



Flagship Programs Attract and Accommodate STEM Students

As many students choose to combine science, technology, engineering, or mathematics (STEM) majors with Flagship language training to distinguish themselves from their peers after graduation, majors such as biology, engineering, computer science, and math are becoming increasingly popular in Flagship programs. Currently, 13 percent of Flagship students are pursuing STEM degrees. To stay ahead of this trend, Flagship campuses are hiring more language professionals with STEM expertise, increasing content-based tutoring, and developing campuswide networks of research faculty who speak Flagship languages to partner with Flagship students.

To enhance his desirability to employers, Jaren Knighton, a senior in the Chinese Flagship Program at Brigham Young University (BYU), is combining a civil engineering major with Chinese. "China's infrastructure has been growing and developing exceptionally fast, and there is still a need for more roads, buildings, and bridges. I wanted to gain experience working on these projects in China to propel my future career."

At the University of Rhode Island (URI), the Chinese Flagship Program works closely with the International Engineering Program (IEP), a 5-year program that offers students the opportunity to combine a major in engineering with a major in German, Spanish, French, Chinese, or Italian. Alfred J. Verrecchia, former CEO of Hasbro, Inc. (also a URI graduate and generous IEP supporter), described the value of this linkage in the 2009–2010 issue of URI's *Research and Innovation*: "Having a global engineering presence with the associated language and cultural knowledge is a huge advantage as we work to grow our global markets" (p. 26).

For STEM students, the traditional barriers to study abroad include demanding sequential course requirements and a lack of time for significant study abroad. URI's IEP is combatting these issues by allowing students to begin taking courses in both Chinese and a STEM discipline in their freshman year and providing a program that supports the overseas internship experience.



A student in the Brigham Young University Chinese Flagship Program practices Chinese with a language tutor.

"The number-one strain for any STEM student trying to diversify is the time commitment," says Shane Gallagher, a junior engineering major at BYU. "[The BYU Chinese Flagship Program] has helped me to stay focused on my long-term career goal and not just rush to get the diploma. The connections I am making with classmates and professors have already proven valuable in gaining experience and network connections."

Students thrive when they can step into the overseas classroom or internship with a working knowledge of the language pertaining to their major. The URI Chinese Language Flagship Program is launching a new initiative to match Flagship students with native-Chinese-speaking researchers in a relevant field so students can build domain-specific Chinese vocabulary through mentorship and research opportunities on campus.

Similarly, Flagship students enrolled in the Russian Flagship Program at the University of Wisconsin, Madison (UW–Madison), take a Russian Across the Curriculum (RAC) tutorial as part of their advanced coursework requirements. Each RAC student is paired with a native (or near-native) Russian speaker who specializes in a discipline correlated with the student's major. Pairs devise a plan of study together, then meet weekly to work through it. The RAC tutorial provides Flagship students with the opportunity to read about and discuss issues of importance in their majors and gain field-specific vocabulary.

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Online LUR Tool to Improve Overseas Learning

In 2014, The Language Flagship will expand the use of the web-based Language Utilization Report (LUR) to more Overseas Flagship Centers. Designed by the American Councils for International Education, the LUR is a powerful tracking mechanism for learners, instructors, and program managers to track time spent on activities that influence learners' language gains (e.g., academic reading, reading for pleasure, interacting with a host family, and other activities that require foreign language use). For The Language Flagship, the LUR will be used to determine which activities lead to an Interagency Language Roundtable Level 3 (or higher) proficiency so results can be shared with the field and those activities promoted for all language learners.

"The LUR helps students develop and maintain a critical perspective and a systematic, reflective stance on their learning in the face of the often nonstop input, academic and personal highs and lows, and periods of occasional cognitive overload that make the overseas immersion experience so rich and potentially powerful for acquiring a second language and culture at the professional level," says American Councils President Dan E. Davidson. Naira Ovsepyan, a graduate of the Russian Flagship Program at the University of Wisconsin, Madison, concurs: "Completing LURs each week gave me the opportunity to record my accomplishments and setbacks and to reflect objectively on my progress. For example, if I noticed a pattern over the course of few weeks that I was spending a lot of time doing my homework and reading books outside of class but very little time exploring the Russian culture and spending time with my host family, I would reorganize my priorities to create a more comprehensive learning environment for myself."

Early LUR data indicated that the amount of time a learner spends speaking the target language while overseas correlates strongly with gains in oral proficiency. More specifically, certain activities in productive modalities (e.g., time spent speaking with one's host family and native-speaker friends) are associated with high proficiency gains (Davidson, D., and M. Letic. The

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Brian Hoettels, a senior biochemistry major in the UW–Madison Russian Flagship Program, speaks highly of the RAC tutorial. “The ability to discuss scientific topics with a native Russian speaker who had a relevant scientific education was invaluable,” he says. “Similar to what I am currently doing with researchers [during my lab internship in Russia], each week my tutor and I would read, critically analyze, and discuss a selected scientific article, noting the differences between Russian and English scientific writing styles.”



UNIVERSITY OF RHODE ISLAND

Students in the University of Rhode Island's Chinese Living and Learning Community learn Chinese games as part of their exposure to Chinese culture.

Anthony Betts, a senior in the UW–Madison Russian Flagship Program who is majoring in nuclear engineering, has gleaned invaluable field-specific knowledge with his RAC tutor. “The real significance for me is learning how to phrase certain ideas,” he says. “I want to be able to communicate academically with my peers abroad, and I’m becoming increasingly more confident through my RAC tutoring.” He admits that studying engineering takes up much of his time, but the opportunity to study and intern

in Russia—and what it could mean for his future career—led him to commit to the Russian Flagship Program.

Across Flagship programs, students claim that tutoring (especially discipline-specific tutoring like RAC) is one of the most important aspects of their preparation for direct-enrolled courses with native speakers at Overseas Flagship Centers. Karen Evans-Romaine, director of the Russian Flagship Program at UW–Madison, hopes that the students’ tutors “help connect them with new information sources, new people on and off campus, and new insights so that they can become more conversant, better connected in their own discipline, and better equipped to use Russian in their chosen careers.”

At URI, most first-year students choose to live in Living and Learning Communities (LLCs), which are organized by major and provide academic support to students outside of the classroom. Each LLC includes a resident assistant and a resident academic mentor (an upperclassman from the same major), and the academic partner (a college or a program, like the Chinese Flagship Program) runs dorm programming. “An LLC gives you a wide range of people interested in the same subject as you. Specifically in the Chinese LLC, it gives multiple partners to speak Chinese with outside of the class,” says Pedro Raposo, a sophomore who is majoring in mechanical engineering and Chinese. “I highly recommend it.”

The Flagship students and staff highlighted in this article represent a mere sample of STEM investments in the Flagship community. As STEM fields continue to be a priority, Flagship programs will develop additional resources to meet their evolving needs.

2014 Language Flagship National Student Meeting

On March 3 and 4, the University of Maryland Arabic and Persian Flagship Programs hosted the 2014 Language Flagship National Student Meeting. Sixty Flagship students representing Flagship’s 26 programs gathered to engage in professional development; network with students specializing in other critical languages; and learn about future careers in federal service from representatives of the U.S. Department of State, the U.S. Department of Homeland Security, the Office of the Director of National Intelligence, and the National Security Agency. A select number of Flagship students presented unique research in their fields on topics that included human trafficking and international adoption, traditional roots of modern street art across the Arab world, work with at-risk immigrant populations in Portland (Oregon), and North Korean media and propaganda. In addition, an alumni panel shared their Flagship experiences and how they are applying their skills gained through Flagship in careers with the Council on Foreign Relations, Dow Jones, the National Endowment for Democracy, the Project on Middle East Democracy, and the U.S. Department of the Treasury.

The Language Flagship National Student Meeting provides Flagship students with an opportunity to learn from the research and first-hand experiences of their peers, gain experience in public speaking and professional development, access information about federal service opportunities, and develop a sense of global community.

Word from Flagship

Sam Eisen
Director
The Language Flagship



INSTITUTE OF INTERNATIONAL EDUCATION

Whether designing a new product or launching a rocket, today’s scientists need to have a lot more skills than what they can learn in a lab. International cooperation and communication are required for multinational team projects in engineering, aeronautics, healthcare, manufacturing, and more. Creating a pipeline of graduates with training in science, technology, engineering, or mathematics (STEM) fields as well as professional language proficiency in the languages used by international partners is an integral part of the mission of The Language Flagship. Students who combine STEM training and experience with language skills and cross-cultural understanding are well positioned to contribute needed expertise in national security fields as diverse as cybersecurity, disease control, and the resolution of energy and environmental issues.

In China this spring, a Flagship chemistry major has a research internship at the State Key Laboratory of Coordination Chemistry and a Flagship biology major is interning in a microRNA laboratory at Nanjing University. Other Flagship STEM students in China are completing internships in the fields of medicine, health, and the environment. Our featured student in this issue of *Discourse* is a biochemistry major interning at the Research Institute of Influenza in Saint Petersburg, Russia. All of these students are getting hands-on experience with scientific procedures and techniques along with the associated skills needed for the international collaboration that high-level research demands.

At the University of Rhode Island (URI), Dean Winifred Brownell and the administration have long supported this kind of cross-disciplinary innovation and have developed strong relationships with locally based international businesses through the URI International Engineering Program. In developing the URI Chinese Flagship Program, the National Security Education Program is investing in the expansion of this effective model of international collaboration in science, education, and business.

Online LUR Tool ... (from page 1)

Overseas Immersion Setting as Contextual Variable in Adult SLA. *Russian Language Journal*, Vol. 60, 2010, pp. 55–78). Somewhat more surprising, data indicated that target language activities in receptive modalities (e.g., reading for pleasure, watching news, and listening to the radio) also are associated with high proficiency gains. A chart of data extrapolated from the LURs of 65 students over eight Flagship Overseas Capstone years in Russia shows the correlation between mean weekly hours spent on the reported activities and final Oral Proficiency Interview (OPI) scores (bottom right). Of the student sample, 5 scored 2 or 2+; 34 scored 3; and 26 scored 3+, 4, or 4+.

The LUR allows learners to generate personal learning reports that summarize all reporting throughout their study experience. “The LUR helped me to identify weakness in my language by pushing me to set concrete, achievable goals for every week,” says Shelby Macy, a senior in the Portland State University Russian Flagship Program. Instructors have access to learners’ reports and provide diagnostic feedback on the basis of the type and time allotment of activities indicated. “It’s one matter to set a personal goal in your mind. It’s another to write a goal that you know will be reviewed by another person,” adds Macy. “I believe that the added accountability motivates students to strive harder to achieve their language goals.”

“Apart from its value as a self-management tool, the LUR creates a link between the student and a Flagship academic advisor back in the United States, which can ensure that the advice that students receive from program staff is well informed about not only classroom performance but also how the learner is taking advantage of opportunities outside the classroom that contribute to language growth,” says Maria D. Lekic, director of curriculum development for the American Councils and senior advisor and codirector of the Russian Overseas Flagship Program. “The LUR helps students (and advisors) align student learning strategies with the levels of language and culture that they are trying to master.”

For Flagship learners, the LUR fosters cultural and linguistic understanding as well as professional growth. Expansion of the LUR platform to include all Flagship languages will increase the understanding of language use as it relates to proficiency gains and lead to improved overseas language programming across a diverse array of languages.

Op-ed: A Winning Combination for Achievement and Success

Winifred Brownell
Dean of Arts and Sciences, University of Rhode Island



NORA LEWIS

For years, many students earning Bachelor of Arts degrees studied foreign languages to enhance their preparation for careers in education, government, humanitarian organizations, business, or health care. Wishing to attract a more diverse community of scholars, the University of Rhode Island (URI) developed models over almost three decades that combine language learning; study in science, technology, engineering, and mathematics (STEM) fields; and international internships. And now, URI boasts a unique Chinese Flagship Program in which engineering and business students lead enrollments.

One reason for this high STEM recruitment is the combination of key Flagship principles with the success of URI’s International Engineering Program (IEP), which, for 27 years, has offered students the opportunity to combine a major in an engineering discipline with a major in German, Spanish, French, Chinese, or Italian. (For details, see John M. Grandin’s memoir on IEP, *Merging Languages and Engineering: Partnering Across the Disciplines. Synthesis Lectures on Global Engineering*, Vol. 2, No. 1, January 2013, pp. 1–88.) Potential students are attracted to this unique program because nearly 100 percent of IEP graduates find employment in global corporations right after graduation. Flagship goals are especially high, and meeting them requires a proficiency-based curriculum, ongoing assessment, continuous advising, one-on-one tutoring, co-curricular activities, and close articulation with Flagship Overseas Centers and internship hosts. Despite the challenging curriculum, student enrollment and retention in the URI Chinese Flagship Program has increased.

Employers are eager to engage Flagship students—especially those who have completed Flagship Overseas Capstones—in paid internships. The students’ technical and business terminology acquired through content-based coursework, advanced knowledge of language and culture, and work experience abroad are cited as valuable additions to their other expertise.

Sponsored by The Language Flagship and presented in June 2012, the Rhode Island Roadmap to Language Excellence brought together leaders in business, government, and education who endorsed the importance of high-level proficiency in world languages to bolster the state’s 21st-century workforce. Efforts have begun to build language pipelines in Rhode Island’s K–16 system to enhance the preparation of university-level students so that they are better able to achieve Flagship standards.

Advanced language study and overseas internships in Flagship programs demand a level of commitment beyond that required for the usual bachelor’s degree in a foreign language. However, Flagship students describe the intellectual rigor and personal challenges as worthwhile, transformative experiences, and employers recognize the value of the global professionals that those students become.

Activity Type	Time on Task (Mean Hours/Week)		
	OPI = 2 or 2+	OPI = 3	OPI = 3+, 4, or 4+
Reading (Academic)	4.7	2.0	2.4
Cultural Events	1.2	2.3	2.7
Homework	0.9	4.9	7.9
Host Family Interaction	5.3	6.8	8.8
Internship	6.6	6.2	4.8
Monitoring Local TV/Radio	3.3	5.3	5.0
Reading (Pleasure)	0.7	3.7	4.2
Talking with Friends	6.9	11.2	10.9
Tutoring	3.1	3.1	3.0

Data extrapolated from the Language Utilization Reports (LURs) of 65 Russian Flagship students over eight Flagship Overseas Capstone years in Russia (2004–2011) demonstrate the correlation between mean weekly times spent on activities in the host language and final Oral Proficiency Interview (OPI) scores. Activities most highly correlated with OPI scores of 3 and higher are highlighted in blue. Adapted from Table 5 in Davidson and Lekic 2010, p. 68.

Building Bridges in Biochemistry

Brian Hoettels enrolled at the University of Wisconsin, Madison, in 2009, never expecting to combine his biochemistry major with language studies. “When I learned about the Russian Flagship Program, the opportunity to fuse these two areas was simply too good to pass up,” he says. As a Flagship student on campus, Hoettels took intensive language courses, participated in cultural activities, and was tutored in biochemistry by a native-Russian-speaking research scientist. Hoettels attributes much of his field-specific vocabulary knowledge to this individual instruction, which allowed him to “focus on weak points and increase vocabulary in areas not covered in standard Russian language classes,” he says.

During his Flagship Overseas Capstone year in Russia, Hoettels is interning with the Research Institute of Influenza in Saint Petersburg, where he assists the head of the Laboratory of Structural and Functional Proteomics. “I shadow colleagues when they carry out laboratory research, provide on-the-spot translation to Russian of results produced in English, and proofread scientific articles for publication in English,” he explains. “To expand my Russian scientific vocabulary, my colleagues and I discuss experiment design and technique as well as scientific articles written in Russian,” he adds.

Hoettels is considering a master’s degree in cellular and molecular biology and intends to pursue a career in which he can build bridges that foster international collaboration and minimize miscommunication in the field of biochemistry.



BRIAN HOETTELS

Brian Hoettels is completing a Flagship Overseas Capstone internship in the Laboratory of Structural and Functional Proteomics, Research Institute of Influenza, Saint Petersburg, Russia.

Flagship Centers

Arabic

Michigan State University
University of Arizona
University of Maryland,
College Park
University of Oklahoma
University of Texas, Austin
Alexandria University, Egypt¹
*Moulay Ismail University,
Morocco¹*

Chinese

Arizona State University²
Brigham Young University
Hunter College
Indiana University, Bloomington
San Francisco State University
University of Mississippi
University of Oregon
University of Rhode Island
Western Kentucky University
Nanjing University, China³
Tianjin Normal University, China¹

Hindi Urdu

University of Texas, Austin
Jaipur Hindi Center, India⁴
Lucknow Urdu Center, India⁴

Korean

University of Hawai’i, Mānoa
Korea University, South Korea⁴

Persian

University of Maryland,
College Park

Portuguese

University of Georgia, Athens
São Paulo State University, Brazil⁴

Russian

Bryn Mawr College
Portland State University
University of California,
Los Angeles
University of Wisconsin, Madison
*Saint Petersburg State University,
Russia¹*

Swahili

Indiana University, Bloomington
*State University of Zanzibar,
Tanzania¹*

Turkish

Indiana University, Bloomington
Ankara University, Turkey¹

Pilot Flagship/ROTC Centers

Arizona State University
Georgia Institute of Technology
North Georgia State College
and University

The Flagship Mission

The Language Flagship leads the nation in designing, supporting, and implementing a new paradigm for advanced language education. Through an innovative partnership among the federal government, education, and business, The Language Flagship graduates students who will take their place among the next generation of global professionals, commanding a superior level of proficiency in one of many languages critical to U.S. competitiveness and security.

What Do We Do?

Flagship Centers offer students intensive language instruction to enhance their academic degrees, graduating students with professional-level language proficiency. Programs include periods of rigorous language and cultural immersion at Overseas Flagship Centers. The Language Flagship also funds a select number of pilot K–12 programs designed to provide an articulated path of language instruction for students from elementary school through college.

Flagship graduates leverage their superior language and cultural skills in various careers, offering an intercultural perspective to employers in the federal and state governments, global businesses, and nongovernmental organizations.



THE LANGUAGE FLAGSHIP

Creating Global Professionals

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