INSPIRE CURIOSITY IN LEARNING - GLOBAL COMPETENCY FOR HIGH SCHOOL STUDENTS

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ABSTRACT

Closing the gap between the knowledge and skills students learn in high school and the knowledge and skills needed in 21st century communities and workplaces is an urgent call to educators. Janesville Academy for International Studies students demonstrate critical inquiry and problem solving skills using an information seeking process that is unique for young researchers. Students experience world cultures, investigate global issues and participate in relevant, real world learning opportunities for three hours of their regular high school day. Recent data collection reflects that the project-based, interdisciplinary model, anchored by the information seeking process: equips students to interact in a culturally and linguistically diverse environment, plants problem solving, critical thinking, technology, global awareness, and responsible citizenship, enriches academic performance through partnerships with community, government, business, colleges and surrounding schools and nurtures global perspectives problem-based learning associated with international business, world language, or international studies. All students are equally able to access this course of study. Excellent results have been evidenced by English as Second Language learners as well as students who are considered to be at risk. This is an example of how to make small changes in the delivery of content to highly impact student engagement and learning. See how the process inspires curiosity, lifelong learning and the initiative to be responsible, informed global citizens.

Keywords: Interdisciplinary, project-based, global.

INSPIRE CURIOSITY IN LEARNING: GLOBAL COMPETENCY FOR HIGH SCHOOL

“International education is for everyone and no child should be left behind.” In 2002, former Secretary of Education, Dr. Rod Paige, charged the U.S. Department of Education to engage in building international relationships and to put the ‘world’ back into “world class” education. He wanted schools to expose students to other languages, cultures, and challenges outside our borders.

Former Janesville School District Superintendent, Dr. Tom Evert, agreed with Dr. Paige and organized a planning group to map out the course for a first international charter school in Wisconsin. The purpose of the charter school was to implement student driven, project-based learning focusing on international studies and skills for 21st century learning. What are the 21st century skills? How will students be prepared to face the challenges and opportunities of tomorrow?

The Janesville Academy for International Studies is a School District of Janesville Charter School. Janesville School District juniors and seniors may opt to attend the charter school for three hours per day. The curriculum is multidisciplinary, project based and student driven. Students use technology to access resources for individualized research based projects and to communicate with experts and peers from around the world. Three concepts that drive the learning experiences at the Academy are collegiality, cooperation, and collaboration.

The charter school works in cooperation with the two existing high schools. Academy students earn three multidisciplinary credits in language arts, social studies and world language and culture. Credits are applied to the students’ home high school’s transcript. A nine member governing board oversees the budget and planning of the Academy.
In January 2005, the Janesville Academy for International Studies (JAIS) opened with the following objectives:

- To expand one’s world view through international awareness and understanding.
- To ignite curiosity and cultivate life-long learners.
- To develop critical thinking and problem-solving skills.
- To be active, self-directed learners.
- To develop effective oral and written skills to interact with a diverse audience.
- To collaborate with peers locally and across networks.
- To explore enrichment in world languages.

At the close of each school year, graduating students complete an exit survey to reflect on how their experience at JAIS impacted their learning and their thoughts for the future. June 2010 marks the fifth anniversary year of JAIS graduates. JAIS surveyed graduates and to identify JAIS impacted their lives. Has student driven, project based learning had an effect on their success in higher education? Are the knowledge and skills at JAIS addressing their needs as 21st century learners? Have 21st century skills been revised since 2005? What benefits at JAIS have contributed to personal success? Have JAIS graduates explored opportunities prompted from experiences at JAIS? What are the effects of student experiences at JAIS on graduates’ professional journey?

The information gathered will reveal anecdotes and data to show the impact that JAIS has had on graduates’ professional journey. The evidence will give JAIS staff feedback on the success or lack of success in meeting the desired objectives. With the evidence, JAIS staff will use the data to examine the curriculum and the skills needed for 21st century success.

JAIS is a microcosm of the School District of Janesville. The students who attend JAIS mirror the demographic and the academic achievement statistics of the School District of Janesville. In the 2008-09 school year, the student population included: .04% Amer-Indian, 2.3% Asian, 8.7% Hispanic, 6.5% Black, not Hispanic, and 82.1% White not Hispanic students. 2% received special education services and 18% were counted as economically disadvantaged.

Prior to 2005, the state of Wisconsin had already begun research on defining 21st century skills. In 1997, Governor Tommy Thompson launched the Wisconsin International Trade Council (WITCO) Task Force on International Education. WITCO was lead by Milton E. Neshek, an executive of Kikkoman Foods in Walworth, Roger E. Axtell, author and public speaker, and Dr. Leslie O. Schulz, Professor of Health Sciences at UW-Milwaukee. The task force was formed to create a strategy to prepare Wisconsin students K-16 for the 21st century. The council diligently examined statewide responses to three questions:

- What is currently being done in the area of international education?
- What should be done to expand and improve international education?
- How should it be done?

The WITCO Task Force published a report that summarized international knowledge and skills into three categories:

**Language Proficiency:** market world languages to all citizens, encourage districts to create a K-12 world language plan, encourage elementary teachers to have second language proficiency, consider a world language requirement for graduation.

**Communication in the Information Age:** create a network of resources and staff expertise to export educational products, annual senior-level conferences designed to discuss public policy issues and the future and vision of IT direction, create seamless digital networks for home and school.
Economic Development: increase awareness of global economy, infuse international studies in content areas beyond world language and social studies, and identify international alumni and friends of Wisconsin’s institutions of higher education to serve as potential business contacts (Neshek et al., n.d.).

The Wisconsin Department of Public Instruction did not act upon the widely collaborative document of findings and conclusions on how to implement, leverage, and accelerate internationalizing Wisconsinites. By 2002, the Department of Public Instruction took the WITCO Report as a working document in the development of the Wisconsin Curriculum Guide to International Education. It was the first curriculum guide to international education in the nation. The guide documented Best Practices and resources from pre-kindergarten through twelfth grade. The Wisconsin Curriculum Guide to International Education called for the infusion of global perspectives across all disciplines and at all grade levels and for beginning world language instruction in elementary schools.

International education teaches about the lives and the natural and social contexts of people living in other countries and cultures. International education explores interactions and connections among nations, especially the ways in which other peoples and cultures impact our daily lives. International education is an approach that creates awareness of political, economic, scientific, and cultural interdependence that exists across national and cultural borders. International education acknowledges the complexity of the world’s peoples, including their differences, similarities, conflicts, and connections (Durtka et al., 2002, p. 2).

The information generated from the WITCO Report and the Wisconsin Curriculum Guide to International Education were guiding documents in identifying knowledge and skill outcomes for exiting students at the Janesville Academy for International Studies. By 2005, the WITCO Report’s recommendations for communication in the information age were outdated. The JAIS objectives had to be designed knowing that digital infrastructures and equipment would quickly change. Objectives identified skill outcomes focusing on what students will be able to do that will give them an advantage in their professional journey. JAIS began in 2005. In the same year, the Wisconsin Department of Public Instruction’s International Education Council published the International Education Recommendations, Global Literacy for Wisconsin which include the following:

- Global literacies for all students
- World languages for all students
- Global training for all teachers
- Intercultural experiences for all citizens
- International linkages for Wisconsin Business and Government

The International Education Council identified globally literacy to mean speaking one or more languages in addition to English, training for high skill jobs, traveling across borders, demonstrating curiosity and empathy for people of other cultures, and solving problems by working together in a diverse workforce (Axtell et al., n.d.).

In 2008, Tony Wagner published the book, the Global Achievement Gap. In chapter one, Mr. Wagner describes the New World of Work and the Seven Survival Skills:

- Critical thinking and problem solving
- Collaboration across networks and leading by influence
- Agility and adaptability
- Initiative and entrepreneurialism
- Effective oral and written communication
• Accessing and analyzing information
• Curiosity and imagination

Mr. Wagner interviewed Jonathan King, an internationally renowned molecular biologist who teaches undergraduate and graduate students at the Massachusetts Institute of Technology. Dr. King said,

I worry about the future of science in this country. The kids who take my intro to lab courses today have gotten top scores on all the Advanced Placement science courses in their high schools, but they don’t know how to observe. I ask them to describe what they see in the microscopes, and they want to know what they should be looking for – what the right answer is (Wagner, 2008, pp. 6-8).

Yong Zhao is University Distinguished Professor at the College of Education, Michigan State University. He also serves as the founding director of the Center for Teaching and Technology, executive director of the Confucius Institute, and the US-China Center for Research on Educational Excellence. He is a fellow of the International Academy for Education. In his book, Catching Up or Leading the Way, Mr. Zhao uses the term global education. Keith Baker, a retired officer of the U.S. Department of Education, looked at the correlation between the results of the First International Mathematics Study (FIMS) and eleven countries’ success in relation to wealth, rate of growth, quality of life, creativity, and democracy 40 years later. The United States finished second to last in the first test. “Today, some 40 years later, the students who took the test would be in their 50s and would have been the primary workforce over the last 30 years.” Mr. Baker did not find a correlation between high test scores and the economic and social success of the nation. Mr. Baker wrote, “In short, the higher a nation’s test score 40 years ago, the worse its economic performance.” Mr. Baker argues that the rhetoric of American education in crisis by comparing our nation’s test scores with nations around the world is a dangerous. What is needed is a shift in thinking about what should be taught and how it should be delivered (Zhao, 2009, pp. 16-17). Mr. Zhao concludes by recommending that the definition of success should expand beyond science and math, that schooling should be personalized so that every student has an opportunity to learn and finally, that schools should be viewed as enterprises with energy and the boldness to embrace globalization and technological advances (Ibid, pp.181-202).

Robert Compton, businessman from Memphis, Tennessee, created and filmed the documentary Two Million Minutes that follows the approximate time students spend in high school. Two Million Minutes contrasts two teenage U.S. suburban high school students’ lives with those of two Indian teenagers and two Chinese teenagers. The documentary makes the case that foreign students are more motivated to succeed. The film gives the U.S. a lot to think about. Compton’s message is that U.S. students do not study enough; there is not enough parental pressure, and not enough focus on math or engineering to compete globally. According to Professor Zhao at the Asia Society Conference in 2008, China is looking at “developed countries” such as the United States, to find ways to move away from the test-driven education toward a more “rounded education”. Today, school curriculum in China is including an increasing number of classes such as life skills training. Compton urges the U.S. to study China and India to ramp up educational achievement. However, China is looking at the United States’ educational system to see how they can improve innovation and creativity (Compton and Zhao, Alexandria, VA, July 2008).

How has the definition of international education transformed since the opening of the Janesville Academy for International Studies? Today, experts use the term global education. How has the definition of global education or global literacies split experts into debating the urgency to compete globally compared to the urgency to collaborate and create. Another shift is in the language of what skills students need to acquire. Broad statements like global literacy, media literacy, and intercultural experiences are being described in terms of personal skills that students need to practice and experience like collaboration across networks and proficiency in languages. Finally, critical thinking and problem-solving skills are imperative to innovate new answers to the challenges facing the 21st century. Daniel Pink, author of the book A Whole New Mind, says the future can be defined by Asia, abundance, and automation. Compton says the importance of STEM (Science, technology, engineering and math) subjects will give the U.S. the global competitive
edge. Pink says the most successful people conceptualize things like Google, YouTube, and Twitter. The United States’ competitive edge will come from imagination, playfulness and the courage to do something different. Chinese education experts are beginning to believe the same.

The integration of global education practices is imperative. It is time to be intentional and informed about the insertion of global perspectives across the curriculum. It is not a subject apart left to someone else’s responsibility. JAIS was designed to bring students regardless of grade point average or international experience to delve into a rigorous, honors level multidisciplinary course of study to equip all students with skills for 21st century engagement.

The JAIS Impact Survey was sent to approximately 50 alumni graduates 2005 – 2009 on May 26, 2010. The alumni accessed the online survey beginning on May 26, 2010 and the data was collected for analysis on June 2, 2010. Nine questions collected quantitative data. The questions asked the respondent to identify if they strongly agree, agree, disagree, strongly disagree or select that the question was not applicable. The final question collected qualitative data. The respondent replied by reflecting on how the knowledge and skills gained from the experience at JAIS impacted their professional journey. Twenty four alumni responded to the ten question survey.

Fig. 1 charts the responses to the following questions:

1. The Academy prepared me to critically evaluate information.
2. The Academy prepared me to tolerate ambiguity.
3. The Academy prepared me to communicate and interact with a diverse audience.
4. The Academy prepared me to analyze from multiple perspectives.
5. The Academy engaged my curiosity to become a life-long, active learner.
6. The Academy prepared me to collaborate and create with colleagues.
7. The Academy increased my interest in continuing or starting the study of a world language.
8. The Academy increased my interest in world travel.
The School District of Janesville’s Beyond 2010 vision calls for students to focus on cultural diversity. Questions two, six and seven indicate that at least 90% of JAIS alumni strongly agree that JAIS prepared them to work and interact in a culturally diverse environment. The results also evidence highly positive alumni attitudes on their preparation for a productive work ethic.

The final question of the survey required a short answer.

10. What skills or characteristics do you as an Academy for International Studies graduate have that sets you apart from other graduates?

Fig. 2 illustrates the answers to question ten. Answers were recorded using five categories that proved to be thematic in the responses: perspectives and curiosity, critical thinking and problem solving, independence and initiative, effective communication, and world languages.
The JAIS Impact Survey results show that alumni indicate that their agility in respecting and negotiating situations that require synthesis with multiple perspectives is very strong. Additionally, the results show that critical thinking and problem solving skills are strengths that set them apart from their peers.

In summary, Wisconsin published the nation’s first curriculum guide to international education in 2002. In 2003, Wisconsin’s Statewide International Education Council was formed. Currently, they are recommendations as stated in the International Education Recommendations and Global Literacy for Wisconsin (2005). Tony Wagner and Yong Zhao identify competencies that will help the nation close the global achievement gap. From 2002 to today, there are two themes that remain constant: begin continuous world language study at an early age and use strategies that focus on how students will practice and experience 21st century skills instead of placing the focus on what should be taught. JAIS alumni responses highlight skills such as; problem solving, interacting and working with a diverse population, and analyzing issues through multiple perspectives. The results evidence the skills acquired, not the specific content delivered.

How will schools foment curiosity, respect for diversity and initiative? I recommend that the International Education Recommendations and Global Literacy for Wisconsin begin to be implemented across the curriculum at the district level. I believe that the data from the JAIS Impact Survey provides strong evidence that teaching delivery and content are meeting the Janesville School District’s Beyond 2010 goals regarding changing demographics, technology, instructional delivery and developing students to be productive citizens in our community. I concur with author Tony Wagner and Professor Zhao that the future belongs to those who can strengthen their capacity for problem solving, collaborating, working in a culturally diverse environment while recognizing the need to be flexible and an informed, responsible global citizen.

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