

Educate, Act, Connect, and Communicate: A Model for Personalized Learning for Sustainability

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Abstract

Two educators describe how the model of Educate, Act, Connect, and Communicate can be utilized to address 21st century issues that concern middle grades students. The authors developed the model while using the United Nations Sustainable Development Goals (UNSDGs) to address global and local issues at two different middle schools. At Main Street Middle School, where Taylor teaches, students work on the Green Team to delve deeply into the scientific and social impact of decreasing the school's waste footprint and developing a re-use, reduce, and recycle ethos at the school. At Pioli Hunt's school, Williston Central School, students create an 8th grade challenge that is project based, and addresses a local or global issue while aligned to the UNSDGs. The authors compare the challenges and benefits of using the Educate, Act, Connect, and Communicate framework to explore personalized learning through the UNSDGs and make recommendations for other educators who are interested in moving toward a more integrative curriculum that highlights student voice, engagement and equity.

INTRODUCTION

Students in the 21st century must be prepared to face issues of social justice that will permeate their personal, educational, and professional lives. As the effects of climate change and environmental degradation increase, as racial and economic injustices continue, and as more children enter schools suffering from trauma, communities will need educated, self-directed, problem-solving citizens capable of tackling these unique issues. The implementation of a personalized learning system, which consists of a personal learning framework, personalized learning plans, and flexible learning pathways allows teachers to introduce critical 21st century topics while developing self-directed students who are empowered to take action.

Through personalized learning, students are able to independently apply their learning in academic, personal, and community settings. Moreover, as students move toward greater levels of independence, teachers can facilitate increased opportunities for student voice and choice with regard to the content and ways of learning (Morrison, 2008). Of equal importance is the fact that personalized learning, and its associated strategies, can provide equitable learning opportunities for all students to engage in rigorous, relevant, and real-life learning activities addressing the challenges facing today's students.

Personalized Learning

The term "personalized learning" can mean different things to the diverse constituents of our public schools. For our purposes, personalized learning, as defined by Vermont's Agency of Education and the National Association of Secondary School Principals is "...a learning process in which schools help students assess their own talents and aspirations, plan a pathway toward their own purposes, work cooperatively with others in challenging tasks, maintain a record of explorations, and demonstrate their learning against clear standards in a wide variety of media, all with the close support of adult mentors and guides" (Vermont Agency of Education, 2019).

Essentially, personalized learning seeks to recognize the unique skills, interests, and aptitudes of students, to build that recognition into positive relationships, to empower students to become self-advocates and reflective thinkers, and finally, to encourage students to become active participants in the educational, and later, the democratic, processes that will make them active, engaged, and informed participants in the public square.

Principles and Components

Building a personalized learning system that enables students to independently explore issues of social justice requires educators to think

systematically. As classroom teachers, we believe that a framework for teaching and learning, one that outlines the structures, standards, and skills required of students, is an essential foundation for success. Our personalized learning system rests on three key components: a personal learning framework, personalized learning plans, and flexible learning pathways. In combination, these components allow teachers to apply four pedagogical principles to 21st century topics of sustainability, social justice, and citizenship.

These principles are best expressed in the infinitive form. Through our personalized learning system, and the application of the personalized learning components, we hope that students will develop the skills to *Educate*, to *Act*, to *Connect*, and to *Communicate* their learning and desire for action related to the issues most important to themselves and their community.

These simple principles guide our thinking not only as instructors, but also as participants in the learning process. We, like the students, need to become *Educate(d)* about our students and their concerns; we need to *Act* on the information we receive from students about their academic, social, extracurricular activities and aspirations; we need to *Connect* with our students, their families, and members of the community who can support our work, and finally, we need to *Communicate* evidence that demonstrates growth, learning, and our evolution toward being self-directed and empowered citizens. The ability to apply these principles guides our personalized learning system and the integration of our personalized learning components. The last component, the flexible learning pathways, is specific to the community context of classroom or the school; teachers can select from a wide range of issues to build pathways that focus on student driven learning. Most often, these pathways are related to the resources or issues of social justice and sustainability specific to the local community.

In this article, we explain the *Educate, Act, Connect*, and *Communicate* model and how it works with our personalized learning system to allow middle school students to engage in social justice and sustainability goals and projects that help their community. First, we explain the principles of the *Educate, Act, Connect*, and *Communicate* model. We then describe the three components of our personalized learning

system. Third, we discuss two case studies that illustrate how to engage students in the authentic, challenging, and meaningful work that empowers students to make real change in their communities. Finally, we reflect on the important factors needed for this type of teaching to be effective in transforming our roles as teachers in a 21st century classroom.

The Educate, Act, Connect and Communicate Model

Through our practice, the development of our personalized learning components, and in the inclusion of issues of sustainability and social justice in our curriculum, we have developed key principles that provide structure to our personalized learning system. These principles: *Educate, Act, Connect*, and *Communicate* help to order our instruction as well as frame our personalized learning system. In our practice, these principles were forged through our work with issues of sustainability and social justice. Together, they serve as a pedagogical tool that helps to direct teacher preparation and instruction. Each of these topics can be applied to a myriad of classroom content and pedagogical practices; when applied to 21st century issues such as climate change, sustainability, and social justice, they are particularly effective. Teachers should also recognize that each of these topics can be expanded, contracted, or modified based on time, topic, and standards that need to be addressed.

Educate

Obviously, education is our central purpose. That said, when addressing issues of climate change, sustainability, and social justice, this principle can be viewed through several different lenses. First, as the instructor, teachers need to learn and understand the issues facing today's students. Whether through surveys, discussion, reflection writing, or communicating with parents and the community, identifying those issues that will permeate students' lives is a critical factor in employing personalized learning. Educators must ask critical questions not only about their practice, but also about the context within which that practice exists.

These might include the following: What matters to our community? What issues will students have to know and understand in order to be functioning, successful adults? What standards-

based skills can be supported in the classroom to assist students in their next life and learning stages?

These key questions surround the *Educate* principle. But another, more powerful perspective should also be considered. Addressing issues of climate change, sustainability, and social justice requires participants to learn as much as possible about that topic, those who are impacted, the consequences for the community, and the multiple perspectives required to understand the topic. If students are to become advocates, citizens, and agents of their own futures, what do they need to know and be able to do to become informed, educated, and productive members of that learning community? For example, what does it mean to be “educated” about climate change and sustainability? What do students need to know in order to respond to community issues related to this topic? Answering these questions, using *Educate* as a driving principle, allow teachers to develop curriculum and activities that are rigorous, relevant, and related to students’ lives.

Act

In order to be informed citizens, students utilize their learning (*Educate*) to *Act* or take action in order to facilitate change. The *Act* principle seeks to provide students with the opportunities to leverage their learning into action. With new information, learning, and understanding, what can students do to act upon that learning and information?

Teachers can build standards-based personalized learning opportunities into the curriculum ranging from simple, single-lesson activities to complex community-based service learning projects. Action based projects can provide teachers and students with tremendous opportunity. Sending letters or emails to local legislators, developing public-service campaigns, or through other student-driven activities requiring action, teachers can integrate literacy, build curriculum around social studies and science standards, and focus on transferable skills. Whatever the choice, tying the learning based on the *Educate* principle to the *Act* principle provides coherent instructional progression which can be utilized to address innumerable instructional and curriculum standards.

Connect

As students become more informed and educated on topics and as they take action based on that knowledge, students are asked to *Connect* with local, regional, national, and global organizations that address similar issues. There are three key reasons for helping students connect to others who are taking action. First, identifying local organizations and experts provides students with community context and “backyard” learning opportunities. Developing an understanding of those community members who focus on specific issues can build positive relationships between students, the school, and the community. Additionally, local organizations are often eager to present their work or participate in school-based activities. This can provide support to existing curriculum or in many cases, provide teachers with new material for developing personalized learning curriculum and opportunities linked to student interests.

Second, connecting with local communities strengthens the ties between the standards and skills woven into classroom activities with the standards and skills required in a variety of jobs, organizations, and employment. What better way for students to understand what skills and standards are required than by having working members of the community explain what they are expected to achieve in their positions or with their organizations? This is the relevance that much of our existing curriculum overlooks.

Finally, connecting with organizations that are focused on similar issues of climate change, social justice, sustainability, or other issues of community concern can provide hope and inspiration to students. Too often, students, teachers, and even schools can become isolated from the needs and issues impacting local communities. By linking learning to groups and organizations that are addressing those issues, students can learn more (*Educate*) about what others are doing (*Act*) in order to solve those critical problems. Working together, and connecting with others who are doing well can be a positive outcome that demonstrates the importance of citizenship and community to students who might otherwise not have that experience.

Communicate

The fourth principle that serves to focus our personalized learning system and its attendant learning opportunities is *Communicate*. After students have learned about their topic (*Educate*), taken action related to their new learning (*Act*), and developed relationships with organizations addressing similar issues (*Connect*), they are then expected to demonstrate growth and learning not only by communicating their findings to help educate others about their issue, but also to employ standards-based literacy skills (reading, writing, research, speaking and listening) to *Communicate* their learning. In an age of social media, pervasive internet usage, and multimedia streaming, students can constructively use these platforms, to communicate their issue-driven perspectives.

For teachers, this also provides the opportunity to integrate student voice and choice, curriculum specific standards, and principles of Universal Design for Learning. Using standards, proficiency-scales, and rubrics created by the teacher, or co-created by teachers and students, projects that *Communicate* findings from student-driven learning can span a wide range of structures. In our classrooms, students have written reports, built slideshows, constructed models, written and edited podcasts, developed websites, and produced lessons for other students.

None of these examples are unique or novel; instead, they are simply products that have been systematically produced based on the operating principles of our personalized learning system. By incorporating the principles of *Educate*, *Act*, *Connect* and *Communicate* into our learning community, we are able to think systematically about our students, the issues that are most relevant to their lives, and how we can encourage them to demonstrate growth and learning through a curriculum designed for the 21st century.

Components of Personalized Learning System

Principles alone cannot drive the day-to-day activities and instruction in the classroom. In order to put the principles into action, we have incorporated the three component structures of a personalized learning system. These three

structures, the personal learning framework, personalized learning plans, and flexible learning pathways, provide direction for teachers to employ the *Educate*, *Act*, *Connect*, and *Communicate* model in learning environments that addresses 21st century issues that students find relevant and meaningful.

The first component of our personalized learning system outlines the iterative process through which students travel as they engage in the learning opportunities presented. The personal learning framework strategically outlines the process by which teachers can help build positive relationships with students, move students towards increased self-direction and engagement, and use reflective practices to prepare for subsequent life and learning stages (Nagle & Taylor, 2017).

Utilizing a personal learning framework, in conjunction with personalized learning plans, and flexible learning pathways, imbues students with the skills required to be informed, engaged, and active citizens. These strategies include, but are not limited to, inquiry-based skills, questioning, research, digital citizenship, evidence-based responses, and the use of transferable skills to independently direct student learning.

The tool that we use to capture evidence of student growth and learning in our personalized learning system and our second strategic component is the personalized learning plan. Mandated by the state of Vermont's *Act 77: Flexible Pathways Initiative* (Vermont Agency of Education, 2013) legislation, personalized learning plans, or PLPs, are student-created plans that encompass the elements of the personal learning framework and allow students to demonstrate their growth and learning. These plans can be in hard-copy format or more likely, in the form of an electronic file or website shared between the student, the student's family, and the teacher. Depending on how schools structure their PLP, this component can guide curriculum development, student reflective practices, student-led conferences, and communication with parents and families. For the sake of this writing, a PLP consists of five specific sections: Identity, Citizenship, Goals, Evidence, and Exploration. Each of these subsections is aligned with the personal learning framework and has been developed to capture longitudinal evidence of student growth and learning.

The third strategic component of our personalized learning system that allows students to focus on our key principles is the development of flexible learning pathways (*Vermont Act 77: Flexible Pathways Initiative, 2013*). Guided by the personal learning framework and captured by the PLP, flexible learning pathways are the student-driven curriculum that students engage with, that are often centered on 21st century issues such as climate change, sustainability, and social justice.

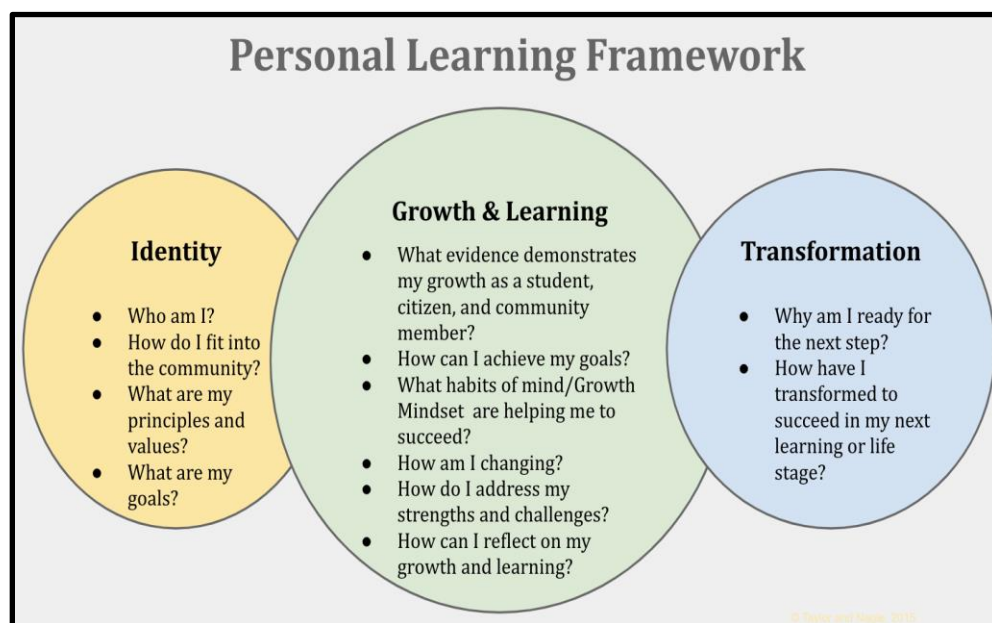
Essentially, flexible learning pathways are any curriculum that allow for student driven inquiry, education, action, connection, and communication based on those issues that are most relevant to the instructor's and students' educational context. Both the principles of *Educate, Act, Connect, and Communicate* and the components of the personalized learning system are particularly effective in building curriculum around issues of climate change, sustainability, and social justice. In the next sections, we will detail how these components frame learning experiences that are designed to be personalized, student-driven, empowering and equitable.

Component 1: Personal Learning Framework

To initiate personalized learning in our classrooms, a personal learning framework is employed to develop the foundations for personalized learning. The framework has multiple purposes that support the development of personalized learning in the classroom and lead to the introduction of the four principles through which we address 21st century topics such as climate change, sustainability, and social justice. Later, we will also discuss how this personal learning framework aligns with the construction of the PLP. Coordinating these elements brings structure to personalized learning experiences and can help teachers align curriculum and student opportunities in the classroom. The process for the personal learning framework can be found in the Figure 1.

Figure 1

Personal Learning Framework



(Taylor & Nagle, 2016)

Identity

Principally, the personal learning framework emphasizes the importance of developing positive relationships with students. Only through a strong foundation of positive relationships can personalized learning take root. The first phase of the framework is the Identity phase. Here, teachers and students explore student interests, learning dispositions, and the principles and values that are driving student behavior, performance, and learning. Through multiple learning activities, instructors acquire knowledge about students and in so doing, develop positive relationships that enhance student engagement and provide teachers with essential student information. Through these relationships, teachers develop informed decisions with regard to curriculum development and the social justice initiatives that best align with student principles and values.

Growth and Learning

Once teachers have learned more about the identities of their students, and the collective identity of their classroom community, they move into the Growth and Learning stage of the framework. During this crucial stage, students are asked to set goals based on their individual interests and the interests of the community or issues of sustainability, social justice, or citizenship. Throughout this phase, teachers must offer both direct instruction and student-directed, personalized opportunities to keep the learning moving forward. For example, during the Growth and Learning phase, students are asked to develop definitions of citizenship, social justice, and sustainability. Rather than impose a definition of social justice, teachers can cooperatively build definitions with students in order to enhance student investment and understanding of the learning. This is a prime example of how teachers can build personalized learning into the classroom setting. Through consideration of what learning activities need to be teacher-directed and the evolution of those activities to a more student-centered learning environment, teachers can begin building learning opportunities, in conjunction with the personal learning framework, that will establish student confidence and self-direction. With regards to topics related to social justice, building these skills of student self-direction

becomes critical.

To support this understanding, teachers can utilize materials that provide relevant content while at the same time building standards-based literacy and social studies skills. Articles, reading, or multimedia presentations focused on social justice issues including, but not limited to environmental issues, the immigration debate, or economic sustainability provide a basis for developing critical thinking skills and give students the opportunity to pair their principles, values, and goals with events impacting the community. Note that to start, the materials and instructional progression are established by the instructor. However, as students become more self-directed, they can become the drivers of their learning, selecting the topics and issues that are most relevant to themselves, their families, and their immediate communities.

Whether teacher or student-directed, the critical aspect of the Growth and Learning phase is that students begin to set goals aligned with their principles, values, and aspirations while teachers, through the development of strong relationships, build social justice curriculum that is relevant, engaging, and meets the needs of the learning community.

Transformation

Teachers utilizing the personal learning framework, who are building strong relationships with students and planning a move from teacher-directed to student-directed learning, can also consider an emphasis on the reflective process as an indispensable practice that can build student understanding and allow for a transformation of learning.

Through each step of the personal learning framework, teachers can integrate a variety of reflective activities that permit students to self-assess, reflect, and provide insight as to the quality of the learning activities. Reflections help students acknowledge their strengths and challenges while also developing a habit of honest self-evaluation. When shared with the instructor, these reflections provide invaluable insight into student learning dispositions, aspirations, and suggestions for improvement. When addressing issues of social justice, the information culled from reflective practices also provides an opportunity for teachers to hear

from students who might otherwise be reluctant to share in a larger group setting.

Using personal learning framework that builds relationships, supports student growth and learning, and moves students towards a more student-directed model of learning is the first step in developing a personalized learning pedagogy that addresses social justice. When teachers know students and their families deeply, when they understand the principles, values, and concerns that the community is bringing to the classroom, and when they are able to build student achievement through those foundations, the stage is set to address significant issues of social justice that will come to bear on our students' lives throughout the 21st century. Likewise, when students feel connected and valued by trusted adults in their school, they are more willing to engage in important conversations regarding equity and social justice; they see themselves as positive contributing citizens to their society.

Component 2: Personalized Learning Plans

Using the personal learning framework to guide students towards independent, personalized learning about social justice works most effectively when students have a plan for learning. In the state of Vermont, all students are required by *Act 77: Flexible Pathways* (Vermont Agency of Education, 2013) to have a personalized learning plan (PLP) that identifies goals, evidence of learning, and that is reviewed at least once per year with students, teachers, and family. PLPs guide students through a process to learn more about themselves, their strengths and potential areas for growth, and their habits of mind and work. Students are engaged with identifying personal and academic goals and actively participate in designing and reflecting on a path to achieve their goals. This process ultimately provides students the opportunity to reflect on their growth and learning and shape their future; it enables adults in their lives to better understand them as unique individuals (Vermont Agency of Education, 2019). When developed thoughtfully, and in conjunction with the personal learning framework, PLPs become a second structure through which teachers can build social justice curriculum and also move responsibility for learning from teacher directed model to a more student-centered, student-driven model of learning.

Identity

The first section of the PLP correlates with the Identity section of the personal learning framework. Learning communities can name this section whatever they feel best represents the identity portion of their work. Examples have included simply Identity, Home, or Biography. Here, learners create a brief biography but also name the principles and values that are most important to them. At Main Street Middle School, we take this a step further and examine students' views on the community, their relationships, and the issues impacting that community. When developing or considering curriculum topics, teachers should consider this as an ideal space to align student perspectives with issues of social justice.

Goals

After working through the Identity phase of the personal learning framework, and correlating a section of the PLP with that work, students then develop specific goals. Setting goals is the bridge between the Identity phase of the framework and the Growth and Learning phase. In the PLP, goal setting is a discrete process of the plan that encompasses student-driven objectives. This not only provides students an opportunity to consider the facets of their identity as explained above, it also allows them to practice the life-long skill of goal setting that will have a lasting impact on their future successes.

With teacher assistance, students create goals that are important to their academic, social, and extracurricular needs. At Williston Central School, we encourage students to develop goals that are transferable and applicable to their lives inside and outside of school. Here too, students can be encouraged to set goals around citizenship and issues of social justice. Whether working on service learning projects, researching social justice issues, or reading literature related to social justice topics, students create goals that reflect their developing interests in the issues relevant to themselves and their community. During the goal setting phase, students also begin considering action steps and identify potential evidence that they will use to demonstrate growth.

Evidence

A third vital element of the PLP is Evidence. Once students have set appropriate, achievable goals, teachers must encourage them to revisit the goals and develop the reflective and self-assessment skills required to measure progress towards the achievement of those goals. As students reflect on their learning and self-assess their progress towards these goals, they need to select the evidence that demonstrates they are making progress towards their goals. This evidence of growth and learning is then placed on the PLP to document progress.

The selection and development of evidence is a critical piece of the personalized learning experience. Selecting, discussing, and reflecting upon evidence can be a rich resource for the development of positive student-student relationships, student-adult partnership, and for the discussion of growth and learning. Together, teachers, students and families can address critical questions about the student learning experience in student led conferences that use the PLP as a platform to discuss student goals and growth.

Component 3: Flexible Learning Pathways

At the middle school level, flexible learning pathways are designed to help students prepare for the learning opportunities afforded by Vermont's *Act 77: Flexible Pathways* legislation. That legislation, signed into law in 2013, outlines secondary education opportunities such as early college, dual enrollment, and a range of work and community-based learning opportunities. In our model, flexible learning pathways emphasize the development of transferable skills and are designed so that students have an equitable opportunity to develop the skills and knowledge required to take advantage of authentic learning opportunities occurring in and out of school walls. Here are two case studies that illustrate how teachers can implement personalized learning utilizing the *Educate, Act, Connect* and *Communicate* model.

Case Study: The Green Team

Through Taylor's work with the personalized learning system, and his desire to implement the *Educate, Act, Connect*, and *Communicate* model to address issues of social justice and

sustainability, Taylor has created a learning program called The Green Team. For the past eight years, students have engaged in the Green Team once a week, on Monday afternoons. Integrating standards-based learning with a student driven learning experience, the Green Team is an opportunity for students to experience personalized learning while exploring issues of sustainability, climate change, and participatory citizenship. The learning goal, always, has been to establish a process whereby *all* students move from being passive recipients of knowledge to active, self-directed, and participating community members who understand climate issues, concepts of sustainability, and taking informed action to address those challenges.

We utilize the four key principles to guide the Green Team's sustainability initiatives. The first principle, *Educate*, is employed through a teacher-directed curriculum component that builds students' background knowledge and understanding of climate change, issues of sustainability, and the analysis of scientific evidence and multiple perspectives to understand numerous aspects of sustainability. We then move to a collaborative phase of the program wherein as a class, we co-construct definitions of citizenship, community, climate change, and sustainability. We integrate this learning by placing it under the overarching theme of Identity that occurs in our personal learning framework. For example, we ask our students to describe their identities as citizens and how their identities are impacted by the environment and the changes in the environment due to climate change.

Once we have established those definitions we ask students to finalize their definitions and record them on their PLP. In sum, we utilize the personal learning framework's Identity phase to build student understanding of critical issues related to sustainability, climate change, and citizenship. In combination with standards-based lessons related to those topics, we establish our student's Identity relative to their pathway and then ask them to record and reflect on that identity on their PLP.

Once students have demonstrated their understanding of themes such as sustainability and social justice, we then move to the second principle, *Act*, which comes to life through student committee work. Over the years, we have developed a rotation of 12 to 14 committees

that focus on specific sustainability issues. For example, we have a Classroom Composting Committee which composts food scraps from student snacks. We have a Drive Committee that collects and delivers hard to recycle items such as batteries, pill bottles, and bottle caps. Additionally, our Green Team News Committee writes, edits, and films a monthly news show that is broadcast on our local public access television station. At the beginning of the year, students vote for three committees with which they would be willing to work. Once our committees are established, students collaborate and work together to *Act* on a work plan for the year. Once that work plan is in place students independently take action to achieve the goals that they have created.

Along the way, students record evidence of their Growth and Learning both on the Evidence and Citizenship pages of their PLP. On a regular basis, we ask students to set personal and Green Team goals and to reflect on the progress they have made. All of this is independently recorded on their PLP. By utilizing a flexible learning pathways afforded by Green Team committees, we are able to create a learning experience for all students that helps them develop an understanding of these important concepts.

Through the Green Team committees, students also *Connect* with local organizations that support the work that the committees are doing. For example, we work closely with the University of Vermont's 4H Extension program, the Central Vermont Solid Waste Management District, ORCA Media, and Friends of the Winooski River to name a few. Each of these organizations provide learning opportunities for our students that expand the work that they are doing in their committees, and help students make connections between their committee work with the work that is occurring in the community.

Additionally, these organizations provide students access to learning programs, materials, and community-based learning events that enrich our students' experience. Again, as we have *Connected* with these organizations and students post evidence of growth and learning on their PLPs to demonstrate progress they have made toward understanding issues related to sustainability and standards-based skills that students have identified through their goals.

Finally, students on the Green Team who have been *Educated* about sustainability issues, who

have *Acted* on those issues through their committee work, and who have *Connected* to local organizations pursuing similar goals are asked to *Communicate* their growth and learning on a regular basis both within the classroom and to the larger community. As part of our regular academic work, each committee presents a summary of their progress to the community group each trimester. These short, standards-based presentations are then posted on the citizenship page of each student's PLP. Furthermore, these presentations and evidence of committee progress are posted to the website of each committee which are public and housed on our learning team's website. We also provide regular updates to the community through the Green Team News Show as well as a Green Team Newsletter.

The Green Team is an example of how the *Educate, Act, Connect* and *Communicate* model can afford flexible learning pathways that addresses critical 21st century issues using the process of the personal learning framework and curating that work on PLPs. Another example is the Swift Sustainability Action Project.

Case: Swift Sustainability Action Project

Inspired by the Green Team, Swift House redesigned their curriculum to include sustainability as part of the regular class schedule. Swift House is a fifth through eighth grade team with four core teachers and roughly 95 students that has practiced standards-based learning and PLPs as its core learning tools since 1990. The Swift Sustainability Action Project (SSAP) was designed in 2018 by the Swift teachers while attending the Middle Grades Institute in Vermont. This is a personalized, integrated class, which aligns with Swift House's foundational student-centered tenets and traditions.

The four principles, *Educate, Act, Connect*, and *Communicate* are a driving force behind SSAP. There are two levels of learning at work here: teacher-directed and student-directed. At the beginning of the year students are *Educated* on the 17 United Nations Sustainable Development Goals (UNSDGs) (United Nations, 2015) via a multi-age, collaborative, jigsaw activity. Students are grouped within their core classes (advisories) with representation from each of the four grade levels and assigned one of the UNSDGs to study in depth and ultimately present to their classmates. Through building

background knowledge on the important issues related to the UNSDGs, students begin gaining a foundational understanding of the impact an individual can have on their larger communities. The ability to begin to analyze multiple perspectives as they relate to scientific research and the needs of our local and global communities is a key contribution to both students' understanding and buy-in of this important work.

After learning about the UNSDGs, we have a panel of community members come in from various organizations to share their experiences as they relate to the UNSDGs and offer ideas for ways middle school students can get involved with service learning (Farber, 2017). The next phase of the SSAP is integral to shifting from teacher-directed to student directed. Having heard from local organizations, students work in small groups to begin brainstorming potential 'action projects' that address community needs and link to the UNSDGs. Once we have a variety of action projects planned, students take part in an infinity task where they are given three dot stickers and they place dots on their favorite brainstorms. These brainstorms with the most dots by the end become various action project committees. We have 16 different committee options by the end of the process for students to choose from. They use a Google Form to choose their top three choices and are placed with one of them.

Once students are placed in committees, the model of four principles guide students in their SSAP while going through the steps of the personal learning framework. Their first task as a group is directly related to Identity. The committee creates group values and norms, a committee name, a mission statement (goal), and action steps. The students immediately gain a sense of belonging within their groups as they work together to address a need in the community. After students establish a clear goal with their mission statement, they begin to research their project (*Educate*) and find ways to leverage what they have learned into actionable items (*Act*). These actionable items tend to take the form of writing emails, making phone calls, and developing a working platform to house and share their ideas. The next steps for committees are to establish community partners that will collaborate with them and provide authentic opportunities to both learn and collaborate about the issues surrounding their goal (*Connect*). The final step for the committee is to

share their progress and findings with a greater audience (*Communicate*). Our groups have done this in a variety of ways, from presenting to third/fourth grade teams in the building to writing short articles in our school and communities' newsletters.

Through this process, students have made lasting connections with community partners and have become advocates for many social justice issues. One group called "Connecting Seniors" meets with a local senior center in our community every two weeks where they participate in cross-generational learning through various activities such as baking and playing games. The students in this committee value our senior population as vital contributors to our society and have promoted this by sharing their positive experiences with their classmates.

Another group developed a mission to educate the Williston faculty and staff on LGBTQ issues, specifically around language. They have worked with various Gay Straight Alliance (GSA) groups within our district and state, and developed a presentation to give to our faculty and staff during faculty in-service meetings. They have also played an integral role in establishing a GSA in our middle school.

Implications for Teaching

When building a teaching practice that includes the *Educate, Act, Connect* and *Communicate* model using personalize learning, educators should consider three important factors that, in our experience, are critical for success: student driven learning; equity; and sustainable practice.

Student Driven Learning

Teachers looking to develop a personalized system of learning in order to address relevant, engaging, and meaningful issues of the 21st century must move from a teacher-driven model to one which incorporates student voice and continually moves to a more student-driven learning environment. When students are given the opportunity to participate in the construction of curriculum and learning, we have found that they are more engaged and motivated to succeed. An excellent first step is to begin employing a systematic process for gathering student input and feedback. In our classrooms, we regularly ask students for feedback on their learning experience. Perhaps more importantly, we then share that data with

students so that we can begin building a cooperative learning environment that honors student voice and student feedback. This very basic step is a fundamental element of developing successful student-adult partnerships in the classroom. As this practice becomes a more regular part of the learning community, educators can then tap students for the ideas and issues they wish to explore in a personal learning system. Additionally, we have found that through emphasizing and encouraging student voice in our classrooms, we have also been able to develop more positive and trusting relationships with our students.

Equity

A key consideration for educators implementing a personalized learning system is whether all students have access to all learning opportunities. Much of the work that we have described involving citizenship and sustainability has evolved from a growing belief that some of these learning opportunities or experiences were not available to all of our students. Citizenship can be a difficult and abstract concept for students. Often, the students who do have community experience with issues of citizenship are those students who have a solid network of supports outside of school or who have parents and families who are engaged in local issues. Our system brings some of these experiences and learning opportunities into the classroom so that we, as a community, provide *all* learners with exposure to opportunities, skills, and dispositions that encourage engaged and participatory citizens.

Sustainable Practice

In our practice, we have tried to develop learning opportunities that are sustainable and can be repeated over time. First, prior to the implementation of our model of *Educate, Act, Connect* and *Communicate*, one of our curricular challenges was moving from one-off service learning and community-based learning projects to a set of more sustainable and enduring learning experiences. That is, rather than focusing on singular events that can only occur once, and that require specific planning, we have taken a long-term perspective and allowed students to develop themes and projects over time. To facilitate this change in planning, we have utilized the model of *Educate, Act, Connect* and *Communicate* to identify local issues that are ongoing, widely acknowledged,

and provide students with a wide range of learning opportunities. As mentioned throughout the article, three issues that meet these criteria are climate change, sustainability, and social justice. By focusing on these issues within our model, we are able to develop, in conjunction with our students, the types of learning experiences that help students build the citizenship and transferable skill sets that will help them as they move through our world. Second, when developing sustainable learning opportunities, it is paramount that long-term relationships are developed with community organizations. Many local organizations that address issues of climate change, sustainability, and social justice have clearly articulated educational programs that align with standards and provide easily accessible learning materials and expertise. Connecting with these organizations and developing long-term relationships is beneficial for a number of reasons. First, students can readily connect their learning with the mission and goals of community organizations. Second, students can identify learning dispositions and skills in these organizations that are needed to succeed as a future employee and citizen. Finally, in our practice we have found that once students are connected to at least one local organization, that connection can lead to other learning opportunities with other community organizations that are at work on similar issues.

A final consideration is the age-old nemesis of teachers: time. We have found that in order to fully commit to our model of *Educate, Act, Connect* and *Communicate* teachers need to dedicate specific time during their planning and instructional time to allow such a system to flourish. Obviously, that time commitment will take away from other essential elements of teacher's curricular and program duties. We have found that with the principles and components we have identified throughout this article, a dedicated time to implement this type of system is critical. As you have seen in our two case studies, building dedicated time into the instructional day can create a sustainable practice that provides students with the personalized learning experiences that build their skills and dispositions that is critical for learners addressing society's 21st century global and local issues.

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