

Developing a Regional FIRST Robotics Mentoring Program for K-12 Teachers in Northern New York

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Extended Abstract

Regionally, our schools serve a high population of low income students as indicated by the percentage of reduced or free lunches in the districts. For this reason, high school administrators developed Cooperative Services (CoSer) in our four-county area to share the costs to participate in the FIRST, “For Inspiration and Recognition of Science and Technology”, robotics program at Clarkson University in Potsdam, NY. This competition promotes STEM and Gracious Professionalism™ during teamwork and problem solving. By “combining the excitement of sport with the rigors of science and technology, the ultimate sport of mind”. More and more students and teachers are interested in robotic curricula for their schools. The responsibility of discovery is meant to be placed on the kids, and teachers accept role of coach. The kids should control most aspects of the process and design, and teachers are there to help, support and promote healthy teamwork habits.

Our schools in Northern New York are beginning to embark on regional competitions at Clarkson University. However, some elementary and high school teachers are apprehensive and lack confidence in embracing an open-ended, problem-solving curriculum. Therefore, SUNY Jefferson created a Robotics Mentoring Program for the K-12 teachers to alleviate apprehension and fear during the learning curve. A team leader and three other mentors were organized to facilitate this program. A framework of support and outreach for participating schools was organized as a service for the coaches to promote participation. Further allowed us to mentor potential engineering students, form relationships with teachers interested in STEM, and serve as ambassadors for engineering outreach. Over 50 hours of onsite mentoring (and countless more hours with planning, communications and logistics) helped these teams reach the competition at Clarkson ready to problem solve and have fun. The outreach model and best practices for our Robotics Mentoring Program will be shared and discussed.