I develop the center's original software for faculty and students. The language-learning applications projects focus on grammar, reading, and listening practice. Administrative programs include grading, database management, and assessment.

These applications use a variety sources (audio, text, and video) and have been designed expressly for WSU students and staff. I also have adapted traditional language assessment instruments to function as web-based applications, including a licensed application of Educational Testing Service's SPEAK exam which is administered to all prospective graduate teaching assistants whose must meet the English proficiency standards.

My current work deals on accessibility and web-based applications with a focus on universal design across multiple platforms and interfaces. This includes designing new software as well as remediating existing programs for mobile-use and W3C compliance.

B. Positions and Honors

Positions and Employment

1996-present	Learning Laboratory Coordinator, Intensive English Language Center, Wichita State University
1994-1996	ABE Coordinator, Instructor, Wichita Indochinese Center
1992-1994	ESOL Instructor, Software Developer, Self-employed; Asuncion, Paraguay
1989-1992	Systems Analyst, Grader; Rutgers University; New Brunswick, NJ
1986-1988	ESOL Instructor, Centro-Anglo Paraguayo; Asuncion, Paraguay
1986	Spanish Tutor, University of Kansas; Lawrence, Kansas

Other Experience and Professional Memberships

2001-present	Teachers of English to Speakers of other Languages (TESOL)

Honors

1989-90	Rutgers Graduate Scholarship
1986	Foreign Language and Area Studies Fellowship

C. Contribution to Science

Selected original software titles presented at various expositions:

1. *World News Review* - Software Fair, TESOL, St. Louis, MO, 2001

2. *Reading Cards* - Developers' Showcase, TESOL, Long Beach, CA, 2004
3. *NetEnglish web browser* and *Journal Writer* - TESOL, San Antonio, TX, 2005
4. *tDictionary* - EV Fair Classics, TESOL, New York, NY, 2008
5. *Original Computer Activities for Multi-Level ESL Programs* - Kansas International Educators Conference, Pratt, KS, 2011
6. *Portable e-readers* - TESOL, Dallas, TX, 2013
7. *TalkWrite* - TESOL, Portland, OR, 2014
8. *Web-Based Oral Proficiency Testing* - (with Aimee Leisy), MIDTESOL, Kansas City, MO, 2016
9. *Enhanced Speak* - TESOL, Seattle, WA, 2017
10. *Beyond YouTube* - Professional Development Day, Kansas State University, Manhattan, KS, 2017
11. *YouTube Task Editor* - TESOL, Chicago, IL, 2018
12. *Spelling* - TESOL, Atlanta, GA, 2019 9

Other original software developed for IELC:

1. *Academic Topics*
2. *Reading & Vocabulary*
3. *Dictation*
4. *SPEAK (web-based version)*
5. *Fixes*
6. *Dialogs*
7. *Journal Writer*
8. *Timed Readings*
9. *Analytical Reasoning*
10. *IELTS Reading*
11. *Grammar Tutorial*
12. *TOEFL Structure*

BIOGRAPHICAL SKETCH

NAME: Kelly Johnson
eRA COMMONS USER NAME (credential, e.g., agency login): NIL
POSITION TITLE: Assistant Educator & Program Coordinator of Game Design

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	END DATE	FIELD OF STUDY
Wichita State University	BA	12/2012	Electronic Communication
Wichita State University	MA	ON GOING	Innovation Design

A. Personal Statement

My expertise lies in digital arts production. I've spent a nearly decade-long career in various areas of creative production before pursuing an academic career. In that time, I have worked in tandem with a variety of artists to complete projects that range from business advertising campaigns and educational video courses to mobile utility applications and video games. My current role as Program Coordinator for Game Design has afforded me the chance to shape the program to be successful in a region that is generally described as a game design desert. My grand goal for the program is to guide students into non-traditional game design careers such as educational game development, real-time 3D rendering for business development and entrepreneurship. I believe the potential for these fields is currently untapped in the midwest region. This project is one more step into this direction and I am thrilled for the chance to collaborate with Dr. Menon on it.

B. Positions and Honors

Positions and Employment

2012-2014	Video Producer, Media Resources Center
2014-2017	Motion Graphics Designer, Brothers & Company
2017-2018	Video Producer, Wichita State University
2018-Present	Assistant Educator, Wichita State University

Other Experience and Professional Memberships

2017-2019	Partner, Quickdraw LLC
2018-Present	Organizer, ICT Game Jam

BIOGRAPHICAL SKETCH

NAME: M. Jason Vandecreek

eRA COMMONS USER NAME (credential, e.g., agency login): n/a

POSITION TITLE: Special Projects Research Associate

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Kansas State University	On leave	05/2004	Electrical and Computer Engineering, Computer Science, Information Systems, Organizational Psychology

A. Personal Statement

I am currently the lead technology research associate for the Center for Applied Research & Evaluation (CARE) at WSU's Community Engagement Institute (CEI). Essentially, I help research teams by designing custom software to collect, organize, clean, analyze, and visualize research data. I also train staff in the latest software tools to enable quality improvement, consistency, and capacity. Our team also focuses on high quality communication design to ensure greater insight and understanding of research reporting. This includes interactive websites, maps, and internet / phone applications. CARE team FY20 projects exceed $800k.

The Community Engagement Institute has served Kansas for 35 years. The goal of the institute is to promote best practices in organizations and communities interested in improving people's lives, as well as fostering connections with community partners looking to create positive change. The institute has 6 centers and 4 initiatives. For the last 8 years, I have been proud to assist this amazing and diverse team.

Recent accolades include building interactive reports for public health, early childhood development and education domains. In current fiscal year (FY20), CEI managed 90 grants and contracts totaling nearly $6,500,000. Outside of WSU, I own a small consulting firm, Vandecreek Consulting, and serve on the board of directors for the beloved, Trees for Life / Teach for Life, International Inc.

B. Positions and Honors

Positions and Employment

2000	K-State Online, Software Developer, Department of Continuing Education, Manhattan, KS
2001	Networking Engineer, a startup Internet Service Provider and ASP, Frontier Consulting Group
2004	Network Engineer and Systems Deployment, Electronic Medical Records, Pulse Systems, Inc Wichita, KS
2005	Web and Software Developer, Howerton+White Interactive, Wichita, KS

2005-present	Owner, Vandecreek Consulting, Wichita, KS
2012-present	Research Associate, Community Engagement Institute, Wichita State University, KS

Other Experience and Professional Memberships

2012-present	Volunteer and Board Member, Trees for Life / Teach for Life, International, Wichita, KS

C. Contribution to Science

1. Assist team at CARE-CEI conducting research and evaluation on early childhood developmental measures. We developed custom tools in Python and R to analyze the data and produce reports and visualizations. Dr. Lynn Schrepferman has over 20 years of experience in research, evaluation, and implementation of evidence-based prevention and interventions. We are using novel, innovative methods with multi-level modeling and factor analysis in this domain. Supported by FY20 grant of $500,000 from the Kansas Children's Cabinet and Trust Fund.
2. Social science and sustainable systems modeling. Assist team at Teach for Life, International, to develop and publish evidence-based teaching methods from retired and active professional educators. Support the creation of innovative and reproducible models for lesson building and dissemination. Systems level thinking about how to sustainably overcome poverty through the lens of education and empowerment. Early adoption has occurred by communities and institutions in India and several other countries.

BIOGRAPHICAL SKETCH

NAME: Vu, Hong

eRA COMMONS USER NAME (credential, e.g., agency login): NIL

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Hanoi National University, Vietnam	BA	06/1995	Linguistics
University of Kansas	MS	05/2011	Journalism & Mass Communications
University of Texas, Austin	PhD	12/2015	Journalism

A. Personal Statement

My scholarship is informed by my professional experience in both journalism and strategic communication. My journalism research examines how digital technologies are changing newsroom practices in different countries. I am also interested in factors that affect the global news flow. My strategic communication research is largely about the effects of emerging technologies on social change (e.g., social, climate, and environmental justice). In this line of research, I have investigated the influence of ICT or social media on various groups (e.g., refugees, nonprofits).

I use a variety of methodological approaches in my various research methods including quantitative (e.g., survey, content analysis, experiment), qualitative (e.g., textual analysis, in-depth interview), and computational (e.g., text mining, machine learning, social network analysis, sentiment analysis). I have recently adopted a more community-based intervention approach, which has allowed me to actively contribute to finding best solutions to different issues that underserved communities are facing (e.g., helping refugees with integration, assisting seniors with detecting misinformation, aiding advocacy organizations in improving gender, and suggesting best communication practices to nonprofits, among others).

B. Positions and Honors

Positions and Employment

2015 – present	Assistant Professor, William Allen White School of Journalism & Mass Communications, University of Kansas
2015 – present	Faculty Affiliate, Center for East Asian Studies, University of Kansas
2013 – 2014	Lecturer, Department of Professional Communications, Royal Melbourne Institute of Technology
2013 – 2014	Communications Manager, Oxfam in Vietnam
1995 – 2009	Journalist for various news organizations including the Associated Press

Other Experience and Professional Memberships

2011-present	Association for Education in Journalism and Mass Communication (AEJMC
2011-present	International Communication Association

Honors

2014 – 2015	Bess Heflin Fellow, University of Texas at Austin
2011	Honors for Masters' Thesis
2009 – 2011	Fulbright Scholar

C. Contribution to Science

Select articles:

1. Vu, H. T.**,** Trieu, T. L. & Nguyen, H. T. (Accepted). Routinizing Facebook: How journalists' role conceptions influence their social media use for professional purposes in a socialist-communist country.

Digital Journalism.

2. Seo, H., Bloomberg, M., Altschwager, D., & Vu, H. T. (Accepted). Vulnerable populations and misinformation: A mixed-methods approach to underserved minority seniors' online information assessment. *New Media & Society.*
3. Vu, H. T., McCombs, M., Russell, A. & Pain, P. (Accepted). Deepening the concept of 'compelling arguments': Linking the substantive and affective dimensions of attributes in assessing the effects of climate change news on public opinion. *The Agenda Setting Journal*.
4. Vu, H. T. & Lynn, N. (2020). When the news takes sides: Automated framing analysis of coverage of the Rohingya crisis by elite press from three countries. *Journalism Studies.*
5. Duong, H. T., Vu, H. T., & Nguyen, L. V. T. (2020). Influenced by anonymous others: Effects of online comments on risk perception and intention to communicate. *Health Communication.*
6. Seo, H. & Vu, H. T. (2020). Social media & global activism: A survey of transnational nonprofits. *Nonprofit and Voluntary Sector Quarterly*.
7. Vu, H. T., Do, H. V., Seo, H., & Liu, Y. (2019). Who leads the conversation on climate change?: A study of a global network of NGOs on Twitter. *Environmental Communication*.
8. Vu, H. T., Liu, Y., & Tran, V. D. (2019). Nationalizing a global phenomenon: A study of how the press in 45 countries and territories portrays climate change. *Global Environmental Change, 58.*
9. Duong, H. T., Nguyen, L. T. V., & Vu, H. T. (2019). Association between online social influence and corporal punishment: An experimental study. *Child & Adolescent Social Work Journal*.
10. Chen, Y. & Vu, H. T. (2019). The role of contextual and structural factors in antibiotic use among European Union citizens: A multilevel analysis. *International Journal of Communication, 13,* 3379-3402.
11. Nguyen, A. & Vu, H. T. (2019). Testing popular discourse on the "echo chamber" effect: Does political polarisation occur among those relying on social media as their primary politics news source? *First Monday*, *24*(6).
12. Duong, H. T., Vu, H. T., & Nguyen, N. (2019) Activists' strategic communication in an authoritarian setting: Integrating social movement framing into issues management. *International Journal of Strategic Communication, 13*(2), 133-151.
13. Vu, H. T., Liefu, J., Cueva-Chacon, M. L., Riedl, M. J., Tran, V. D., & Bobkowski, P. (2018). What influences media effects on public perception? A cross-national study of comparative agenda setting. *International Communication Gazette*. *81*(6-8), 580-601. *(This article uses news media data in five languages).*
14. Vu, H. T., Lee, T.-T., Duong, H. T.*, & Barnett, B. (2018). Gendering leadership in Vietnamese media: A role congruity study on news content and journalists' perception of female and male leaders. *Journalism & Mass Communication Quarterly*, *95*(3), 565–587.
15. Vu, H. T., Duong, H. T., Barnett, B., & Lee, T.-T. (2017). A role (in)congruity study on Vietnamese journalists' perception of female and male leadership. *Asian Journal of Communication, 27*(6), 648-664.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1. PI: (Pending). Faculty General Research Fund: *Network structure of fake news on Twitter regarding the corona virus.* $3,500.
2. PI: (Pending). Faculty General Research Fund: *What influences audience trust in, accurate identification of, and intention to share fake health news/disinformation.* $3,289.72.
3. PI: (Pending). New Faculty General Research Fund: *American public's use of Information and beliefs, concerns and adoption of climate change measures*. $7,960.

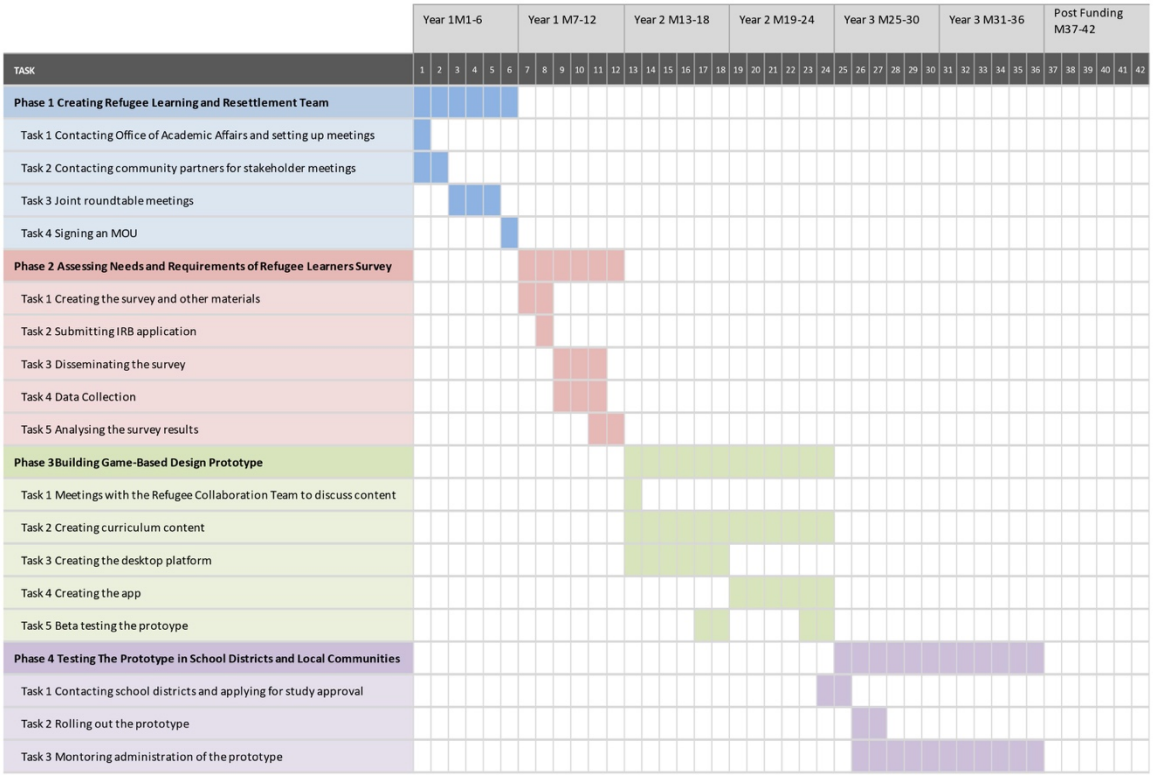
Select Completed Research Support

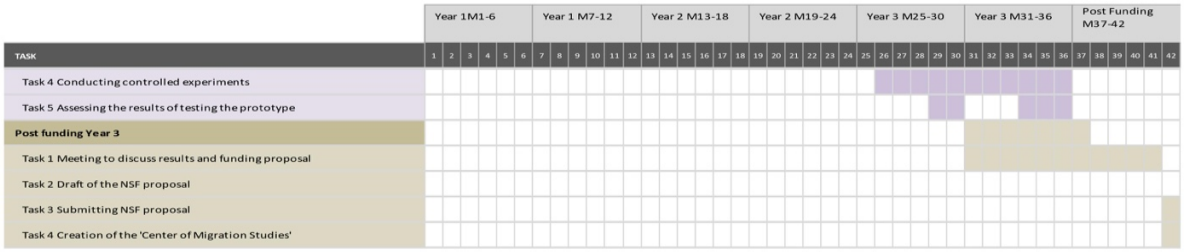
1. PI: University of Kansas, Diversity Research: *Digital media, social support and adjustment: Effects of digital literacy on immigrants' and refugees' integration to new communities in the U.S.* $4,931.60. (2017 – 2018).
2. PI: University of Kansas, Center for Migration: *Digital media, social support and adjustment: Effects of digital literacy on immigrants' and refugees' integration to new communities in the U.S.* $5,000. (2018 – 2019)
3. PI: Oxfam in Vietnam. Action research as part of a national campaign advocating for female leadership: *Journalism and female leadership*. $39,694 (2015 –2016)

Appendix D: Gantt Chart for Project Education for All: Management Plan for Cluster

Project Education for All

Wichita State University
PI: Mythili Menon





Appendix E: Budget and Budget Justification

Proposal #: 200749
PI: Mythili Menon
Agency: State of KS - PCSI
Date: 5/21/2020

		Year 1	Year 2	Year 3	Total		Annual Base	1.03	Monthly	Contract Mo.	Sum Mos	AY Mos	T&E
Key Personnel													
PI: Mythili Menon		$ 4,647	$ 4,786	$ 6,573	$ 16,006		$ 55,761	$ 55,761	$ 6,196	9	1		75%
PI Fringes:	0.18379	$ 854	$ 880	$ 1,208	$ 2,942								100%
Co-PI: Karissa Marble-Flint		$ 5,663	$ 5,833	$ 8,011	$ 19,507		$ 67,958	$ 67,958	$ 7,551	9	1		75%
Fringes:	0.18379	$ 1,041	$ 1,072	$ 1,472	$ 3,585								100%
Co-PI: Jaehwan Byun		$ -	$ 4,513	$ -	$ 4,513		$ 52,588	$ 52,588	$ 5,843	9	1		75%
Fringes:	0.18379	$ -	$ 830	$ -	$ 830								0%
Senior Personnel: Andrew Bowman		$ 2,459	$ 2,533	$ -	$ 4,992		$ 46,845	$ 46,845	$ 3,904	12	1		63%
Fringes:	0.39	$ 959	$ 988	$ -	$ 1,947								63%
Senior Personnel: Kelly Johnson		$ 3,836	$ 3,951	$ -	$ 7,787		$ 54,795	$ 54,795	$ 6,088	9	1		63%
Fringes:	0.18379	$ 705	$ 726	$ -	$ 1,431								63%
Senior Personnel: Janet Twomey		$ -	$ -	$ 1,617	$ 1,617		$ 152,350	$ 152,350	$ 12,696	12	3	9	0%
Fringes:	0.35	$ -	$ -	$ 566	$ 566								0.0%
													1.0%
Senior Personnel: Zhiyong Shan		$ -	$ -	$ 1,195	$ 1,195		$ 84,471	$ 84,471	$ 9,386	9	3	9	0%
Fringes:	0.18379	$ -	$ -	$ 220	$ 220								0.0%
Total Key Personnel		**$ 20,164**	**$ 26,112**	**$ 20,862**	**$ 67,138**								1.0%
Other Personnel							**Weeks**	**Rate**	**#of GRAs**	**Hrs/Week**			
GRA Salary - Academic Year:		$ 27,200	$ 28,016	$ 14,428	$ 69,644		40	$ 17.00	2	20	Year 1-2		
GRA Fringes	0.011	$ 299	$ 308	$ 159	$ 766			**Ins**	1	20	Year 3		
Insurance		$ 2,128	$ 2,192	$ 1,129	$ 5,449			1,064	*Note: Insurance & Tuition prorated the same (based on 20 hrs FT)*				
GRA Salary - Summer:		$ 8,160	$ 8,405	$ 4,328	$ 20,893		12	$ 17.00	2	20	Year 1-2		
GRA Fringes	0.011	$ 90	$ 92	$ 48	$ 230			**Ins**	1	20	Year 3		
Insurance		$ 426	$ 439	$ 226	$ 1,091			213					
							Weeks	**Rate**	**No. of Indiv**	**Hrs/Week**			
Undergrad Student		$ -	$ 5,923	$ -	$ 5,923		46	$ 10.00	0	0			
Undergrad Fringes	0.011	$ -	$ 65	$ -	$ 65		50	$ 11.50	1	10			
Total Other Personnel		**$ 38,303**	**$ 45,440**	**$ 20,318**	**$ 104,061**		46	$ 10.00	0	0			
Total Salaries		**$ 51,965**	**$ 63,960**	**$ 36,152**	**$ 152,077**								
Total Fringes		**$ 6,502**	**$ 7,592**	**$ 5,028**	**$ 19,122**								
Total Salaries & Fringes		**$ 58,467**	**$ 71,552**	**$ 41,180**	**$ 171,199**								
Equipment													
		$ -	$ -	$ -	$ -								
Total Equipment		**$ -**	**$ -**	**$ -**	**$ -**								
							Mileage Rate	**Miles**					
							0.575	404					
Travel							**Flight**	**Hotel**	**Per Diem**	***Ground Trans.**	***Other**	**# of People**	**# of Days**
Local Travel		$ 232	$ 239	$ 246	$ 717								
		$ -	$ -	$ -	$ -								
Total Travel		**$ 232**	**$ 239**	**$ 246**	**$ 717**								
Participant Support Costs							**Participants**	**Pay Rate**					
Stipends		$ -	$ -	$ -	$ -								
		$ -	$ -	$ -	$ -								
Total Participant Support Costs		**$ -**	**$ -**	**$ -**	**$ -**								
Supplies													
Curriculum Design Materials		$ 3,242	$ 4,043	$ 3,750	$ 11,035								

School Visit Supplies				$ 1,500	$ 1,500								
Total Supplies		**$ 3,242**	**$ 4,043**	**$ 5,250**	**$ 12,535**								
Contractors													
Refugee Services		$ 4,000	$ 3,500	$ 4,000	$ 11,500								
Jason Vandecreek		$ 10,000	$ 2,500	$ 32,500	$ 45,000								
		$ -	$ -	$ -	$ -								
Total Vendors/Contractors		**$ 14,000**	**$ 6,000**	**$ 36,500**	**$ 56,500**								
Subreceipients													
University of Kansas		$ 5,000	$ -	$ 5,000	$ 10,000								
Total Subrecipients		**$ 5,000**	**$ -**	**$ 5,000**	**$ 10,000**								
							Note: Insurance & Tuition prorated the same (based on 20 hrs FT)						
Other Expenses							**Tuition**	**Cr Hrs/AY**	**# of GRAs**	*- If needed, 6 Cr Hrs for Summer*			
Tuition Remission		$ 13,809	$ 14,223	$ 7,324	$ 35,356		$ 383.57	18	2	*- Add $50/Cr Hr for engineering GRAs.*			
Publication Costs		$ 1,000	$ 750	$ 750	$ 2,500		**Incentive**	**Participants**	1				
Participant Survey Incentive		$ 1,000	$ -	$ -	$ 1,000		$ 10.00	100					
Printing		$ 500	$ -	$ -	$ 500								
Meeting Refreshments		$ 750	$ 750	$ 750	$ 2,250								
Tablet - $500/ea		$ 500		$ 1,500	$ 2,000								
Laptop		$ 1,500	$ 1,500	$ 1,500	$ 4,500								
Software			$ 943		$ 943								
Curicculum Design Materials		$ -	$ -	$ -	$ -								
Total Other Expenses		**$ 19,059**	**$ 18,166**	**$ 11,824**	**$ 49,049**								
Total Direct Costs		**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 300,000**								
**MTDC		$ 81,191	$ 85,777	$ 87,676	$ 254,644		Adjust MTDC Formula for subrecipients						
0%		$ -	$ -	$ -	$ -		Internal Award						
Total (Direct + Indirect Costs)		**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 300,000**		0%	Unrecovered Indirects:		$ -			

Prepared by: DM
Checked by: DC

BUDGET NARRATIVE

A. Senior Personnel - $47,384

1. Dr. Mythili Menon, PI and Co-Project Director ($18,948): Dr. Menon is budgeted for 0.75 FTE of one summer month in years one and two of the project and 1.0 FTE of one summer months in year three of the project. She will be responsible for organizing team meetings, establishing partnerships with community members, submitting the IRB application, developing curriculum content for the game, beta testing the prototype, supervising a GRA and two undergraduate research assistants and data analysis of the survey. Fringes are calculated at 18.379% of her salary per Wichita State's approved rates.

1. Dr. Karissa Marble-Flint, Co-PI and Co-Project Director ($23,092): Dr. Marble-Flint is budgeted for 0.75 FTE of one summer month in years one and two of the project and 1.0 FTE of one summer months in year three of the project. She will be responsible for establishing partnerships with community members, organizing literacy workshops among the refugee population, assisting the PI in developing the IRB application, and data analysis of the survey. Fringes are calculated at 18.379% of her salary per Wichita State's approved rates.

   Dr. Jaehwan Byun, Co-PI ($5,344): Dr. Byun is budgeted for 0.75 FTE of one summer month in year two of the project. He will be responsible for assisting in game design, developing curriculum content for the game, creating the survey and data analysis of the survey. Fringes are calculated at 18.379% of his salary per Wichita State's approved rates.

B. Other Personnel - $123,815

Andrew Bowman, Senior Personnel ($6,939): Mr. Bowman is budgeted for 0.63 FTE of one calendar month in years one and two of the project. He will be responsible for assisting Dr. Byun and Senior Personnel Johnson in designing the game and providing curriculum content for the game. Fringes are calculated at 39% of his salary per Wichita State's approved rates.

Kelly Johnson, Senior Personnel ($9,218): Ms. Johnson is budgeted for 0.63 FTE of one summer month in years one and two of the project. She will be responsible for creating the game-based learning platform and implementing the game prototype. Fringes are calculated at 18.379% of her salary per Wichita State's approved rates.

Dr. Janet Twomey, Senior Personnel ($2,183): Dr. Twomey is budgeted for 0.01 FTE of one calendar month in year three of the project. She will be responsible for mentoring the PI and co-PIs and assisting in obtaining external funding for the project. Fringes are calculated at 35% of her salary per Wichita State's approved rates.

Dr. Zhiyong Shan, Senior Personnel ($1,415): Dr. Shan is budgeted for 0.01 FTE of one summer month in year three of the project. He will be responsible for assisting Dr. Byun

and Senior Personnel Johnson in designing the game and providing curriculum content for the game. Fringes are calculated at 18.379% of his salary per Wichita State's approved rates.

Graduate Students ($98,073): Two graduate students (GRA) are budgeted at 0.50 FTE during the academic years and summer in years one and two of the project and one graduate student in year three of the project. The rate is $17.00/hr including an annual 3% COLA. The GRAs will be from the English and Communication Sciences and Disorders departments and they will be responsible for assisting in establishing partnerships with community members drafting the IRB application, designing the curriculum, beta testing the game prototype, and data analysis. The GRAs' fringes are calculated at 1.1% plus $1,277/year in insurance including an annual 3% COLA.

Undergraduate Student ($5,987): One undergraduate student is budgeted at 0.25 FTE during the academic year and summer in year two of the project. The rate is $11.50/hr. The undergraduate will be from Shocker Studios and they will be responsible for helping establish partnerships with community members and helping design and create the educational platform. The undergraduates' fringes are calculated at 1.1%.

C. Equipment - $0

None budgeted

D. Travel - $717

Approximately 400 miles in local travel are budgeted each year at the State of Kansas approved rate of $0.575/mile including an annual 3% COLA. This local travel will be carried out by the graduate RAs in order to establish contacts with the refugee community, through partnerships with the City of Wichita, International Rescue Committee, and the Breakthrough Community Church.

E. Participation Support Costs - $0

None budgeted

F. Supplies - $12,535

Curriculum Design Materials ($11,035): Funds are budgeted in years one through three for materials to design curriculum for the educational platform, both the desktop and the mobile version.

School Visit Supplies ($1,500): Funds are budgeted in year three for materials such as incentives for school teachers to carry out the school visits and test the effectiveness of the prototype .

G. Contractors - $56,500

Refugee Services (11,500): Funds are budgeted for Chishugi Omba to provide assistance with the refugee populations such as interpreting services and translation.

Jason Vandecreek ($45,000): Funds are budgeted for Mr. Vandecreek to assist Kelley Johnson with the game design, software development, and beta testing the prototype.

H. Subrecipients - $10,000

Funds are budgeted to issue a subaward to the University of Kansas in order for Dr. Hong Tien Vu, Assistant Professor of Journalism, to help prepare the survey for the refugee community, and to provide expertise during creation of curriculum content and the game design, and to assist in preparation of NSF proposal for external funding.

I. Other Expenses - $49,049

Tuition Remission ($35,356): In accordance with WSU policy, funds are budgeted for 18 credit hours for each GRA each year. The tuition is calculated at $383.57 per credit hour and includes and annual 3% COLA.

Publication Costs ($2,500): Funds are budgeted for Jason Vandecreek/Community Engagement Institute to create reports at the end of each year for dissemination to the funding agency, community and industrial partners.

Participant Survey Incentive ($1,000): In order to ensure broad participation from the refugee community a $10 incentive will be provided to 100 participants who fill out the survey.

Printing ($500): Funds are budgeted in year one in order to print the publication reports, and/or any survey needed to complete school visits.

Meeting Refreshments ($2,250): Funds are budgeted in order to provide coffee and other light refreshments at the stakeholder meetings with members from WSU, community partners, and industry partners.

Tablets ($2,000): Tablets will be purchased in year one and year three of the project. These tablets will be used by the GRAs for analysing the survey results in year one, and they will be made available for use in year 3 for school visits.

Laptop ($4,500): Funds are budgeted in order to purchase three laptops will be purchased. These laptops will be used by the two graduate research assistants and the undergraduate research assistant to assist with the survey dissemination, as well as the creation of the educational platform.

Software ($943): Game-design software will be purchased in year two of the project. This software will be needed in order to create the educational platform, both desktop and mobile.

J. Direct Costs - $300,000

K. Indirect Cost - $0

Internal award, none budgeted.

L. Total Costs - $300,000

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WSU OFFICE OF RESEARCH PROPOSAL ROUTING FORM

Prop # 200749

GDS: DM

MAC USERS: Please fill complete using the latest version of Adobe Reader

FINAL proposals are due a MINIMUM of 3 days prior to the Agency Deadline

Paper submissions which include cost share and/or waived indirects require additional processing time.

Principal Investigator (PI): Mythili Menon

Agency Deadline: 06/08/20

Sponsor/Agency: State of Kansas - Wichita State University

Solicitation #:

Project Title: Creating Educational Technologies to Assist Refugee Learners: Project Education for All

Period From: 08/01/2020 To: 08/01/2023

	YEAR ONE	TOTAL PERIOD
Direct Costs:	$100,000.00	$300,000.00
Indirect Costs	$0.00	$0.00
Total Costs	$100,000.00	$300,000.00
Cost Share:	$0.00	$0.00

PI's Effort (Total Project Person Months) 2.5

Course Release? No Overload? No

Research Type: Development

Indirect (F&A) Rate (MTDC):

(•) Organized Research 48%	( ) Off Campus 26%
( ) Instruction 50%	( ) Commercial 63.61%
( ) Other Sponsored Activities 30%	

If Sponsor Limits F&A, what rate is allowed? 0%

Rate applied to this proposal (if not listed above)

Budget is Lab Rate ONLY ( ) Yes (•) No

Includes Subreceipients (•) Yes ( ) No

Fundamental Research (•) Yes ( ) No

Research where the results are ordinarily published and shared broadly within the research community, and for which the researcher has not accepted restrictions for proprietary or national security reasons.

COMPLIANCE REVIEW: To be completed by the PI - MUST answer Yes or No to ALL

(•) Yes	( ) No	Human Subjects	( ) Yes	(•) No	Biological Materials	( ) Yes	(•) No	Infectious Agents
( ) Yes	(•) No	Hazardous Chemicals/Waste	( ) Yes	(•) No	Clinical Trials	( ) Yes	(•) No	Proprietary Information
( ) Yes	(•) No	Animals	( ) Yes	(•) No	Medical Devices/Drugs	(•) Yes	( ) No	Foreign Nationals
( ) Yes	(•) No	Radioactive Material	( ) Yes	(•) No	Recombinant DNA or RNAi	( ) Yes	(•) No	Foreign Travel/Shipping
( ) Yes	(•) No	HIPPA/PHI*	( ) Yes	(•) No	ITAR/CUI*	( ) Yes	(•) No	Int'l Collaborations

Does this project pose a conflict of interest for you or any anticipated project member? ( ) Yes (•) No

Have you or any anticipated project member been debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from transactions by a federal department or agency? ( ) Yes (•) No

Are you or any anticipated project member currently delinquent on any federal debt? (i.e. taxes, student loans, etc.) ( ) Yes (•) No

Does this project require facilities that are not currently allocated/available to you? ( ) Yes (•) No

WSU Department/College/Center Responsible for Matching Funds/Cost Share	Amount

NOTES/COMMENTS:

*__Definitions: HIPAA/PHI__ - Health Insurance Portability and Accountability Act/Personal Health Information; __ITAR/CUI__ - International Traffic in Arms Regulations/Controlled Unclassified Information

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NEW - RTT is now tracking PI/Co-PI involvement on sponsored projects Please complete the table below. This information will be used when reporting proposal/award totals across PI/Co-PI roles, departments and colleges.

Name	Role	Dept/College/Center	% of Project
Mythili Menon	PI	English/LAS	40
Karissa Marble-Flint	Co-PI	CSD/CHP	40
JaeHwan Byun	Co-PI	C&I/CAS	20

Total Project Allocation **MUST** equal **100**

100

ACKNOWLEDGMENTS AND CERTIFICATIONS:

As the Principal Investigator, I acknowledge that I have reviewed and considered all terms and conditions (including those that must be accessed electronically), and I understand that said terms and conditions are/may be applicable to any and all work performed should the application be successful. My signature indicates my knowledge of the terms and conditions and my willingness/ability to comply therewith. With respect to any invention, discovery, or copyrightable material produced in the course of activities encompassed by this project, I agree that my rights and those of any Co-Investigator(s) working on this project shall be governed by the University policies relating to research, patents and copyrights as described in the WSU Faculty Handbook, and by the patent policy of the Kansas Board of Regents; and I have read and understand the lobbying restrictions and Responsible Conduct of Research requirements for **FEDERAL** grants, contracts and cooperative agreements attached hereto as page 3.

As the Principal Investigator, I hereby certify that: 1) the information submitted within this application is true, complete and accurate to the best of my knowledge; and 2) any false, fictitious or fraudulent statements or claims may subject me personally to criminal, civil or administrative penalties; and 3) I agree to accept responsibility for the scientific conduct of this project and provide the required progress reports if a grant is awarded as a result of this application.

FORM WILL LOCK ONCE SIGNED BY PI - ENSURE YOU HAVE READ AND COMPLETED ALL PRIOR SECTIONS

PI Signature: Mythili Menon Digitally signed by Mythili Menon Date: 2020.06.04 19:45:53 -05'00' Date:

Agreement of project involvement and acknowledgements and certifications of Co-Principal Investigators (as applicable)

Co-PI DocuSigned by: Karissa Marble-Flint 4A77E3304E594BE... **Co-PI** DocuSigned by: FD856E9B4AE948A...

Co-PI **Co-PI**

The validity of the proposed activity and commitment of resources (as noted) are hereby authorized.

DocuSigned by: Francis Connor 56B1826540574B8... **PI Chair/Center Director**	6/5/2020 **Date**	DocuSigned by: Andrew Hippisley 32F58B2071B34E8... **PI Dean/Vice President**	6/5/2020 **Date**
DocuSigned by: Julie Scherz 1CF0605239E54D4... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**	DocuSigned by: Stephen Arnold 62D7B5D0EA424E0... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**
DocuSigned by: Jody Fiorini 8CCE902228554B2... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**	DocuSigned by: BB0C12A9C8F04DB... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**
Additional Endorser / Co-PI Chair/Dean	**Date**	**Additional Endorser / Co-PI Chair/Dean**	**Date**
DocuSigned by: Karen Davis ABC3018BC2E74DB... **Director for Pre-Award / NIAR Pre-Award**	6/5/2020 **Date**	**Provost or Sr VP of Ind & Defense Programs** ***Required for proposals with waived indirects and/or cost share***	**Date**

Prop # 200749 GDS: DM

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CERTIFICATION REGARDING LOBBYING

The applicant certifies, to the best of his or her knowledge and belief , that: (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan or cooperative agreement. (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. (3) The applicant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

RESPONSIBLE CONDUCT OF RESEARCH (RCR)

RCR training is a funding requirement for the National Science Foundation (NSF), the National Institutes of Health (NIH) and the USDA National Institute of Food and Agriculture (NIFA). Researchers applying for, and receiving, support from NSF, NIH or NIFA should be familiar with each agency's requirements with regards to RCR and be prepared to provide documentation of appropriate training. While RCR training should be an ongoing component of any research program, at a minimum, personnel on projects with a research component will need to register and complete the "Externally Funded Researchers" RCR course through the Collaborative Institutional Training Initiative (CITI) during the first 90 days of receiving salary support.

Date Rec'd by RTT

Prop # 200749

GDS: DM

Creating Educational Technologies to Assist Refugee Learners: Project Education for All

1. Participating Investigators

Number	Name	Primary Role	Title	Home Dept. and College
1	Mythili Menon	PI/Co-director	Assistant Professor of Linguistics	Fairmount College of Liberal Arts and Sciences, Department of English
2	Karissa Marble-Flint	Co-PI/Co-director	Assistant Professor of Communication Sciences and Disorders	College of Health Professions, Department of Communication Sciences and Disorders
3	JaeHwan Byun	Co-PI	Assistant Professor of Curriculum and Instruction	College of Applied Studies, Department of Curriculum and Instruction
4	Zhiyong Shan	Senior Personnel	Assistant Professor of Computer Science	College of Engineering, Department of Electrical Engineering and Computer Science
5	Janet Twomey	Senior Personnel	Associate Dean and Professor of Industrial, Systems, and Manufacturing Engineering	College of Engineering, Department of Industrial, Systems, and Manufacturing Engineering
6	Andrew Bowman	Senior Personnel	Senior Educator	Intensive English Learning Center
7	Kelly Johnson	Senior Personnel	Assistant Educator and Program Coordinator of Game Design	School of Digital Arts, Shocker Studios
8	Jason Vandecreek	Support Personnel	Special Projects Associate	Community Engagement Institute
9	Hong Tien Vu	Intra KBOR collaborator	Assistant Professor of Journalism and Mass Communication	William Allen White School of Journalism and Mass Communication, University of Kansas

2. Theme

This proposal falls outside of the three core areas of the President's Convergence Sciences Initiative and we are submitting this proposal as a wildcard entry. The main theme of the project is to create free and accessible digital K-12 educational technologies using innovative game-based design for the under-represented refugee and asylee population in Wichita. Thus, the broad theme associated with this project is to provide education for all.

3. Introduction, relevance, and need

3.1 The Problem to be Addressed

This project addresses the issue of "providing inclusive and equitable quality education" (Sustainable development goal 4, UNESCO 2030) for refugee and asylee learners in the United States. The project, titled 'Project Education for All' will proceed in four phases, piloting in Wichita. The first phase will involve creating a signed collaboration partnership between Wichita State University and community partners who assist refugee resettlement in Wichita. This partnership will entail the creation of the 'Refugee Learning and Resettlement Team', comprising of a team of faculty, staff, and administrators from WSU and a team of community members, such as the International Rescue Committee, St. Francis Ministries, and the City of Wichita. The second phase will involve conducting a community research survey to understand and study the personalized needs and requirements of refugee learners. The survey will be administered in the native language of the refugee learners and results of the survey will benefit the creation of a digital, game-based learning intervention for K-12 students which constitutes phase three of the project. The last phase of the project involves piloting the prototype to learners in Wichita and studying the effectiveness of game-based learning through controlled experiments. At the end of the fourth phase, the project team will submit a grant proposal for additional funding to implement and extend the project to Lawrence and Kansas City in collaboration with University of Kansas and beyond Kansas.

Refugees and asylees, migrants fleeing persecution and violence, are often underserved in their host countries due to lack of learning and teaching resources, language barriers, exclusion in the host society, and inadequate health care opportunities. Social capital creates a pathway necessary for the exchange of knowledge and resources between individuals (Woolcock 1998, Putnam 2000). Therefore, it is essential that institutions of higher education work together with resettlement agencies, community members, and providers of English as second language classes (ESL) to create opportunities for refugee learners. Addressing this gap in Wichita is the goal of phase one of the Project Education for All. Wichita State University is uniquely situated to reach out and create a mutually beneficial partnership that includes expanding our service-learning offerings, creating opportunities to increase public awareness of refugee issues, and creating appropriate applied-learning opportunities for refugee and other WSU students. A full draft of the proposed memorandum of agreement as well as the goals of the 'Refugee Learning and Resettlement Team' can be found in Appendix A[1].

The United Nations estimates 70.8 million people have been forcibly displaced worldwide (UNHCR, 2019) and the United States led the world in being the largest resettlement program until 2016. African refugee admissions to the US has steadily increased from 1975 to 2016 (Krogstad, 2017). In 2016, the largest group of refugees arriving in the US was from the Democratic Republic of Congo. Approximately 16,370 refugees came from the Congo in 2016, followed by 12,587 refugees from Syria. From 2012-2019, approximately 500,000 refugees were resettled in the U.S, out of which 1,913 of them arrived in Wichita (U.S State Department, 2019). The majority of them came from the Congo (858), followed by Eritrea (247), and Somalia (243).

The incoming refugee population is expected to integrate into the American society. However, this integration is challenging for a number of reasons. First, integration is affected by past experiences of the refugees. Many of them have fled from war and conflict zones and adjusting to a new way of life in a short span requires overcoming PTSD and other mental health issues, often without adequate access to resources that help combat these issues. Secondly, due to language barriers and lack of proper documentation, children of refugees may not be enrolled in local school districts. It is estimated that more than half of school age refugee children (3.7 million out of 7.1 million) are out of school (UNHCR, 2018). It has been demonstrated that once refugees parents meet the basic needs of food, water, and

[1] A final version of the memorandum of agreement will be put in place with the assistance of WSU's General Counsel if the grant is awarded.

shelter, their primary concern is to ensure their children can go to school (UNHCR, 2001). The percentage of refugee children who are likely to be out of school is five times higher than children who are not refugees. With regard to higher learning, refugees on average attend college at a rate of one percent, with the international average being 34% (UNHCR, 2016). These dire statistics show the need to create easier access to education. Phases 2 and 3 of the project address this gap as illustrated below.

In phase 2, in collaboration with the community partners, an IRB approved Qualtrics survey will be created and disseminated to study the refugee demographic population in Wichita. This survey will attempt to understand the refugee community's access to technologies, such as the number of users who have access to mobile devices, computers and laptops, and stable internet connection. In addition, the survey will also have open-ended questions regarding what the community members see as pertinent to learning, what resources would be more beneficial, and the survey will also make them aware of the creation of our prototype for digital game-based learning. The results of the survey will enable us to create game-based learning strategies personalized to the learner. In addition, one of the core goals of the project is to educate teachers and other educational professions in the Wichita Public Schools on the refugee population. This will aid in integrated teaching skillsets which in turn leads to better learning. Year-end reports of this project will be disseminated at the end of each year to the school districts, as well as the community partners.

In phase 3 of the study, we use an innovative digital game-based learning approach to create a platform (both mobile and desktop) for teaching elementary and middle grade science and arts to refugee children. In the game, students will take on various roles such as detective, spy, tourist etc. and they will be given various situations to play out. The aim of the game is to create a more engaging interface that fosters deep learning as well as literacy. The content of the game will be created according to Kansas Science Standards and the Next Generation Science Standards, as well as the Kansas State Department of Education's English Language Arts and Literacy Common Core Standards. The game-based learning approach combines critical thinking skills with literacy skills. The language of the content will integrate English, in combination with the native language of the refugees, such as Swahili. This will entail faster learning of concepts. Additionally, there will be an interface for teachers and educators, to immerse them in the cultural expectations of the refugee population. One core goal of the project is to improve intercultural competency among educators.

In the last phase of the project, the game-based prototype in collaboration with USD 259 and USD 385 will be rolled out to the refugee students at these schools. As of 2016, Wichita had at least 332 refugee children enrolled in schools (Wichita Public Schools, 2017) in 12 newcomer programs that includes 6 elementary and 3 middle schools. In addition, in collaboration with the City of Wichita, International Rescue Committee and the Breakthrough community church[2], the survey will be sent to refugee populations whose children are currently not enrolled in a school district.

Beyond phase 4 of the project, the results of this three year pilot study will be used to create funding proposals furthering the game-based learning prototype to be a test bed for studying Intelligent Tutoring Systems (ITS), the use of artificial intelligence techniques for performing adaptive tutoring to learners according to what they know about the domain (Sleeman and Brown, 1982) and the Generalized Intelligent Framework for Tutoring (GIFT) that allows authoring of ITS software by training learners in a variety of domains and environments (Sottilaire et al., 2012).

3.2 The Significance of the Problem

Traditional educational systems in the U.S are based on a "one-size-fits-all" philosophy. Recently there have been advances in designing personalized systems, addressing the needs of individual students (Gordon et al. 2016, Andallaza et al. 2012, a.o). However, these systems are currently being tested on

[2] The Breakthrough Community Church is one of the primary churches for the Swahili-speaking refugees from Democratic Republic of Congo, Rwanda, Burundi, and Kenya. Their pastor is from Kenya and the primary language used in the church is Swahili.

people from western, educated, industrialized, rich, and democratic (WEIRD) populations who represent only 12% of the world's population. We know very little about the effectiveness of these models and systems on special, underrepresented populations such as refugee learners. Education is a fundamental human right and there is a huge number of refugee children who are unable to attend elementary and middle school, thereby leading to increase in world poverty.

The significance of this project is that it will help create free and accessible digital, educational technology for refugee learners thereby improving their opportunities for education and as a correlate help in alleviating poverty. It will serve as a tool to empower refugee children and make them successful and help in integrating them into the U.S society. As lack of education and poverty go hand in hand, increasing educational opportunities leads to a decrease in the world's percentage of poverty. Providing personalized game-based learning opportunities for refugee children will provide better lives and better standards of living. Education is a form of empowerment, especially for young girls. In addition, it reduces hunger, fights HIV/AIDS, spurs economic growth and provides a foundation for peace-building (UNICEF, 2015).

By providing a free, accessible, digital game-based learning platform, this project will change the lives of thousands of refugees. During these uncertain COVID-19 times, the use of digital technologies is beneficial as formal school settings require money, time, and resources that they might not have access to. In addition, school districts can be spared from creating, staffing, and finding interpreters and translators which very often can be costly. By allowing refugees to become responsible for their own learning, they can begin to learn much faster, quicker and at their own pace. With the current models of refugee education, refugees must wait for the government or an NGO to come in and set up paperwork, get materials, and staff the schools. Very often this causes unnecessary delays in providing quick access to these special populations. Access to laptops, desktops, and mobile phones will be assessed in Phase 1, thereby ensuring that the educational platform will truly be accessible to the demographic population it is targeting.

The long-term benefits of this project include providing a safe social setting to learn thereby helping relieve refugees of emotional trauma. Offering a digital platform for a child to learn also gives their parents time to do activities they need to do, such as searching for a job, or applying for a driving license, thereby allowing for better integration into the U.S society.

In today's current volatile world, it is important to note that many of these refugees are Africans and they are subjected to racial discrimination, similar to African-Americans who are U.S. citizens. There is an urgent need to address this issue given what is happening in the world today. This growing gap in education among refugee children and American children will create a divide that will be too hard to close if the problem is not addressed immediately. Thus, there is an urgency in creating accessible educational tools and provide equitable education for all, a goal UN hopes to achieve by 2030.

3.3 How the Problem Relates to the Identified Theme

The project qualifies as a wildcard entry as the main line of inquiry is not related to sustainability, health disparity and health delivery, or digital transformation. The primary focus of the project is in addressing the fundamental human right for education and educational opportunities for all communities.

3.4 Why the Convergence Research Cluster is Necessary to Effectively Address the Problem

Research related to learning in K-12 public schools has typically only been a focus of researchers in the field of education. However, a concern is that current curriculum and approaches to learning have resulted in creating curricular content that benefits one community over another, in other words, current existing state models of education bias learning in WEIRD populations to the exclusion of any other population. The refugee population is a special, minority population that creates additional challenges for already severely underfunded state programs of education. Thus, traditional ways of thinking have failed to solve this issue of providing engaging content to speakers with limited English proficiency. Therefore, the current research cluster is necessary in order to address new modes of learning, finding unique ways of

personalizing existing curriculum to these minority populations, and using the power of information technology to provide accessible and equitable education for all.

The existence of new and emerging technologies in the fields of computer science, linguistics, game design, health sciences and literacy, and artificial intelligence provide a platform for researchers in various disciplines to come together to solve the issue of providing equitable educational access to all. Our interdisciplinary team has a wide array of skillsets that integrate well together to propose a unique and innovative solution to the issue of providing equal access to education for all. These will be outlined in the next section.

4. Research Cluster

Our interdisciplinary team of nine members has the relevant skill sets needed to create educational technologies for this pressing societal problem. These include and are not limited to quantitative and qualitative data collection, experimental design, working with under-represented populations and minorities, conducting literacy camps for children, working with children with autism, learner engagement/interaction in an online learning environment, digital game-based learning, developing language learning software for ESL students, digital arts production, creating data analysis software, creating literacy opportunities for low-income communities, mobile phone security and natural language processing. In addition, our intra-KBOR collaborator has worked on digital literacy in immigrants' and refugees' integration to new communities in the U.S.

4.1 Profile of the Members of the Research Cluster

PI Menon has established relationships with the African refugee community of Wichita through her LING 668: Field Methods of Linguistics class offered in Spring 2020. Through this class, she learned Swahili from two refugee language consultants who are undergraduate students of WSU. These refugee language consultants will continue to aid this project through the next three years. As a Service- Learning Faculty Scholar 2019-2020, she has established several community partnerships, including the International Rescue Committee (IRC), Saint. Francis Ministries, and the Kansas Leadership Institute. See attached letters of support from these institutions in Appendix B. PI Menon's expertise includes working with under-represented populations such as the refugee population in Wichita, the Potawatomi tribe in Mayetta KS, and conducting research among these populations by quantitative and qualitative data collection. She has supervised a senior honors thesis, submitted May 2020, titled "Intercultural Competency in TESOL: A Study of Immigrant English Leaners" where data was collected from 48 immigrant students at WSU. In addition, she has published an article with an undergraduate student in Applied Studies on the effects of war and displacement on Palestinian Arabic. She has also supervised several IRB-approved student final projects investigating attitudes towards immigrants on the Wichita State Campus. This presentation was part of the Tilford Workshop at University of Kansas in 2019. Since 2015, PI Menon has been the Linguistics Advisor and Company Mentor of 'Subverses Inc.', an early-stage language learning startup building a suite of language learning tools around their interactive spy video game.

Co-PI Marble-Flint's major research, teaching, and clinical interests include language and literacy in childhood, literacy and autism spectrum disorder, and technology for language-literacy assessment and intervention. Dr. Marble-Flint is the coordinator of the Literacy in Kansas (LinKS) Lab at WSU. As a nationally credentialed and state-licensed speech-language pathologist, Co-PI Marble-Flint has served a diverse population of children and adolescents with speech, language, and language-literacy disorders. She has provided language-literacy assessment and intervention to children in kindergarten through third grades through a Summer Literacy Camp at WSU's Speech-Language-Hearing Clinic since the summer of 2018. This summer camp provides instruction to children who are struggling readers to avoid the "summer slide" or loss of skills that can occur in children who do not receive instruction during the summer months. Of relevance to this proposal, prior to her employment at WSU, Co-PI Marble-Flint conducted survey research on adult-child home literacy practices of Mexican American families in rural Central Nebraska, which culminated in a poster presentation at the American Speech-Language-Hearing Association Convention. In addition, Co-PI Marble-Flint gained experience working with migrant

children and families as a preschool teacher and teacher's aide for the Summer Migrant Program at Head Start in Hastings, Nebraska.

Co-PI Byun has set his career goal as seeking ways to create a learning environment where learners can learn through aesthetic learning experiences, which are engaging, infused with meaning, and felt as coherent and complete. In the journey to pursue the goal, he has studied the factors affecting learner engagement in online learning environments in collaboration with the other faculty members in the School of Social Work at WSU. Also, he has participated in an NSF grant writing project titled, Innovative Technology Experiences for Students and Teachers (ITEST) Grant. Project title: Generation STEAM: Cultivating the Creativity of Underrepresented Students as the Next Generation of STEM Innovators through Art Integration. NSF 19-583 (not funded), in 2019. His research interest in digital game-based learning has been developed since he was a Ph.D. student at Southern Illinois University Carbondale. During the period, he joined a digital game-based learning project and the game his team created became one of the finalists for the 2nd Serious Game Showcase and Challenge, Inter-service/Industry Training Simulation and Education Conference (I/ITSEC, 2007). As an expert in instructional design and technology, he has skills and knowledge in designing digital games with educational content.

Senior Personnel Shan's research expertise lies in the field of software security and reliability. In the recent years, his research interests focus on mobile app security and reliability. He applies Natural Language Processing and program analysis techniques to find security and reliability vulnerabilities in Android apps.

Senior Personnel Bowman manages the Learning Laboratory at the Intensive English Language Center (IELC). He teaches Lab classes and develops ESOL applications for IELC. All of the students in the program are either international students or immigrants who attend IELC in order to improve their English skills to further their academic or professional careers. The language-learning software he develops for IELC classes uses a variety of coding languages, including PHP, MySQL, JavaScript, HTML5, etc. Bowman has served on various committees for TESOL (Teachers of English to Speakers of Other Languages) and manages its computer expo at the yearly conferences. Prior to coming to WSU, Bowman was the Adult Basic Education Coordinator at the Wichita Indochinese Center where he also taught classes for immigrants and refugees. He worked abroad in Paraguay for several years before that, serving as a Spanish/English interpreter, teaching English at a British Council school, and developing software for language learning.

Senior Personnel Johnson is the Program Coordinator of Game Design for the School of Digital Arts. He teaches video game programming, design and development at Shocker Studios. Johnson has a long history of media arts production. He has spent six years as a commercial video producer and animator. He was a partner in Quickdraw Studios and helped them transition their business to the mobile games space. Johnson is also responsible for producing several independent games applications.

This project partners with Support Personnel Vandecreek, a special projects research associate, at WSU's Community Engagement Institute (CEI). CEI's goal is to promote best practices in organizations and communities interested in improving people's lives, as well as fostering connections with community partners looking to create positive change. Vandecreek's skillset aligns with the proposals needs as he has expertise in building teams, software architecture, strategic communications, product development, design, and user experience. Vandecreek also serves on the board of Teach for Life, International who have been working for many years to refine a model of bringing educational opportunities to the poorest of the poor. This organization has a history of birthing grass roots social movements that allow space for self-growth and empowerment.

Senior Personnel Twomey is currently the Associate Dean for Research, Graduate Studies, and Faculty Development. In that role she works closely with faculty to locate sources of funding and develop their research programs. She has organized faculty development seminars focusing on research, assigns new faculty mentors, and travels to NSF with new faculty to meet program offices. As a Program Officer at the National Science Foundation, Dr. Twomey, together with two other NSF Program Officers, developed and delivered two workshops - NSF Proposal Writing and CAREER Proposal Writing.

This project will be the first collaboration among this group of researchers (see Appendix C for bio sketches of the researchers) and it creates the possibilities of several new partnerships of sub-projects and problems that could arise from the implementation of this project. For example, Co-PI Marble-Flint's interest in typically developing children and children with autism could evolve into a project with respect to refugee children who have been diagnosed with autism. Co-PI Bowman can create policy recommendations on the implementation of ESL classes to refugee students of WSU. The team will use existing software and laboratory space, including Menon Lab, LinKS lab, Shocker Studios, resources at the Community Engagement Institute and the Intensive English Language Center, and the Software and Intelligence Lab.

We are fortunate to have Dr. Janet Twomey as our senior personnel and external funding mentor. Dr. Twomey has been successful in procuring external funding from several agencies, such as the NSF and the Directorate of Engineering. Dr. Twomey brings to this project over 25 years of faculty mentorship and she will assist the PI and the Co-PIs in preparing full grant proposals to be submitted at the end of the three year grant funded period.

4.2 Organizational and Management plan for the Cluster

Project Education for All: Organizational Plan for the Cluster

Investigator	**Primary Role(s)**
PI Menon	1. Organize team meetings to discuss research plan and outcomes. 2. Establish partnerships with community members. 3. Communicate with WSU's administration team to implement the 'Refugee Learning and Resettlement Team'. 4. Submit and obtain IRB application before implementing the study. 5. Develop curriculum content for the game. 6. Data analysis of the survey. 7. Beta testing the game prototype and sending it out to other testers. 8. Supervise a graduate research assistant, and two undergraduate refugee contractors.
Co-PI Marble-Flint	1. Establish and maintain partnerships with community members. 2. Work with PI Menon on IRB approval for the study. 3. Organize workshops regarding literacy among the refugee population. 4. Data analysis of the survey. 5. Develop curriculum content for the game.
Co-PI Byun	1. Work with Senior Personnel Johnson on designing the game. 2. Creating curriculum content for the game. 3. Creating the survey for Phase two. 4. Data analysis of the survey.
Senior Personnel Bowman	1. Establish and maintain partnerships with community members. 2. Assist Co-PI Byun and Senior Personnel Johnson in designing the game. 3. Creating curriculum content for the game.
Senior Personnel Johnson	1. Create the game-based learning platform. 2. Implement the prototype in Phase four. 3. Supervise an undergraduate student in Year 2.
Support Personnel Vandecreek	1. Establish and maintain partnerships with community members. 2. Assist Senior Personnel Johnson, Co-PIs Byun and Bowman in the design of the game. 3. Assist Co-PI Marble-Flint in organizing workshops regarding literacy among the refugee population. 4. Creating reports of the project for dissemination to the community partners.

Senior Personnel Shan	1. Assist Senior Personnel Johnson, Bowman, Co-PI Byun in the design of the game. 2. Creating curriculum content for the game. 3. Integrating ITS and GIFT software into the next phases of the study.
Senior Personnel Twomey	1. Mentoring the PI and Co-PIs 2. Assisting the PI and Co-PIs in procuring external funding
Graduate Research Assistants and Undergraduate Research Assistant	1. Assist in establishing partnerships with community members. 2. Assist PI in communicating with WSU's administration team to implement the 'Refugee Learning and Resettlement Team'. 3. Assist in IRB application 4. Assist in developing curriculum content for the game. 5. Data analysis of the survey. 6. Beta testing the game prototype and sending it out to other testers.

See Appendix C for a Gantt Chart for Project Education for All: Management Plan for the Cluster.

5. Budget and Return on Investment

The project requests funding of $100,000 per year for three years. A detailed budget and a justification for the budget can be found in Appendix D, prepared with the help of David Melgren at the Office of Research.

The data collected from phase 2 of the study and the prototype of the game designed in phase 3 of the study will serve as pilot data for a full proposal to the be submitted to the National Science Foundation (NSF). In addition, Jacob's Foundation regularly funds proposals related to educational opportunities for children. Extensions of the study include proposals that can be submitted to the National Institute of Health, United Nations, Microsoft and Google.

The project supports two graduate research assistants in Years 1 and 2 of funding, one graduate research assistant in Year 3 of funding, as well as an undergraduate research assistant in Year 2 of funding. The graduate research assistants will be from LAS and CHP. The undergraduate research assistant will be a part of the School of Digital Arts.

Microsoft and Google are pioneers in the industry for creating educational technologies. Creating partnerships with these industries will be beneficial to WSU's mission of applied learning. It will lead to additional internship opportunities for students.

In addition, the project has potential to be designated as an NSF-REU (research engaging undergraduates) site under either migration studies or applied linguistics.

6. Identifying gaps in expertise

We live in a highly displaced world. At Wichita State, the faculty, staff, administration is composed of people who have migrated from other states, immigrated from other countries, leading to diversity. Having a diverse set of people brings new ways of thinking, interdisciplinary opportunities for collaboration, and forward-thinking strategies. It is our belief that this proposal by nature will lead to hiring diverse candidates, thereby increasing our African-American, Latinx, Asian, and other minority faculty representation.

Currently, Wichita State does not have a dedicated faculty member whose research primarily focuses on refugee and immigrant populations. A new faculty hire in the area of refugee studies could assist in the setting up of an interdisciplinary 'Center for Migration Studies' which encompasses interdisciplinary faculty working on studies related to immigrants, refugees, and asylees. This faculty could be hired in the Colleges of Applied Studies and Fairmount College of Liberal Arts and Sciences. This faculty member will be responsible to lead cluster hires in the area of migration, and forced displacement.

Having a leading faculty expertise in this area of migration and forced displacement would help the cluster by identifying availability of funding, and bringing new perspectives to creating solutions to the problem. This faculty member will also be experienced in understanding the traumatic experiences of refugee families and children, which will be key to supporting language learning and identifying language

differences and disorders in this population. Thus, this faculty could also have a joint appointment in the College of Health Professions.

In addition, these are some specific, potential hires relating to gaps in expertise.

a. Forced Migration and International Affairs
   The Center for Migration Studies will benefit from a global thinker and leader. This hire could help lead collaborations with the world-renowned 'Refugee Studies Center', a part of the University of Oxford. This will lead to increased study abroad opportunities, as well as internships and post-doc opportunities. LAS and the School of Business could collaborate in hiring this person.
b. Refugee and Migration Law
   This faculty member will be an expert in migration law and could hold positions in Criminal Justice and the School of Applied Studies.
c. Gender and Forced Migration
   Studying the effects of gender on displacement is crucial when researching forced displacement and migration. This faculty member could hold positions in Women's Studies and the College of Health Professions.
d. Artificial Intelligence expert
   We currently have a gap in an expert in artificial intelligence. This person could inform us regarding new directions to take when applying for external funding, especially related to GIFT and ITS software, mentioned in the introduction section. This faculty member could hold positions in linguistics and the College of Engineering.
e. Game development researcher
   Although we have an expert on game design on our team, the Center for Migration Studies would benefit from having a game development researcher. This person would test and conduct experiments using game-design based learning and hold appointment in the Colleges of Fine Arts, Applied Studies, and LAS.
f. A speech-language pathology expert in diversity and minority populations
   As noted in personal communication with USD 259 speech pathologist, Natasha Reyes, there is a need for a faculty member with expertise in offering courses relating to cultural and linguistic diversity and inter-cultural competency. This faculty member could hold positions in the College of Health Professions and LAS.

7. Curricular Implications

There are several curricular implications resulting from this project. First is the need to set up an interdisciplinary 'Center for Migration Studies'. This center will host faculty working on research on immigrants, refugees, and asylees. Once set up, the center can offer certificate courses on 'Migration Studies'. International migration is one of the most pressing issues facing the global community in the 21st century. Wichita State, similar to other institutions of higher education, relies on international student enrollment. The 'Center for Migration Studies' will contribute to WSU's pledge for diversity and inclusion. The certificate on Migration Studies can be offered at both the undergraduate and graduate levels. The Center can also offer an undergraduate major in 'Migration Studies'. This major will be highly interdisciplinary with courses taught in several departments and colleges such as, English, History, MCLL, Anthropology, Sociology, Psychology, Business school, Applied Studies, and Health Professions. In addition, several existing programs can be updated when new courses are offered on migration studies, such as the course offerings in English which can be made more diverse. Thus, in addition to new course and degree proposals, the Center can also contribute to revamping and updating existing program structures. Once student interest is established, the Center can also develop a Masters in Migration Studies. This program could include a study abroad program, such as summer fieldwork in an international setting, or immersion trips such as trips to India, Africa, or Latin America. Similar study abroad programs can be incorporated into the Bachelors in Migration Studies major as well. This will be in accordance with the LAS Dean's vision of having a study abroad option for every student of WSU.

One of the positive outcomes of this new center will be its emphasis on creating new service-learning and applied-learning opportunities. With respect to service-learning, the creation of the 'Refugee Learning and Resettlement Team' will create new partnerships with local community partners. In addition to service-learning, students will also have access to internships in these community organizations, thus strengthening WSU's commitment to the local Fairmount community and Greater Wichita community. These internships will provide a platform for students to meet applied-learning requirements. The students will have opportunities to work with a different cultural community, such as the Congolese community, thereby providing a "study abroad experience at home". Letters of support from community partners for the creation of the 'Refugee Learning and Resettlement Team' can be found in Appendix C. There are several grants that are available for the creation of the Center and to create scholarships for students traveling to fieldwork locations. Some of these include Andrew W. Mellon Foundation, MacArthur Foundation, Knight Foundation, Ford Foundation, and the Gates Foundation.

A wide range of topics and programs can be included in the Center's research and teaching agenda. These include, Language Access: Translation and Interpretation Policies and Practices, Migration Data Hub, Immigrant Integration Policies, Education and Language Learning, Employment and the Economy, Immigration Policy and Law, Migration and Development, and Refugee and Asylum Policy. Several of these topics are related to two new degree proposals PI Menon has been working on, the Applied Linguistics Major and the American Sign Language Major. In addition, the English department is in the planning stages of a new Digital Humanities Initiative and several of these topics could contribute to this initiative as well. The new course offerings in the Center can be created as 'First Year Seminars' and the research opportunities arising from the Centre's offerings can contribute to the Honors College's FYRE: First Year Research Experience in STEM. Therefore, the Center integrates well with already existing programs, and enhances the applied-learning and service-learning mission of Wichita State. The programs offered in the Center will lead to increased enrollment and contribute to the LAS's mission of internships and study abroad for all.

A curriculum gap has been identified in the Communication Sciences and Disorders (CSD) department by a community partner. Recent graduates of WSU's CSD master of arts (MA) in speech-language pathology program have indicated that cultural and linguistic diversity and cultural competency is an area where they feel overwhelmed without much background information to rely on in their new positions[3]. While the topic of cultural and linguistic diversity is covered across the curriculum, a new course in cultural and linguistic diversity and working with refugee families will broaden the students' depth of knowledge in this area and open enrollment to community partners. New badge courses will be developed and cross-listed in CSD and Linguistics. Initial badge course offerings will include working with children from Culturally and Linguistically Diverse Populations, and with Language Learning in Children from Refugee Families. By implementing these courses as badges, they will be available to interested community partners in the fields of speech-language pathology, education, special education.

8. Sustainability and Impact

The CSI funding will provide seed money to collect pilot data for the creation of a prototype to be tested before a full proposal submission to the National Science Foundation (NSF). NSF has regularly funded proposals dealing with refugee and forced migration through the Division of Behavioral and Cognitive Sciences (BCS), and the Division of Social, Behavioral, and Economic Sciences (SBE) both in the linguistics program as well as in the office of Multidisciplinary Activities (SMA). Funding has also been available through the Division of Research on Learning (DRL) and RAPID grants. In addition, occasional funding opportunities arise through the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Refugee Resettlement. The funding proposal preparation will start in Year 2, under the mentorship of Senior Personnel Twomey. See below for a timeline.

[3] (Personal communication with Natasha Reyes, USD 259 speech-language pathologist and program specialist for the cultural and linguistic diversity team, 4-8-2020 and 6-2-2020).

Project Education for All: Expected timeline for Submission of External Funding Proposal

Date/Year	Task	Personnel
August 2022	1. Start planning NSF proposal 2. Identify programs with specific calls 3. Contact program managers	PI Menon, Co-PI Marble-Flint, and Co-PI Byun and Collaborator Tien Vu meet with Senior Personnel Twomey
August 2022-August 2023	1. Analyze results of the effectiveness of the prototype 2. Write a draft of the proposal for NSF	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Collaborator Tien Vu
January 2024	1. Full proposal submission to NSF	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Collaborator Tien Vu

In addition to the NSF proposal, the cluster will monitor for other funding calls throughout the August 2022-August 2023 funding cycle. If any appropriate calls for proposals or DCLs are available, the cluster will plan on submitting proposals to these calls.

The following are the goals and expected outcomes of the project.

Project Education for All: Phases 1-4 and beyond goals and expected outcomes

Goals	Outcome	Year	Personnel
Establish a working partnership with local community partners Sub-goals: More applied-learning and service-learning opportunities for WSU students.	Creation of the 'Refugee Learning and Resettlement Team'	By December 2020 (Mid-Year 1 of funding)	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Senior Personnel Bowman, and Support Personnel Vandecreek, and 2 graduate research assistants
Understand the needs and requirements of refugee learners in Wichita	Conduct a demographics and assessment of refugee learners survey	By August 2021 (End of Year 1 of funding)	PI Menon, Co-PI Marble-Flint, Co-PI Byun, Collaborator Tien Vu, 2 graduate research assistants, and 2 undergraduate research refugee contractors.
Provide equitable and accessible education to all	Creation of a game-based learning platform for refugee learners in Wichita	August 2021-August 2022 (Year 2 of funding)	Co-PI Byun, Senior Personnel Bowman, Senior Personnel Johnson, Support Personnel Vandecreek, Senior Personnel Shan
Testing the effectiveness of game-based learning	Making the game-based learning platform available to students in USD 259, USD 385, and others	August 2022-August 2023 (Year 3 of funding)	PI Menon, 1 graduate research assistant and 1 undergraduate research assistant
Procure external funding for expansion of study to Kansas City and surrounding areas	Submit NSF proposal	January 2024 (Post funding)	PI Menon, Co-PI Marble-Flint, Co-PI Byun, and Collaborator Tien Vu with

			mentorship from Senior Personnel Twomey
Provide additional course offerings and applied-learning opportunities to WSU students	Creation of the 'Center for Migration Studies'	Fall 2024 (Post funding)	Entire cluster
Disseminating reports to the discipline and community	Creating reports at the end of every year, and publications in top journals and conference submissions	At the end of every year; beyond funding period	SupportPersonnel Vandecreek (for end of year reports); entire cluster for publications/ conferences

The creation of the 'Center for Migration Studies' will benefit the research cluster with the possibility of adding additional faculty members with expertise in the gaps outlined in Section 6. In addition, the new programs that will come out of the creation of this center will increase enrollment for the Fairmount College of Liberal Arts and Sciences.

One of the primary benefits of this project to the local economy of Wichita and Kansas is the creation of a free, accessible tool available to the teachers of K-12 system. The tool will aid the teachers in providing quality education to all students of Wichita and Andover Public Schools, among others. It will be a valuable resource supplementing the Multilingual Education Services (MES) offered by the Wichita Public Schools. By creating this digital game-based learning platform, Wichita State can be a pioneer in the regents' institutions, as well as other institutions in the I-35 corridor. It will make WSU stand apart, and enforce WSU's commitment to the local and greater Wichita community. By creating an educational tool benefiting under-represented and minority students, WSU will uphold its commitment to being "an essential educational, cultural, and economic driver for Kansas and the greater public good".

9. Intra-KBOR collaborations

The research cluster will be collaborating with Collaborator Hong Tien Vu, an Assistant Professor in the William Allen White School of Journalism and Mass Communication at the University of Kansas. Collaborator Vu brings expertise related to text mining, machine learning, social network analysis, and sentiment analysis. His community-based intervention approach involves finding solutions to issues that underserved communities are facing. He has worked in the areas of helping refugees with integration, aiding advocacy organizations in improving gender equality, and advising nonprofits on how to more effectively communicate their works to various audience groups.

Collaborator Vu successfully completed a diversity research project titled "Digital media, social support and adjustment: Effects of digital literacy on immigrants' and refugees' integration to new communities in the U.S" between 2017-2018. His latest project, funded by the University of Kansas, Center for Migration was completed in 2018-2019. His experience in completing these projects will prove valuable to the 'Project Education for All'.

In particular, Vu's projects offered training courses on digital technologies to refugees from African countries and Myanmar. There are several types of digital skills Vu's projects provided his clients through numerous training courses. They include (1) basic computer skills for beginners (e.g., using Microsoft Word, searching for information, using google applications such as translation services, maps, and emails among others); (2) digital literacy skills with regards to misinformation (e.g., credibility evaluation, password creation and protection as well as information source differentiation, among others), and; (3) social media for small business (e.g., basic social media marketing, advertising, interacting with customers). The curriculum was designed based on the results from a series of focus groups with potential participants and extensive consultations with community leaders. The objectives of these activities included helping refugees who were information and communication technology (ICT) beginners learn how to use computers and the internet in their everyday life in the U.S. confidently and safely, as well as

equipping those who were interested in farming digital marketing skills to start and develop their businesses.

The research components of his projects, however, aimed to examine the adoption and use of digital technologies by refugees in their integration process. Specifically, they sought to investigate how refugees use digital technologies to seek social support and adapt to different aspects of their new life in the U.S. The projects were based on empirical evidence of positive impacts of the internet and digital skills on users' online social support seeking and adjustments (Costanza-Chock, 2011; Tsai, 2006). They also stemmed from the fact that technology use varies widely among different population groups. In particular, migrants/immigrants, especially refugees, have been on the far end of the digital divide, where both digital literacy and access to the internet are real challenges for these users (Alarm & Imran, 2015; Kluzer, Hache & Codagnone, 2008). Vu's projects have, therefore, contributed to finding the solutions to bridging the gap in digital use by refugees, hence providing support to this underserved population group in their integration into new communities.

In implementing his projects, Vu recognized one of the major obstacles for the training programs was participants' insufficient English language skill. This problem soon became a barrier to achieving the project goal in increasing participants' digital literacy. This barrier made learning ICT skills more challenging for participants as the language of instruction was English, which had to be translated to their native languages. Additionally, the language barrier prevented participants from applying the knowledge and digital literacy skills they had acquired from the projects into their everyday life in the U.S. as most contents related to their new local communities are in English.

In these projects, Vu worked closely with local institutions including Kansas City's Kansas Public Library and several other local nonprofits (e.g., Catholic Charities of Northeast Kansas) that provide support services to refugees. Vu's background as a communications professional for nonprofits working on projects fighting social injustice and campaigning for sustainable development will also be useful in helping to develop networks with local community leaders. Furthermore, Vu has been involved in a project that provided digital and online health information literacy training to seniors in Kansas City, MO. A research study based on the results from this project has been accepted for publication in *New Media & Society,* a top journal in the field of media studies. But most importantly, through this project he has gained extensive experience working with different underserved populations who have different needs for education and different expectations.

Vu's expertise in social scientific research will be helpful for many of the project activities. In his research, Vu frequently uses traditional social scientific methods including focus groups, in-depth interviews, surveys, and experiments. His two recent projects that are closely related to the present one here were conducted using a community-based intervention approach. Apart from these traditional methods, Vu has also collaborated with computer scientists from Boston University in an interdisciplinary project to develop AI systems that enable quantitative studies of media coverage and public discussion of climate challenges and disaster response.

The role(s) of Collaborator Vu will include attending meetings with the cluster, helping in preparing the IRB-approved assessing personalized needs of refugee survey, providing expertise during creation of curriculum content and game design, meetings with PI, Co-PIs, and Senior Personnel Twomey on preparing the NSF draft proposal, and submitting the NSF proposal funding along with the PI and Co-PIs. Thus, collaborating with Vu and the University of Kansas will highly benefit the research team at Wichita State, leading to new opportunities for funding and publishing joint papers.

10. Innovation campus involvement

The proposal also collaborates with two other partners in the innovation campus, Sedgwick County Wichita and City of Wichita. The PI is in touch with Mayor Brandon Whipple regarding the creation of the 'Refugee Learning and Resettlement Team', as well as the digital game-based learning platform, see attached letter of support in Appendix B. The successful integration of the educational technology into the Wichita school system will require resources and cooperation with the City of Wichita. The Mayor has given full support to the project and this will ensure the success of the project.

For the creation of the app version of the digital game-based learning platform, the cluster is exploring partnering with another innovation campus partner, namely Deloitte. Graduate research assistants in Year 2 of funding could intern at Deloitte and assist in the creation of the app. In addition, the project could reach out to Cybertron PCs to offer additional computers in Year 3 of the project. Partnerships with MidWest e-Sports are also being explored. In addition, the research cluster could partner with YMCA on campus in exploring possibilities of conducting literacy and health related workshops for refugee members. Lastly, collaborations could be created with Dassault Systemes, especially with their 3D experience platform located on the innovation campus. It would be highly innovative to use their 3DExcite software and integrate it with our unique game-design platform. Graduate research assistants could intern with Dassault Systemes while helping us in creating the game-design platform. These exciting opportunities will be pursued if funding is awarded.

In addition, we are also pursuing collaboration opportunities with Boston Consulting Group (BCG). BCG has education consultants and industry experts who partner with leading companies, institutions, governments, and organizations. BCG recognizes that innovation and digital transformation will help solve difficult challenges that the education sector is facing. Our proposal and BCG are in alignment as we are both looking to evaluate how digital learning can improve access to education, achievement, and equity. This also includes studying how models can be replicated and adapted for the needs of a community. Additionally, a new approach to how we communicate about educational policy and funding is at play. Often spending on education is seen as a cost or loss, when in reality a strong case can be made for framing the discussion in terms of a return on investment. Similar research to this has been established in early childhood funding called the Heckman equation in early childhood which states that for each dollar invested into early childhood, society gets a net gain of 13%. BCG can help us demonstrate that our project will empower the lives of the refugee population and also reduce the potential social burdens placed upon the communities in which they now call home.

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Appendix A: Proposed Memorandum of Agreement for the Creation of the 'Refugee Learning and Resettlement Team'

Agreement of Cooperation/Collaboration between
Refugee Resettlement Community Partners and Wichita State University, 2020

Wichita State University (WSU) and Refugee resettlement community partners (RRCP) such as International Rescue Committee, St. Francis Ministries, desire to develop a mutually beneficial partnership.

WSU and RRCP share common interests and a commitment to assisting refugees and asylees rebuild successful lives in Southcentral Kansas and to educating our students and our Wichita community toward these efforts.

WSU and RRCP agree that cooperative activities under this MOA may consist of (but are not limited to) the following:

1) Expand existing service-learning opportunities for WSU students to work with refugee and asylee populations.

2) Explore the possibility of RRCPs hiring WSU students who can advance refugee-centered initiatives, thereby advancing applied-learning opportunities for WSU students.

3) Explore the possibility of RRCP and WSU jointly sponsoring an annual conference on refugee issues that would address the needs of governmental agencies, school districts, health care organizations, social service agencies, employment programs, and others.

4) Explore collaborative research projects regarding refugee issues using mutually developed protocol for considering potential research studies; pursue grants that might be available for such research.

5) Explore the possibility of WSU creating a credit-granting certificate program in refugee/migration studies.

6) Explore joint ventures that provide a venue for refugees to share their cultures with WSU students and faculty as well as other Greater Wichita residents.

7) Assemble a team of WSU and RRCP individuals that will meet quarterly to pursue the above initiatives. This group will serve as the nexus for discussing research, seminars, symposia and other similar activities that explore issues surrounding refugee resettlement: acculturation, language acquisition, economic self-sufficiency, child and adult education, health and mental health well-being, and integration.

8) Advance the vision that RRCP and WSU together can become an important resource for addressing refugee resettlement issues, serving Kansas and beyond.

_____	_____
Richard Muma Date	TBD Date
Provost, Wichita State University	

Appendix B: Letters of support

Number	Letter of support organization/consultant name	Role in the project
1	Dr. Francis Connor, Wichita State University	Chair of PI's home department
2	Dr. Andrew Simpson, University of Southern California	Senior consultant and expert
3	Dr. Murtuza Jadliwala, UT San Antonio	Senior consultant and expert
4	Dr. Katherine Cramer, Wichita State University	Senior consultant and expert
5	Dr. Frehiwot Wuhib, Media Resource Center, WSU	Senior consultant and expert
6	Justin Rorabaugh, Shocker Studios, WSU	Senior consultant and expert
7	Dr. Emily Fedele, Institute for Defense Analyses, VA	Senior consultant and expert
8	Dr. Chinyere Okafor, Wichita State University	Senior consultant and expert
9	Community Engagement Institute, WSU	Community Partner
10	International Rescue Committee	Community Partner
11	Saint. Francis Ministries	Community Partner
12	Dr. Brandon Whipple, Mayor of Wichita	Community Partner
13	Rev. Anthony Macari, Breakthrough Community Church	Community Partner
14	KMUW	Community Partner
15	Kansas Leadership Center	Community Partner

WICHITA STATE UNIVERSITY
FAIRMOUNT COLLEGE OF LIBERAL ARTS AND SCIENCES
Department of English

May 29, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Hippisley:

I write this letter to strongly support Dr Mythili Menon's 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All', a program she is submitting as a wildcard entry in the Convergence Sciences Research Cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. Speaking as Dr Menon's colleague in the English department, her talents for and commitment to interdisciplinary teaching and research, especially her enthusiasm for engaging and mentoring undergraduate and graduate students in original research, make her the perfect person to lead this project.

Dr. Menon's proposal corresponds with the English department's proposed Applied Linguistics major, which together would make Wichita State the most innovative center for the study of linguistics in the Great Plains. Its game-based learning program will strengthen other digital humanities initiatives in the English department and LAS generally. The interdisciplinary 'Center for Migration Studies' will offer new degree programs and enhance course offerings in English and several other departments, while at the same time it will provide new opportunities for WSU to collaborate with community partners.

Therefore, on behalf of the English department I offer my and the department's enthusiastic support of Dr. Menon's program. Feel free to contact me with any further questions or concerns.

Sincerely,

Francis X. Connor
Associate Professor and Interim Chair
Department of English
Wichita State University

USC Dornsife
Dana and David Dornsife
College of Letters, Arts and Sciences

DEPARTMENT OF LINGUISTICS
Andrew Simpson
Professor

From: Andrew Simpson,
Professor of Linguistics,
Chair of the Department of Linguistics,
University of Southern California,
GFS 301D, Los Angeles, CA 90089-1693

May 21, 2020

To: Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount, Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

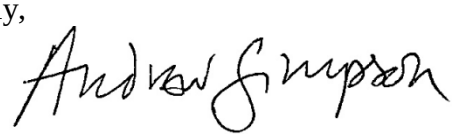
Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. Dr. Menon graduated from the Linguistics Department at University of Southern California in 2016 and I was part of her dissertation committee. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Yours sincerely,



Andrew Simpson, USC Linguistics

University of Southern California
GFS 301, Los Angeles, California 90089-1693 • Tel: 213-740-3674 • Fax: 213-740-9306

UTSA The University of Texas at San Antonio™

College of Sciences | Department of Computer Science

May 21, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. Dr. Menon and I have previously collaborated on an interdisciplinary, WSU MURPA funded project 'Studying the Online Spread of Misinformation on the Web'. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Murtuza Jadliwala, PhD
Assistant Professor of Computer Science
Department of Computer Science
University of Texas, San Antonio

WICHITA STATE UNIVERSITY
COLLEGE OF APPLIED STUDIES
School of Education

May 22, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Dr. Katherine Mason Cramer
Professor and Program Chair, Middle/Secondary English Education
School of Education
Wichita State University
Katie.Cramer@wichita.edu

May 22, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Dr. Frehiwot Wuhib
Senior Instructional Designer- STEM
Media Resources Center
Wichita State University

WICHITA STATE UNIVERSITY
COLLEGE OF FINE ARTS
Shocker Studios

June 03, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Justin Rorabaugh
Director, School of Digital Arts and Shocker Studios
Assistant Educator of Media Arts
Wichita State University

June 05, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I have known Dr. Menon in a professional capacity since 2010. I am excited to be a consulting member of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. The project also has a very high chance of securing external funding from agencies such as the National Science Foundation.

I wholeheartedly support this proposal and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Emily Fedele

Dr. Emily Fedele
Research Staff Member
Institute for Defense Analyses
4850 Mark Center Drive
Alexandria, VA 22311
efedele@ida.org

RE: Letter of support for President's Convergence Science Initiative proposal

Okafor, Chinyere

Fri 6/5/2020 1:10 PM

To: Menon, Mythili <Mythili.Menon@wichita.edu>;

Please let me know whether the following will be ok?

I write in strong support of the proposal, “Creating Educational Technologies to Assist Refugee Learners: Project Education for All,” for the wildcard entry in the Convergence Sciences research cluster. This is a game-based learning platform for refugee learners in Wichita, Kansas. It is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. Led by Dr. Menon, the team of nine consists of interdisciplinary researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, and Community Engagement Institute, as well as a collaborator from University of Kansas’ School of Journalism. Many of these team members have previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners. This team converges diverse scholarly knowledge and skills that will facilitate success of this interdisciplinary project

My confidence in the team’s capability and the expected educational outcome of the project for an educationally disadvantaged group motivated my willingness to serve as a senior consultant and expert for the research cluster. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations. It has a very good chance of securing external funding from agencies such as the National Science Foundation. I unequivocally support this proposal.

From: Menon, Mythili <Mythili.Menon@wichita.edu>
Sent: Friday, June 5, 2020 11:50 AM
To: Okafor, Chinyere <chinyere.okafor@wichita.edu>
Subject: Re: Letter of support for President's Convergence Science Initiative proposal

Dear Dr. Okafor,
Please let me know if you need any additional information in order to sign the letter of support.
Thank you,
-Mythili

--
Dr. Mythili Menon
Assistant Professor of English and Linguistics
Director of Menon Lab
Linguistics Advisor
Associate editor *Journal of South Asian Linguistics*
Department of English
Wichita State University
Phone: 316-978-6763
www.mythilimenon.com

From: Menon, Mythili
Sent: Wednesday, June 3, 2020 6:12:16 PM

WICHITA STATE UNIVERSITY
COMMUNITY ENGAGEMENT INSTITUTE

May 29, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies for Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Teresa L. Strausz

Teresa L. Strausz, LMSW, MSOD
Director, IMP*ACT* Center
WSU Community Engagement Institute
WSU Old Town
238 N. Mead
Wichita, KS 67202

International Rescue Committee
1530 S Oliver
Wichita, KS 67218
TEL +1 316.351.5495

www.Rescue.org/Wichita

May 26, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Michele Green

Michele Green
Executive Director
International Rescue Committee

Saint Francis MINISTRIES

Yeni Telles
Director
International Ministries USA
Providing healing and hope to children and families

May 26, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies for Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners. Saint Francis Migration Ministries provides services to refugee families and we are willing to serve as a senior consultant and expert on the project.

Sincerely,

Yeni Telles, LMSW
Director of International Ministries USA
Saint Francis Ministries
Wichita, KS 67218

CITY OF
WICHITA

Office of the Mayor

May 27, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster competition. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am fully supportive of this project and The City of Wichita will be a community partner of the research cluster.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations in the City of Wichita.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project. The City of Wichita will partner with the team to ensure the educational platform will reach the thousands of refugee families in Wichita and surrounding areas.

Sincerely,

Dr. Brandon Whipple
Mayor of Wichita
City Hall

City Hall • First Floor • 455 North Main • Wichita, Kansas 67202-1622
T 316.268.4331 • F 316.858.7743
www.wichita.gov

Letterhead

May 28, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dr. Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project. When the project team is ready to disseminate the survey among refugees in Wichita, I will put Dr. Menon in touch with members of my church.

Sincerely,

Pastor's name Rev. Anthony Macari
Affiliation Breakthrough Community Church.

Pastor Anthony Macari
Breakthrough Community Church
06-04-2020.

Generated by CamScanner

June 08, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the President's Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am excited to be a community partner of the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Debra Fraser

Debra Fraser, General Manager of KMUW

KANSAS LEADERSHIP CENTER

June 07, 2020

Dr. Andrew Hippisley
Dean of Liberal Arts and Sciences and Professor of Linguistics
1845 N. Fairmount
Wichita State University
Wichita, KS 67260

RE: Wichita State University Project Education for All Convergence Science Research Cluster

Dear Dean Andrew Hippisley:

I am writing to confirm my support for the 'Creating Educational Technologies to Assist Refugee Learners: Project Education for All' for the wildcard entry in the Convergence Sciences research cluster. This proposal is highly innovative and addresses one of the core UNESCO goals for 2030: Providing equitable education for all populations. The interdisciplinary nature of this 9-member team creates a strong research group with a high likelihood for success. I am willing to endorse the research cluster based on Dr. Menon and her team's previous experiences in interdisciplinary projects, data analysis, and credibility with local community partners.

This project provides the opportunity for an interdisciplinary convergence of researchers, staff, and students from Linguistics, Engineering, Health Sciences, Applied Studies, Digital Arts, Intensive English Center, Community Engagement Institute, and a collaborator from Journalism in University of Kansas. This project fills a much-needed gap in creating accessible, low-cost, digital learning platforms for vulnerable and special populations.

This proposal aligns well with the Kansas Leadership Center's mission to foster leadership for stronger, healthier and more prosperous communities in Kansas. I am especially interested to utilize my organization's approach to community development and civic engagement – based on the notion of leadership as an activity available to anyone -- to help this team of interdisciplinary researchers and community partners develop trustworthy processes for both collaboration and for listening, engaging and building trust with the learning populations they endeavor to serve.

I wholeheartedly support this proposal and the creation of the 'Refugee Learning and Resettlement Team', a partnership between Wichita State and local community partners, and I am willing to serve as a senior consultant and expert on the project.

Sincerely,

Sam Smith
Communications Manager
Kansas Leadership Center
ssmith@kansasleadershipcenter.org | 316.712.4955

Appendix C: Bio sketches of the research cluster

BIOGRAPHICAL SKETCH

NAME: Menon, Mythili

eRA COMMONS USER NAME (credential, e.g., agency login): NIL

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Mahatma Gandhi University, India	BA	05/2004	Mass Communication
Central Institute of English and Foreign Languages, India The	MA	05/2006	Linguistics
English and Foreign Languages University, India The English	MPhil	05/2008	Linguistics
and Foreign Languages University, India University of	ABD	08/2010	Linguistics
Southern California	MA	08/2012	Linguistics
University of Southern California	PhD	08/2016	Linguistics

A. Personal Statement

My research expertise lies in the field of theoretical and experimental linguistics, with three research focus areas. My primary research focus area is in the interface of syntax-semantics and morphology, solving issues related to a variety of empirical phenomena in language such as expression of degree modification, predication, and comparison, argument ellipsis, expression of color terms across languages, and notions of finiteness within the clausal domain. My secondary research area is in psycholinguistics, specifically the intersection of linguistics with music, artificial language learning, vision, narrative, accessibility, and other cognitive domains. My third research area is language documentation and revitalization. My research methodologies combine tools from linguistics and psychology to understand better how human cognition works. My approach combines formal modeling with quantitative experimental data and fieldwork focusing on several problems in the syntax-semantics-morphology interface, as well as across modalities. Recently, my research interests have expanded to include healthcare equity and accessibility issues for minorities and refugee populations in Wichita, specifically refugee population from Africa, in addition to the development of linguistic technologies aiding these vulnerable populations.

B. Positions and Honors

Positions and Employment

2016-present	Assistant Professor, Wichita State University
2016-present	Linguistics Program Director, Wichita State University

Other Experience and Professional Memberships

2010-present	Linguistics Society of America (LSA)
2013-present	Society for Music Perception and Cognition (SMPC)
2013- present	Women in Cognitive Science (WiCS)
2014-present	Cognitive Science Society (CSS)
2015-present	Linguistics Advisor and Company Mentor, Subverses LLC, a language learning start up.
2018-present	Undergraduate Research Mentor, Honors College, Wichita State University
2018- present	Member of 'Super Linguistics' global network

Honors

2019-2020	Finalist for Wichita State President's Interdisciplinary Program Award

C. Contribution to Science

Select articles:

1. Menon, M. (accepted). Association with Focus and the Morphological Focus Markers in Malayalam. *Journal of South Asian Linguistics*.
2. García-Pardo, A and Menon, M. (forthcoming in August 2020). The Aspectual Structure of the Adjective: Spanish *Ser* and *Estar*. In, Alfonso Morales-Front, Michael J. Ferreira, Ronald P Leow, and Cristina Sanz (eds.) *Hispanic Linguistics: Current Issues and New Directions*. John Benjamins Publishing.
3. Menon, M and Pancheva,R. (2019). Degree Achievements of Color. In, Mónica Cabrera and José Camacho (eds.) *Exploring Interfaces.* Cambridge: Cambridge University Press.
4. Sleiman, J and Menon,M. (2019). The Changing of Arabic Terminology in Times of War and Displacement. In Temkin Martinez et al. eds, *WECOL Proceedings*.
5. Menon, M and Showstack,R. (2019). Measure Phrases in Spanish Second Language Learners and Heritage Speakers. In Temkin Martinez et al. eds, *WECOL Proceedings*.
6. Menon, M. 2018. Domain General Representations shared across Music and Language. *Studies in Humanities and Social Sciences* 23 (2), 64-86.
7. Menon, M. 2017. Building Superlatives from Property Concepts. In, *Proceedings of LSA 2*, 34:1-9. http://dx.doi.org/10.3765/plsa.v2i0.4086.
8. Menon, M. 2017. The Standard Marker in Malayalam encodes Comparative Semantics. In *Proceedings of the 34th West Coast Conference on Formal Linguistics*, ed. Aaron Kaplan et al., 379-386. Somerville, MA: Cascadilla Proceedings Project.
9. Menon, M. 2016. Reevaluating Standard Analyses of Comparison: The View from Malayalam. In M. Menon and S. Saurov (eds.) In, *Proceedings of FASAL 6*.
10. Menon, M, and Pancheva, R. 2016. Decomposing color expressions in Malayalam. In S. Sundaresan and R. Balusu eds. In, *Proceedings of FASAL V*, pp. 3-20.
11. Wang, F.H, Menon, M, Kaiser, E.K. 2015. Statistical Structures in Artificial languages Prime Relative Clause Attachment Biases in English. In D. C. Noelle, R. Dale, A. S. Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
12. Menon, M and Pancheva, R. 2014. The grammatical life of property concept roots in Malayalam. In U. Etxeberria, A. Fălăuș, A. Irurtzun, B. Leferman eds., *Proceedings of Sinn und Bedeutung* 2013, pp. 289-302.
13. Simpson, A, Choudhury, A, Menon, M. 2013. The derivation and licensing of covert nominals in Bangla, Hindi, and Malayalam. *Lingua* 134, 103-128.
14. Menon, M. 2014. Property Concepts and the Apparent Lack of Adjectives in Dravidian. In, Pritha Chandra and Richa Srishti (eds.) *The Lexicon-Syntax Interface: Perspectives from South Asian Languages*. pp 25-52.
15. Menon, M. 2013. The Apparent Lack of Adjectives in Malayalam and other Related Languages. In Nobu Goto, Koichi Otaki, Atsushi Sato, Kensuke Takita eds. *Proceedings of Glow-in-Asia IX 2012: The Main Session*. Mie University, Japan, pp. 157-171.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1. **PI**: (Pending) Wichita State University, University Research/Creative Projects Award (URCA): "Languages of Wichita.".
2. **PI**: Wichita State University, Dean's Startup Fund. "Language and Cognition Project".

Select Completed Research Support

1. **PI**: Wichita State University, Award for Research/Creative Projects in Summer (ARCS): "Documenting the Language and Culture of Jewish People in Cochin." Award: $4,000; 05/2019-08/2019.
2. **PI**: Wichita State University, Multidisciplinary Research Project Award (MURPA): "Investigating the Spread of Misinformation on the Web." Award: $7,500; 01/2018-06/2018.
3. **PI:** Wichita State University, University Research/Creative Projects Award (URCA): "Documenting Indigenous Food and Language of Potawatomis in Kansas." Award: $4,500; 12/2016-12/2017.
4. **PI:** University of Southern California, Del Amo Fellowship: "Language and Music Research in Madrid, Spain." Award: $5,000; 05/2013-08/2013.

BIOGRAPHICAL SKETCH

NAME: Marble-Flint, Karissa Joy

eRA COMMONS USER NAME (credential, e.g., agency login): KMARBLE-FLINT

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Hastings College, Hastings, Nebraska	Bachelor of Arts	05/2007	Special Education K-12
University of Nebraska at Kearney, Kearney, Nebraska	Master of Science in Education	07/2010	Speech-Language Pathology
Wichita State University Wichita, Kansas	Doctor of Philosophy	05/2017	Communication Sciences and Disorders

A. Personal Statement

My research expertise is in the areas of language and literacy development and disorders across the lifespan, and interprofessional education/interprofessional practice. My primary research line relates to this proposal as I have published articles on technology for language-literacy assessment and intervention in children with autism spectrum disorder. I am interested in expanding this line to include technology supports for other populations. In my secondary line of research in interprofessional education and interprofessional practice, I have been interested in supporting university students in their evolution from the classroom into clinical practice. Additionally, I bring ten years of clinical experience as a state licensed and nationally credentialed speech-language pathologist in both school and university clinic settings to inform this project.

B. Positions and Honors

Positions and Employment

2007-2008	Preschool Teacher, Summer Migrant Program, Head Start, Hastings, NE
2010-2012	Speech-Language Pathologist, Grand Island Public Schools, Grand Island, NE
2013-2015	PRN Speech-Language Pathologist, Quantum Health Professionals, Wichita, KS
2012-2017	Graduate Teaching Assistant, Wichita State University, Wichita, KS
2017-Present	Assistant Professor, Wichita State University, Wichita, KS

Selected Professional Memberships and Certificates

2010-2012	Nebraska Dept. of Health and Human Services Speech Language Pathology License
2010-2012	Nebraska Speech-Language-Hearing Association, Member
2010-Present	American Speech-Language-Hearing Association, Member
2011-Present	American Speech-Language-Hearing Association, Certificate of Clinical Competence
2012-Present	Kansas Dept. for Aging and Disability Services Speech Language Pathology License
2012-Present	Kansas Speech-Language-Hearing Association, Member

2019-Present	Member, Task Force for Speech Language Pathology-Assistants (SLP-A), Kansas Speech, Language, Hearing Association

Honors

2009	Nebraska Speech-Language-Hearing Association Foundation Scholarship
2013, 2014	Pilot International Founders Fund Scholarship
2014	Second Place in Oral Presentations, Wichita State University Graduate Research and Scholarly Projects Symposium
2016, 2020	Alpha Eta Inductee as a Student, Alpha Eta Inductee as a Faculty Member
2013-2021	Award for Continuing Education, American Speech-Language-Hearing Association

C. Contributions to Science

Articles:

- **Marble-Flint, K.,** Strattman, K., & Schommer-Aikins, M. (2020). Comprehension scores among young neurotypical children and children with ASD: Paper and iPad® storybooks. *Journal of Special Education Technology.* https://doi.org/10.1177/0162643420924197
- Musaji, I.Y., Self, T., **Marble-Flint, K.,** & Kanade, A. (2019). Moving from interprofessional education toward interprofessional practice: Bridging the translation gap. *Perspectives of the ASHA Special Interest Groups. 4*(5), 971-976. https://doi.org/10.1044/2019_PERS-SIG10-2018-0020d
- **Marble-Flint, K. J.,** Strattman, K. H., & Schommer-Aikins, M. A. (2019). Comparing iPad® and paper assessments for children with ASD: An initial study. *Communication Disorders Quarterly. 40*(3): 152-155. https://doi.org/10.1177/1525740118780750
- Self, T. L., Mitchell, L. M., Hess, S., **Marble, K. J.,** & Swails, J. (2017). Developing a university-based interprofessional education diagnostic team to identify children with possible autism spectrum disorder. *Communication Disorders Quarterly*. *38*(3): 185-192. doi: 10.1177/1525740116655774

Selected Refereed Presentations:

- **Marble-Flint, K.** Strattman, K., Self, T., Schommer-Aikins, M., Scherz, J. & DiLollo, A. (2017, November). *Comprehension Scores Among Young Typically Developing Children & Children with Autism: Traditional & Tablet-Based Storybooks.* American Speech-Language Hearing Association Annual Convention, Los Angeles, LA.
- **Marble, K.J.,** & Crowe, L.K. (2011, November). *Adult-child literacy practices in Mexican American families of rural central Nebraska.* Poster presented at the American Speech-Language-Hearing Association Annual Convention, San Diego, CA.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

Marble-Flint, K. (Under Review, Submitted April 15, 2020). *Self-Regulated Strategy Development for Writing using Technology with Elementary Children with Autism Spectrum Disorder.* 2020 New Investigators Research Grant. American Speech-Language-Hearing Foundation. (Role: PI, $10,000).

Nkanata, J. & **Marble-Flint, K.** (Awarded May 14, 2020). *Enhancing reading comprehension skills for children with learning disabilities.* Wichita State University Foundation/Dollar General Literacy Foundation. Summer Reading Grant. (Role: Project Director, $3,000).

Selected Completed Research Support (Funded only)

Marble-Flint, K. & Novak, C. (April 2018). *Summer Literacy Camp.* Award for Research/Creative Projects in Summer (ARCS). Wichita State University Office of Research and Technology Transfer. (Role: PI, Funded for summer, $4,000).

Marble, K. (May 2015). *Comparison of iPads and paper tests for assessment of children with autism spectrum disorders (ASD).* Clifford W. & Leah E. Gaulter Memorial Grant. Wichita State University College of Health Professions. (Role: PI, Funded for 1 year, $3,941).

BIOGRAPHICAL SKETCH

NAME: Byun, JaeHwan

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Hanyang University, Seoul, Republic of Korea	BA	02/2001	Educational Technology
Hanyang University, Seoul, Republic of Korea	MA	02/2004	Educational Technology
Southern Illinois University, Carbondale, IL	PhD	12/2012	Education

A. Personal Statement

My career goal is to seek ways to design and develop a learning environment where learners can learn through aesthetic learning experiences that are engaging, infused with meaning, and felt as coherent and complete. In the journey to pursue the goal, I have studied digital game-based learning during the period at Southern Illinois University Carbondale. I noticed the potential of digital games on learner engagement in learning environments and investigated the factors of digital games that can possibly engage learners in a virtual learning environment. Since starting at Wichita State University, I have been expanding my research interests from the digital game-based learning to the factors influencing students' engagement in various learning environments and how to measure the students' engagement level in more objective and quantitative methods. In addition to such areas, I have recently given my attention to learning analytics to see how data collected from students' activities in online learning environments can be used to improve their learning experience. Especially, I have been looking for ways to use learning analytics techniques to improve the quality of the experience of online students who have accessibility issues.

B. Positions and Honors

Positions and Employment

Aug. 2015 - present	Assistant Professor, Wichita State University
Aug. 2012 - Aug. 2015	Post-doctoral Researcher, Southern Illinois University Carbondale
Jan. 2014 – May. 2014	Lecturer, Adjunct

Other Experience and Professional Memberships

2007-present	Member, Korean Society for Educational Technology (KSET)
2007-present	Member, Association for Educational Communications and Technology (AECT)
2007-2012	Member, Association of Teacher Educators (ATE)
2015-present	Member, School Science and Mathematics Association (SSMA)
2016-present	Member, Summer Institute of Distance Learning and Instructional Technology (SIDLIT)
2017-2018	State Advisor, Kansas Technology Student Association

Honors

May. 2019	Technology & Innovation Award, College of Applied Studies, Wichita State University
Aug. 2017	Online Learning Faculty Fellowship (OLFF), Wichita State University
Oct. 2016	NSF/AECT Early Career Award, Ass. for Edu. Communications and Technology (AECT)
Nov. 2007	Finalist for the 2nd Serious Game Showcase and Challenge, Inter-service/Industry Training Simulation and Education Conference (I/ITSEC)

C. Contribution to Science

1. Byun, J., Kang, S. P., Law, V., Jeon, S., & Seo, Y., (Accepted) Students' Citizenship Behavior in Collaborative Learning Environment: Exploring Dual Mediation Model with Emergent Leadership and Group Cohesion. International Journal of Teaching and Learning in Higher Education (IJTLHE).
2. Joung, E., & Byun, J. (Accepted) Content Analysis of Digital Math Games Connecting to the NCTM standards.
3. Kang, S. P., Byun, J., Seo, Y., Law, V., & Ferris, K. (Accepted) Adaptation and Validation of the Measure of Organizational Citizenship Behavior in Collaborative Learning (OCB-CL)
4. Byun, J., & Joung, E. (2018). Digital game-based learning for K-12 mathematics education: Ameta-analysis. School Science and Mathematics Journal.
5. Byun, J., & Loh, C. S. (2015). Audial Engagement: Effects of game sound on learner engagement in digital game-based learning environments. Computers in Human Behavior. 46. 129-138. doi: 10.1016/j.chb.2014.12.052.
6. Byun, J. (2015). Chapter 5. Practical and ethical issues on using social media for educational purpose. In S. Kwon, W. Eom, S. You, Y. Seo, K. Kang, S. Park, H, Shim, S. Shin, H. Kim, J. Byun, S. Kim, J. Lee, & M. Seoung, Social Media and Education. ISBN 978-89-994-0352-1 (Invited, Written in Korean)
7. Byun, J. (2013). Book Review: Pedagogical and andragogical teaching and learning. International Journal of Web-Based Learning and Teaching Technologies(IJWLTT), 8 (2). 106-108.
8. Loh, C. S., & Byun, J (2009). Modding Neverwinter Nights into serious games. In D. Gibson &Y. K. Baek (Eds.), Digital Simulations for Improving Education: Learning Through Artificial Teaching Environments (p. 408-426). Hershey, PA: Information Science Reference.
9. Loh, C. S., Anantachai, A., Byun, J., & Lenox, J. (2007). Assessing what players learned in serious games: in situ data collection, information trails, and quantitative analysis. In Q.Mehdi (Ed.), Computer Games: AI, Animation, Mobile, Educational & Serious Games(CGAMES 2007). Wolverhampton, UK: University of Wolverhampton.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Scholastic Performance

1. Investigation of the Trends and Issues in Learning Analytics in Higher Education
2. Case study: lesson learned from the challenges and experiences of a blind student in online learning
3. Using learning analytics approach to improve accessibility for online learning environments

Select Completed Research Support

1. PI: Wichita State University, University Research/Creative Projects Award (URCA):"Interactions and engagement in Online Learning Enviornments. Award: $4,498 Dec. 2017-Dec. 2018

BIOGRAPHICAL SKETCH

NAME: Zhiyong Shan

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Zhejiang University, China	BS	07/1997	Computer Science
Zhejiang University, China	MS	03/2000	Computer Science
Chinese Academy of Sciences, China	Ph.D	03/2003	Computer Science
Stony Brook University, US	Postdoc	02/2009	Computer Science
University of California, US	Postdoc	08/2015	Computer Science

A. Personal Statement

My research expertise lies in the field of software security and reliability. In the recent years, my research interests focus on mobile app security and reliability. I am applying Natural Language Processing and program analysis techniques to find security and reliability vulnerabilities in Android apps. My recent research results about an important bug in Android operating system was acknowledged by Google and will be fixed soon. The papers are published on top tier computer science conferences like MobiCom, ICSE and OOPSLA.

B. Positions and Honors

Positions and Employment

2017-present	Assistant Professor, Electrical Engineering and Computer Science, Wichita State University
2015-2017	Assistant Professor, School of Computing, University of Central Missouri
2003-2013	Associate Professor/Assistant Professor, Renmin University of China

Other Experience and Professional Memberships

2002-2004	Project Manager/Senior Engineer (Part time), Beijing Rising Anti-virus Software Company

Honors

2004	President Award of Chinese Academy of Science (for top Ph.D. students)
2005	Beijing Science & Technology Achievement Award (for secure operating system)
2007	Science & Technology Award of Chinese Ministry of Public Security (for network security management system)
2010	National Information Security Contest Award of China (third grade, awarding rate 15%) awarded by the Education Ministry of China.
2010	National Information Security Contest Award of China (second grade, awarding rate 7%) awarded by the Education Ministry of China.
2016	Nominee of UCM's Learning to a Greater Degree Award (for teaching)

C. Contribution to Science

Select articles:

[1] Zhiyong Shan, Raina Samuel and Iulian Neamtiu. Device Administrator Use and Abuse in Android: Detection and Characterization. In Proceedings of the 25th Annual International Conference on Mobile Computing and Networking (**MobiCom '19**). ACM, Oct 21-25, Los Cabos, Mexico, pp. 1-16.

[2] Zhiyong Shan, Iulian Neamtiu, Raina Samuel, Self-Hiding Behavior in Android Apps: Detection and Characterization, In Proceedings of the 40th International Conference on Software Engineering (**ICSE 2018**). ACM, May 2018, Gothenburg, Sweden, pp.728-739.
[3] Zhiyong Shan, Tanzirul Azim, Iulian Neamtiu. *Finding Resume and Restart Errors in Android Applications*. ACM Conference on Object-Oriented Programming, Systems, Languages & Applications (**OOPSLA'16**), November 2016. pp.864-880.
[4] Jin, Xinxin, Soyeon Park, Tianwei Sheng, Rishan Chen, Zhiyong Shan, and Yuanyuan Zhou. "*FTXen: Making hypervisor resilient to hardware faults on relaxed cores*." In 2015 IEEE 21st International Symposium on High Performance Computer Architecture (**HPCA'15**), pp. 451-462. IEEE, 2015.
[5] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh: *Shuttle: Facilitating Inter-Application Interactions for OS-Level Virtualization*. **IEEE Trans. Computers** 63(5): 1220-1233 (2014)
[6] Zhiyong Shan, Xin Wang: *Growing Grapes in Your Computer to Defend Against Malware*. **IEEE Transactions on Information Forensics and Security** 9(2): 196-207 (2014)
[7] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh: *Malware Clearance for Secure Commitment of OS-Level Virtual Machines*. **IEEE Transactions on Dependable and Secure Computing**. 10(2): 70-83 (2013)
[8] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh: *Enforcing Mandatory Access Control in Commodity OS to Disable Malware*. **IEEE Transactions on Dependable and Secure Computing** 9(4): 541-555 (2012)
[9] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh, Xiaofeng Meng: *Facilitating inter-application interactions for OS-level virtualization*. In Proceedings of the 8th ACM Annual International Conference on Virtual Execution Environments (**VEE'12**), 75-86
[10] Zhiyong Shan, Xin Wang, Tzi-cker Chiueh, and Xiaofeng Meng. "*Safe side effects commitment for OS-level virtualization*." In Proceedings of the 8th ACM international conference on Autonomic computing (**ICAC'11**), pp. 111-120. ACM, 2011.
[11] Zhiyong Shan, Xin Wang, and Tzi-cker Chiueh. 2011. *Tracer: enforcing mandatory access control in commodity OS with the support of light-weight intrusion detection and tracing*. In Proceedings of the 6th ACM Symposium on Information, Computer and Communications Security (**ASIACCS '11**). ACM, New York, NY, USA, 135-144. (full paper acceptance rate 16%)

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

- PI: Wichita State University, Dean's Startup Fund.

Select Completed Research Support

- Aug 2017 ~ Sep 2018, Models for Enabling Continuous Reconfigurability of Secure Mission. Army Research Lab and NJIT. (PI)
- Nov 2015 ~ Nov 2016, *Binary analysis on the first popular iOS malware*. Professional Development Assistance Grant from Missouri, United States. (PI)
- Jan 2009 ~ Dec 2012, *Flash Disk Based Database Management System*. Supported by National Natural Science Foundation of China as a key project. Number 60833005. (Co-PI)
- Jan 2008 ~ Dec 2010, *Research on Survivability Mechanisms of Operating System by Control Theory*. Supported by National Natural Science Foundation of China. Number 60703103. (PI)
- Jan 2008 ~ Dec 2008, *Research on Static Method for Detecting Security Vulnerability in System Software*. Supported by National Natural Science Foundation of China. Number 60703102. (Co-PI)
- Jan 2007 ~ Dec 2007, *PDCA Cycle based Network Security Management System*. Supported by the Research Foundation of Renmin University. (PI)

BIOGRAPHICAL SKETCH

NAME:Janet (Jan) Twomey

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Engineering Associate Dean for Research, Graduate Studies, and Faculty Development

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION		DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Duquesne University	Pittsburgh, PA	BA	1977	Sociology
University of Pittsburgh	Pittsburgh, PA	BS	1990	Industrial Engr.
University of Pittsburgh	Pittsburgh, PA	MS	1992	Industrial Engr.
University of Pittsburgh	Pittsburgh, PA	PhD	1995	Industrial Engr.

A. Personal Statement

Record of Faculty Mentorship: Dr. Twomey is currently the Associate Dean for Research, Graduate Studies, and Faculty Development. In that role she works closely with faculty to locate sources of funding and develop their research programs. She has organized faculty development seminars focusing on research, assigns new faculty mentors, and travels to NSF with new faculty to meet program offices. As a Program Officer at the National Science Foundation, Dr. Twomey, together with two other NSF Program Officers, developed and delivered NSF Proposal Writing and CAREER Proposal Writing two workshops. Since leaving NSF she has participated in over ten NSF sponsored CAREER proposal writing workshops.

Embracing Diversity: Dr. Twomey has been working to increase the number of underrepresented students in the WSU College of Engineering since she was hired. Dr. Twomey is WSU PI for a current subaward under Kansas State University for the NSF Louis Stokes STEM Pathways Implementation-Only Alliance: Kansas Pathways to STEM program, the PI for the NSF ADVANCE Catalyst award. She has participated nationally and internationally in events to improve the status of women faculty: Invited day long advisor and presentation to North Dakota State University ADVANCE Program on Research Program development: Short and long term strategies, September 30, 2014; Twomey, J. (2009), Research Program in Sustainability, Poster Session, Women's International Engineering Research Summit, Barcelona, Spain, June 1 – June 4, 2009; US-Turkey Workshop: Empowering Women in Industrial Engineering Academia - International Collaborations for Research and Education, Ankara, Turkey, March 2012, Smith (Auburn) and Twomey (Co-PI), NSF, $60K.; Twomey Keynote: "A Path to Full Professor" ADVANCE Workshop, Auburn Alabama, April 2010.

B. Positions and Honors

Positions and Employment

2015-Present	Associate Dean for Research, Graduate Studies and Faculty Success, College of Engineering, Wichita State University
2008-Present	Professor, Industrial and Manufacturing Engineering, Wichita State University
2000-2008	Associate Professor, Industrial and Manufacturing Engineering, Wichita State University
2001-2004	Program Officer, Manufacturing Enterprise Systems, Division of Design, Manufacture and Industrial Innovation, Engineering Directorate, National Science Foundation
1994-2000	Assistant Professor, Industrial and Manufacturing Engineering, Wichita State University
1997-1990	Research Specialist: Data Analyst/Manager. Built and managed data analytic team. Department of Child and Adolescent Psychiatry, University of Pittsburgh School of Medicine

Other Experience and Professional Memberships

Just named	Ulrich Advisory Board Member
2012 -2014	VP for Academics, Board of Trustees, Institute for Industrial Engineering

1998-present	NSF Proposal reviewer

Honors

1998	National Science Foundation (NSF) CAREER Award,
2011	Named by AD ASTRA as one of the 150 Kansas Famous Scientists
2007	Boeing Faculty Fellow
1997, 1999, 2000	Nominated Board of Trustees Excellence in Teaching (BOT)

C. Contribution to Science (most recent)

- Alshqaqeeq, F., Esmaeili, M. A., Overcash, M., & Twomey, J. (2020). "Quantifying hospital services by carbon footprint: A systematic literature review of patient care alternatives." Resources, Conservation and Recycling, 154, 104560.
- Alshqaqeeq, F., C. McGuire, M. Overcash, K. Ali, J. Twomey, (2020) Choosing Imaging Modalities to Meet Patient Needs with Lower Environmental Impact, Resources, Conservation and Recycling, 155, April, 2020, 6 p.
- Esmaeili, A., McGuire, C., Overcash, M., Ali, K., Soltani, S., & Twomey, J. (2018). "Environmental impact reduction as a new dimension for quality measurement of healthcare services." International journal of health care quality assurance.
- Mason, C., Twomey, J., Wright, D., & Whitman, L. (2017) Predicting Engineering Student Attrition Risk Using a Probabilistic Neural Network and Comparing Results with a Backpropagation Neural Network and Logistic Regression. Research in Higher Education, 1-19.
- Esmaeili, A., Twomey, J. M., Overcash, M. R., Soltani, S. A., McGuire, C., & Ali, K. (2015). "Scope for energy improvement for hospital imaging services in the USA." Journal of health services research & policy, 20(2), 67-73.
- Soltani, S. A., Overcash, M. R., Twomey, J. M., Esmaeili, M. A., & Yildirim, B. (2015). "Hospital Patient-Care and Outside-the-Hospital Energy Profiles for Hemodialysis Services: Report of Two Cases." Journal of Industrial Ecology, 19(3), 504-513.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

- NSF ADVANCE Catalyst: A Catalyst to Increase the Representation and Advancement of Women and Underrepresented Minorities in Academic STEM Careers at Wichita State University, PI: Twomey, $299734, (7/19 – 8/21).
- NSF Louis Stokes STEM Pathways Implementation-Only Alliance: Kansas Pathways to STEM; PI: Twomey, WSU Sub-award, $813,257 (9/18 - 8/23).
- NSF Workshop to Scope an Effective Environmental Genome Mapping Initiative, PI: Twomey, $49,850, (6/17 – 12/20).

Select Completed Research Support

- NSF: Sustainable Energy Pathways: Collaborative: Achieving a Sustainable Energy Pathway for Wind
- Turbine Blade Manufacturing ; Twomey and Overcash (PIs), collaborative with U. Mass-Lowell 9/12-9/16, $390,302/$1,800,000
- Workshop: Energy/Materials Dimensions of Engineering in Evidence-Based Healthcare, Twomey and Overcash (PIs); NSF, 8/10-8/12, $29.5K
- US-Turkey Workshop: Empowering Women in Industrial Engineering Academia - International Collaborations for Research and Education, Ankara, Turkey, March 2012, Smith (Auburn) and Twomey (CoPI), NSF, 9/1/-8/12, $60K.

BIOGRAPHICAL SKETCH

NAME: Andrew Philip Bowman

eRA COMMONS USER NAME (credential, e.g., agency login): n/a

POSITION TITLE: Senior Educator

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
University of Kansas	B.A.	05/1986	History
Rutgers University	M.A.	05/1993	History

A. Personal Statement

In addition to teaching lab classes at IELC, as the Learning Laboratory Coordinator at IELC I develop the center's original software for faculty and students. The language-learning applications projects focus on grammar, reading, and listening practice. Administrative programs include grading, database management, and assessment.

These applications use a variety sources (audio, text, and video) and have been designed expressly for WSU students and staff. I also have adapted traditional language assessment instruments to function as web-based applications, including a licensed application of Educational Testing Service's SPEAK exam which is administered to all prospective graduate teaching assistants whose must meet the English proficiency standards.

My current work deals on accessibility and web-based applications with a focus on universal design across multiple platforms and interfaces. This includes designing new software as well as remediating existing programs for mobile-use and W3C compliance.

B. Positions and Honors

Positions and Employment

1996-present	Learning Laboratory Coordinator, Intensive English Language Center, Wichita State University
1994-1996	ABE Coordinator, Instructor, Wichita Indochinese Center
1992-1994	ESOL Instructor, Software Developer, Self-employed; Asuncion, Paraguay
1989-1992	Systems Analyst, Grader; Rutgers University; New Brunswick, NJ
1986-1988	ESOL Instructor, Centro-Anglo Paraguayo; Asuncion, Paraguay
1986	Spanish Tutor, University of Kansas; Lawrence, Kansas

Other Experience and Professional Memberships

2001-present	Teachers of English to Speakers of other Languages (TESOL)

Honors

1989-90	Rutgers Graduate Scholarship
1986	Foreign Language and Area Studies Fellowship

C. Contribution to Science

Selected original software titles presented at various expositions:

1. *World News Review* - Software Fair, TESOL, St. Louis, MO, 2001

2. *Reading Cards* - Developers' Showcase, TESOL, Long Beach, CA, 2004
3. *NetEnglish web browser* and *Journal Writer* - TESOL, San Antonio, TX, 2005
4. *tDictionary* - EV Fair Classics, TESOL, New York, NY, 2008
5. *Original Computer Activities for Multi-Level ESL Programs* - Kansas International Educators Conference, Pratt, KS, 2011
6. *Portable e-readers* - TESOL, Dallas, TX, 2013
7. *TalkWrite* - TESOL, Portland, OR, 2014
8. *Web-Based Oral Proficiency Testing* - (with Aimee Leisy), MIDTESOL, Kansas City, MO, 2016
9. *Enhanced Speak* - TESOL, Seattle, WA, 2017
10. *Beyond YouTube* - Professional Development Day, Kansas State University, Manhattan, KS, 2017
11. *YouTube Task Editor* - TESOL, Chicago, IL, 2018
12. *Spelling* - TESOL, Atlanta, GA, 2019 9

Other original software developed for IELC:

1. *Academic Topics*
2. *Reading & Vocabulary*
3. *Dictation*
4. *SPEAK (web-based version)*
5. *Fixes*
6. *Dialogs*
7. *Journal Writer*
8. *Timed Readings*
9. *Analytical Reasoning*
10. *IELTS Reading*
11. *Grammar Tutorial*
12. *TOEFL Structure*

BIOGRAPHICAL SKETCH

NAME: Kelly Johnson
eRA COMMONS USER NAME (credential, e.g., agency login): NIL
POSITION TITLE: Assistant Educator & Program Coordinator of Game Design

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	END DATE	FIELD OF STUDY
Wichita State University	BA	12/2012	Electronic Communication
Wichita State University	MA	ON GOING	Innovation Design

A. Personal Statement

My expertise lies in digital arts production. I've spent a nearly decade-long career in various areas of creative production before pursuing an academic career. In that time, I have worked in tandem with a variety of artists to complete projects that range from business advertising campaigns and educational video courses to mobile utility applications and video games. My current role as Program Coordinator for Game Design has afforded me the chance to shape the program to be successful in a region that is generally described as a game design desert. My grand goal for the program is to guide students into non-traditional game design careers such as educational game development, real-time 3D rendering for business development and entrepreneurship. I believe the potential for these fields is currently untapped in the midwest region. This project is one more step into this direction and I am thrilled for the chance to collaborate with Dr. Menon on it.

B. Positions and Honors

Positions and Employment

2012-2014	Video Producer, Media Resources Center
2014-2017	Motion Graphics Designer, Brothers & Company
2017-2018	Video Producer, Wichita State University
2018-Present	Assistant Educator, Wichita State University

Other Experience and Professional Memberships

2017-2019	Partner, Quickdraw LLC
2018-Present	Organizer, ICT Game Jam

BIOGRAPHICAL SKETCH

NAME: M. Jason Vandecreek

eRA COMMONS USER NAME (credential, e.g., agency login): n/a

POSITION TITLE: Special Projects Research Associate

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Kansas State University	On leave	05/2004	Electrical and Computer Engineering, Computer Science, Information Systems, Organizational Psychology

A. Personal Statement

I am currently the lead technology research associate for the Center for Applied Research & Evaluation (CARE) at WSU's Community Engagement Institute (CEI). Essentially, I help research teams by designing custom software to collect, organize, clean, analyze, and visualize research data. I also train staff in the latest software tools to enable quality improvement, consistency, and capacity. Our team also focuses on high quality communication design to ensure greater insight and understanding of research reporting. This includes interactive websites, maps, and internet / phone applications. CARE team FY20 projects exceed $800k.

The Community Engagement Institute has served Kansas for 35 years. The goal of the institute is to promote best practices in organizations and communities interested in improving people's lives, as well as fostering connections with community partners looking to create positive change. The institute has 6 centers and 4 initiatives. For the last 8 years, I have been proud to assist this amazing and diverse team.

Recent accolades include building interactive reports for public health, early childhood development and education domains. In current fiscal year (FY20), CEI managed 90 grants and contracts totaling nearly $6,500,000. Outside of WSU, I own a small consulting firm, Vandecreek Consulting, and serve on the board of directors for the beloved, Trees for Life / Teach for Life, International Inc.

B. Positions and Honors

Positions and Employment

2000	K-State Online, Software Developer, Department of Continuing Education, Manhattan, KS
2001	Networking Engineer, a startup Internet Service Provider and ASP, Frontier Consulting Group
2004	Network Engineer and Systems Deployment, Electronic Medical Records, Pulse Systems, Inc Wichita, KS
2005	Web and Software Developer, Howerton+White Interactive, Wichita, KS

2005-present	Owner, Vandecreek Consulting, Wichita, KS
2012-present	Research Associate, Community Engagement Institute, Wichita State University, KS

Other Experience and Professional Memberships

2012-present	Volunteer and Board Member, Trees for Life / Teach for Life, International, Wichita, KS

C. Contribution to Science

1. Assist team at CARE-CEI conducting research and evaluation on early childhood developmental measures. We developed custom tools in Python and R to analyze the data and produce reports and visualizations. Dr. Lynn Schrepferman has over 20 years of experience in research, evaluation, and implementation of evidence-based prevention and interventions. We are using novel, innovative methods with multi-level modeling and factor analysis in this domain. Supported by FY20 grant of $500,000 from the Kansas Children's Cabinet and Trust Fund.
2. Social science and sustainable systems modeling. Assist team at Teach for Life, International, to develop and publish evidence-based teaching methods from retired and active professional educators. Support the creation of innovative and reproducible models for lesson building and dissemination. Systems level thinking about how to sustainably overcome poverty through the lens of education and empowerment. Early adoption has occurred by communities and institutions in India and several other countries.

BIOGRAPHICAL SKETCH

NAME: Vu, Hong

eRA COMMONS USER NAME (credential, e.g., agency login): NIL

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Hanoi National University, Vietnam	BA	06/1995	Linguistics
University of Kansas	MS	05/2011	Journalism & Mass Communications
University of Texas, Austin	PhD	12/2015	Journalism

A. Personal Statement

My scholarship is informed by my professional experience in both journalism and strategic communication. My journalism research examines how digital technologies are changing newsroom practices in different countries. I am also interested in factors that affect the global news flow. My strategic communication research is largely about the effects of emerging technologies on social change (e.g., social, climate, and environmental justice). In this line of research, I have investigated the influence of ICT or social media on various groups (e.g., refugees, nonprofits).

I use a variety of methodological approaches in my various research methods including quantitative (e.g., survey, content analysis, experiment), qualitative (e.g., textual analysis, in-depth interview), and computational (e.g., text mining, machine learning, social network analysis, sentiment analysis). I have recently adopted a more community-based intervention approach, which has allowed me to actively contribute to finding best solutions to different issues that underserved communities are facing (e.g., helping refugees with integration, assisting seniors with detecting misinformation, aiding advocacy organizations in improving gender, and suggesting best communication practices to nonprofits, among others).

B. Positions and Honors

Positions and Employment

2015 – present	Assistant Professor, William Allen White School of Journalism & Mass Communications, University of Kansas
2015 – present	Faculty Affiliate, Center for East Asian Studies, University of Kansas
2013 – 2014	Lecturer, Department of Professional Communications, Royal Melbourne Institute of Technology
2013 – 2014	Communications Manager, Oxfam in Vietnam
1995 – 2009	Journalist for various news organizations including the Associated Press

Other Experience and Professional Memberships

2011-present	Association for Education in Journalism and Mass Communication (AEJMC
2011-present	International Communication Association

Honors

2014 – 2015	Bess Heflin Fellow, University of Texas at Austin
2011	Honors for Masters' Thesis
2009 – 2011	Fulbright Scholar

C. Contribution to Science

Select articles:

1. Vu, H. T.**,** Trieu, T. L. & Nguyen, H. T. (Accepted). Routinizing Facebook: How journalists' role conceptions influence their social media use for professional purposes in a socialist-communist country.

Digital Journalism.

2. Seo, H., Bloomberg, M., Altschwager, D., & Vu, H. T. (Accepted). Vulnerable populations and misinformation: A mixed-methods approach to underserved minority seniors' online information assessment. *New Media & Society.*
3. Vu, H. T., McCombs, M., Russell, A. & Pain, P. (Accepted). Deepening the concept of 'compelling arguments': Linking the substantive and affective dimensions of attributes in assessing the effects of climate change news on public opinion. *The Agenda Setting Journal*.
4. Vu, H. T. & Lynn, N. (2020). When the news takes sides: Automated framing analysis of coverage of the Rohingya crisis by elite press from three countries. *Journalism Studies.*
5. Duong, H. T., Vu, H. T., & Nguyen, L. V. T. (2020). Influenced by anonymous others: Effects of online comments on risk perception and intention to communicate. *Health Communication.*
6. Seo, H. & Vu, H. T. (2020). Social media & global activism: A survey of transnational nonprofits. *Nonprofit and Voluntary Sector Quarterly*.
7. Vu, H. T., Do, H. V., Seo, H., & Liu, Y. (2019). Who leads the conversation on climate change?: A study of a global network of NGOs on Twitter. *Environmental Communication*.
8. Vu, H. T., Liu, Y., & Tran, V. D. (2019). Nationalizing a global phenomenon: A study of how the press in 45 countries and territories portrays climate change. *Global Environmental Change, 58.*
9. Duong, H. T., Nguyen, L. T. V., & Vu, H. T. (2019). Association between online social influence and corporal punishment: An experimental study. *Child & Adolescent Social Work Journal*.
10. Chen, Y. & Vu, H. T. (2019). The role of contextual and structural factors in antibiotic use among European Union citizens: A multilevel analysis. *International Journal of Communication, 13,* 3379-3402.
11. Nguyen, A. & Vu, H. T. (2019). Testing popular discourse on the "echo chamber" effect: Does political polarisation occur among those relying on social media as their primary politics news source? *First Monday*, *24*(6).
12. Duong, H. T., Vu, H. T., & Nguyen, N. (2019) Activists' strategic communication in an authoritarian setting: Integrating social movement framing into issues management. *International Journal of Strategic Communication, 13*(2), 133-151.
13. Vu, H. T., Liefu, J., Cueva-Chacon, M. L., Riedl, M. J., Tran, V. D., & Bobkowski, P. (2018). What influences media effects on public perception? A cross-national study of comparative agenda setting. *International Communication Gazette*. *81*(6-8), 580-601. *(This article uses news media data in five languages).*
14. Vu, H. T., Lee, T.-T., Duong, H. T.*, & Barnett, B. (2018). Gendering leadership in Vietnamese media: A role congruity study on news content and journalists' perception of female and male leaders. *Journalism & Mass Communication Quarterly*, *95*(3), 565–587.
15. Vu, H. T., Duong, H. T., Barnett, B., & Lee, T.-T. (2017). A role (in)congruity study on Vietnamese journalists' perception of female and male leadership. *Asian Journal of Communication, 27*(6), 648-664.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1. PI: (Pending). Faculty General Research Fund: *Network structure of fake news on Twitter regarding the corona virus.* $3,500.
2. PI: (Pending). Faculty General Research Fund: *What influences audience trust in, accurate identification of, and intention to share fake health news/disinformation.* $3,289.72.
3. PI: (Pending). New Faculty General Research Fund: *American public's use of Information and beliefs, concerns and adoption of climate change measures*. $7,960.

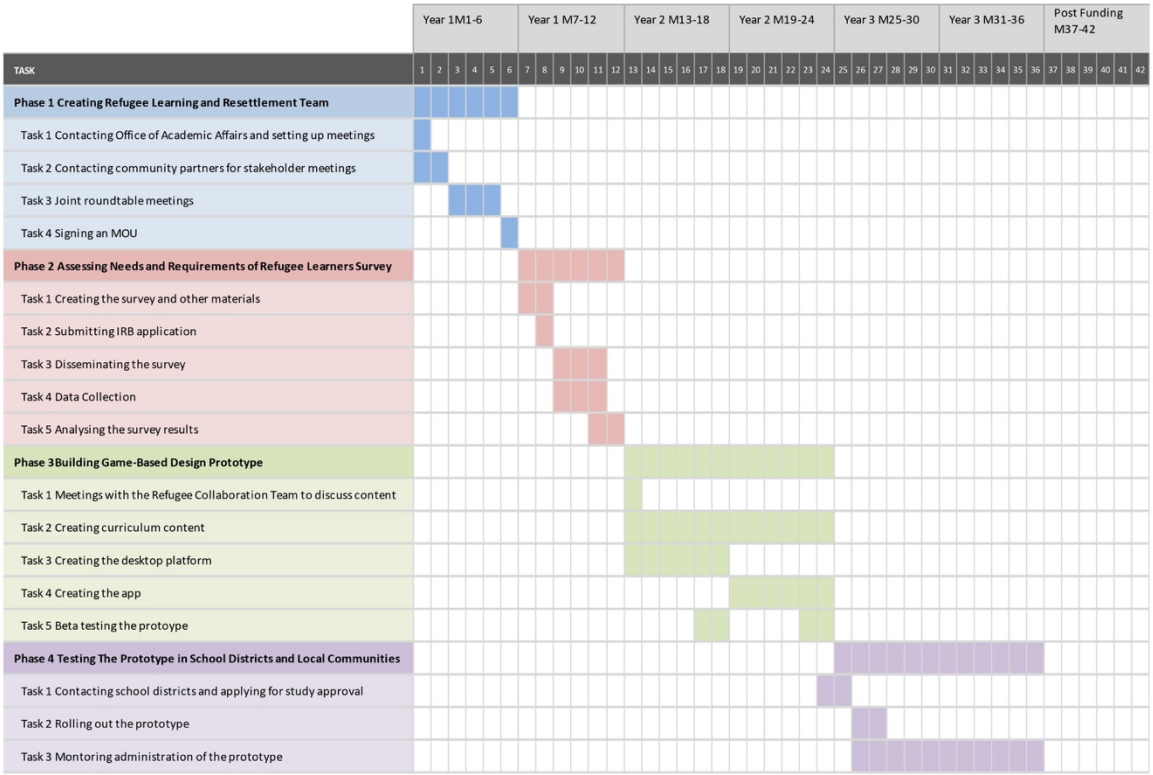
Select Completed Research Support

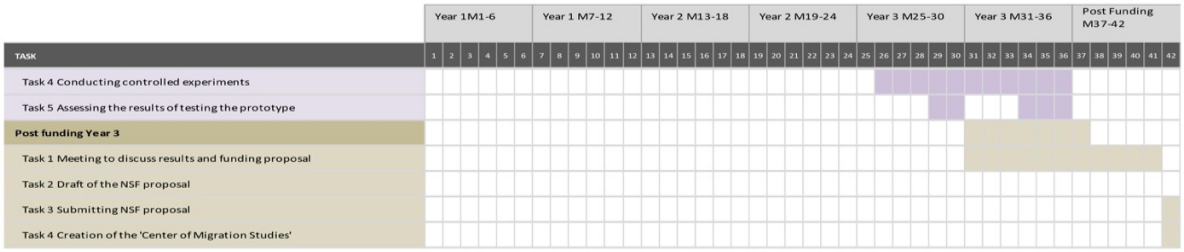
1. PI: University of Kansas, Diversity Research: *Digital media, social support and adjustment: Effects of digital literacy on immigrants' and refugees' integration to new communities in the U.S.* $4,931.60. (2017 – 2018).
2. PI: University of Kansas, Center for Migration: *Digital media, social support and adjustment: Effects of digital literacy on immigrants' and refugees' integration to new communities in the U.S.* $5,000. (2018 – 2019)
3. PI: Oxfam in Vietnam. Action research as part of a national campaign advocating for female leadership: *Journalism and female leadership*. $39,694 (2015 –2016)

Appendix D: Gantt Chart for Project Education for All: Management Plan for Cluster

Project Education for All

Wichita State University
PI: Mythili Menon





Appendix E: Budget and Budget Justification

Proposal #: 200749
PI: Mythili Menon
Agency: State of KS - PCSI
Date: 5/21/2020

		Year 1	Year 2	Year 3	Total		Annual Base	1.03	Monthly	Contract Mo.	Sum Mos	AY Mos	T&E
Key Personnel													
PI: Mythili Menon		$ 4,647	$ 4,786	$ 6,573	$ 16,006		$ 55,761	$ 55,761	$ 6,196	9	1		75%
PI Fringes:	0.18379	$ 854	$ 880	$ 1,208	$ 2,942								100%
Co-PI: Karissa Marble-Flint		$ 5,663	$ 5,833	$ 8,011	$ 19,507		$ 67,958	$ 67,958	$ 7,551	9	1		75%
Fringes:	0.18379	$ 1,041	$ 1,072	$ 1,472	$ 3,585								100%
Co-PI: Jaehwan Byun		$ -	$ 4,513	$ -	$ 4,513		$ 52,588	$ 52,588	$ 5,843	9	1		75%
Fringes:	0.18379	$ -	$ 830	$ -	$ 830								0%
Senior Personnel: Andrew Bowman		$ 2,459	$ 2,533	$ -	$ 4,992		$ 46,845	$ 46,845	$ 3,904	12	1		63%
Fringes:	0.39	$ 959	$ 988	$ -	$ 1,947								63%
Senior Personnel: Kelly Johnson		$ 3,836	$ 3,951	$ -	$ 7,787		$ 54,795	$ 54,795	$ 6,088	9	1		63%
Fringes:	0.18379	$ 705	$ 726	$ -	$ 1,431								63%
Senior Personnel: Janet Twomey		$ -	$ -	$ 1,617	$ 1,617		$ 152,350	$ 152,350	$ 12,696	12	3	9	0%
Fringes:	0.35	$ -	$ -	$ 566	$ 566								0.0%
													1.0%
Senior Personnel: Zhiyong Shan		$ -	$ -	$ 1,195	$ 1,195		$ 84,471	$ 84,471	$ 9,386	9	3	9	0%
Fringes:	0.18379	$ -	$ -	$ 220	$ 220								0.0%
Total Key Personnel		**$ 20,164**	**$ 26,112**	**$ 20,862**	**$ 67,138**								1.0%
Other Personnel							**Weeks**	**Rate**	**#of GRAs**	**Hrs/Week**			
GRA Salary - Academic Year:		$ 27,200	$ 28,016	$ 14,428	$ 69,644		40	$ 17.00	2	20	Year 1-2		
GRA Fringes	0.011	$ 299	$ 308	$ 159	$ 766			**Ins**	1	20	Year 3		
Insurance		$ 2,128	$ 2,192	$ 1,129	$ 5,449			1,064	*Note: Insurance & Tuition prorated the same (based on 20 hrs FT)*				
GRA Salary - Summer:		$ 8,160	$ 8,405	$ 4,328	$ 20,893		12	$ 17.00	2	20	Year 1-2		
GRA Fringes	0.011	$ 90	$ 92	$ 48	$ 230			**Ins**	1	20	Year 3		
Insurance		$ 426	$ 439	$ 226	$ 1,091			213					
							Weeks	**Rate**	**No. of Indiv**	**Hrs/Week**			
Undergrad Student		$ -	$ 5,923	$ -	$ 5,923		46	$ 10.00	0	0			
Undergrad Fringes	0.011	$ -	$ 65	$ -	$ 65		50	$ 11.50	1	10			
Total Other Personnel		**$ 38,303**	**$ 45,440**	**$ 20,318**	**$ 104,061**		46	$ 10.00	0	0			
Total Salaries		**$ 51,965**	**$ 63,960**	**$ 36,152**	**$ 152,077**								
Total Fringes		**$ 6,502**	**$ 7,592**	**$ 5,028**	**$ 19,122**								
Total Salaries & Fringes		**$ 58,467**	**$ 71,552**	**$ 41,180**	**$ 171,199**								
Equipment													
		$ -	$ -	$ -	$ -								
Total Equipment		**$ -**	**$ -**	**$ -**	**$ -**								
							Mileage Rate	**Miles**					
							0.575	404					
Travel							**Flight**	**Hotel**	**Per Diem**	***Ground Trans.**	***Other**	**# of People**	**# of Days**
Local Travel		$ 232	$ 239	$ 246	$ 717								
		$ -	$ -	$ -	$ -								
Total Travel		**$ 232**	**$ 239**	**$ 246**	**$ 717**								
Participant Support Costs							**Participants**	**Pay Rate**					
Stipends		$ -	$ -	$ -	$ -								
		$ -	$ -	$ -	$ -								
Total Participant Support Costs		**$ -**	**$ -**	**$ -**	**$ -**								
Supplies													
Curriculum Design Materials		$ 3,242	$ 4,043	$ 3,750	$ 11,035								

School Visit Supplies				$ 1,500	$ 1,500								
Total Supplies		**$ 3,242**	**$ 4,043**	**$ 5,250**	**$ 12,535**								
Contractors													
Refugee Services		$ 4,000	$ 3,500	$ 4,000	$ 11,500								
Jason Vandecreek		$ 10,000	$ 2,500	$ 32,500	$ 45,000								
		$ -	$ -	$ -	$ -								
Total Vendors/Contractors		**$ 14,000**	**$ 6,000**	**$ 36,500**	**$ 56,500**								
Subreceipients													
University of Kansas		$ 5,000	$ -	$ 5,000	$ 10,000								
Total Subrecipients		**$ 5,000**	**$ -**	**$ 5,000**	**$ 10,000**								
							Note: Insurance & Tuition prorated the same (based on 20 hrs FT)						
Other Expenses							**Tuition**	**Cr Hrs/AY**	**# of GRAs**	*- If needed, 6 Cr Hrs for Summer*			
Tuition Remission		$ 13,809	$ 14,223	$ 7,324	$ 35,356		$ 383.57	18	2	*- Add $50/Cr Hr for engineering GRAs.*			
Publication Costs		$ 1,000	$ 750	$ 750	$ 2,500		**Incentive**	**Participants**	1				
Participant Survey Incentive		$ 1,000	$ -	$ -	$ 1,000		$ 10.00	100					
Printing		$ 500	$ -	$ -	$ 500								
Meeting Refreshments		$ 750	$ 750	$ 750	$ 2,250								
Tablet - $500/ea		$ 500		$ 1,500	$ 2,000								
Laptop		$ 1,500	$ 1,500	$ 1,500	$ 4,500								
Software			$ 943		$ 943								
Curicculum Design Materials		$ -	$ -	$ -	$ -								
Total Other Expenses		**$ 19,059**	**$ 18,166**	**$ 11,824**	**$ 49,049**								
Total Direct Costs		**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 300,000**								
**MTDC		$ 81,191	$ 85,777	$ 87,676	$ 254,644		Adjust MTDC Formula for subrecipients						
0%		$ -	$ -	$ -	$ -		Internal Award						
Total (Direct + Indirect Costs)		**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 300,000**		0%	Unrecovered Indirects:		$ -			

Prepared by: DM
Checked by: DC

BUDGET NARRATIVE

A. Senior Personnel - $47,384

1. Dr. Mythili Menon, PI and Co-Project Director ($18,948): Dr. Menon is budgeted for 0.75 FTE of one summer month in years one and two of the project and 1.0 FTE of one summer months in year three of the project. She will be responsible for organizing team meetings, establishing partnerships with community members, submitting the IRB application, developing curriculum content for the game, beta testing the prototype, supervising a GRA and two undergraduate research assistants and data analysis of the survey. Fringes are calculated at 18.379% of her salary per Wichita State's approved rates.

1. Dr. Karissa Marble-Flint, Co-PI and Co-Project Director ($23,092): Dr. Marble-Flint is budgeted for 0.75 FTE of one summer month in years one and two of the project and 1.0 FTE of one summer months in year three of the project. She will be responsible for establishing partnerships with community members, organizing literacy workshops among the refugee population, assisting the PI in developing the IRB application, and data analysis of the survey. Fringes are calculated at 18.379% of her salary per Wichita State's approved rates.

   Dr. Jaehwan Byun, Co-PI ($5,344): Dr. Byun is budgeted for 0.75 FTE of one summer month in year two of the project. He will be responsible for assisting in game design, developing curriculum content for the game, creating the survey and data analysis of the survey. Fringes are calculated at 18.379% of his salary per Wichita State's approved rates.

B. Other Personnel - $123,815

Andrew Bowman, Senior Personnel ($6,939): Mr. Bowman is budgeted for 0.63 FTE of one calendar month in years one and two of the project. He will be responsible for assisting Dr. Byun and Senior Personnel Johnson in designing the game and providing curriculum content for the game. Fringes are calculated at 39% of his salary per Wichita State's approved rates.

Kelly Johnson, Senior Personnel ($9,218): Ms. Johnson is budgeted for 0.63 FTE of one summer month in years one and two of the project. She will be responsible for creating the game-based learning platform and implementing the game prototype. Fringes are calculated at 18.379% of her salary per Wichita State's approved rates.

Dr. Janet Twomey, Senior Personnel ($2,183): Dr. Twomey is budgeted for 0.01 FTE of one calendar month in year three of the project. She will be responsible for mentoring the PI and co-PIs and assisting in obtaining external funding for the project. Fringes are calculated at 35% of her salary per Wichita State's approved rates.

Dr. Zhiyong Shan, Senior Personnel ($1,415): Dr. Shan is budgeted for 0.01 FTE of one summer month in year three of the project. He will be responsible for assisting Dr. Byun

and Senior Personnel Johnson in designing the game and providing curriculum content for the game. Fringes are calculated at 18.379% of his salary per Wichita State's approved rates.

Graduate Students ($98,073): Two graduate students (GRA) are budgeted at 0.50 FTE during the academic years and summer in years one and two of the project and one graduate student in year three of the project. The rate is $17.00/hr including an annual 3% COLA. The GRAs will be from the English and Communication Sciences and Disorders departments and they will be responsible for assisting in establishing partnerships with community members drafting the IRB application, designing the curriculum, beta testing the game prototype, and data analysis. The GRAs' fringes are calculated at 1.1% plus $1,277/year in insurance including an annual 3% COLA.

Undergraduate Student ($5,987): One undergraduate student is budgeted at 0.25 FTE during the academic year and summer in year two of the project. The rate is $11.50/hr. The undergraduate will be from Shocker Studios and they will be responsible for helping establish partnerships with community members and helping design and create the educational platform. The undergraduates' fringes are calculated at 1.1%.

C. Equipment - $0

None budgeted

D. Travel - $717

Approximately 400 miles in local travel are budgeted each year at the State of Kansas approved rate of $0.575/mile including an annual 3% COLA. This local travel will be carried out by the graduate RAs in order to establish contacts with the refugee community, through partnerships with the City of Wichita, International Rescue Committee, and the Breakthrough Community Church.

E. Participation Support Costs - $0

None budgeted

F. Supplies - $12,535

Curriculum Design Materials ($11,035): Funds are budgeted in years one through three for materials to design curriculum for the educational platform, both the desktop and the mobile version.

School Visit Supplies ($1,500): Funds are budgeted in year three for materials such as incentives for school teachers to carry out the school visits and test the effectiveness of the prototype .

G. Contractors - $56,500

Refugee Services (11,500): Funds are budgeted for Chishugi Omba to provide assistance with the refugee populations such as interpreting services and translation.

Jason Vandecreek ($45,000): Funds are budgeted for Mr. Vandecreek to assist Kelley Johnson with the game design, software development, and beta testing the prototype.

H. Subrecipients - $10,000

Funds are budgeted to issue a subaward to the University of Kansas in order for Dr. Hong Tien Vu, Assistant Professor of Journalism, to help prepare the survey for the refugee community, and to provide expertise during creation of curriculum content and the game design, and to assist in preparation of NSF proposal for external funding.

I. Other Expenses - $49,049

Tuition Remission ($35,356): In accordance with WSU policy, funds are budgeted for 18 credit hours for each GRA each year. The tuition is calculated at $383.57 per credit hour and includes and annual 3% COLA.

Publication Costs ($2,500): Funds are budgeted for Jason Vandecreek/Community Engagement Institute to create reports at the end of each year for dissemination to the funding agency, community and industrial partners.

Participant Survey Incentive ($1,000): In order to ensure broad participation from the refugee community a $10 incentive will be provided to 100 participants who fill out the survey.

Printing ($500): Funds are budgeted in year one in order to print the publication reports, and/or any survey needed to complete school visits.

Meeting Refreshments ($2,250): Funds are budgeted in order to provide coffee and other light refreshments at the stakeholder meetings with members from WSU, community partners, and industry partners.

Tablets ($2,000): Tablets will be purchased in year one and year three of the project. These tablets will be used by the GRAs for analysing the survey results in year one, and they will be made available for use in year 3 for school visits.

Laptop ($4,500): Funds are budgeted in order to purchase three laptops will be purchased. These laptops will be used by the two graduate research assistants and the undergraduate research assistant to assist with the survey dissemination, as well as the creation of the educational platform.

Software ($943): Game-design software will be purchased in year two of the project. This software will be needed in order to create the educational platform, both desktop and mobile.

J. Direct Costs - $300,000

K. Indirect Cost - $0

Internal award, none budgeted.

L. Total Costs - $300,000

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WSU OFFICE OF RESEARCH PROPOSAL ROUTING FORM

Prop # 200749

GDS: DM

MAC USERS: Please fill complete using the latest version of Adobe Reader

FINAL proposals are due a MINIMUM of 3 days prior to the Agency Deadline

Paper submissions which include cost share and/or waived indirects require additional processing time.

Principal Investigator (PI): Mythili Menon

Agency Deadline: 06/08/20

Sponsor/Agency: State of Kansas - Wichita State University

Solicitation #:

Project Title: Creating Educational Technologies to Assist Refugee Learners: Project Education for All

Period From: 08/01/2020 To: 08/01/2023

	YEAR ONE	TOTAL PERIOD
Direct Costs:	$100,000.00	$300,000.00
Indirect Costs	$0.00	$0.00
Total Costs	$100,000.00	$300,000.00
Cost Share:	$0.00	$0.00

PI's Effort (Total Project Person Months) 2.5

Course Release? No Overload? No

Research Type: Development

Indirect (F&A) Rate (MTDC):

(•) Organized Research 48%	( ) Off Campus 26%
( ) Instruction 50%	( ) Commercial 63.61%
( ) Other Sponsored Activities 30%	

If Sponsor Limits F&A, what rate is allowed? 0%

Rate applied to this proposal (if not listed above)

Budget is Lab Rate ONLY ( ) Yes (•) No

Includes Subreceipients (•) Yes ( ) No

Fundamental Research (•) Yes ( ) No

Research where the results are ordinarily published and shared broadly within the research community, and for which the researcher has not accepted restrictions for proprietary or national security reasons.

COMPLIANCE REVIEW: To be completed by the PI - MUST answer Yes or No to ALL

(•) Yes	( ) No	Human Subjects	( ) Yes	(•) No	Biological Materials	( ) Yes	(•) No	Infectious Agents
( ) Yes	(•) No	Hazardous Chemicals/Waste	( ) Yes	(•) No	Clinical Trials	( ) Yes	(•) No	Proprietary Information
( ) Yes	(•) No	Animals	( ) Yes	(•) No	Medical Devices/Drugs	(•) Yes	( ) No	Foreign Nationals
( ) Yes	(•) No	Radioactive Material	( ) Yes	(•) No	Recombinant DNA or RNAi	( ) Yes	(•) No	Foreign Travel/Shipping
( ) Yes	(•) No	HIPPA/PHI*	( ) Yes	(•) No	ITAR/CUI*	( ) Yes	(•) No	Int'l Collaborations

Does this project pose a conflict of interest for you or any anticipated project member? ( ) Yes (•) No

Have you or any anticipated project member been debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from transactions by a federal department or agency? ( ) Yes (•) No

Are you or any anticipated project member currently delinquent on any federal debt? (i.e. taxes, student loans, etc.) ( ) Yes (•) No

Does this project require facilities that are not currently allocated/available to you? ( ) Yes (•) No

WSU Department/College/Center Responsible for Matching Funds/Cost Share	Amount

NOTES/COMMENTS:

*__Definitions: HIPAA/PHI__ - Health Insurance Portability and Accountability Act/Personal Health Information; __ITAR/CUI__ - International Traffic in Arms Regulations/Controlled Unclassified Information

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NEW - RTT is now tracking PI/Co-PI involvement on sponsored projects Please complete the table below. This information will be used when reporting proposal/award totals across PI/Co-PI roles, departments and colleges.

Name	Role	Dept/College/Center	% of Project
Mythili Menon	PI	English/LAS	40
Karissa Marble-Flint	Co-PI	CSD/CHP	40
JaeHwan Byun	Co-PI	C&I/CAS	20

Total Project Allocation **MUST** equal **100**

100

ACKNOWLEDGMENTS AND CERTIFICATIONS:

As the Principal Investigator, I acknowledge that I have reviewed and considered all terms and conditions (including those that must be accessed electronically), and I understand that said terms and conditions are/may be applicable to any and all work performed should the application be successful. My signature indicates my knowledge of the terms and conditions and my willingness/ability to comply therewith. With respect to any invention, discovery, or copyrightable material produced in the course of activities encompassed by this project, I agree that my rights and those of any Co-Investigator(s) working on this project shall be governed by the University policies relating to research, patents and copyrights as described in the WSU Faculty Handbook, and by the patent policy of the Kansas Board of Regents; and I have read and understand the lobbying restrictions and Responsible Conduct of Research requirements for **FEDERAL** grants, contracts and cooperative agreements attached hereto as page 3.

As the Principal Investigator, I hereby certify that: 1) the information submitted within this application is true, complete and accurate to the best of my knowledge; and 2) any false, fictitious or fraudulent statements or claims may subject me personally to criminal, civil or administrative penalties; and 3) I agree to accept responsibility for the scientific conduct of this project and provide the required progress reports if a grant is awarded as a result of this application.

FORM WILL LOCK ONCE SIGNED BY PI - ENSURE YOU HAVE READ AND COMPLETED ALL PRIOR SECTIONS

PI Signature: Mythili Menon Digitally signed by Mythili Menon Date: 2020.06.04 19:45:53 -05'00' Date:

Agreement of project involvement and acknowledgements and certifications of Co-Principal Investigators (as applicable)

Co-PI DocuSigned by: Karissa Marble-Flint 4A77E3304E594BE... **Co-PI** DocuSigned by: FD856E9B4AE948A...

Co-PI **Co-PI**

The validity of the proposed activity and commitment of resources (as noted) are hereby authorized.

DocuSigned by: Francis Connor 56B1826540574B8... **PI Chair/Center Director**	6/5/2020 **Date**	DocuSigned by: Andrew Hippisley 32F58B2071B34E8... **PI Dean/Vice President**	6/5/2020 **Date**
DocuSigned by: Julie Scherz 1CF0605239E54D4... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**	DocuSigned by: Stephen Arnold 62D7B5D0EA424E0... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**
DocuSigned by: Jody Fiorini 8CCE902228554B2... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**	DocuSigned by: BB0C12A9C8F04DB... **Additional Endorser / Co-PI Chair/Dean**	6/5/2020 **Date**
Additional Endorser / Co-PI Chair/Dean	**Date**	**Additional Endorser / Co-PI Chair/Dean**	**Date**
DocuSigned by: Karen Davis ABC3018BC2E74DB... **Director for Pre-Award / NIAR Pre-Award**	6/5/2020 **Date**	**Provost or Sr VP of Ind & Defense Programs** ***Required for proposals with waived indirects and/or cost share***	**Date**

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CERTIFICATION REGARDING LOBBYING

The applicant certifies, to the best of his or her knowledge and belief , that: (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan or cooperative agreement. (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. (3) The applicant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

RESPONSIBLE CONDUCT OF RESEARCH (RCR)

RCR training is a funding requirement for the National Science Foundation (NSF), the National Institutes of Health (NIH) and the USDA National Institute of Food and Agriculture (NIFA). Researchers applying for, and receiving, support from NSF, NIH or NIFA should be familiar with each agency's requirements with regards to RCR and be prepared to provide documentation of appropriate training. While RCR training should be an ongoing component of any research program, at a minimum, personnel on projects with a research component will need to register and complete the "Externally Funded Researchers" RCR course through the Collaborative Institutional Training Initiative (CITI) during the first 90 days of receiving salary support.

Date Rec'd by RTT

Prop # 200749

GDS: DM