

Using Non-Traditional Learning Partnerships to provide Experiential Teaching Opportunities

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Introduction/need for innovation or idea

The New River Gorge Learning Cooperative (NRGLC) is a parent run, Montessori-based learning center located in Fayette County, West Virginia that offers a Primary Program for children ages 3-6 and an Elementary Program for children ages 6-12. Recently the NRGLC board of trustees decided to expand to include a middle school with a curriculum focused on STEM emphasized permaculture; a system of agriculture with core values centered on environmental sustainability. This decision was based on the potential benefits of developing youth focused on sustainable agricultural practices who were also STEM literate. The NRGLC Middle school is aimed at moving beyond the traditional standards of learning and allowing students to develop the problem-solving skills, STEM knowledge, and agricultural practices to develop and run sustainable agricultural endeavors. They reached out to the Agricultural & Extension Education (AGEE) at West Virginia University for assistance in developing the curriculum, and providing professional development for all their instructors in sustainable agricultural practices, increasing STEM emphasis, and utilizing inquiry-based instruction. As part of this partnership the AGEE was able to provide opportunities for their students to gain teaching experience in a non-traditional school atmosphere and engage in a unique educational experience.

How it works/methodology/program phases/steps

The NRGLC found the program through mutual faculty acquaintances. The Middle School is a one teacher program with 12 students in its first year. The teacher worked with faculty to develop the middle school curriculum and resources over the summer. During that time, he identified agricultural topics related to power and structure as being the area in which he needed the most pedagogical assistance.

Once the fall semester started the senior cohort of AGEE was introduced to the learning cooperative and Montessori teaching practices, and were then given their assignment for the semester. To break into small groups of 3 and develop 2-day lesson on one area within Agricultural Power and Structure content. They worked with the teacher, Mr. Mike, to develop the specific content of each visit, and scaffold it to meet the needs of the students' sustainable agriculture project. Each group traveled to NRGLC once throughout the fall semester and taught the students a set of specific skills, from basic electrical wiring to installing windows, and pouring concrete to framing in a structure over the course of their 2-day visit. During that time, the student teachers were mentored not only by faculty but also by Mr. Mike, which allowed them not just to observe but also experience his teaching approach. At the end of the University semester the AGEE students organized a 2-day fieldtrip for Mr. Mike and the middle schoolers to come to campus and participate with them in college based courses and laboratories.

Results to date/implications

Though the curriculum and professional development has been a success the greatest success has been student learning – from both the NRGLC and the AGEE students. The connections they developed, the continued engagement, and the educational impact has continued to be an asset to both sets of students. Below you will find excerpts from the AGEE students reflections, which highlight the learning experiences they had while working with the NRGLC students.

“I love the base concepts behind the school such as the skills based learning, flexible schedule, and overall approach to learning. In public schools, we focus so much on standards

and meeting what our state requires I think we forget that our main purpose is to provide a good, useable education for our students to prepare them for life after school. This is something that the Montessori school does well.” - Student #1

“As I circulated around the pavilion I saw long division problems being solved, sketches being drawn, and students conversing and working together. Occasionally students would ask questions which I eagerly answered at first, however, after a conversation with [Mike], I changed the way I answered questions. I noticed one of the answers [Mike] had given and how it sounded wise but somewhat like a riddle. [Mike] took note when I had been listening and explained he felt students learned more from a question when he was either able to give them an answer which meant more than the answer itself or gave them an opportunity to think past what they originally had asked. While I was skeptical of this at first due to my experiences watching students give up out of frustration, here I watched the students continue to be motivated and work to find the meaning in their solution.” – Student #2

“Another aspect that was different was the planning on the teacher’s part. I asked [Mike] how he went about planning and it blew my mind. He said that while it doesn’t seem like he has a plan, he does. He sets up his curriculum as kind of a living thing. Its always changing and flowing with how the day is going and how the students are reacting to the material. If the students burn through the material fast and grasp the concepts well, then he has to be ready to get out another lesson to teach to the students. Flip side, if the students aren’t really getting it and seem like they just aren’t into it then he switches subjects to something that will work better” – Student #3

Future plans/advice to others

We are currently planning for continued service learning opportunities in partnership with NRGLC in the Fall Semester of 2019. For the AGEE students, the most influential resource for them was Mr. Mike the lead teacher at the middle school who helped them focus on exploring teaching and learning from a different perspective. He was an excellent Co-operating teacher, who would mentor our students and help them plan which really demonstrated what differentiated instruction and the Montessori philosophies exemplify. He also continued to support our students through their formal public school based student teaching internships.

Costs/resources needed

The cost for the 4 Microteaching visits could be split into 2 categories, travel and teaching supplies. For each of the 4 trips roughly \$1,500 was spent on travel; This included rental vans and mileage for a faculty’s truck (when necessary), lodging, and 5 meals for university students and faculty. For the last 3 visits money was saved by renting an Airbnb residence and preparing meals at the house. An additional \$1,000 was spent on teaching supplies for the students. This expense could be variable depending on the topics taught, but do to the Agricultural Mechanics focus larger supply costs were incurred.

Perhaps the most challenge resource to find would be a Learning Cooperative School and the excellent mentor teacher they provided for the Agricultural and Extension Education students. The NRGLC really allowed for the Agricultural and Extension Education faculty and students to become part of their community which was essential to the partnerships success.

References