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Welcome to this Issue

Kyle Greenwalt
Michigan State University

Jared Kemling
Southern Illinois University

Along with my associate editor, Jared Kemling (Southern Illinois University), I am pleased to share with you this editorial team’s first issue of The Journal of School & Society. We thank the many members of the John Dewey Society who have supported us in this project as well as our contributors to this exciting issue.

The John Dewey Society was founded in 1935. While the ideas and topics that interested Dewey are shared by many in our organization, as an editorial team, more than anything else, we seek to work in the spirit of the great American philosopher—and in particular, with his commitment to the use of the method of conjoint experience and communication for the enrichment of democratic living.

The Journal of School & Society seeks to position itself as speaking to all those interested in the place and function of education in a democratic society—to academics, certainly, but even more so to public school teachers, to parents, and to community and labor activists. To that end, we actively seek to highlight voices from diverse constituencies. We seek to be a journal of intelligent practice for creative and justice-oriented practitioners.

To that end, this issue deals with the future of vocational education.

Our Contributors Reflect on the Work Vocational Education

The term “vocational education,” it seems, is quickly losing its popularity in favor of other terms and other trends: CTE (Career and Technical Education), POS (Programs of Study), and, perhaps most excitingly, the MakerSpaces that have been popping up in communities across the globe.

A whole new way of working has brought with it a whole new way of learning to work. James R. Stone III, Director of the National Research Center for Career and Technical Education at Southern Regional Education Board, makes this abundantly clear in his article in this issue.

What accounts for the decline in vocational education, as it was once known? Certainly, federal policy and legislation have played a part in this—as Stone makes clear. But there are perhaps other reasons as well.

The older view of vocational education got itself entangled on the horns of several dilemma from which it was never able to free itself. Was it about enrichment of the living present or was it about preparation for a coming future? Was it about fitting children to the needs of industry or was it about re-shaping industry towards more socially-just outcomes? Was it about the preservation of the skills of the past or about learning the skills of the future? And just who, in any case, should engage in topics we might consider “vocational?”

Needless to say, Dewey would have rejected any such dualisms and asserted the importance of vocational education—rightly understood—for all learners. Pieces in this issue by Anthony DeFalco and Liu Xing make this point in compelling ways: any worthy educational endeavor must, it seems, have its cake and eat it too. It must combine appreciation of the past with readiness for the future, present enjoyment with future demands, individual gifts with social needs, and efficiency with equity.

To that end, the piece by the Reverend Kit Carlson of All Saints Episcopal Church in East
Lansing, Michigan, is deeply resonate for me—as a scholar, as a teacher, and as a parent. Drawing upon figures such as Martin Luther, Frederic Buechner, and Parker Palmer, Carlson asks us to consider the difference between vocation and career, all the while asking how we can connect our “deep gladness” with “the world’s deep hunger.”

In our everyday lives, when pipes break, we need plumbers to fix them. But in a democracy, surely we need not just plumbers who know their work, but plumbers who carry with them a sense of their worth and purpose. Such is the story told by Karen Murphy, Communications Director of Michigan State Employees Association: of plumbers who rushed into Flint to install new filters and faucets for residents threatened by the lead poisoning of the city’s water. Can we appreciate the work done by these plumbers and, at the same time, deny them a fair wage? Can we appreciate their work and deny them the right to collectively organize? Can the new wave of vocational education concern itself with credentials but ignore issues of social justice? It must not.

Those carrying out the work of CTE must ensure that this does not happen. We turn, then, ultimately, to those doing the work. Both k-12 public school teachers and community organizations are well represented in this issue.

Erica Swinney of Manufacturing Renaissance tells the fascinating story of her organization’s work to partner with Chicago Public Schools in offering the very type of cutting-edge CTE that seems so promising to those working in the field: stacked credentials, long-term career counseling, and attention to the so-called “soft skills” that make a person a valued colleague, comrade and citizen—all in a Chicago community hard hit by the flight of manufacturing jobs and institutional racism.

Where, indeed, will the next Grace Lee Boggs come from? Erica Swinney just might be able to tell us.

From the classroom, we hear from John Denson, an agricultural teacher in Texas. Drawing upon his experience as both a parent and a classroom teacher, Denson points out the continued opportunities for learning as we help a new generation of farmers feed the world. Love of animals—something that seems almost inherent to our species—can, in the hands of a talented educator, be led into love of both agricultural methods and democratic purposes. It also builds traits of character—the lovely notion of “horse sense” that Denson speaks of—that serve young adults well in the future.

We also hear from Diane Allerdyce in a wide-ranging interview with Natasha Perez—all in a video that has been wonderfully edited and produced by James Jackman. Allerdyce is a long-time John Dewey Society member and a founder of the Toussaint L’Ouverture High School for Arts & Social Justice in Delray Beach, Florida. In this interview with Perez, Allerdyce broadly considers how her incredible school contributes to “the vocation of being human” among a group of students who clearly have so much to offer the world. From the arts, to social justice, to career education, Allerdyce helps us consider of what a truly integrated school curriculum consists.

Finally, we hear from Kevin Russell, a social studies educator turned manufacturing instructor. Russell helps us see how these two subjects, in the hands of the right educator, are actually not so far apart. They both aim to ready kids to transform their communities through work done in service to others. Russell lays bare for us the struggles that teachers will have to confront as they open themselves up to the idea that colleges—with their ever increasing tuition rates—might not open as many doors as they promise. That teachers might demonstrate to students the beauty and worth of many different life paths.
John Dewey and Vocation

One senses that everything that John Dewey cared about could be fruitfully approached through the topic of vocational education. As he said in *Democracy & Education*: “The dominant vocation of all human beings at all times is living—intellectual and moral growth.”

What this means, then, is that vocational education—in the sense developed by the contributors across this issue—is a process that never ends.

The excitement of vocational education can be sensed when we realize that each day brings opportunities for further growth and transformation—that today can be different than tomorrow, *if our society values the human potential within all of its diverse members.*

Dewey understood this and he insisted upon honoring the diverse talents that each human being brings to the world. In his reconstruction of society, he called for new ways of working and serving, ones that would put learning at the forefront.

As he noted, “if even adults have to be on the lookout to see that their calling does not shut down on them and fossilize them, [then] educators must certainly be careful that the vocational preparation of youth is such as to engage them . . .”

This, then, is a vocational education worth pursuing. One that contributes to a life devoted to learning in, through, and for our work—broadly understood—all in pursuit of the common good.

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On the Vocation of Being Human [VIDEO]

Diane Allerdyce
Union Institute & University

Natasha Perez
Michigan State University

James Jackman
Toussaint L'Ouverture High School for Arts & Social Justice

The interview for this article is presented in an alternative, video format. The video interview can be accessed online from the below link:

https://www.youtube.com/watch?v=A8RUyjxFK_M

Interview Details

Diane Allerdyce, Ph.D., is Chair and Faculty of the Humanities & Culture (HMS) major of the Ph.D. program in Interdisciplinary Studies at Union Institute & University, where she has taught since 2008. She is also the Co-Founder of the Florida-based non-profit organization Center for Education, Training & Holistic Approaches, Inc. (CETHA), which operates the Toussaint L'Ouverture High School for Arts & Social Justice in Delray Beach, Florida. Diane is the author of Anaïs Nin and the Remaking of Self: Gender, Modernism, and Narrative Identity (University of Northern Illinois, 1998). In addition to Lacanian psychoanalytic theory, gender studies, feminisms, and poetry, her research interests include international educational outreach efforts, particularly in Haiti, where she has authored and facilitates a support program for teachers, Teaching by Heart in Haiti.

Natasha Perez is a doctoral candidate at Michigan State University. Natasha taught Reading and English in South Florida for seventeen years before moving on to pursue her doctorate in Literacy and Teacher Education. As a daughter of immigrants, she has long been fascinated by the movement of people, language, and culture across time and space. She is currently finishing her dissertation, "Stories of Cuban-Americans Living and Learning Bilingually."

James Jackman is the Director of Technology at the Toussaint L'Ouverture High School for Arts & Social Justice. He produced this video for The Journal of School & Society.
Looking at the Future of Vocational Education: Vocational Agricultural Technology

John D. Denson

The subject of Vocational Education is very personal to me, as I am an Agricultural Technology Teacher Educator. Academic subjects such as English, Science, and Mathematics are extremely important for students to communicate with understanding. Certainly, English, Science, and Mathematics classes help students in the Agricultural Technology classes as well. However, the lack of Agricultural Technology classes deprives a student of horse sense learning experiences.

People with horse sense are prudent. They can tell the real from the sham. They can harness energy to get the job done. Agricultural Technology teaches a student horse sense through hands-on instruction and students get it... they learn the horse sense of living a better, healthier, conservative, democratic life, within a better, healthier, conservative, democratic environment. Simply stated, improvements and progression are needed (if you are not improving and progressing, you are going backwards), but we need to hold on to our roots. A tree without roots cannot weather the storm.

I have had the desire all my life to become an Ag teacher. My grampy and granny had a ranch out in the country, and I would spend as much time and as many summers with them as I could, desiring to learn as much as possible about animals, farming, and ranching. As high school drew near, the desire to study agriculture seemed to finally become a reality. However, the road to becoming an Ag teacher was filled with many potholes.

The first pothole came in high school. I was not allowed to take agriculture classes. What? I was not allowed to study agriculture? Because of plans to attend college, my high school counselor would not allow it: she explained that vocational classes were for students not planning to attend college. I was allowed, however, to take “shop” and was able to make it through high school with the shop classes. As I planned for college, it was difficult to find a college I could afford and that offered Ag classes. As a bull rider, rodeo scholarships, as well as many part-time jobs, helped finance my studies while attending college first in Weatherford, Texas, and then in Stephenville, Texas. My Ag teachers were the best, too, at both Weatherford College (WC) and Tarleton State University (TSU)!

When you really are trying hard to be an Ag teacher, it shows, and there are good agriculture people who are pleased to help.

After graduating from WC with an Associate in Farm and Ranch Management, and after graduating from TSU with a BS in Agricultural Services and Development (with a minor in Animal Science), I went on to earn a Master’s in Education at Stephen F. Austin State University (SFASU), and will earn a Doctorate in Educational Leadership during the coming year at SFASU.

This Agriculture Educator is so pleased to see renewed attention to vocational educa-
tion—to see it returning to the front arena, so to speak—and to see how people are now realizing the greater need for vocational education in today’s world, when it is perhaps more possible than ever to truly enjoy working with others to develop a better environment for the future. There is better machinery for developing crops, for providing food, and for providing clothing and shelter. There is a whole world of robots able to assist in any field.

**But, I am convinced (as both a parent and a teacher) vocationally-oriented classes will provide better training for each of these girls in each of the fields they have chosen.**

This author has two daughters, each one very different from the other. The oldest daughter is very interested in Vocational Agriculture and has hopes of becoming a Veterinarian, having the desire to care for animals. The younger daughter is more interested in the Arts. The older daughter cannot get enough of agriculture, working with animals. Her favorite pet is a pig she calls “Shadow” because it is black and follows her everywhere (like a shadow). The younger daughter has given working with animals a try, showing rabbits at the county fair, then showing goats, and finally showing a heifer at the Houston and Fort Worth Stock Shows. She did not enjoy working with animals at all.

The older daughter just seems to have a talent for working with animals and getting the animals to perform in the way she needs them to perform. The younger daughter’s talents are in the Arts. She enjoys learning and playing music. She plays several different musical instruments very well, she loves drawing and painting, and she is learning to be a seamstress, as well as cooking very well. While the older desires a scholarship in Agriculture, the younger desires a scholarship in Music and Art. But, I am convinced (as both a parent and a teacher) vocationally-oriented classes will provide better training for each of these girls in each of the fields they have chosen. There are opportunities for learning through career technology classes that are not available through any other source; such as the new Meats Laboratory at our high school, providing education in all areas of the study of meat, or the assistance of an Ag teacher to assist in the planting of crops, or arranging flowers. There is no substitute for the assistance an agricultural educator can provide.

There are students in college today who took vocational agriculture at Longview High School with me and they now have a desire to become Ag teachers themselves. Had each of these students not taken Vocational Agriculture classes in high school, they probably would have never gone to college, and never had a desire to become an Ag teacher. There is a very special feeling when these students call me up just to talk about what’s going on in their studies. It seems obvious, too, that there are some students who take an Ag class just thinking they will get an easy grade; and, yet, participation in hands-on learning in the Ag classes makes such a difference, they become eager to learn.

Upon signing on to teach at Longview High School, I was immediately asked to direct the construction of the best Meat Processing Educational Laboratory in Texas east of IH-45. This Meat Lab has been such a great encouragement for students to take Ag classes. They receive hands-on training in Meats classes. Students are prepared at the time of their graduation to be employed in any area of the meat processing industry. Several of my students have been hired by Brookshire’s to be their butchers. Students graduating with these experiences are also well prepared to major in any area of agriculture as they enter college.

The children of today have a different future than any other generation: each generation experiences its own changes. This generation, however, has a greater-than-ever need for vocational education. As the vocational educators of
today, we should provide as much assistance as possible to ensure students receive beneficial, hands-on learning experiences. That they not disdain the work that got their families where they are. That they see the intelligence needed to do work well, work that supports family and community. As educators, we should strive to be the best we can be, be a role model that will encourage today’s children to be the best they can be, and encourage each student to discover their calling.

In any direction, vocational classes are needed. Our children are the future of the world. We have heard this statement over and over again, but the depths of this statement are tremendous. If our children do not have an understanding of practical abilities, this world will have a sad future if every student decides to go in the same direction. More than ever, our society needs intelligent and well trained people working with animals, to ensure that our food is safely produced and processed.

That they not disdain the work that got their families where they are. That they see the intelligence needed to do work well, work that supports family and community. As educators, we should strive to be the best we can be, be a role model that will encourage today’s children to be the best they can be, and encourage each student to discover their calling.

There are numerous skills to learn through vocational classes. Longview High School, and most other high schools as well, offer vocational education classes for most anything a student might attempt to do in their lives. If a student loves working on a car, whether it is working on the motor or the body of the car, there is a vocational class for an education in that field. If a student desires to be a florist, seamstress, cook, welder, butcher, farmer, or rancher there are classes in vocational education for this training; and anyone with the desire to be the best they can be at whatever they choose to be, should consider taking a vocational class in that field. However, some seemingly lead students and parents to feel vocational training results in receiving a lesser education, rather than vocational classes being an asset and broadening their education. This is simply a lack of understanding and the need for parents to question what is available for their children.

As an Ag teacher, there are many opportunities available for assisting students in life training, and experiences of feeling the need to help students realize their talents through Vocational Education. There are needs for all talents throughout the world, each one assisting the other. If there were no agriculture or any other technical studies, we obviously would soon have no need for English, Science, and Mathematics. We can realize the world’s need for agriculture to help supply for health and security of the world. But we also need to teach the skills of preservation, the ability to provide food, shelter, and clothing; and, this Ag teacher would like to think these students would have employment opportunities available for their livelihood in which they could be happy and enjoy the work they are performing.

An Ag Educator should be a leader who enjoys the employment he or she is undertaking; be the role model who is encouraging stu-
students to also become a positive role model and life preserver.

What, then, should a good Ag Educator look like? I attended the funeral a couple of weeks ago of a very dear friend. This very dear friend was Mr. Brown, an Ag Educator who taught horse sense. He could teach a lesson, and then you could instantly use that knowledge to make or save money in an agricultural operation. He was the Ag teacher that made me want to hang in there and not give up on becoming an Ag Educator to also teach horse sense. The very large building holding this memorial was packed with people desiring to honor this gentleman’s life. There was not a person in that place that had not been touched by this gentleman’s influence on their lives. Many of the people attending, such as me, were students he had taught in his agriculture classes. These students did whatever they had to do in order to attend Mr. Brown’s memorial. Perhaps, this is what an Ag teacher should look like. Perhaps, quite often, life is too busy to have the time or desire to assist others.

John Denson is an agricultural educator in the Longview Independent School District in Texas. John has been instrumental in his district as an advocate for vocational education and for the vocational classes to be a reflection of the school’s racially diverse student population.
A History Teacher Who Happened to Teach Manufacturing . . . and Loved It

Kevin Russell
Austin High School, Chicago, Illinois

Chicago is a fascinating city, with enough history to fill several courses of study. Nine years ago I moved to this wonderful Midwest city, and have had the opportunity to teach Social Studies to high schoolers in the Chicago Public Schools during that time. I have led courses in US and World History, Global Issues, and Consumer Education.

Then, at the beginning of this year, a unique opportunity presented itself. The school at which I had taught for the past eight years was slowly (but steadily) losing enrollment, and my principal was searching for a way to rectify the issue. An idea was hit upon: to bring students into the engineering and manufacturing track within the school. This engineering and manufacturing track is coordinated by the non-profit Manufacturing Renaissance.

In light of the student enrollment issue at my high school, my principal asked if I would be willing to teach an exploratory class at a local middle school. The idea was to introduce students to the basic concepts of manufacturing with the hope that their appetite would be whet and a passion ignited. Additionally, the thought was that if these students formed a relationship with their high school teachers early enough in their learning trajectory, they would be more inclined to attend our high school and pursue a diploma with a focus on engineering and manufacturing.

I was admittedly skeptical of the idea initially. As someone who has taught history his entire life, I was hesitant to teach a subject with which I had almost no experience.

In addition, there was my own history. Prior to beginning my teaching career, back when I was younger and preparing to graduate from high school, my parents helped me to consider all possible career options. But every one of those options included college. As the son of an educator, education was in my blood. Looking back, I learned a lot of information in college, but some of the biggest lessons were around discipline, self-reliance, and teamwork. Those are lessons that have served me well in life. I constantly reflect upon how I want my students to be able to graduate from college and have those same opportunities for growth, while also realizing that college is much more costly today than it was even ten years ago.

I constantly reflect upon how I want my students to be able to graduate from college and have those same opportunities for growth, while also realizing that college is much more costly today than it was even ten years ago.

So, after several discussions with my principal and the people from Manufacturing Renaissance, the determination was made that it was a good fit. We would pursue the project.

The key selling point that convinced me to pursue this relationship and teach at the middle school was the vision that the people from Manufacturing Renaissance had—both for the students and community they served. Their basic premise, with which I agree, is that every student is capable of attending college and should have the chance to do so. However, we

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3 See the article in this issue by Erica Swinney.
should also equip these students with marketable skills in case they choose to go directly into the workforce.

The idea of closing doors to young people seems ludicrous, especially when so many of them have no idea what type of career they will pursue. However, it also seems counterintuitive to force students to take advanced course in subjects in which they have no interest. In my first few years of teaching, I often struggled to adequately answer students when they would ask a question such as, “I really want to go work in my dad’s mechanic shop when I graduate. He took it over from his dad, and I’m going to take it over eventually. Why do I need to go to college?”

Often I responded with the requisite, “it never hurts to keep your options open,” or “you have to be able to manage the books as well, so you may want to consider a degree in accounting”. The inherent problem with that response is that, many times, the student had no interest in accounting. I questioned why it was important to tell a student that they should absolutely pursue college. Especially in light of the ballooning costs of post-secondary education, I reflected on whether it made sense for a young man or woman to accumulate tens of thousand of dollars worth of debt and forego four years of on-the-job experience to get a degree that may or may not benefit them in their chosen career.

These were the things that would keep me up at night. As I contemplated these ideas I would consider the obvious counterpoint that, despite the high costs, college degrees can still open doors and, generally, those who go to college will have a higher earning potential over the course of their careers. Part of my job as an educator is to show students how they can achieve more than they ever thought possible, and in no way did I want to limit my students, or even validate their desire to limit their own pursuits. So when the people from Manufacturing Renaissance explained their vision, I was intrigued.

Essentially, Manufacturing Renaissance is a non-profit organization that operates within a Chicago Public School. Their goal is to teach students basic manufacturing and engineering skills that can prepare those students for a post-secondary career. Along with coursework, students visit manufacturing companies and work at internships to gain real-world experience. Whether the post-secondary goals of the student include going straight to the workforce or attending college, the plan is that they are prepared.

The idea of serving the community through the education of youth, with a focus on both college and career, was right up my alley.

Additionally, one of the stated goals of Manufacturing Renaissance is to see communities transformed. Their desire is to see students be gainfully employed and involved in job creation within their communities in order to spark a revitalization of commerce in underserved neighborhoods. The idea of serving the community through the education of youth, with a focus on both college and career, was right up my alley.

When I walked into the middle school on day one of the 2016 school year, I had no idea what to expect. It turned out, of course, that kids are kids, no matter where you teach. I was grateful to be able to team teach with a gentleman who had been teaching a shop class at our high school for several years. He brought expertise from the manufacturing world, whereas I had the background in social studies education. We complemented each other well and learned from one another.

We have been able to teach students how to use instruments such as dial calipers and micrometers, which will be useful should they pursue a
high school curriculum pertaining to manufacturing and engineering. Additionally, we showed the students how to build simple machines using pulleys, gears, and cranks. The idea was to create a foundation of knowledge that could be built upon in the future. Finally, we led the students through the process of using a Computer Numerical Control (CNC) machine. Students designed a top on the computer, then watched as the CNC machine brought their design into the world. It was simple (but great) way to whet the students’ appetites and show them how interesting a career in manufacturing and engineering could be.

At the end of the day, I agreed to teach at the middle school out of hope.

At the end of the day, I agreed to teach at the middle school out of hope. I have hope that the students I meet there will be able to pursue a career that they are passionate about—without drowning in college debt along the way. I hope that students who otherwise would have dropped out of school find a reason to keep attending and see a path to success through a career in manufacturing or engineering. Most of all, I hope that students can see that there are many paths to success and, whether this means college or straight to the workforce, there are teachers to help them along the way.

Kevin Russell is the Social Studies Department Chair at Austin High School in Chicago, Illinois. He has been teaching and coaching wrestling in Chicago for the past nine years.

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4 According to Wikipedia, “Numerical control (NC) is the automation of machine tools that are operated by precisely programmed commands encoded on a storage medium, as opposed to controlled manually by hand wheels or levers, or mechanically automated by cams alone. Most NC today is computer (or computerized) numerical control (CNC), in which computers play an integral part of the control.”
The Question of Vocation: or, Learning to Ask the Right Question

Rev. Dr. Kit Carlson

I remember an early school assignment -- the kind we did on a special sort of paper. The lower half had a few rows of lines so that we could make our letters properly as we wrote our answer to the question, and the top half was blank, so we could draw a picture that illustrated our writing. The name of the assignment was “What Will I Be When I Grow Up.” And when we had finished our vocational dreaming, when we had printed with care our statement of hope and ambition, and when we each had sketched a primitive, distorted image of ourselves as a grown-up, the teacher posted all of our work on a bulletin board for Back to School Night, so parents could see the range of identities their children hoped to attain.

It was the mid-1960s, so you can imagine the selection. Boys wanted to be football players, doctors, lawyers, farmers, and there was one lion tamer in the circus. Girls wanted to be mommies, teachers, secretaries, or TV stars. I wanted to be a writer, and my drawing showed a girl typing at a table. Our parents were all suitably impressed with our printing, our drawing, and our dreams.

What do you want to be when you grow up? The question still gets asked of children and teenagers, and as they approach the final years of high school, the question gets more intense. Our society asserts, in so many ways, that a job or a career is the means by which adults can achieve these goals of being. In higher-income, high-achieving families like those I work with in my congregation, and like those I raised my own children among, there is a more specific assumption. This assumption is that if a child gets the best grades in the right courses, bolstered by the right extra-curriculars, that will inevitably lead to the right college and the right career—and that this pathway will automatically deliver things like happiness, independence, importance, satisfaction, excitement, and love.

However, when that assumption fails to deliver on its promises, things can get terrifying. Because a high school diploma no longer provides an automatic gateway to a job that can provide even a living wage, much less happiness, satisfaction, or importance. My own son never finished college. Although we set him on
that track of grades, courses, extra-curriculars, and college, he failed to thrive. After high school, he dropped out of university, and then out of community college, and for some years he lived hand to mouth delivering pizzas. Fortunately, a friend helped him land an entry-level job at an internet provider answering the phones. That has blossomed into a career in IT. He does internet security, beating back spammers and hackers. Is this the job of his dreams? That’s unclear. But it is a job that he is good at, and it provides some mental stimulation and satisfaction, while it pays a decent wage.

Maybe that’s the best anyone should hope for—a job that you are good at, that provides some stimulation and satisfaction, and which pays a decent wage. That’s certainly the assumption behind the drumbeat of “jobs, jobs, jobs” that we hear from politicians and the media. That is even the assumption behind vocational education as it was traditionally practiced. Back in the days when vo-tech education meant home economics, shop class, typing, welding, or cosmetology, the goal was to train young people—and generally young people from lower socio-economic strata—for a job that could last their entire working lives. And in the twentieth century, there were plenty of jobs, even good, middle-class union jobs, for people with this kind of training. But the days of good union jobs in factory is over.

Nonetheless, the necessity of meeting basic needs endures. “I want to be alive.” “I want to be safe.” “I want to be fed.” “I want to be warm.” “I want to be sure tomorrow won’t bring worry and fear.” A steady job, a decent, well-paying job, can accomplish this at least.

But apart from simple security, there are those deeper needs which endure in every human being. “I want to be happy.” “I want to be independent.” “I want to be important.” “I want to be loved.” “I want to be excited to wake up every day.” “I want to be satisfied.” And if vocational education is designed to address only the basic questions, and not those deeper needs, then the essential humanity of all students will be stunted and disfigured.

Perhaps a deeper consideration of the very word “vocation” could help expand the vision of ways that education can help all students “be” something when they grow up … something that will help them meet their basic needs, while allowing them to strive toward those deeper hopes and ambitions.

And if vocational education is designed to address only the basic questions, and not those deeper needs, then the essential humanity of all students will be stunted and disfigured.

For centuries, since sometime in the Middle Ages, the word “vocation” has had a religious connotation. It was used to refer to the lives of monks and nuns and priests. If one gave up one’s life to the Church, one had a “vocation.” And the word is still used in this sense by Catholics today. There are discernment programs, days of prayer, and all kinds of concerted efforts made by church officials to generate the idea that some children and young people can discover a vocation to serve the Catholic Church as a priest or a nun.

But the word has a more basic root. It derives from the Latin word vocare, which means “to call.” That’s why it has such a strong religious connotation. Who is doing the calling? In the Middle Ages, they understood that God did the calling, because in the Bible, all sorts of people are directly addressed by God—they are called—and then they are told to take on a special task to benefit the world and God’s people.

In the Bible, Abraham is told to leave his home in Haran and head out for a destination
yet unknown, where he will settle and have uncounted descendants who will bless the world. Moses hears a voice out of a burning bush that tells him to bring the Israelites out of slavery in Egypt. A young girl named Mary is greeted by an angel who tells her she will bear the Son of God. A man named Saul is knocked off his horse by a vision and gets renamed Paul, apostle to the Gentiles. So it’s understandable that in reading these stories, the Church understood calling as something holy and specific, as something that comes from God. In this medieval understanding, God called special people for special work. God called priests and monks and nuns into lifelong vows of poverty, chastity, and obedience and into lifelong service to the institutional Church.

Out of the Reformation grew an understanding that ordinary people could consecrate their daily work to God, and thus live out their own vocations, no matter how small or menial.

In the sixteenth century, the Protestant reformer Martin Luther rejected this idea of vocation as purely ecclesiastical. He asserted that all Christians were made part of Christ’s priesthood by virtue of their baptism, and thus there was no distinguishing between the value of a nun’s work and the value of a mother’s work, if both kinds of work were done with a faithful intention, and were done in a way that glorified God. He wrote in his Lectures on Genesis, “If you are a student, mind your studies; if you are a maid, sweep the house; if you are a servant, care for the horses, etc. A monk may live a harder life, wear poorer clothes, but he will never be truly able to say that he serves God in this manner. But they who serve society, the state, and the church can say it.” Or as seventeenth-century poet George Herbert wrote, “Who sweeps a room as for Thy laws,/Makes that and the action fine.” Out of the Reformation grew an understanding that ordinary people could consecrate their daily work to God, and thus live out their own vocations, no matter how small or menial.

It was not until the early days of the twentieth century, and the rise of the vocational counseling movement that the word “vocation” moved fully into the secular vocabulary. With the founding of the Vocation Bureau in Boston in 1908, the word “vocation” became inextricably linked to the efforts to provide education and job training for immigrants and underprivileged youths, an understanding that has led to modern ideas of vocational education and vocational counseling. And thus in our current lexicon, the word “vocation” has come to mean one of only two things—either it’s a life given over in service to the Catholic Church, or else it’s a job or trade that can be learned without going to university.

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If we could retrieve a broader and a deeper sense of the word “vocation,” that might help broaden the understanding of what vocational education is for. And perhaps then educators and other professionals could help students—all students, regardless of socio-economics, ethnicity, or national origin—dream about their own vocation. Not as something to do to make money, although that might be part of it. Not as something to be, as a core identity, although that could perhaps happen. But to claim again the idea of vocation as calling, as a response to a call that comes from outside oneself, a call to something that can use an individual’s gifts and talents to meet the needs of the wider world. That is, actually, the way author and theologian Frederic Buechner defined vocation in his book Wishful Thinking: A Seeker’s ABC—as “the place where your deep gladness and the world’s deep hunger meet.” There is a double-sided desire at
work in Buechner’s definition. First, there is the desire of the individual to attain some of those core longings: “I want to be happy.” “I want to be independent.” “I want to be important.” “I want to be loved.” “I want to be excited to wake up every day.” “I want to be satisfied.” But there is also a desire coming toward the individual from the world itself—a longing to be healed, fed, delighted, repaired, nourished, or set to rights.

Buechner described it as “the kind of work (a) that you need most to do and (b) that the world most needs to have done. If you really get a kick out of your work, you’ve presumably met requirement (a), but if your work is writing TV deodorant commercials, the chances are you’ve missed requirement (b). On the other hand, if your work is being a doctor in a leper colony, you have probably met requirement (b), but if most of the time you’re bored and depressed by it, the chances are you have not only bypassed (a) but probably aren't helping your patients much either.”

In my late twenties, I was only partially fulfilling part (a) and coming to realize that my work was truly not at all part (b). I was working for a large nursing home company, coordinating advertising and marketing. For a few years, I was excited to climb the corporate ladder, to find my abilities stretched every day, and to realize I could grow and improve as I stretched. There were deadlines to meet, arguments to have with upper management, schedules to coordinate. I was living on a series of adrenaline rushes, working long hours and weekends. The crash I experienced was probably inevitable. After a while I realized that while quality long-term nursing care is important, the work I did advertising and marketing that care was not meeting the world’s deep hunger. Adrenaline is a thin sort of substance to live on, day in and day out.

I left that job and began a long journey of trying to discover what really was letter (a). What was the work I most needed to do? And how could that intersect with letter (b), what the world most needs to be done? As I struggled with this dilemma, I took a course at my church called “Linking Faith and Daily Life,” and in one of the readings, I was introduced to a story about a grocery store checkout clerk named Maxine.

Although her stated job was ringing up and bagging groceries, Maxine saw her real job as sharing compassion with her customers.

Although her stated job was ringing up and bagging groceries, Maxine saw her real job as sharing compassion with her customers. She talked about observing the faces of her customers, and how she offered a word of encouragement to someone who seemed sad, or how she packed bags a little lighter for a weary-looking customer. “Compassion is the most vital tool of my trade,” she said. “There are many sad stories to be heard while ringing up grocery orders. Many times I find I’m called upon to help nurture the emotional state of a shopper—just as the food they’re buying will provide nourishment to their bodies...When I succeed in easing the pain of another human being, it is then I realize just how important my job as a simple cashier is.”

Maxine was able to link (a) with (b). Her deep gladness was in being a person who shared compassion with others, and the world’s deep hunger was to receive compassion. The fact that she was a checkout clerk only provided the vehicle for Maxine to live out her vocation. She could have exercised that same vocation as a doctor, or a teacher, or a letter carrier, or as a vice-president of a large institution. Her vocation and her job were not necessarily the same thing.

This opened my own thinking about vocation. At the time, I was wondering if I had a religious vocation in the classical sense of the
word—if I was being called to be a priest in my own Episcopal denomination. But Maxine’s story stopped me in my tracks. It encouraged me to think about many things I did as vocation.

I realized that my letter (a), my deep gladness, comes from being able to be with people and to connect groups of people to one another in nourishing ways. The world’s letter (b), its deep hunger, is for more connection, more love, more friendship, more understanding. So for a while I worked for a cultural exchange program as an area coordinator, helping American families and foreign students as they worked to live together. And I also volunteered as a court advocate for a young girl who had been abused by her father and who was living under the court’s authority. Over time, I saw myself less and less as someone who needed a job as a “professional helper,” and more and more as someone who could be that helping person in many different situations.

Vocation does not come from a voice ‘out there’ calling me to become something I am not. It comes from a voice ‘in here’ calling me to be the person I was born to be.

So when I did end up in a religious vocation, when I was ordained a priest, I saw it more as a vehicle—a more official and more comprehensible vehicle, but a vehicle nonetheless—for me to live out my deep vocation of (a) and (b), of what I needed to do most and what the world most needed to be done.

Educator and author Parker Palmer writes in Let Your Life Speak: Listening for the Voice of Vocation, “I understand vocation … not as a goal to be achieved but as a gift to be received. Discovering vocation does not mean scrambling toward some prize just beyond my reach but accepting the treasure of true self I already possess. Vocation does not come from a voice ‘out there’ calling me to become something I am not. It comes from a voice ‘in here’ calling me to be the person I was born to be.”

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And so we come back to the original question: “What do you want to BE when you grow up?” How do we help children discover—not ultimate fulfillment in a specific job, but true fulfillment in becoming the person they were born to be?

Parker Palmer describes how he realized that his granddaughter was born as a distinct person, with certain dislikes and certain desires, definite personality traits, and gifts that needed to be nourished. “She did not show up as raw material to be shaped into whatever image the world might want her to take. She arrived with her own gifted form, with the shape of her own sacred soul.”

And he warns about the forces that will try to bend that gifted form out of shape. “We arrive in this world with birthright gifts—then we spend the first half of our lives abandoning them or letting others disabuse us of them. As young people, we are surrounded by expectations that may have little to do with who we really are, expectations held by people who are not trying to discern our selfhood but to fit us into slots.”

Every young person an educator encounters arrives as a distinct individual, each with their own gifted form, each with the shape of their own sacred soul. But by the same token, by the time these students arrive in any classroom, the world they inhabit outside of school has already tried to shape them into its own images. And that is true for the economically disadvantaged child in the inner city, for the non-native English speaker in the school already bursting with immigrants, or for the exhausted child of overachieving parents in an upscale neighborhood.
And then the educational system takes its own turn at bending those gifted forms. And often the demands of testing, of too many students and too little time, can keep even the most sensitive educator from helping a student to listen for the real voice of vocation, the calling that draws their truest selves into deep engagement with an aching world.

What if vocational education could engage students in deep questions of meaning and purpose and joy? Not abandon career counseling or technical training, but come to those practical practices only after fully engaging with the question of vocation at its deepest level. How might the innate gifts and inner joys of a student be drawn out and applied to effective and rewarding pursuits that can make the world a fit place for all of us to live in?

What if we changed the question? What if the question we asked a child—from the day they walked into a kindergarten classroom until the day they crossed the stage and flipped their tassel—was not, “What do you want to BE when you grow up?” What if we could ask, and keep on asking, “Who ARE you—truly, today—and how do you hope to engage this truest self with this troubled world?”

The Rev. Dr. Kit Carlson is rector of All Saints Episcopal Church in East Lansing, Michigan. She earned a D. Min. at Virginia Theological Seminary in 2015. She has a deep passion for helping people of all ages to discover the work they are called to do in this world, and she teaches classes in vocational discernment for people in all walks of life.
Building the Bridge as We Travel

Erica Swinney
Manufacturing Renaissance

A case study in developing a program to help reanimate a public school’s role in economic and workforce development for the communities they serve

The People

“Dec, the phone is for you. It’s Andre, he’s says he wants us to find him another job, he’s ready to quit.” Dee takes the phone and for the first few minutes, I watch her listening to the voice on the other end of the phone. I know Andre, he is normally an even-tempered young man, but I can hear the raised volume of his voice through the handset of the phone. He’s upset. Dee thoughtfully acknowledges him on the phone without interrupting him. The rumbling that is coming out of the phone finally stops.

Andre is a skilled machine operator working on the third shift (midnight-8 am) at a local manufacturing company located in the heart of the West Side of Chicago, not far from the high school from where he graduated: Austin Pol-technical Academy (soon to be consolidated into the Austin College and Career Preparatory High School). Andre is also taking classes at a community college as he works towards earning an Associate degree in Mechatronics. Andre is having an issue with his supervisor: he feels like he is being picked-on and singled out unfairly, as if his supervisor wants him to mess up bad enough to get fired or leave. Andre has been on the job for almost a year.

Andre graduated from high school with four nationally-recognized industry credentials and he was able to become a relatively skilled machinist as a high school student—even winning a state-wide competition programming computerized lathes when he was only a junior. Despite the marketable skills Andre was able to learn while still in high school, he is still a young adult who grew up in a household with parents who struggled with alcoholism, mental illness and poverty. Although Andre had test scores that suggested he was college-ready, he fell behind in keeping on top of all the college, financial aid and scholarship application deadlines that would make it possible for him to go straight into college after high school. Thankfully, however, he had real skills to qualify him for an entry-level production job in manufacturing.

The woman who was speaking on the phone with Andre, Dee Dee, works as an Industry Coordinator. She has the ambitious job of recruiting local manufacturers to partner with the program; organizing a variety of work experiences including job shadowing, Spring Break internships and summer jobs; and helping participants prepare and successfully complete these work experience opportunities. For those who want the opportunity to work full-
time after high school in manufacturing, Dee Dee will help them both get and keep a job.

Dee Dee tells Andre what he is experiencing—while difficult,—is normal. Regardless of what sector we work in, we’ve all had the experience of working under a supervisor that we did not like. Quitting suddenly will be the most limiting option, given the uncertainty of when he’d start another job and the likelihood of having to start all over, working his way into another company. Dee Dee commits to working with Andre on how to raise this issue with both the supervisor as well as the HR Director of the company as a first step. Depending how these meetings go—, which will include a discussion exploring his role in contributing to the challenges at work—Andre, will be given the informed cues he needs to make a thoughtful decision of whether to stay or begin the job search for another job that may be a better fit. Either way, he stays in control of the situation and, in control of his own professional development. Given the tone of the conversation I’m able to overhear, it seems as if Andre has calmed down and has agreed to the process that Dee Dee has suggested.

The Context

This phone call took place January 13, 2016 within the Manufacturing Connect program offices which resides in the Austin High School Multiplex on the West Side of Chicago. It’s not often you hear of high school graduates calling their high school for career advice. However, high schools, with some thoughtful planning and coordination with certain public and private sector stakeholders, could provide career and college support services for their alumni who may embark upon a number of different career paths.

Most high school graduates stay close to home to attend college and especially so if they choose to work. Despite the real benefit of a college education in terms of potential lifetime earnings, according to the Harvard Graduate School of Education, most young adults with a high school diploma or GED do not finish either a two- or four-year college degree, and of those who do complete their degrees, half of those end up underemployed, as their occupational or educational training is not a good fit for today’s labor market.

This is in direct contradiction to the predominant educational assumption that our public education system is designed to help most young people get a college education and access gainful employment. Although that may have been the goal, it has never manifested in reality—the truth is that too many young people end up unprepared and unable to access career-track employment that can allow for a meaningful and fulfilling quality of life—one synonymous with what we regard as being part of the middle class.

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What we do have is a situation where high school graduates aren’t just falling through the cracks of the system, they are running clear off the cliff into the canyon between high school


and opportunities for economic prosperity. The public education system is failing too many young people—both those who remain enrolled as well as those who have been alienated and effectively pushed out (often due to chronic low levels of literacy and numeracy).

Meanwhile we have an economy that is largely failing huge swaths of society: the working-class, the unemployed and underemployed. Manufacturing is still one of the keystones of our economy. Although it employs less people directly than it did 30 years ago, thanks to sophisticated technologies, it has only increased in productivity since World War II. Despite the manufacturing sector’s importance to our national economy, despite the need for good paying jobs, the shocking reality is that according to the National Association of Manufacturers, 600,000 jobs remain unfilled in this vitally important sector. This effectively equates to 600,000 lost opportunities. Talent, innovation and economic prosperity, for both individuals and companies, remain undeveloped and disconnected from today’s globalized economy. Our inability, as a society, to fill these jobs, this “low-hanging fruit” for addressing unemployment and alleviating poverty, is setting the stage for the US to undermine its own potential for equitable economic development.

All of these conditions converge in communities like Austin, one of the largest neighborhood areas on the West Side of Chicago. Austin is home to approximately 100,000 people, about 85% of which are African-American, 27% of which are living in poverty (compared to 19% averaged across Chicago), 21% of which are unemployed (Compared to 11% averaged across Chicago). There is a crisis in joblessness which includes Austin, particularly for youth and young adults ages 20-24 which is estimated at 57% and that estimate goes as high as 73% in surrounding areas. The student body at Austin Polytechnical Academy has been a direct reflection of these conditions with a student body that is: 98% low-income, 98% African-American, 2% Latino, 24% with documented learning disabilities, and 14% are considered homeless.

Manufacturing Connect emerged as a response to these conditions. Manufacturing Connect is a programmatic prototype developed and operated by the not-for-profit organization Manufacturing Renaissance (MR). MR has been working with Chicago Public Schools (CPS) in a school called Austin Polytechnical Academy on the West Side of Chicago since its inception, in 2005 and school opening in 2007. Manufacturing Connect is a result of the policy and advocacy work of the Chicago Manufacturing Renaissance Council (CMRC), which was set into motion with the objective to reconceive and rebuild the link between secondary education and the opportunities in today’s advanced manufacturing sector which benefits both young people and manufacturers alike.

How Did We Get Here?

9 Cordova, Teresa, Matthew D. Wilson, and Jackson C. Morsey. 2016. Lost: The Crisis of Jobless and Out of School Teens and Young-Adults In Chicago. Chicago, IL: Great Cities Institute, University of Illinois at Chicago.
The road that led to the creation of Manufacturing Connect began over thirty years ago with the founding of Manufacturing Renaissance (formerly known as the Center for Labor and Community Research and, before that, the Midwest Center for Labor Research) by my father, Dan Swinney. As a young man, Dan was deeply inspired by the Civil Rights Movement of the 1960s, particularly after an eventful summer as a volunteer for the Student Non-violent Coordinating Committee (SNCC), which included being jailed and beaten for being SNCC sympathizer, that irrevocably altered his world view. As a result, he dedicated his career in the pursuit of economic equity.

Dan became a machinist and also a successful labor organizer, organizing a Steelworkers Union local at Taylor Forge, a subsidiary of Gulf & Western, located on the West Side of Chicago. Taylor Forge, like so many other hundreds of small manufacturing companies around the country, was consumed by conglomerates like Gulf & Western, which siphoned its capital resources to other lines of higher, short-term, profit-generating investments.11

Despite this intentional dismantling of the hundreds of family-owned companies that made up the manufacturing sector, Dan found it difficult to organize his members to fight the disinvestments happening department by department at Taylor Forge. Plant closures were happening frequently at that time. The predominant narrative sold to the public was that workers were needed to cut costs through concessions in their wages and benefits as a way to save their jobs. Dan knew that it wasn’t enough to accuse the company of being greedy, he knew he needed a competing business plan of how the company could operate profitably, working in partnership with the union and its employees. But by that point it was too late to mount such an effort. Dan, like so many thousands of people who lost their jobs from sector wide disinvestments, was laid off from Taylor Forge when the company was closed 1983.

Dan, along with other local Steelworker Union leaders, organizers and academics founded Manufacturing Renaissance in 1982 to provide the kind of research and analysis that Dan had needed to help save jobs at Taylor Forge as well as provide a resource to others who were working to stabilize their local economies. Through the 1980s, Chicago lost 3,000 of 7,000 manufacturing companies with over 150,000 people who lost their jobs. During that time MR studied hundreds of companies and worked on dozens of campaigns with local unions, community-based organizations, and even the City of Chicago under the Harold Washington administration, to save manufacturing jobs.

One particularly demonstrative case study was MR’s effort to help save jobs at the E.J. Brach’s Candy Company, the largest candy manufacturer in the world at the time located in the heart of the Austin community. In 1990, the International Brotherhood of Teamsters

(IBT) Local 738 and the Garfield/Austin Interfaith Action Network (GAIN) looked to MR to provide research and strategy assistance to see if there was a way to keep the company from moving thousands of jobs from the Brach plant on Lake Street and Cicero Avenue to Mexico. Brach’s foreign parent company was threatening to move production to Mexico and eliminate more than 2,100 jobs. MR’s research, which included direct assistance from a former CEO of the company, concluded this move was being catalyzed due to a series of misjudgments by the relatively new parent company, and instead of making the necessary investments to get the company back on track, simply moving the production to Mexico provided a cheaper solution. In short, Brach’s owner’s desire for short-term profit gains would lead to long-term job and income losses for the workers and their community.

This narrative represents a scenario that replayed thousands of times over in Chicago and the broader United States economy. Fueled by research that Brach’s was still a viable company (despite recent crises), MR, IBT and GAIN spearheaded a Save Brach’s Coalition which organized about 100 Chicago and West Side community, civic and religious organizations to advocate upon City leadership and Brach’s to sell the company to local ownership. Although their efforts delayed the closure of the plant for several years, it was ultimately not enough to save Brach jobs altogether. When the Brach’s plant finally closed in 1996 putting thousands of people out of work—it brought a magnifying lens to the critical role that manufacturing has in both local economic development and for the quality of life of the residents of Austin, whether they worked directly in manufacturing or not.

Although there were many more losses than wins during the first 15 years of the organization’s work, what it provided was an in-depth and nuanced knowledge of the all the variables involved in what it took to save jobs and create new ones. Dan and MR learned that the loss of all those manufacturing jobs was not some inevitable, “natural” progression of the economy as the emergence of globalization, the modern finance sector and the knowledge-based economy came into fruition. Dan believes that 80% or more of the companies that closed during the 70s and 80s could have been saved if there was enough advance notice that a closure was imminent and a willingness across both public and private stakeholders to proactively engage in a planning process that would allow for balancing public sector priorities, like jobs and stable communities, with a needs of the private sector to earn a fair return on their investments.

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The manufacturing companies that did last through this period of time, did not only survive, they thrived. Although there were fewer companies, they had grown more technologically sophisticated, embraced robotics and other innovations that allowed the sector as a whole increase its productivity in lock step with the US’s growing GDP. To this day, unlike any other sector, manufacturing supports middle-


class incomes for people of all educational levels. Manufacturing creates six new jobs in related sectors for every one manufacturing job created. Manufacturing also increases local tax bases—given that most manufacturing companies are domestically (if not locally-) owned, privately-held, small businesses. What we now call “advanced manufacturing” employed fewer people directly, but the quality of those jobs increased. These advanced manufacturing jobs required more specialized skills and paid higher average compensation than most other industry sectors.

In 2001, MR and the Chicago Federation of Labor published a report funded by the US Department of Labor entitled Creating a Manufacturing Career Path System in Cook County. The report detailed the gaps in the workforce development and training system as it related to the manufacturing industry, including: the lack of standards to define and measure quality training, the public school system and community colleges not teaching the skills required by modern manufacturers, and no recruitment mechanism to attract young people into the field. The report also outlined a proposal to address these issues, the ideas of which lead to the creation of the Chicago Manufacturing Renaissance Council (CMRC) in 2005, a multi-sector coalition of government, labor, business, and community leaders committed to making Chicago a global leader in advanced manufacturing.

Given the central role of education, the CMRC engaged the then CEO of Chicago Public Schools, Arne Duncan, who invited the CMRC to submit a proposal as part of his Renaissance 2010 initiative. Thus, the CMRC’s first major project was the development and design of a school with a high quality program that could create a meaningful link between a high school and well-paying manufacturing jobs. The CMRC convened a school-design team that included educators, the Chicago Teachers Union, manufacturers, community-based organization leaders, and local training and workforce development agency leaders. The resulting school design proposal was for a school to be operated by Chicago Public Schools and represented by the Chicago Teachers Union, called Austin Polytechnical Academy, which opened in 2007.

Austin Polytech’s goal was not just to be another vocational school trying to plug Kid A into Job B. The design for Austin Polytech was inspired by international best practices in both education and community and economic development, where a school can serve as a catalyst for community development instead of simply a portal for the best and brightest to leave the community. For example, in 1943, in the Basque region of Spain, a small engineering high school was founded by a Catholic priest, Don Jose Maria Arizmendiarieta. In the aftermath of the Spanish Civil War, where the small town of Mondragon laid in ruin, Arizmendiarieta believed that if the youth learned skills in engineering and manufacturing (fused with Catholic social values) they could start businesses that could help improve the community through providing gainful employment and create the wealth needed for rebuilding the community infrastructure (such as creating a bank, a university and other services).

Five of the first graduates of this technical high school did start their own manufacturing company, in 1956, making small stoves that soon successfully sold all over Spain. This first company was created as a worker cooperative grounded in community-building values which ensured profits were reinvested back into the business to provide more jobs, foster new businesses, and support the broader community.
The result of this visionary effort is the Mondragon Cooperative Corporation—which today is a network of 100 cooperative businesses employing over 85,000 people in Spain and around the world, while still espousing the same values of community-driven economic development.\(^\text{18}\)

Building Austin Polytech From the Ground Up

When MR sponsored a trip to take nine Austin Polytech students to visit Mondragon back in 2009, students observed the lack of visible poverty, the clean streets and the quiet neighborhoods, and were surprised to learn that almost everybody who wanted a job had one. In addition to a typical college prep program that all students would take, the unique elements that distinguished the Austin Polytech design also included:

- Three to four years of the Project Lead The Way pre-engineering course sequence;
- One to two years of a machining course MR developed to help students earn up to four nationally-recognized machining credentials from the National Institute for Metalworking Skills (NIMS);
- A variety of manufacturing and engineering career-exposure opportunities, including field trips to local manufacturing companies, trade shows and college campuses;
- Work experiences, including summer jobs and job shadowing at local manufacturing companies;
- A variety of work readiness and leadership development opportunities; and
- Individualized coaching to help interested graduates access career and college opportunities related to manufacturing and engineering.

In 2007, Austin Polytech opened with its first class of ninth graders as one of three new schools housed in the shell of the Austin Community High School—a school that had recently been closed by CPS due to mix of years of disinvestment leading to low performance, high rates of school violence, and other conditions unfortunately associated with “inner city” schools. As one of the lead conveners of the school’s design team and given MR’s 30 years of work on the West Side around a variety of economic development initiatives related to industry retention and workforce development, MR was committed to working closely with the school to help it fulfill its mission to “educate the next generation of leaders in advanced manufacturing.” Our role initially was to help the school create partnerships with local manufacturers who would provide the work experiences for students and support the technical training goals of the program.

However, like so many great ideas on paper, the difficulties of implementation in a complex, dynamic and resource-poor environment quickly materialized. The school and MR’s work to develop this new career program to serve its students had a mix of compelling strengths and undermining weaknesses. On one hand, this small school on the West Side was creating more paid internships for students than any other high school we knew about in the district, and specifically, internships in manufacturing. Austin Polytech was for a couple years the top

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\(^{18}\) Georgia Kelly and Shaula Massena, “Mondragon Worker-Cooperatives Decide How to Ride Out a Downturn,” Yes!, June 2009.
high school in the state of Illinois for high school-aged students earning NIMS credentials and one of the top 10 training facilities overall for NIMS training in Illinois. The program MR created had the most robust manufacturing company partner engagement of any equivalent program we were aware of—we worked with an average of nearly 40 manufacturers per school year, working with a total of 90 companies over the years, who hosted and hired students and advised the program in some way or another.

On the other hand, most students coming into the school as freshmen averaged fourth grade reading and math scores. Funding that allowed the school to have an extended school day with academic, extracurricular and social-emotional supports dried up within the first three years. The school has had five principals in the last eight years while CPS has had six CEOs of schools in the same time frame, with dozens of other administrative positions experiencing similar turnover. With every administrative turn over, the institutional memory needed to protect the program that Austin Polytech represented was eliminated.

Manufacturing, indeed, has a mixed legacy as far as the average American is concerned. Although always credited for creating a middle class in the United States, manufacturing also has an ugly history of relegating dangerous and dirty work to people of color due to pervasive racism. When hundreds of thousands of people lost their jobs in the waves of plant closings in the 1970s and 1980s, the positive effects of manufacturing left town while leaving its negative effects behind: empty factory shells, industrial toxic contamination, and massive urban blight. Thus, understandably so, at a time when manufacturing was presumed irrelevant, MR was at times left isolated.

Critics from the community were wary that the school was reminiscent of the vocational education of yesteryear, targeting African-American youth to serve as the grist for the mills of industry. Critics from the business sector expressed deep concerns over, and cynicism of, the ability of public education (much less inner-city public education) to meet the needs of today’s high-tech manufacturing industry. Critics from the educator community, including many who worked in the school, were skeptical and even hostile at the notion of connecting education to work in manufacturing. Promoting anything but college was a diversion and counter to the vision which many educators saw as their job. We had critics from across the spectrum. At times, this felt to us like a case of institutional actors resistant to change and protective of a status quo that provided them with individual job security even while the system was failing young people, communities and manufacturers alike.

That said, MR’s role in this project, especially as it evolved over time, was also suspect. From nearly every vantage point, MR was considered the “outsider,” not educators, not manufacturers, not parents of children on the West Side, not based within the boundaries of the Austin neighborhood, and no legal authority of any kind as it relates to any aspect of the school’s operations. Despite the long term history of working in Austin, the organization itself did not fit neatly in any particular stakeholder box.

However, with an organizer’s resolve, through methodical, persistent and often tenacious engagement with stakeholders, MR was able to win over many critics, one person at a time, to understand the implications of what a school like Austin Polytech could mean for the Austin community. We talked about the im-
portance of integrating college and career education; that all students, regardless of academic abilities, would benefit from rigorous college preparatory academics, college tours and contextual learning through hands-on career preparation experiences. We talked about the nationally-recognized industry credentials students could earn while in high school. Individuals who earn National Institute for Metalworking Skills (NIMS) credentials are typically preferentially hired and could start in entry-level, career-track positions earning an average of $18/hour (when the school started is was approximately $16/hour). We explained how manufacturing is no longer toiling assembly line work, cranking out simple products, but explained how the manufacturers of today are designing and producing increasingly sophisticated and precise components that go into the most advanced technologies in the world—from MRI machines to wind turbines.

We talked about the opportunity for business ownership. MR did a study that surveyed 800 manufacturing companies in Chicago, and of those with an owner 55 and over, 40% were in risk of closing solely because there was no successor. We talked about the Mondragon story as an example of what could be possible for Austin. We talked about how this kind of program could be the first step towards ultimately building an educational infrastructure that could contribute to positioning Austin as a global leader in the development of technologies. In this vision, Austin Polytech would be an integral part in cultivating the next generation of talent who develops these technologies and starts the businesses to manufacture them. Austin Polytech could be the springboard for the re-development of the community guided by the skills and values of this generation of students—development that will be economically, socially, and environmentally sustainable and restorative.

Of course, it wasn’t just all talk. We made sure students and teachers alike got introduced to modern manufacturing first hand. For example, some of the earliest fieldtrips we organized was to Winzeler Gear, a small factory on the Northwest Side of Chicago, a facility full of sunlight and highly sophisticated machinery—complete with art on the walls and highly engaged employees. On one such visit, there we were, standing on a lacquered floor in a glass-walled conference room overlooking the plant.

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floor with humming, automated million-dollar machines. As Mr. Winzeler addressed the students, he pointed to several engineers on his staff whose Masters degrees he had paid for. He explained how his most significant challenge in running his business is finding employees who not only have the specialized skills he needs, but who also have the drive to continue their education and capacity to become innovators within his company and in the field where the company competes. Winzeler Gear, and other manufacturers like them, no longer run on people power, they run on innovation. Innovation is what keeps them competitive and profitable in today’s globalized economy.  

Although Mr. Winzeler is personally a generous man, he makes the time to meet with our students to explain these facts of his business not out of charity but in the self-interest and preservation of the future of his company—a company that is dependent on young people, like those freshmen, becoming inspired to play a leadership role in the advanced manufacturing economy.  

Between 2007 and 2011, the school added one grade level at a time until the first graduating class in 2011. Although the original school design was never fully implemented due to budget constraints and varying degrees of participation (and even obstruction) from various CPS administrators, MR staff was still able to successfully implement a career program through collaboration with a mix of manufacturers and teachers and through engaging students and their parents directly. MR raised over $150,000 towards the installation of a modern machining facility in the school in 2009. MR also hired a machining instructor to teach the curriculum to help students earn NIMS credentials once they became juniors and seniors in high school. MR staff coordinated over a hundred fieldtrips to visit local companies and coordinated job shadows, internships and summer jobs through dozens of local companies. The program activities MR

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26 Data results from Reading Scantron Test administered by Chicago Public Schools to Austin Polytech 9th graders, October 2010.


operated essentially became a drop-in, extracurricular program for those students who were interested in participating. Although nearly all students took the engineering and machining courses, not all were interested or able to apply themselves to the extent of earning credentials or participating in the work experiences. Many students simply chose not to participate. Students chose to attend Austin Polytech for a variety of reasons and being passionate about starting a career path in manufacturing was rarely at the top of the list. Some students participated in a couple of the career preparation activities we organized and some participated in everything we had to offer—whether they were fundamentally interested in manufacturing or not—as there were few other extracurricular options available at the school.

**The School’s First Fruits**

For those first four years, we operated a program in a situation in which nearly all the students and teachers we worked with had no frame of reference for understanding what a career in modern manufacturing actually entailed. We were, it felt like at certain times, starting from scratch: building a new, culturally acceptable path to success. This was a challenge when there were very few young people who worked in manufacturing, much less aspired to work in manufacturing. There was no current precedent to reference, no one with whom our kids could identify and say, “I want to do what he or she did.” Until we had our first graduates actually secure jobs and have the experience of earning a steady pay check, the fruits that kind of economic security can bring were not always apparent to our students. Despite all of our efforts, when the Austin Polytech had its first graduating class in 2011, only one graduate chose to work manufacturing even though only about 50% of the graduates made it to college that first year after high school.

It was not until the Class of 2012 that we had our first critical mass of graduates choose to pursue a career-track job in manufacturing upon graduation. Several graduates enrolled in college with the intention of studying engineering and a group of about 10 graduates started entry-level jobs at a handful of different companies. It was through their experiences that we got our first real feedback as to the efficacy of our efforts. Some were able to hit the ground running at their new jobs, while some got washed out within the first few weeks as they learned the hard way that expectations for success at the workplace can be profoundly different than expectations for success in high school. As we studied the experiences of the 2012-2014 graduates we found that, though our technical training seemed to be sound, where our graduates struggled most was in the professionalism or “soft-skills” training. It was proving insufficient to focus primarily on the resume and interview skills.

Because our students often had a NIMS credential (or two) as well as some work experience, getting the job was the easiest part—it was keeping the job that was the hard part, as it involved transitioning into a whole new culture different from the one they grew up in. Most companies in our area have few African-American employees and most manufacturers have a workforce with an average age in the late 40s and 50s. Our 18- and 19-year-old African American graduates were walking into companies with virtually no support in place, where it’s often a “sink or swim” kind of environment, complete with a variety of workplace rules and expectations that can appear hidden without someone being intentional about show-
ing a new and inexperienced hire the ropes. This required both cross-racial and cross-generational support of the type our society is not particularly good at fostering.

For example, we had one young man get terminated because he wasn’t doing enough overtime. It wasn’t until talking both to the employer and the young man that we learned that the young man didn’t know that overtime was mandatory. He would leave at the end of his shift, not understanding that leaving when there was mandatory overtime facilitated the appearance that he was not reliable and dedicated to his job. We have also learned of circumstances when our graduates dealt with tensions on the job in part due to they had more technical training (through earning NIMS credentials) than their much older supervisors. All of these are circumstances that a more experienced person would, perhaps, know how to better navigate.

Improving the Model for the Future

Our 18- and 19-year-old African American graduates were walking into companies with virtually no support in place, where it’s often a “sink or swim” kind of environment, complete with a variety of workplace rules and expectations that can appear hidden without someone being intentional about showing a new and inexperienced hire the ropes.

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Building a school—one that was now in active risk of closing.

In early 2014, we had the opportunity to apply for a US Department of Labor grant called the Youth CareerConnect program that was seeking to identify and scale up promising practices in career pathways programs on the secondary level that were successful in connecting young people to college and careers upon graduation in STEM-related fields. It was the opportunity for the programmatic work we now started calling Manufacturing Connect to build on its strengths and evolve a model for how high schools can create meaningful and robust linkages between the young people they serve and real economic opportunity in the surrounding region. We submitted our program design and were deeply honored to be one of 24 grantees out of over 400 applicants nationally for a four-and-a-half-year grant to implement this “new and improved” program design. Of the 24 grantees, we are one of two lead agencies who are not school districts, and the only entity in the state of Illinois to receive the award.

Thus the goal for MR’s work officially shifted—from building up a school to supporting youth through schools. Manufacturing
Connect now provided a template and framework for a program around our experiences working through Austin Polytech. Although we would be committed to work with the newly-consolidated Austin High School (which we now know will be named Austin College and Career Preparatory High School starting in the Fall of 2016), we knew there were key elements that could be replicated elsewhere if need be. Manufacturing Connect not only was about the technical training and work experiences, but through learning from our former participants, we also needed to expand the social supports of our program—to go much deeper and tailor our professionalism training to the unique situations our young people would find themselves in.

Thus the goal for MR’s work officially shifted—from building up a school to supporting youth through schools.

Manufacturing Connect’s design shifted from a drop-in program into a prescribed program in which students who choose the engineering and machining course sequence would apply to participate and commit to participating for a minimum of two years. MC’s aims is to help all participants have a college acceptance letter in one hand and a job offer letter in the other upon high school graduation. This means every participant knows and has considered their options—either to go to college or into a career-path job or both simultaneously. In MC’s experience, even the highest performing student may not have the means, interest or wherewithal to successfully stay in college full-time right after high school. Even many of the lower performing students can access an opportunity for career-path employment at a company who may help pay to continue their education and training.

Every young person should know their options in light of their education, skills, interests and work experiences. At the heart of the Manufacturing Connect, shaped from both direct experience and the best international models, are a few basic principles and values that guide the priorities and operations of the program:

1) Focus on Advanced Manufacturing for both public and private benefit
2) Partner with public education
3) Work through public-private partnerships
4) Regional labor market conditions drive program design and development
5) Schools as part of community development
6) Social inclusion, equity and opportunity

These are values that we believe will reinvent our communities, our economies and our schools—all with a focus on justice and inclusion.

Manufacturing Connect consists of ten elements that represent the full expression of the program. Depending on the hosting school and community, the partners available, the resources and staffing available, each of these elements can be designed and developed to varying degrees that should be determined during a feasibility study and developmental planning stages. Certain elements can be phased in over time, whereas others should be in place from day one of program implementation:

1) Three- or four-year course sequence and industry credentials
2) Multiple work-based learning experiences
3) Work-readiness skill development
4) Individualized counseling, coaching and mentoring
5) Contextualized educational experiences
6) Exposure to post-secondary opportunities
7) Leadership and entrepreneurial development
8) Career-track jobs and career navigation support
9) Manufacturing company participation
10) Human Resource development support for local manufacturers

Under MC’s revised design framework, our first graduating class of 28 seniors will graduate this June of 2016. Our goal is that at least 80% of our students will be enrolled in college and/or working full-time in a career-track job within the first six months. Meanwhile we are actively attempting to keep track of the graduates from our program from the last five years. Of the 328 graduates from Austin Polytech between 2011 and 2015, approximately 157 of those students participated in our program activities, earning at least one of 280 NIMS credentials and participating in one or more of 248 paid internships and summer jobs in manufacturing. As might be expected, we’ve had difficulty keeping in touch with all the graduates, but we’ve assisted 38 graduates through 50 manufacturing job placements (approximately a third had 2-3 placements before finding the right fit), averaging about a one-year retention on the job earning between $25,000 and $75,000 (estimates based on self-reports).

Where we once had virtually no young people in Austin working in manufacturing, much less aspiring to work in manufacturing, we now have about twenty who are successfully pioneering this new pathway and are serving as role models for the high schoolers coming up behind them. We now have some great stories to tell our participants and our alumni make the best guest speakers on Career Day.

We have one alum, “Rico,” who is now earning around $75,000 a year as a twenty-one-year-old. What impressed our participants the most is that he owns two cars. Another young man, “Dante,” who has been working at his company for over three years now, just bought a house in the community where he lives with his partner and their baby daughter. Other alumni who have been on the job for a while now are also continuing their education, taking advantage of the tuition reimbursement programs that their employers offer. Although it’s not many, we now have our first program graduates leaving college with their degrees.

It’s not a cakewalk, by any means. For each success story, each of these young people also have challenges they face, whether personal or professional. Some of them learned their lessons the hard way, losing their first job only to pick up and find success in the second job, or even the third. The good news is that many of these young people are persisting as they realize that they truly have a valuable skillset relative to many of their peers. We’ve had alumni who, barely giving us the time of day while attending Austin Polytech, come back to us two years later and ask if that NIMS credential they earned is still good, or if we could help them get the kind of job “Rico” has. We simply answer: “Yes!”

As part of MR’s continuous learning on how to best serve the young people who have gone through our program, in the last year we’ve started organizing a network of our working alumni called the Young Manufacturers Association. Our goal is the help create a network of these young people who are in the process of building their careers in manufacturing to provide, first and foremost, a space where they can provide peer support to one another, and secondly, to continue providing career coaching and leadership development support as they navigate the next steps of their careers, and finally, to proactively serve as role models to other young people who many not be aware of the opportunities in manufacturing.

The Young Manufacturers Association just had a meeting last weekend. Andre showed up. He shared the struggles he was dealing with on
the job. He is not getting along well with his supervisor, but admitted he knows he was slacking a bit on getting to work on time and that it was not the best way to express his frustration. His fellow classmates at the YMA meeting, Jaden, Shante and Trevor, nodded in appreciation of his story and shared their own stories of how they dealt with similar challenges on the job. Sometimes it just feels good to get things off your chest. By the end of the meeting, Andre had a couple ideas he got from his peers on how to better manage the situation at work and promised to let us know how it all goes next time.

Ericia Swinney serves as Program Director for Manufacturing Renaissance and has worked on a variety of community development initiatives in the Austin community on the west side of Chicago. She was born and raised on the west side of Chicago and graduated from Whitney M. Young High School. After completing her B.A. degree at the University of California at Berkeley she served two years in the Peace Corps in Paraguay and eighteen months in Americorps. She later earned her M.A. degree in Ecology & Systematics from San Francisco State University. Before joining Manufacturing Renaissance, for five years Erica worked in California in the non-profit sector serving various low-income communities on projects to increase civic engagement and build leadership capacity among youth and adults to address environmental and economic justice issues.
The Skilled Trades
Working for You,
Working for Michigan

Karen Murphy,
Communications Director, Michigan State Employees Association

Members of the Michigan State Employees Association (MSEA) joined the Right-to-Work protest at the state Capitol in Lansing, Dec. 2012. MSEA was founded in 1950 and represents state employees in 17 departments in two bargaining units—Labor and Trades, and Safety and Regulatory. MSEA also represents the Osceola County Road Commission and the power plant employees at Western Michigan University. MSEA is affiliated with the American Federation of State, County and Municipal Employees (AFSCME), Local 5 of the AFL-CIO.

Wash your hands. Stick together. Take a nap. Clean up your mess. Our schools do a good job of teaching these fundamentals to children. But Robert Fulghum points out in “All I Really Need to Know I Learned in Kindergarten,” that if we all—including adults—just took care of the basics, the world would be a lot better place for everyone. This sense of community awareness and involvement can reap big benefits when it translates into action that demonstrates the very type of concerns taught to children in kindergarten. Workers in the skilled trades know that what they do is important. Sometimes it can save a life…and sometimes an entire community.

“It doesn’t matter what you say you believe—it only matters what you do.”
—Robert Fulghum, All I Really Need to Know I Learned in Kindergarten

Three hundred volunteer union plumbers from across Michigan fanned out in Flint on Saturday, Jan. 30, 2016. They drove in from Lansing, Detroit, Saginaw and other cities to help United Association (UA) Local 370 in Flint whose plumbers have been installing filters and faucets to get lead out of residents’ water since October. By the end of the day, the plumbers had visited 1,100 homes. Local 370 will keep on volunteering since it’s estimated there is a need for about 6,000 new faucets in Flint homes so residents can use the free water filters provided by the state. Plumbing Manufacturers International (PMI) donated hundreds of faucets and supplies; plumbers affiliated with the United Association of Journeymen and Apprentices of the Plumbing and Pipe-Fitting Industry (UA) did the installations.

On September 11, 2001, terrorist attacks killed nearly 3,000 people and injured many more, bringing horrific destruction to New York City, the Pentagon, and the fields outside Shanksville, Penn. Rescue and recovery efforts following the attacks on the World Trade Center in New York City involved iron workers, structural engineers, heavy machinery operators, asbestos workers, boilermakers, carpenters, cement masons, construction managers, electricians, insulation workers, machinists, plumbers and pipefitters, riggers, sheet metal workers, steelworkers, truckers and teamsters,
and many others. Built on the site of the twin towers destroyed in the 9-11 attacks, is the “Freedom Tower,” which opened on Nov. 3, 2014. At 104 floors and standing 1,776 feet tall, it’s now New York City’s tallest skyscraper built by $4 billion and union labor.

These two examples show us the importance of skilled trades to communities, yet the skilled trades are disappearing at an alarming rate. An aging workforce, a shrinking middle class, the cutting of vocational and technical education in school curriculums, manufacturing jobs drying up, and increased attacks on unions are some of the reasons.

According to Dr. Dale Belman, professor of labor relations and economics at Michigan State University, in the Construction Labor Report, “The housing market will never be at the 2006 level. It’s going to be a long ways away from it for some time.” He added: “They need to make jobs more attractive to bring the workers into them.” So what’s being done to make skilled trades jobs more attractive to workers? Let’s take a look at the landscape.

In January 2016, The Bureau of Labor Statistics released data that shows the percent of wage and salary workers in Michigan who were members of unions increased from 14.5% in 2014 to 15.2% in 2015. Labor unions in Michigan added approximately 36,000 new members last year. But Michigan was only one of two Great Lakes states to see an increase in union membership in 2015: Illinois was up slightly from 15.1% in 2014 to 15.2% in 2015; Ohio was down from 12.4% in 2014 to 12.3% in 2015; Indiana was down from 10.7% in 2014 to 10.0% in 2015.

Wisconsin was down from 11.7% in 2014 to 8.3% in 2015; and Minnesota was unchanged from 14.2% in 2014 to 14.2% in 2015. Nationally, the union membership rate held steady at 11.1% from 2014 to 2015. Compare this with union membership in the Scandinavian countries: In Norway, that number is 52%; in Denmark, 67%; in Sweden, 70%.

In a press release on the statistics, Ron Bieber, President of the Michigan AFL-CIO, stated: “Despite the unrelenting attacks from Lansing politicians, working people understand the value of collective bargaining. A union contract gives working people the power to speak up together with one clear voice for fair wages, strong benefits, and time to be with family. And when working people earn wages that can sustain a family, it helps our small businesses and creates more jobs. Lansing needs to get the message, and start working together to make Michigan’s economy work for all of us, not just the wealthy.”

A recent article published in Forbes magazine featured a poll conducted by several Harvard professors of more than 2,700 Harvard Business School alumni on the U.S. economy and the current competitiveness of American firms. According to Forbes, American and
global business elite are starting to believe that income inequality is a serious threat to the country and to their businesses. [The researchers] find that, “respondents remain pessimistic on balance about the likelihood that firms will lift American living standards by paying higher wages and benefits in the near term. Shared prosperity is not around the corner.”

State officials in Michigan estimate there are 8,300 job openings in a variety of skilled trades. Governor Rick Snyder has promoted job retraining and vocational education in order to fill job openings, citing a lack of qualified candidates for open positions.

“There seems to be a real disconnect between the governor’s eagerness to recruit qualified workers for the skilled trades, and corporate attempts to weaken unions,” said Ken Moore, President of the Michigan State Employees Association (MSEA). “The repeal of prevailing wage is a case in point.”

Michigan’s prevailing wage law requires contractors to provide workers with union scale wages and benefits on state-funded construction projects, such as schools and government buildings. Critics say the law inflates costs on projects that utilize taxpayer dollars and puts Michigan at a competitive disadvantage compared to states that have scrapped their own versions. Unions and other supporters say it guarantees fair wages and promotes quality work that will provide a better bargain in the long run. (MLive.com, 8-26-15).

The prevailing wage issue isn’t unique to Michigan. In West Virginia, local union contractors fear that the prevailing wage requirement for state-funded projects could be eliminated altogether during this year’s session, according to an article by Joselyn King, “Contractors Lobby to Keep Prevailing Wage on the Job,” published in The Intelligencer on Jan. 14, 2016. In Ohio, its prevailing wage law has been eliminated for state-funded construction projects, allowing contractors to hire lesser trained workers, according to Matthew Mansuetto, president of Mansuetto Roofing of Martins Ferry, who is quoted in The Intelligencer article.

A Huffington Post commentary, entitled, “It’s Time to Re-Build, Re-Train, and Rejuvenate America,” by Sean McGarvey, President of North America’s Building Trades Unions, states:

Infrastructure jobs—especially jobs in the skilled construction craft trades—represent long-term, well-paid career opportunities for many of the two-thirds of U.S. workers who lack four-year college degrees. Jobs in the union construction sector not only boast strong middle class wages and benefits, as well as rela-
tively low barriers to entry, but when public infrastructure investments are tethered to apprenticeship-readiness and formal apprenticeship programs, they can be leveraged into a proven and viable career training pathway that can elevate people out of poverty and into the middle class, especially for historically neglected communities, such as communities of color, women and military veterans. In many cases, graduating from a formal skilled craft apprenticeship can lift not one, but two, and sometimes even three, generations of a single family onto the ladder to the middle class.

After all, in 1950s middle class America, it was unions—at their highest membership then—that created the middle class.

“A union wage scale helps increase wages for all workers. Those groups who want to repeal prevailing wage, want to cut everyone’s wages in order to increase their own profits,” said Moore. “If workers lose prevailing wage, it’s doubtful they’ll get it back.”

There are many excellent reasons to pursue a career in the construction trades. Helmets to Hardhats (H2H) helps military service members successfully transition back into civilian life by offering them the means to secure a quality career. As the H2H website notes:

- Federal approved apprenticeship training programs come at no cost to the veteran.
- No prior experience required. The three-to-five-year apprenticeship programs teach you everything you need to work in a specialized skilled craft.
- Because these are federally-approved programs, you can use your Montgomery G.I. Bill benefits to supplement your income. Better yet, apprenticeship programs offer the opportunity to earn while you learn.
- Continue to serve as part of your local community.

Governor Rick Snyder of Michigan has said he opposes repeal of the prevailing wage law, fearing it could harm his efforts to promote careers in the skilled trades. However, another obstacle to re-establishing the skilled trades in Michigan is a lack of funding.

“It can’t be stressed enough that the failure to invest in vocational programs in our middle and high schools severely restricts the future of our workforce,” said Moore. “Vocational programs allow students to explore various career paths.”

“Often, the first budget cuts are in the areas of vocational education,” he continued. “The ongoing trend of cutting education has had catastrophic effects on vocational programs throughout Michigan. The result is a serious shortfall of trained workers who have the necessary education and qualifications to participate in the skilled trades.”

Michigan has the potential to become a world leader in STEM education and careers, due to strong talent, educational institutions
and thriving industries, according to a report released he beginning of March 2016 by the MiSTEM Advisory Council. STEM stands for Science, Technology, Engineering and Mathematics. The MiSTEM Advisory Council was created in 2015 to develop recommendations on ways to promote STEM education and careers around the state. The MiSTEM Advisory Council includes business, higher education, K-12 education and philanthropic leaders, as well as state legislators.

In a press release from the Michigan Department of Education about the report, State Superintendent Brian Whiston stated: “Every student being able to take STEM programming is a key strategy in building Michigan into a Top 10 education state in 10 years. Let’s take this opportunity and put it into gear.” The MiSTEM Advisory Council will publish recommendations annually; the council’s approach to STEM in Michigan focuses on four key efforts including:

1) Creating a new culture of STEM
2) Strengthening the educator pipeline
3) Integration between business and education
4) Ensuring quality STEM experience.

According to the STEM website:

The work of the Partnership is guided by a statewide Board comprised of employers, educators, and other partners. For administrative purposes, the state is divided into five hubs and the work of each STEM hub is directed by a leadership team, also made up of employers and educators. The Board sets the overall strategic direction for the work of the Partnership through a 5-year strategic plan and annual operational plans. Each hub leadership team creates an annual operational plan that determined STEM activities that will advance local efforts while supporting the work of the Partnership. All plans include performance metrics that are reported annually. The Partnership is playing an important role in answering questions such as:

- What skills will be needed in the new economy and how are they developed?
- What is happening across the state to assist people who want to develop STEM skills?
- What and where are the new jobs going to be?

Women comprise less than 25% of the STEM workforce. Fifty percent of women in STEM careers drop out in the first 10 years. Over the past five years, high school boys’ interest in STEM is increasing, while girls’ interest in STEM is decreasing. The gender gap in interest in STEM appears in middle schools, even at a point while girls are still out-performing boys in math and science. At a press conference on March 4, 2016, The Michigan Science Center joined with Detroit Public Television and Detroit leaders in a STEM-and-girls partnership. The goal is to increase involvement of women in the STEM workforce via their STEMinista Project which aims to spark interest in STEM in elementary and middle schools girls. A goal of the Project is to “engage girls with authentic STEM experiences designed to increase interest, confidence and skill sets in STEM.
Through these encounters, we will inspire girls to leverage their interests and skills into the STEM careers and STEMPreneurship that support their dreams and create meaningful impact in the world.”

The skilled trades have traditionally been a way for workers to earn a decent living wage and to support a family. A return to investing in vocational and technical education is crucial. The American dream isn’t dead, but it has become much more difficult to achieve. A renewed emphasis on preparing individuals for careers in the skilled trades, along with union membership opportunities, would once again make this an attractive, viable option.

In 1865, a national eight-month strike by the Sons of Vulcan, a union of iron forgers, ended in victory when employers agreed to a wage scale based on the price of iron bars. This was the first union contract in the iron and steel industry—and what may be the first union contract of any kind in the United States. Unions are workers who stand together to establish, build and defend worker rights. When they win, everyone wins. The skilled trades expand career opportunities through formal apprenticeship training and education. This provides individuals with skills that last a lifetime and ensures a foothold on the ladder to a safe and secure life in the middle class.

Union workers support our communities in times of prosperity and in times of crisis. Recently, stickers were distributed to all union members to put on their checks, credit card receipts, invoices, utility bills and on the front and back of envelopes being mailed. Each bright yellow sticker lets merchants know where the money for their services came from and stated, “This Payment Made Possible By Union Wages.”

Wouldn’t it be great if the government recognized and supported workers’ contributions to society? And wouldn’t it be beneficial for everyone if schools offered students opportunities for shared prosperity? I will end with a quote that President John F. Kennedy used frequently when talking about economic justice: “A rising tide lifts all boats.”

**FRIDAY, MAY 29, 2015, LANSING**

Michigan Building and Construction Trades Council Legislative Director Patrick “Shorty” Gleason issued this statement May 13 after the Michigan Senate Competitiveness Committee approved legislation to repeal the state’s prevailing wage law and remove its reference from other statutes. The entire Senate voted 22-15 the next day on a package of bills to repeal prevailing wage, bringing the state a step closer to permanently reducing the wages of thousands of Michigan’s construction workers.
“It’s a sad state of affairs and a real slap in the face for Michigan workers across the state when a Senate committee can gut a 50-year bill in the span of 90 minutes without any meaningful form of due diligence. On top of that, it’s a complete disregard for the working class when you tie $75,000 in appropriations that in no way can be reversed. Michigan legislators have stuck it to the working class in a way that we could never have imagined.

“To say those in favor of repealing prevailing wage are dangerously naive about the construction trades is a major understatement. Quite frankly, it is irresponsible for Michigan’s leaders to consider the creation of an environment that incentivizes less training; less safety; less health care; less retirement care; and less interest in the skilled trades as a career choice.

“The model in place now delivers a quality, safe construction project on time and on budget. The need for health care, retirement care and training are very real concerns for us, and the financial burden to pay for those benefits should not be passed on to the hardworking taxpayers of Michigan.

“This is not a union vs. non-union issue. It’s a quality of life—and workmanship—issue. We (unions affiliated with the Michigan Building and Construction Trades Council) invested $42 million in skilled trades training this past year and have plans to spend more in the future. This legislation, however, rips the heart out of our budget and places real limitations on what we can afford to spend.

“MITA (Michigan Infrastructure Transportation Authority) executive Mike Nystrom hit the nail on the head: “Can you imagine an established company with an experienced workforce trained to build a finished project in a safe, timely and efficient manner that pays competitive wages for skilled labor at an industry-accepted level, competing against a company that pays minimum wage to its employees to take on the challenging and often hazardous duties of being a construction worker? The skill and expertise needed to build these sophisticated projects deserve to be paid a fair, industry accepted wage.

—Courtesy, The Building Tradesman Newspaper

Karen Murphy is Communications Director for the Michigan State Employees Association. A graduate of Michigan State University, she earned a B.A. degree in journalism. She has been honored by the International Association of Business Communicators, the Labor Heritage Foundation, and has received over 30 awards from the Michigan Labor Press.

Ken Moore has worked in state government for over 15 years and has held a variety of leadership positions in the Michigan State Employees Association. He was elected President by the membership in 2010, and re-elected in 2012 and 2015. A lifelong resident of Michigan, he is committed to improving working conditions for labor and the middle class. He believes that Union membership offers the opportunity to work toward common goals in sound economic policies in state government.
Career and Technical Education in the Second Decade of the 21st Century

James R. Stone III

One of the fundamental assumptions about adulthood in the United States is the expectation that adults work, they have a career, and they contribute to the overall economy. The pathway by which children become adolescents who become contributing adults is influenced by a number of factors, not the least of which is education.

The debate over the role of secondary education in this process has been raging for over a century, and at the heart of these arguments is what Lewis (2000) (Lewis, Stone, Shipley & Madzar, 1998) describes as education’s basic dilemma: the conflicting functions of maximizing each student’s potential while simultaneously selecting and socializing all students for their future occupational roles (and consequent place in society). Hyslop-Margison (2000) frames these conflicting roles as those of education for democracy versus education for social efficiency. Early in the 20th century, as the economic base of American society shifted from agricultural to largely industrial, schools were forced to adopt new education techniques for students who were to become the future workforce. In 1907, President Roosevelt urged school reform that would provide industrial education in urban areas and agricultural education in rural areas. The president, according to D. Tanner and L. Tanner, thought this would enhance domestic competitiveness and socialize youth into their appropriate economic roles.

This began a debate that continues to this day: what is the best strategy (morally, politically, economically, socially) to prepare students for the career challenges that they will face? In these early debates, the two dominant approaches were represented by John Dewey and David Snedden. Dewey argued for vocational education to be included as part of a comprehensive curriculum that would help students expand their range of personal skills, rather than taught as a set of occupation-specific skills that would limit students’ occupational options. According to Dewey, the purpose of education was to provide the skills and competencies necessary for the integration of work, family, and community life. Snedden argued for vocational training structured to direct non-academic students into the occupation for which they were best suited, and that would best fulfill the specific needs of the labor force.

Lewis (2000) (Lewis, et al., 1998) argued that vocational education at the secondary level, and the community college at the post-secondary level, represent attempts by society to resolve this dilemma as fairly as possible.

In 1910, the American Federation of Labor (AFL) joined with the National Association of Manufacturers (NAM) to ensure the working class was represented in education policy. They succeeded, and a commission was appointed to study whether and in what form vocational education should receive federal aid. The com-

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mission’s report, consistent with Snedden’s perspective, recommended narrowly focused vocational training as the proper vehicle by which to help non-academic students contribute to the workforce upon completion of school. President Wilson signed the Smith-Hughes Act into law in 1917, which established federal funding for vocational education in the form of specific, skills-based training programs in the areas of agriculture; trade and industries; and home economics (Hyslop-Margison, 2001). In a very real sense, Snedden won the debate.

The aftermath of World War II and the changed social and economic conditions resulting from the war spurred further debate about the appropriate role of vocational education. In 1944, the National Education Association’s Education Policies Commission launched a program titled Education for ALL American Youth, which advocated a broad range of vocational programs designed to prepare high school students for the labor force, and which also included a component of supervised work experience. In contrast to the programs developed under the Smith-Hughes Act, this new proposal called for a broad-based curriculum to allow for flexibility in responding to changing labor market conditions, and did not require students to be streamed into either an academic or a vocational track, but rather allowed for integration of the two. It failed to move public policy discussions, however, so vocational education remained relatively unchanged.

The education conversation abruptly changed following the Soviet’s 1957 launch of the Sputnik, an event that created our first STEM panic. Desperately concerned that the USSR was producing more scientists than the United States, the Congress passed the National Defense Education Act (NDEA) in 1958 which emphasized moving more youth to college. There is, the Act stated, “an insufficient proportion of our population educated in science, mathematics, and modern language and trained in technology.”

This was followed in a few short years by a report to President Kennedy from an expert panel that concluded that a large percentage of high school students were neither prepared for college nor for the opportunities provided in the workplace. This in turn led to the 1963 Vocational Education Act with an emphasis on preparing youth for gainful employment.

Amendments during the 1960s and 1970s did not make major changes to the 1963 Act other than to increase the focus on specific student categories (e.g., special needs). This Act was and remains the largest single federal investment in secondary education. The current much amended version has the shorthand title of Perkins IV.

**College-for-All**

In 1983, the conversation around American education changed, again. A report commissioned by the federal government attacked public education as leading the United States to economic ruin. *A Nation at Risk* transformed thinking about public education in the United States. It provided the memorable phrase, a *rising tide of mediocrity* that threatened our children and our nation’s future (p. 9). It accelerat-

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33 Tanner and Tanner, *Curriculum Development*.


ed the growing emphasis on sending more youth to college and contributed to a college-for-all mindset that began to dominate the education conversation. One education pathway for all students became the assumed paradigm. Within this context, vocational education was increasingly seen as lower priority. More and more parents and indeed students themselves began to view college as the only viable post-high school option.

Figure 1. Academic Credential Growth 2000 to 2014

It is with some irony then that the generation of children put at risk by “a rising tide of mediocrity” moved into the labor market in the 1990s and helped generate the longest sustained economic boom in our history. It is also interesting to note that concerns about our economic competitiveness in 1983 were expressed in the context of fears about Japanese and German companies outperforming American companies, due in large part to the superior quality of their education systems. Today, concerns about economic competitiveness are expressed as concerns about competition from China, as well as other countries where workers are paid little, have little voice, and whose educational systems are not considered worthy of emulation.

An examination of the data shows that this singular focus on moving all students to college has produced changes. Between 2000 and 2014,

the percentage of adults in the population with college academic credentials has increased, as shown in Figure 1 below. While we are moving more youth to college, today more than half who begin 9th grade do not obtain an associate’s degree or higher in the years following graduation.

Blindly assuming however, that college is the key to economic success is to oversimplify a complex set of relationships. As Whitehurst (2010) observed, while there is a small, consistent correlation between years of schooling and long-term economic growth the variability in the data is striking. He notes for example that Germany has a much stronger economy than France but only half the number of college graduates. France, like the United States, has been increasing its percentage of college graduates over the past 10 years while Germany has not. Despite this, German economic growth has exceeded that of France during this period. As noted earlier, the U.S. saw historic economic growth during a period when college completion rates were considerably lower than they are today, but gross domestic product grew at nearly double today’s rate. All this argues that the connections between the economic health of a nation and its education system at any given time is tenuous at best.

CTE Today

Despite the data, assumptions about the demise of U.S. economic competitiveness remain connected to education. The U.S. economy, in the past decade, did lose its spot as the most competitive in the world, but it remains third in the world behind Switzerland and Singapore. However, the factors identified with this decline have little to do with education. Although education is a contributing factor, more relevant are labor-employer relations, flexibility of wage determination, the participation of women in the workforce, infrastructure issues, and worker health. The nation with the highest percentage of college educated adults? Russia.

It is useful to recognize that the United States has no national system of education. Instead of a national system, the 50 states serve as primary governing bodies, making and carrying out education policy. In many states, local school districts are the primary leaders in education. So in place of a national authority exercising a governance function over all of education as we find in most industrialized nations, in the United States, schools, state and local governments, and business organizations, operating in very loose partnerships with the federal government, have sought to support youth in successfully and efficiently transitioning from public education to further education or the workplace. The federal government has only minimal influence on public education, and then only through achievement standards or other incentives (e.g., Race to the Top funding) tied to federal grants. Understanding career and technical education (CTE) in the United States should begin with an understanding that the United States has no national CTE system. American CTE is a non-system built upon a series of ad hoc fixes begun in 1917, as briefly described in the preceding section.

38 http://www.multpl.com/us-gdp-growth-rate


This non-system of CTE is delivered through different systems in different states. Across the United States CTE is provided in more than 9,000 high schools, 1000 CTE or technical high schools and approximately 800 regional technical centers where students typically spend a half-day, with the other half spent in their home high school taking academic subjects. It is reasonable to assume in this complex of school types and different governing bodies that the consistency of offerings is limited and quality cannot be assumed.\(^42\)

CTE, however, is not immune to overall trends in education thinking. Despite evidence to the contrary, global competitiveness argu-

\(^{41}\) Source: http://nces.ed.gov/surveys/ctes/figures/fig_01.asp

ments continue to be used as a means of promoting a strictly academic curriculum in high school—one designed solely to prepare students to pursue a four-year college degree—as the best and only educational option. The college-for-all mindset had a profound effect on what was then called vocational education—a term still used by the rest of the world, while the U.S. now favors the CTE label. Shop and home economics classes were widely available into the 1980s but were considered a dumping ground for the less able, rather than a pathway to meaningful employment opportunities (Jacoby, 2013).

Figure 3. Changes in Student CTE Enrollment

In the decade before the advent of NCLB, CTE enrollments held fairly constant (Figure 2) despite the growing standards movement. However, beginning around the year 2000, CTE enrollments began to decline. By contrast, enrollments in academics increased as did overall credits earned by the average high school graduate from 23.5 in 1990 to 26.9 in 2009, the last year federal data are available. It is reasonable to assume the trend has continued.

The decade and a half of No Child Left Behind (NCLB, 2001) with its heavy focus on testing in two subject areas and linking that to school accountability further eroded the public’s perception of CTE (Jacoby, 2013). Many of CLB’s early advocates eventually concluded that the Act created more harm than it did good (Ravitch, 2010). This college-for-all mentality has had the pernicious effect of diminishing the presence of high school CTE during a time when policy makers, especially at the state level, were beginning to recognize the need for multiple options for students.

Not only have overall CTE enrollments declined as average credits earned has risen, the mix of CTE course taking has changed (Figure 3). With the exception of health care, none of the programs experiencing growth are identified as high demand, nor in many cases high wage or high skill. CTE programs linked to high demand careers or careers offering high wages (e.g., computer technology, engineering, manufacturing), which are the focus of national and state workforce development efforts, are in decline as shown in Figure 3.

College and Career Readiness

These trends are occurring during a period of renewed interest in, and emphasis on, encouraging more students to exit high school prepared to continue their formal learning beyond high school and/or move into the workplace. The “college for all” approach that characterized the previous three decades evolved in recent years to incorporate the idea that public education ought to prepare youth for college and careers. College and career readiness is a phrase that has captured the imagination if not the vocabulary of state and federal policymakers in the United States. President Obama has called for all students to receive some kind of education and training for the workforce.

To effect his vision would require the creation of a seamlessly integrated P-16 educational system that includes workforce development, economic development, welfare reform, and adult education programs. Such a fusion of education systems with the demands of the modern marketplace stands in marked contrast to the nation’s current preoccupation with four-year college degrees. In this conversation, CTE has emerged as an important part of secondary education. Evidence of this is that more than 30 governors included increases in CTE fund-
ing in their state budgets for 2016 and J.P. Morgan Chase recently announced a $75 million investment to support career pathways.

Figure 3. Changes in Student CTE Program Enrollments

What “college and career ready” means, however, is subject to a great deal of variance in interpretation. Achieve Inc. and other education advocacy organizations define this as the knowledge and skills in English and mathematics necessary to qualify for and succeed in entry-level, credit-bearing postsecondary coursework without the need for remediation. Other definitions, especially those offered by states, also include a focus on personal qualities (e.g., work ethic), workplace skills (e.g., critical thinking), and technical skills (skills specific to particular occupations).

Thus the means recommended by many advocacy organizations to prepare college ready graduates are: high standards and expectations; rigorous courses aligned with standards; and tests to ensure that students meet those stand-

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46 http://blogs.edweek.org/edweek/high_school_and_beyond/2016/01/state_ed_chiefs_offer_75_million_to_states_for_career_preparation_initiatives.html
47 Source: http://nces.ed.gov/surveys/ctes/figures/fig_02.asp
ards. Presumably, career-readiness comes with the same requirements. This was the position expressed by the ACT when they concluded planning for college or careers required comparable levels of readiness in reading and mathematics.\textsuperscript{50} No mention was made of personal qualities or workplace skills.

The evidence contradicts the rhetoric, however. Paul Barton at ETS,\textsuperscript{51} Peter Cappelli at the Wharton School,\textsuperscript{52} and other labor market experts argue that being prepared for college is not the same as being prepared for successful transition into the workforce. Indeed, the many simplistic definitions supported by various advocacy groups fail to accommodate the varied nature of the workplace and the different kinds of academic preparation required for successful entry. Put another way, the math skills required for entry into an engineering career pathway are different from those required in a social services career pathway. Still these may be different from those math skills required to function as a citizen in a consumer-driven economy.

Despite the rhetoric around college and career readiness, there is general consensus that equipping all young people with the knowledge and skills to become productive adults is an implicit goal of public education. CTE, with its emphasis on providing the background knowledge and tangible skills crucial to career preparation, is now recognized as opening multiple pathways to reach that goal. Pathways will differ for each student, but all pathways should facilitate the ultimate transition into continued learning beyond high school and into the labor market.

Some of the disparity in understanding college and career readiness originates in the U.S. labor market. One explanation for the nation’s “college for all” emphasis is that a college degree has become a proxy for employability or work readiness.\textsuperscript{53} Believing that the high school diploma no longer signifies meaningful achievement, and lacking a national system of industry credentials, employers rely on college degrees. A more recent report shows this trend is continuing if not growing. Burning Glass’ 2014 analysis of online job postings concluded that many jobs previously not requiring a college credential now do.\textsuperscript{54} Occupations such as entry level IT desk help, construction supervisor, office administrator are a few examples among many that demonstrate an upskilling trend in today’s labor market even when there is no evidence of the need for baccalaureate skills. The authors conclude that the B.A./B.S. requirement provides a proxy for identifying better workers. The authors also conclude that industries with well-defined or strong certification and licensure standards are resisting this trend. What the authors do not acknowledge is the likelihood that employers have the luxury of raising standards in a weak labor market with relatively high unemployment and underemployment.\textsuperscript{55}

In the context of growing interest in CTE as part of a college and career ready agenda, a parallel discussion of what constitutes high quality CTE has emerged. The current Perkins IV federal legislation provides a beginning framework for the necessary system to support high quality CTE but it is not sufficient.

\textsuperscript{50} ACT, Ready for College and Ready for Work: Same or Different, (Iowa City, IA: ACT, 2006).
\textsuperscript{55} A. Sasser Modestino, D. Shao, and J. Balance, Upskilling: Do Employers Demand Greater Skill When Skilled Workers are Plentiful, Working paper, (Boston: Federal Reserve Bank of Boston, 2014).
Career and, one could argue, college readiness requires much more than academic skills. To be career ready, a graduate must have mastery of three kinds of skills, not just one. First and most obviously, academic knowledge is important—especially the *occupational expression of academic knowledge*; graduates should know how to use mathematics or science to solve authentic workplace problems, for example. Second, *employability skills*—often called soft skills—apply to all workplaces and include such personal qualities as responsibility, self-management, and integrity. Recently the term “grit” has been popularized as capturing the qualities of persistence in the face of setbacks; a quality necessary for success in work and life (Duckworth, Peterson, Mathews and Kelly, 2007). Third, *technical skills* are unique to specific occupational areas, although for many students, instruction in a specific occupational context offers opportunities to develop all three types of skills.\(^{56}\)

## Programs of Study

The 2006 Perkins IV legislation introduced Programs of Study (POS) to the CTE community. POS are the most recent effort in the United States to improve the transition of youth from high school to the workplace. Unlike most other industrialized nations, the U.S. educational system lacks the formal structures—like apprenticeships—that facilitate this transition. Indeed, the United States has no national system linking education and the workforce but is rather a patchwork of state, federal and private initiatives as discussed earlier. None-the-less, the legislation building on the history of Tech Prep, School-to-Work, and Youth Apprenticeship required the following:

- Secondary and postsecondary elements.
- Technical content that is aligned with academic standards and offered in a coherent, coordinated and non-duplicative progression that begins in secondary on leading seamlessly into post-secondary education where students engage in more advanced learning and acquire more advanced industry credentials.
- Rather than just a collection of courses, the focus in POS should be on obtaining industry-recognized credentials. Such credentials may be short-term (like an AWS welding certification or NIMS certifications) or longer term, such as a two-year RN or applied associates degree in advanced manufacturing. Other credentials may require degrees from professional schools in colleges and universities. Acquisition of credentials can begin in high school with more advanced credentials offered in the post-secondary setting. Ideally, these credentials would be stackable, that is: each would articulate into the next to facilitate student development over time as the workplace and personal circumstance might require.
- The opportunity for obtaining postsecondary education credits through dual or concurrent credit is encouraged. The use of dual credits has grown over the past decade and graduating high school with a college transcript as well is a terrific motivator to continue education beyond high school. However, most dual credit offered is for academic, not technical courses (NCES, 2013).

The most exhaustive and current research on POS has been conducted by the NRCCTE. Multiple studies on POS may be found at www.nrccte.org. The most recent longitudinal

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study found that POS students (Castellano, et al, 2014):

- outperformed their peers on the number of credits they earned in STEM and AP classes
- while also earning higher GPAs in their CTE classes

POS research conducted by the NRCCTE has shown the need for (and benefits of) career guidance and counseling to be quite clear. Developing a career identity and building a career pathway is a process that should begin no later than middle school. Unfortunately, not enough attention is paid to assisting young people in engaging in thoughtful, thorough career development. One of the issues facing schools is that students are often confronted with career and life decisions with limited opportunities for career exploration. Too often, students are offered few opportunities to engage in career exploration and given little useful information on postsecondary options (Dykeman, et al., 2003). The result is that career development is often a by-product of the educational curriculum, with a “figure it out as you go along” mentality prevalent among educators and students regarding career exploration. An effective, high quality CTE system would address this.

A successful CTE system that serves the needs of many, if not all students, requires supportive state policy and a well-articulated system. Such a system must bring together key institutions in effective partnerships grounded in extensive and intensive career development staffed by knowledgeable and effective educators who teach a world-class technical curriculum. If we assume the Common Core State Standards or state equivalents will continue to shape the traditional core academic subjects, what is the role of career and technical education curriculum in preparing youth for careers and continued learning beyond high school?

Relevant Programs in CTE

The curriculum for a high quality CTE program ought naturally to begin with the career pathway and the knowledge and skill demands required for successful entry into and advancement within that pathway. The framework for identifying the requisite knowledge and skills may be thought of as career readiness. This is a part of the larger discussion of college and career readiness that has come to dominate public discourse around the purposes of public education. In applying this larger framework to the question of creating world-class curricula, three kinds of knowledge and skills emerge that ought to be the foundation of occupationally oriented programs described earlier: occupational expression of academics, occupational or generalizable employability skills, and technical skills. Each domain of knowledge and skills must be part of a high quality CTE program.

To build on this basic framework, CTE programs should access state or regional labor market data and economic analyses and then use joint (HS and CC) technical advisory committees to further refine programs to ensure the curriculum is aligned with real world labor market opportunities for graduates for existing and emerging occupations. Similarly, related academics should be integrated in the program framework.

Effective pedagogy in CTE

Secondary CTE is more than a job-training program. While it is important to align the curriculum with industry practices, it is equally important to align the pedagogy with sound learning theory focused on meeting student needs as

well. High-quality CTE should employ three pedagogical strategies: classroom instruction, work-based learning, and career-technical student organizations.

In the classroom, CTE teachers should emphasize **contextual learning** in addition to technical skills in which students learn how to apply academic content in a real world context (for instance, learning how electricians use algebra to solve job-related problems), in the classroom. According to a report published in 2010 by the National Research Center for Career and Technical Education (NRCCTE) Curriculum Integration Workgroup, the integration of curriculum in CTE should support the understanding of academic and technical content. As the authors note, **rigor resides in combining CTE and academic skills as applied to real-world problems**. Students who learn mathematics in this way—exploring fractions with tape measures while constructing a building, calculating the volume of a cylinder while repairing an automobile, estimating the surface area of parts of the human body during EMT training—routinely do better on standardized math tests than other students. Embedding integrated curricula in project based learning appears to be a promising extension of this approach.

Beyond the classroom, quality CTE programs must actively involve employers in the training and education of youth (work-based learning or WBL). Our counterparts in Europe have long understood the value of WBL in the education of youth. The Organization for Economic Cooperation and Development (OECD, 2010) conducted an extensive analysis of vocational education and training (VET: the European equivalent of CTE) in its member countries. The cross-country synthesis of these studies showed that WBL-intensive approaches are especially effective in meeting the developmental needs of youth and in preparing them for advanced studies in polytechnics and applied science university programs. The United States is an outlier amongst the industrialized nations in how few of its youth are afforded the opportunity to engage in meaningful WBL.

WBL has the potential to build the kinds of skills and behaviors that research has increasingly shown are critical to success in many fields of human endeavor including the workplace and college: environments that are not easily replicated in the classroom. It is quite clear that learning within a community of professional practice provides students unparalleled opportunities to learn adult behaviors necessary to prosper in today’s workplace, colleges, and communities: as observed in the Harvard University *Pathways to Prosperity* report which described WBL as a necessary part of preparing youth for successful adulthood.

Almost all successful CTE programs have an active student organization. Career and Technical Student Organizations (CTSOs) are co-curricular with some activities taking place during regular classes and others outside of school hours. Because of their integration of rigorous academic and technical content and focus on preparation for a career, CTSOs complement many elements of the Programs of Study required under the 2006 reauthorization of the Perkins IV legislation and lead to positive academic and career development outcomes.

Students learn skills related to specific occupations and develop their technical literacy

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through exposure to the general concepts of their chosen field. A national study by the NRCCTE found that in comparison to comparable students not enrolled in CTSOs, CTSO participants reported higher academic motivation, academic engagement, career self-efficacy, and college aspirations. Some of the positive experiences identified by CTSO members include teamwork, decision-making, competition, leadership, community awareness, career awareness, and personal and social development.

The impact of CTE in helping high school students achieve high school outcomes (i.e., graduation, test scores) has been examined through multiple studies in the past decades. One of the most consistent findings is the holding power of CTE. That is: CTE students in numerous studies were more likely to graduate from high school than were students to which they were compared (as seen in Dougherty; Plank, et al; and Stone & Aliaga). Some studies have found a positive effect of CTE on enrollment in postsecondary education while others find mixed effects, especially those which control for student characteristics.

One can conclude that concentrating in CTE does no harm in terms of academic achievement and postsecondary participation.

Finally, there have been a number of studies examining the economic impact of CTE participation in high school. The most rigorous study was conducted by the Manpower Development Research Corporation and found substantial wage advantages to students who participated in career academies in high school. Jacoby (2013) summarized numerous studies and found consistent positive labor market returns to CTE participation. While these varied depending on the field of study (i.e. computer related vs. hospitality), the overall results were positive. Carnevale, Rose and Hanson (2012) found that sub-baccalaureate credentials were more valuable in the labor market than many baccalaureate degrees.

What these data suggest is that CTE engages youth and increases the likelihood they will complete high school. There is evidence that some forms of CTE enhance students’ academic performance. There is abundant evidence that CTE provides participants an advantage in the labor market of today.

Like any educational program there is variability in the quality of what the students experience. The challenge is to imagine and then create a CTE that is consistently high quality regardless of where it is offered.

CTE Tomorrow

D. Stern, Pathways or Pipelines: Keeping High School Students’ Future Options Open While Developing Technical Skills and Knowledge, (Background paper for the National Academy of Science Committee on The Supply Chain for Middle-Skill Jobs: Education, Training, and Certification Pathways, 2015).

http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_167702.pdf

Career and technical education is and has been the part of the American high school that provides the link between the needs of the labor market and the needs of young people to be fully prepared to move into the workforce or continue their career-focused education and training beyond high school, to become a productive adult. Concerns regarding how to strengthen our economy, as well as complaints from employers that too many students graduate from college without the knowledge and skills needed to fill jobs, have sparked a renewed interest in CTE.

A general consensus is emerging that equipping all young people with the knowledge and skills to become productive adults is or should be one of the goals of public education. CTE, with its emphasis on providing the background knowledge and tangible skills crucial to career preparation, is now recognized as opening multiple pathways to reach that goal. The future of CTE lies in providing the occupational component to the emergent movement to career pathways.

In 2012, the secretaries of the U.S. Departments of Education, Health and Human Services, and Labor signed a joint letter committing to the use of career pathways as a strategy to help youth and adults acquire marketable skills and industry recognized credentials. The means for this would be alignment between and among education, workforce development, human and social services and other state agencies that provide workforce preparation. The alignment includes aligning state resources with the intent of creating integrated service delivery combining federal and state funding streams.68

This is a new way of thinking for secondary CTE. The vision embedded in this letter and subsequent documents is of a comprehensive, cross-agency approach to building a system that aligns education, workforce and supportive services to guide a wide range of individuals—youth and adults—to move successfully through the continuum of education and training programs that ultimately lead to credential attainment and family-supporting careers. In this vision, high quality CTE described earlier is but one component. The CTE of the future will be part of a larger system that shares with other education and training programs a common direction linked to a state or region’s economic strategy.

Imagine a system where a student interested in health care begins a career pathway in 10th grade. In this system, the student would begin to study the same technical content as a person who is not a high school student but has the same career goal. The high school student would begin a process of taking courses and acquiring industry recognized credentials (e.g., Medical Assistant, EMT, STNA/CNA) in his high school career that lead directly into postsecondary education where he continues to stack credentials as a Phlebotomy Technician or LPN which can lead further to an RN; an RN in turn can be articulated into a BSN. An adult can pursue the same pathway with courses offered through adult education or the local community college. Some of these courses may be taken at the local college or other education provider through a dual credit arrangement. Some of these educational experiences may occur in the community, in enterprises.

The key is that the curriculum and the credentials are the same because all providers are guided by the same conceptual framework and the same industry standards. For the high school student, the credentials are embedded in high quality CTE programs that ensure the student will graduate with the necessary skills to continue formal learning beyond high school. One can imagine a similar program in manufacturing built around certifications provided by the National Institute of Metalworking Skills (NIMS) leading to a career pathway built on

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68 http://www2.ed.gov/about/offices/list/ovae/ten-attachment.pdf
Stackable credentials providing opportunities in advanced manufacturing and ultimately manufacturing management. Such a system does not perpetuate the false dichotomy between types of learning that plagued the latter part of the 20th century.

This vision requires the CTE of the future to be an integral part of the high school experience of many if not most students, students who aspire to careers in health care, law and government, STEM, manufacturing, marketing, education or the thousands of other opportunities, the education for which can begin in high school. This vision offers an integrated educational experience for all students that addresses their academic, social and career development needs. Such a Deweyan vision would ensure young people have a solid beginning on the pathway to becoming their future selves.

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Dewey and Vocational Education: Still Timely?

Anthony DeFalco

John Dewey lived and worked in an environment where the manual training movement was ever-present. Nevertheless, over the years, what Dewey meant by manual training—aka occupations and vocational education—has been either misinterpreted or ignored for a plethora of reasons. In fact, what Dewey meant by occupations and what he believed vocational education should be have become blurred and confused.

Dewey’s notion of occupations, as a method of learning by doing, did transform manual training and offer a new view of knowledge and knowing; however, he also transformed vocational education. Numerous sources refer to Dewey’s notion of vocational education and in many cases misinterpret what he meant by it. This paper will examine how Dewey’s view of vocational education has been misunderstood, the vocational education context that Dewey was a part of, and what specifically Dewey meant by vocational education—with its social, political, moral and educational dimensions. Finally, the paper will recommend that Dewey’s notion of vocational education is needed as much today in schools as it was when he first suggested it and what educators need to do.

Relevant but Misunderstood

The relevance of Dewey, as discussed by Emily Robertson, shows the value of Dewey today with regard to vocational education. His vision, the issues he identified in his writings, are either unresolved or undetected, but still important. Robertson explains:

But even without being mainstream, Dewey’s vision continues to stand as a critical conscience that draws attention to the far-from-completed agenda of making all students masters of their economic and social fate. Concepts such as the intelligent worker, the employer and employee, public control not ownership of the economy, schools not doing enough or doing the wrong thing are still issues raised by Dewey and still need to be examined.

No one can question the importance of vocational education today. Nevertheless, as Christopher Winch points out, vocational education is a relatively neglected topic in educational theory.

Vocational education is a topic that is connected with broader ethical and political questions about the education of students, the kind of society they will live in, and how the schools can be part of the answer.

Yet it is a subject of great importance. The way we prepare young people for work; their ability to determine the quality of the work that a society offers them, and the is-


72 See Joe L. Kincheloe, Toil and Trouble. (New York: Peter Lang, 1995).
sues related to economics, must all be addressed. Winch echoes Dewey by stating that in discussing the subject of vocational education, one cannot ignore issues of the quality of working lives and the broader aims of economic and social policy. Vocational education is a topic that is connected with broader ethical and political questions about the education of students, the kind of society they will live in, and how the schools can be part of the answer.

One can find numerous references to Dewey and vocational education. Scholars use different aspects of Dewey’s writings to support their position on vocational education and seem to either ignore or miss Dewey’s comprehensive vision. Three examples of scholars using Dewey to discuss vocational education are Richard Becker, Norton Grubb, and John Goodlad. Each of these writers provides help in understanding Dewey’s thoughts on vocationalism, though individually, they each fall short of providing the comprehensive approach with which Dewey approached the topic.

Becker discusses Dewey’s notion of vocational education as offering the objectives of what vocational education should consist of: 1. democracy, 2. play and work, 3. culture, 4. society, and 5. educational process. However, Becker’s discussion of Dewey’s thought are not so much incorrect as they are incomplete. Although Becker codifies Dewey’s thought on vocational education into five ingredients, they are not explained in any depth, nor do they leave the educator with a good understanding of what Dewey was stating.

Norton Grubb explains Dewey’s view of vocational education and uses a theme which he repeats in other writings: that Dewey’s view of vocational education is best understood though the notion of education through occupations.

The limitation in Grubb’s writings on Dewey’s view of vocational education is that he equates Dewey’s view of occupations with Dewey’s view of vocational education and does not share Dewey’s social and political concerns with regard to vocational education. Grubb seems to realize their importance, but does not elucidate Dewey’s position.

Finally, Goodlad, in discussing the four goals of education, identifies vocational education as one of the four. However, in describing vocational education, Goodlad identifies five points that comprise the goals of vocational education, separating them from academic goals and absenting them from any discussion of social and political issues. Goodlad also discusses vocational education in the context of the flawed dualism of liberal education and vocational education. Here he echoes Dewey’s concern about two types of education and is in agreement with Dewey that all children need both a liberal education and a vocational education. Nevertheless, I do not believe he reflects Dewey’s notion of an “enlarged” educational vision that would eliminate this dualism.

In short, vocational education is still discussed by contemporary scholars, still seen as important, but not in the way that Dewey envisioned it. It is time to revisit this theme in Dewey’s writings.

The Historical Context of Vocational Education: Social Efficiency versus Education for Democracy Models

Historically, vocational education was not initially a part of public education. In the early 1800s, public schools were for the elite. Advocates for vocational education believed that by introducing vocational education into the schools, it would: 1) make schools more meaningful; 2) encourage children to spend more time in school; 3) create better educated and more skilled workers, with the ability to earn more; 4) have an indirect and positive effect on the aims and methods of general education; and, 5) result in better teaching and learning by employing “learning by doing” and not mere book learning.

Some scholars believe there were two distinct models of vocational education in the early twentieth century: education for social efficiency and education for democracy. David Snedden is identified with the former, John Dewey with the latter. However, that clean distinction is not obvious when one looks at the vocational education movement. Even within the social efficiency model, one can find variations. Ultimately, however, it is the social efficiency model that has prevailed.

Julius House explains that the vocational education of the 1920s—that found in the technical schools—was based on the social efficiency model; its goal was to fit the child for the job. The child was taught to accept the present social system with little or no criticism, and there was no connection between vocational training and social purposes.

The child was taught to accept the present social system with little or no criticism, and there was no connection between vocational training and social purposes.

House remarks that vocational education was based upon habit, not thought—as well as the separation of technical schools from rest of the school system. This type of education wanted student to "get the right answer" quickly, an automatic response was favored, and ethics was not a concern.

House explains this model of vocational education saw two kinds of individuals: 1) leaders or managers; and 2) followers or workers. According to House, vocational education favored the exploitation of workers and was there to ensure that current institutions were perpetuated.

Interestingly, there was support from both educators and the business community for this type of vocational education—but for different reasons. From the business perspec-

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78 ‘Learning by doing’ is not Dewey’s notion of ‘learning by doing’ but refers to manual training.
81 Kincheloe, Toil and Trouble. (New York: Peter Lang, 1995).
83 If you look at Arthur Wirth "Issues Affecting Education and Work in the Eighties: Efficiency versus Industrial Democracy, A Historical Perspective." Teachers College Record 79 (1977): 55-67 there are the two models of vocational education discussed. Different terms but the same concepts. There was an early debate according to Wirth over which model of voc ed to follow 1] business civilization 2] populist model or economic outlook efficiency vs wholeness of the person, self- realization, democratic ethos [55].
The pervasive attitude was that “we pay the bills,” and in return, “we should have what we need”—workers. Teachers who supported this type of vocational education saw children entering the world ill prepared for jobs, with few skills, and that their chief task was therefore "to fit" youth for a place in the economic process.

House is critical of this model because it institutionalizes class separation and stratifies society: workers are the laboring class, there is no provision for their role in leadership, and their social intelligence is disregarded. According to House, the other model, education for democracy, was opposed to the technical school model. And this is where John Dewey comes in.

This education for democracy model has children studying vocations to make intelligent choices that relate work to the scientific method, delay individuals’ choice of vocation, and end vocational training as traditionally practiced. Instead, students examine lines of work and seek to ascertain the service that such work renders society. Under this model, schools and society need to socialize work, and workers need to receive a living wage.

As noted earlier, the vocational reformers during the period from 1890 to 1920 had various agendas: skills training, fitting child to job, docile workers, and restoring the creative impulse unto industry. According to Kantor, the reformers seldom raised the question of who controlled the economy and for what purposes. Whatever their agenda, many vocational education reformers saw vocational education as socialization through the schools. The National Association of Manufactures [NAM] is an example of such advocates for vocational education. They wanted the schools to produce good workers. Furthermore, the manufacturers argued that public schools adopt curriculum to meet that would meet their specific needs.

David Snedden: An Example of the Social Efficiency Model

David Snedden, Commissioner of Education for Massachusetts, set the context for vocational education as he saw it, circa 1910. His vision was the antithesis of Dewey’s view of vocational education. For Snedden saw a clear distinction between liberal education and vocational education. Vocational education, according to Snedden, was specialization and training.

Snedden divided vocational education into five areas: 1) professional education preparing lawyers, physicians, engineers, teachers, clergy, military personnel; 2) commercial education preparing bookkeepers, clerks, stenographers, commercial travelers, and business leaders; 3) industrial education preparing bricklayers, machinists, shoemakers, metal workers, factory hands, and others in higher manufacturing pursuits; 4) agricultural education providing skill and knowledge for the tillage of the soil and the management of domestic animals; and 5) education in the household arts, preparing girls for dressmaking, cooking, and management of the home.

Although Snedden saw a social purpose behind the vocational training offered in the schools, that was about as far as it went regarding agreement between Dewey and Snedden. Snedden’s view was that vocational education was provided at public expense for all.

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84 House, "Two Kinds of Vocational Education," 222-223.
86 Ibid., 403-404.
This included the unfortunates—delinquents, dependents, and defectives for whom the home no longer exists.

For Sneeden liberal education and vocational education were two distinct tracts within the public school experience. And although individuals with various intellectual abilities would benefit from vocational education, Sneeden believed not all students could or should engage in the more demanding levels of vocational education. For those lacking in the higher intellectual abilities the unfortunates would receive a vocational education that prepared them for a trade but a model whose goal was to fit the child for the job. The child was taught to accept the present social situation. 88

Dewey; Social, Political, and Moral Issues; and Vocational Education: The Education for Democracy Model

Dewey’s writings7 on vocational education begin in 1901 and continue until 1944. In 1917, John Dewey addressed the Public Education Association, explaining that popular education has always been largely vocational, and that the issue should not be framed as a choice between vocational and cultural education. Furthermore, the notion of “learning for earning” is not so much incorrect as it is badly conceived. Dewey explains that children were trained to enrich the system, not themselves. This conception of learning for earning, explains Dewey, is not for the worker, but for the business: “the ability of the learner to add to the earnings of others rather than to his own earnings has been the main factor in selecting materials of study and fixing methods.” 90

...the issue should not be framed as a choice between vocational and cultural education.

What Dewey wanted was a reconstruction of the educational system, one touching on social, political, moral, and education issues. He states in a response to David Snedden91 that he, too, wants education to be vocational—but in a quite different sense of that term.

When Dewey discussed the kinds of vocational education he wants he focuses on what sorts of industrial education there might be and whom it might serve. Although the business community wanted workers, preferably docile ones, Dewey saw his vision as an enlarged educational plan. As an example, Dewey wanted a kind of social studies curriculum92 that would encourage individuals to be politically astute, not docile workers who would be turned into automatons:

88 Ibid, 6.
89 References to Dewey’s collected works are to the Electronic Edition, 1996. Larry A. Hickman, General Editor Director, The Center for Dewey Studies. This present edition is based on the critical edition, but differs from it in significant ways. Previously unpublished materials were transcribed and delivered in hard copy. Consequently, no machine-readable text was produced at the Center as a part of the editorial process. The Collected Works of John Dewey, 1882-1953. The Electronic Edition Folio Bound VIEWWS ver 3.1a. Distributed by Intellex corp. Future references to the Collected Works will be noted Dewey, CD Rom.
90 Dewey CD Rom, “Learning To Earn: The Place Of Vocational Education In A Comprehensive Scheme Of Public Education,” The Middle Works.10.144, Address at the annual meeting of the Public Education Association, Hotel Biltmore, February 20, 1917.
91 Dewey, CD Rom, “Education Vs. Trade-Training Reply To David Snedden” [Page The Middle Works,8.411] [First published in New Republic 3 (1915): 42-43. For David Snedden's letter to which this is a reply, see "Vocational Education," 40-42 (print edition, Appendix 2).
So far as it takes in civic and social studies at all, it will emphasize those things which emphasize duties to the established order and a blind patriotism which accounts it a great privilege to defend things in which the workers themselves have little or no share. The studies which fit the individual for the reasonable enjoyment of leisure time, which develop good taste in reading and appreciation of the arts, will be passed over as good for those who belong by wealth to the leisure class, but quite useless in the training of skilled employees.  

Dewey’s vocational education would prize freedom more than docility; initiative more than automatic skill; insight and understanding more than capacity to recite lessons or to execute tasks under the direction of others. Some examples? Consider Dewey’s claims about the needs for a wide-spread “industrial intelligence:

select the materials and the technique of the trades not for the sake of producing skilled workers for hire in definite trades, but for the sake of securing industrial intelligence—a knowledge of the conditions and processes of present manufacturing, transportation, and commerce—so that the individual may be able to make his own choices and his own adjustments, and be master, so far as in him lies, of his own economic fate.

Consider, too, that Dewey lamented the waste of human talent in the educational system and argued that:

Waste of natural resources and carelessness as to human life, together with almost exclusive attention to raw materials and coarse methods, was the mark of the former [style of education]. Conservation of resources and of life, together with preparation of individuals with trained imagination and resourceful skill for expert action in a complex society, must be the mark of our future America—unless degeneration is to set in.

Consider, finally, that Dewey supported socializing industry. His notion of socializing asserts that industry exists not for profit, but for the needs of society. In discussing the realignment of vocational education, he refers to what America has learned from the First World War about the idea of education for social service. Dewey asserted the need for public control of the economy toward the goals of full employment, socially responsive business practices, and meaningful work that is democratically managed (that is, work that would be socially useful and aesthetically fulfilling):

While, as I have already said, political action is not basic, concentration of attention upon real and vital issues such as attend the public control of industry and finance for the sake

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93 Dewey, CD Rom, “Learning To Earn: The Place Of Vocational Education In A Comprehensive Scheme Of Public Education,” Address at the annual meeting of the Public Education Association, Hotel Biltmore, February 20, 1917. mw.10.148
94 Italics mine.
97 Dewey, CD Rom, “Vocational Education In The Light Of The World War” The Middle Works.11.58 First published as Bulletin No. 4 (Chicago, 1918), 9 pp., of the Vocational Education Association of the Middle West, from an address to the Association, Chicago, 25 January 1918.
of social values would have vast intellectual and emotional reverberations. No phase of our culture would remain unaffected. Politics is a means, not an end. But thought of it as a means will lead to thought of the ends it should serve. It will induce consideration of the ways in which a worthy and rich life for all may be achieved. In so doing, it will restore directive aims and be a significant step forward in the recovery of a unified individuality.  

Industrial intelligence, the cultivation of human talent, and the socialization of the economy—these are all themes that run across Dewey’s thinking about the relationship between the economy and society. However, any movement toward the realization of this vision must mean a thorough reorganization of the schools. For Dewey opposed the dual school system: one for a liberal education and one for vocational education. In a response to such a dualism, Dewey wanted a complete overhaul of schools, representing “newer social needs.”

Dewey believed that a dual system of education was (and will continue to be) dangerous for the future of any democracy. The dual system would strengthen class divisions whereas an integrated system would do more to strengthen democratic ways of life.  

Dewey sought social democracy through the reconciliation of the liberal and vocational dualism in schools. For Dewey, social democracy must oppose the belief that there are two different aims of life, located on different planes; that there are those few who are educated to live on a plane of exclusive and isolated culture, while the many toil below on the level of practical endeavor, directed at material commodities. Dewey claimed nothing less than that the problem of modern life is the doing away with all barriers that keep up such divisions.

For Dewey, social democracy is moral democracy, and it is needed along with a political democracy. Social democracy is:

Industrial intelligence, the cultivation of human talent, and the socialization of the economy—these are all themes that run across Dewey’s thinking about the relationship between the economy and society. However, any movement toward the realization of this vision must mean a thorough reorganization of the schools.

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101 Ibid., The Middle Works 7.101.
Democracy, according to Dewey, must be born anew every generation—education must be its midwife.\(^{104}\) His views on vocationalism, I hope to have shown, were at the heart of such claims.

**Personal Power and Individualism**

Dewey’s version of education would empower each with a certain personal control, or power, discontent for external control of their mental capacities, and self-discipline. Each would have the ability to delay gratification so as to secure powers that will enable them to adapt to change. Furthermore, instead of “being prepared for a special, exclusive, practical service, as a hide might be prepared for a shoemaker, he is educated into ability to recognize and apply his own abilities—is given self-command, intellectual as well as moral.”\(^{105}\)

This concern with the power of the individual can be contrasted with the type of “individualism” that American society can all too quickly buy into. Dewey worried that capitalism would have a negative effect on individuals and their education. As discussed by Martínez Aleman,\(^{106}\) if capitalist business interests dictate educational policy, students receiving a vocational education would not be provided with equal opportunity. Individuality would be sacrificed for individualism as school continues to value high stakes testing policies and the perpetuation of a stratified society.

In short, Dewey worried that capitalism was bringing about a type of individualism that would pervert the individual. A "vocational track" and an "academic track" in public schools signaled to Dewey a formalized subjugation of individuality.\(^{107}\) He states that the "perversion of the ideal of individualism is simply the distortion by capitalism of the ideal of individuality, a parody of democratic ends."\(^{108}\) In Dewey’s view, mass production and the alienation of the worker would infuse social policy with an understanding of the American democratic mission that valued the attainment of private gain and individual autonomy—not true individuality.\(^{109}\)

**A New Form—A New School Model**

In 1912, Dewey noted that because of the changes in society, namely the growth of democratic ideals, the industrial revolution, and the emergence of experimental science and evolution,\(^{110}\) schools needed to reorganize and develop a new kind of general education. This general education would be built upon "both new subject-matter and new methodol-

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104 Ibid., The Middle Works 10.139.

105 Ibid., 10.141.


107 Ibid., 394.

108 Ibid., 388.

109 Ibid., 388.

ogy [and] a recognition of the intellectual value of labor.”

Nevertheless, as late as 1936, Dewey maintained that vocational education had subsisted in missing the point:

It may prepare them quite effectively on the technical side and yet leaves graduates with very little understanding of the place of those industries or professions in the social life of the present, and of what these vocations and professions may do to keep democracy a living, growing thing.

So Dewey asks what kind of vocational education is needed and whom it shall serve. His answer was as follows:

reorganization of existing schools as will give all pupils a genuine respect for useful work, the ability to render service, and a contempt for social parasites whether they are called tramps or leaders of "society." Instead of assuming that the problem is to add vocational training to an existing cultural elementary education, it will recognize frankly that the traditional elementary education is largely vocational, but that the vocations which it has in mind are too exclusively clerical, and too much of a kind which implies merely ability to take positions in which to carry out the plans of others. It will make much of developing motor and manual skill, but not of a routine or automatic type. It will rather utilize active and manual pursuits as the means of developing constructive, inventive and creative power of mind.

As Sidney Hook explained, when educational leaders talked about “making a living,” they were speaking of a curriculum that would make students efficient workers, but not a curriculum that would liberate them. In short:

To find out what one is fitted to do and to secure an opportunity to do it is the key to happiness. Nothing is more tragic than failure to discover one's true business in life, or to find that one has drifted or been forced by circumstance into an uncongenial calling. A right occupation means simply that the aptitudes of a person are in adequate play, working with the minimum of friction and the maximum of satisfaction.

Conclusion

Vocational education is still caught between the two schools of thought. For example, in the “Unfinished Agenda—The Role of Vocational Education in the High School: National Commission on Secondary Vocational Education,” there still is no apparent consensus on the definition of vocational education. The report states that the Commission wants a balance of both academic and vocational experiences. However, the report still sees vocational education as myopically preparing students for work. The Commission’s expectations are vague and do not really touch on either the political or the social issues that Dewey sought to put front and center.


113 Ibid., 11.188.
116 Ibid., 9.318.
Unfortunately, then, vocational education has not moved much closer to what Dewey envisioned. A badly conceived conception of “learning for earning” is still very much on the top of the vocational education agenda, as it was when Dewey wrote about vocational education over a century ago.

Most Americans agree that high school students should receive more education about possible career choices. Most also feel there should be more emphasis on preparing students for career fields with better employment opportunities. However, when we look at the kind of vocational or work-study programs wanted, there is no shared view. Ignoring social, political, and moral issues of school reform, many still express concern about students not possessing the specific skills needed for particular jobs. Many still seem to find Dewey in the wrong.

Yet Michael Handel explains that, although there is concern that students graduating high school do not possess adequate work skills, the data does not necessarily support this concern. Handel notes that “employers are less concerned about cognitive skills deficits than what they consider poor work habits, motivation, demeanor, and attitudes.” In other words, the concern is still on the social—even the moral—level.

Deweyan educational reform can help to alleviate the exploitation of workers—if schools sincerely want to become instruments for democracy instead of maintaining the status quo.

Instead of vocational education being a peripheral concern of reformers, a superficial reference, it might yet become an education that will integrate social, political and moral issues along with reform in curriculum and methodology. The result? Individuals who are intelligent workers in charge of their own economic destiny.

As pointed out by Michael Zweig, director of the Center for Study of Working Class Life at the State University of New York at Stony Brook, there are literally millions of workers who are unequipped to be masters of their own fate, not because of a lack of intelligence, but because of a lack of material resources: individuals who are not allowed to become intelligent workers in charge of their own economic destiny. People whose education has done little to prepare them for life:

They are cashiers, home health care workers, truck drivers, janitors, retail salespeople, secretaries, and many other people we see and rely on every day. They are people whose income is so low they cannot rise above the lowest twenty-five percent of housing stock for a family of their size in the community where they live without spending more than the government standard of thirty percent of income for housing. In short, they are over sixty million people in nearly twenty-three million households with eighteen million kids who can’t afford to pay for the basic necessities of housing, food, medical care, and transportation.

Deweyan educational reform can help to alleviate the exploitation of workers—if schools

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119 Also see “The Workforce Readiness Crisis,” By Susan McLester and Todd McIntire, November 15, 2006.
120 Ibid., 41.
121 Commentary: Bailing out distressed workers, for a change on Fri Sep 26, 2008, http://www.reuters.com/article/reutersComService4/idUSTRE48 O8JD20080926
sincerely want to become instruments for democracy instead of maintaining the status quo.

Perhaps Richard Rorty says it best when he argues that it is time to educate our students not just about the history of labor unions, and not just that labor unions are America at its best, but more specifically: that workers have the right and the obligation to change society from the bottom up.

What Rorty wants our students to learn is that social justice cannot happen without civil disobedience. He explains:

The students need to know that the deepest and most enduring injustices, like the unending humiliation of African-Americans and the miserable wages paid to unorganized workers, are always downplayed by the political parties, and by most of the press. They need to remember that the same argument now used against raising the minimum wage—that doing so will discourage economic efficiency and productivity—was once used against the eight-hour day. They need to be able to spot the resemblances between what the politicians were indirectly and gently bribed to ignore at the beginning of this century and what they are being indirectly and gently bribed to ignore now. They need to realize that the last hundred years of our country’s history has witnessed a brutal struggle between the corporations and the workers, that this struggle is still going on, and that the corporations are winning. They need to know that the deepest social problems usually go unmentioned by candidates for political office, because it is not in the interest of the rich to have those problems discussed in public.

Dewey, in his writings about vocational education, warned us that unless education was reformed, America would continue to be plagued by economic inequality and the forming of economic castes. He asked what would happen if teachers became courageous and free to insist that educating children means creating discriminating minds—instead of minds that are able to be duped by others. When this happens, Dewey believed, the schools will become the “dangerous” outposts of a humane civilization: interesting places.

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123 Ibid., 257.

Revisiting Franklin Bobbitt’s Thoughts on Vocational Education

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Introduction

In the 1910s and 1920s, John Franklin Bobbitt (1876–1956) made a monumental impact on the emergent curriculum field; in fact, many scholars argue that his 1918 book, The Curriculum, marked the starting point of the field itself and call him the founder of curriculum.125

Some defining principles embodied in his curriculum theory, like activity analysis, became popular in his time and have been studied by later scholars. Cremin summarized activity analysis as the classification and detailing of “the full range of human experience with a view to building a curriculum that would prepare for it.”126 “Training for Occupational Efficiency,” the second of five parts of his book, occupies 62 pages and is absolutely vital to an understanding of his work.

Any topic has to struggle for a position in the curriculum. Vocational education is not an exception. In this paper, I want to come back to the starting point to see what kind of position and duty Bobbitt gave to vocational education. For, sometimes, to revisit a starting point can help us to understand where we came from and adjust the direction we are going to.

Division of Labor Called for Vocational Education

In Bobbitt’s view, “the vocations are the specializations that make up the Great Cooperative Enterprise. In total, they provide those services and commodities needed by the population which individuals and families do not provide for themselves by their unspecialized labors.”127

This kind of idea came with the development of industry and the division of labor. Living in the same time of Bobbitt, John Dewey also noticed that:

Back of the factory system lies the household and neighborhood system. Those of us who are here today need go back only one, two, or at most three generations, to find a time when the household was practically the center in which were carried on, or about which were clustered, all the typical forms of industrial occupation.128

But things changed. In order to raise the efficiency of production, division of labor became more and more specialized. When specialization went beyond what a general upbringing could offer, the foundational needs of vocational education emerged.

Everyone is impacted by such a change. Given that a self-sufficient economy and aristocratic society have gone, “with only occasional exceptions, each of the twenty million

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children now in the public schools of America will in time be obliged to earn his living . . . Each is to be a producer to the extent that he consumes." In this sense, it can be said that education at any level is some kind of vocational education. Even to get a Ph. D can be seen as a preparation for an academic career. It is also one part of economic specialization.

Putting aside such an understanding, though, even vocational education in the narrower sense, as we tend to use it, should play an important part in curriculum. Here Bobbitt gave an anthropological explanation, stating that:

Nature is very parsimonious with her supplies of food, clothing, fuel, shelter; more illiberal still in supplying books, pianos, theaters, railroad and steamship tickets, church pews, and college courses . . . Nature supplies only the crudest raw materials. The rest must be created by human labor.130

Humanity has taken raw nature in hand and through heavy labor controlled it and shaped it to its purposes. Through productive toil—thought Bobbitt—humanity has won its leisure, its surplus energies, and the means for its art, literature, science and religion. “In civilized conditions,” labor also plays an irreplaceable role. “The most obvious thing is that men and women must work; that to their callings they must devote a major portion of their time and energy.”131

Since Bobbitt put curriculum as a series of experience which children must have in order to become what adults should be, it is easy to see why he put so much focus on vocational education in his structure of curriculum. In Bobbitt’s time, more than ninety per cent of students would be compelled to “enter the ranks of tradesmen, merchants, miners, farmers, factory operatives [and] nearly all would be turned back into the so-called ‘lower’ vocations”.132 “There is no reason—argued Bobbitt—why the education of the majority of students should be sacrificed for those few who would finally go to universities. It is unfair and undermines the foundation of society.

Vocational Education as a Power for Change

Bobbitt’s idea of vocational education went far beyond the teaching of some useful technologies which could be used in adult life.

... vocational education should be a power for change.

First of all, vocational education should be a power for change. “In the imperfections of the occupational world, one finds the call for directed vocational training”.133 If all occupational affairs were efficiently and harmoniously conducted by the present adult generation, then education would have but a simple task: to hand over to the rising generation the fully developed heritage of the present generation. But the present world of occupation cannot be of the type described:

Education under the circumstances has, therefore, a double task to perform: 1) to act as a primary agency of social progress, lifting the occupational world to a higher and more desirable level; 2) to do this by educating the rising generation so that they will perform their occupational functions in a manner greatly superior to that of their fathers. The task is to develop in the rising generation, not merely

130 Ibid.
131 Ibid.
the degree of proficiency found in the world about them, but to carry them much beyond; to look, not merely to the actual practices, but rather to those that ought to be.\textsuperscript{134}

In this sense, students of vocational education should develop a competence to judge the existing situation and try to improve it with a view of science.

Bobbitt used the work of the farmer as an illustration. In his time, the efficient farmer, in terms of proven standards, could raise, not one hundred bushels of potatoes to the acre, which was about the average, but rather two hundred to five hundred bushels. Farming, for example, “presents the problem of controlling a large number of independently variable factors: soil ingredients, lime, nitrates, phosphates, sand, clay, moisture, soil oxygen, weeds, quality of seeds, temperature, light, plant parasites, and a number of others.”\textsuperscript{135} In order to improve production, a farmer must see each factor in its separate working in order to control it. Most of them are invisible or indistinguishable to the eye of sense; they are to be seen only by the inner eye of technical agricultural science. Only the trained farmer has this inner light and this inner vision. Here, then, is what vocational education really matters.

Secondly, Bobbitt argued that vocational education is born to be public. Given the division of labor, no person is an island. Everybody, to a certain extent, needs others to supply the things needed for living. Meanwhile, each person should contribute to society in some other respects. Each is to be a producer to the extent that he or she consumes. This situation connects everyone into a whole and unites them in an organic way. So it is to those who receive the service, not those who perform it, to judge whether it is good or not.

This makes vocational education essentially public. For it has to be open to intelligent criticism from consumers in the pursuit of social improvement. When an occupation improves itself, the whole society should also benefit from it. In such a society, everyone relies on others and should respect others for this very reason.

Based upon this, Bobbitt gave vocational education a foundation in social ethics. “Occupational labors clearly represent the basic service to humanity, the most fundamental social service.”\textsuperscript{136} The physician, for example, supported by a given community, is expected to serve that community to the best of his or her ability. The physician should respond to calls for service at any hour, and under all conditions. Not the physician’s convenience, but the patients’, is to be served. The physician must keep inviolate all information professionally confided to his or her care. “In these matters the ethics of the medical vocation is clearly social. The work is recognized as social service. The physician’s measure of honor is the greater because it is so” and—Bobbitt claimed—“most professional service is of analogous type.”\textsuperscript{137}

While, “these professional labors are not the only ones about which public opinion is weaving systems of social ethics.” He continues to argue that, previously, “corporations were expected to serve the stockholders and directors. Now we have faced them the other way. They are to serve the public.”\textsuperscript{138} Bobbitt took rail road company as an example. Those companies could no longer fix the qualities, rates, or conditions of service in ways dictated

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\textsuperscript{134} Franklin Bobbitt, \textit{The Curriculum} (Boston: Houghton-Mifflin, 1918), 64.
\textsuperscript{135} Franklin Bobbitt, \textit{The Curriculum} (Boston: Houghton-Mifflin, 1918), 72.
\textsuperscript{136} Franklin Bobbitt, \textit{The Curriculum} (Boston: Houghton-Mifflin, 1918), 55.
\textsuperscript{137} Franklin Bobbitt, \textit{The Curriculum} (Boston: Houghton-Mifflin, 1918), 57.
\textsuperscript{138} Franklin Bobbitt, \textit{The Curriculum} (Boston: Houghton-Mifflin, 1918), 57-58.
\end{flushleft}
solely by self-interest. These were fixed in the interests of efficient public service. To serve others and to make a maximum of social service for a minimum of social expenditure has become, Bobbitt claimed, the aim of an occupation.

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In Bobbitt’s view, “this weaving of a social ethics about vocational groups proceeded with almost disconcerting rapidity.” He treated this movement as the irresistible movement of civilization:

The growing zeal for the vocational education of all classes, shown by clear-sighted men and women whose primary interest is general human welfare, is closely related to this changed and still rapidly changing attitude toward all useful vocations. They see that every useful calling is not only in itself social service, but that it is coming to be so recognized; and that it is being more and more given its proper measure of social reward and honor.

Vocational education, in this sense, does not only mean teaching a particular craft which is useful and would ensure a youngster gainful employment. On the one hand, labor, as the foundation of civilization, can give the laborer a sense of existence, honor and value. On the other hand, as vocational education goes forward, society should benefit from it and create an atmosphere where everyone respects and recognizes each other.

Enlightenment as the Spirit of Vocational Education

Opinions devaluating vocational education already existed in Bobbitt’s time. He said: “those who object to vocational education in public schools because manual labor is sordid and unclean, should note that its frequent unloveliness is due, not to the fact that men work, but to the conditions of their labor.”

Instead of showing any superficial pity to those poor men, Bobbitt pointed out the reasons behind the disrespect working people are often shown (and, by extension, industrially-focused vocational education):

Insanitary shops, factories, and mines sap the physical vitality of the workers. Their inertia, ignorance, and inefficiency result in too long a work-day and a too-extended deadly mechanical monotony. They live usually within a narrow mental and social horizon. There is a great dearth of humanizing influences, companionships, and associations; and owing to this absence of uplifting influences and opportunities, they all too often tend to vicious and destructive animal pleasures. Too often they are compelled to live in crowded, unwholesome houses; are too often ill-fed, ill-clad, and uncleanly of habit; and have wages that permit little better even if they should desire and attempt a higher standard of living.

It is very easy to see how destructive the labor conditions once were and how dissatisfied Bobbitt was with that.

For Bobbitt, much more than any technology-focused teaching, “the purpose of occupational education is the removal through general enlightenment of the injurious or de-

141 Ibid.
142 Ibid.
To admit that too much labor is debased and debasing was not an excuse, Bobbitt thought, for ignoring vocational education. It is, instead, the very reason for undertaking it. It is the presence of imperfections in the labor field that justify the ameliorative labors of education.

Here lies a problem of recognition. As much work, like that of a physician or a banker, has been recognized as valuable, some other ones, like that of the farmer, the small merchant, the housekeeper, the artisan, and the factory-worker, still lack this kind of recognition.

It is easy to see that these classes serve the general welfare as fully and as fundamentally as the other classes mentioned above; but their labors are not yet so fully recognized as community service... The difference in the social-service situation is not a difference of reality, but only one of social understanding and recognition.144

Clearly, Bobbitt recognized the inherent value of all forms of labor (rightly understood).

Bobbitt used the farmer as an example. The farmer performs an indispensable community service in supplying the original elements of food and clothing. His service is not less high than that of the physician simply because he ministers to the bodily side of the human. The physician also ministers to the bodily welfare (and perhaps in a less fundamental way). We can do without the labors of the physician most of the time, but how can we imagine one day’s life without the products of the farmer? Vocational education is needed, therefore, right here. Science can be applied to scrutinize the service of the farmer and to point out ways in which the farmer may better serve the general welfare. Bobbitt used the term enlightenment here. And I agree.

It is true that vocational education has a role to play in the service of enlightenment: to sweep out customary social beliefs existing with the help of reason. Vocational education should fight for fairness, for those who makes contribution, but rarely get recognized.

Conclusion

The problems that Bobbitt faced 100 years ago still trouble us.

In some countries, vocational education is looked at as the last choice for those students who have failed in academic competition. For some students, to accept vocational education is a way to get a job and stay alive. For some governments, it may be a tactic to lower the juvenile crime rate and increase profit margins. Nothing more is expected. Losing its commitment to innovation and public spirit, vocational education risks being reduced to a production line—one which produces generations of docile youngsters into fixed social positions. Students caught inside would lose the opportunity for self-realization. In addition to all of the technologies which might be taught, what vocational education needs imminently, right now, is just such a spirit of enlightenment.

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On the other hand, society should also change its attitude. As a form of education, vocational education concerns all students, given that they are all called to contribute directly to their society. There is no reason to depreciate it. What true vocational education calls for is equality, rather than any kind of mercy:

So long as equally useful vocations have been so unequally honored and rewarded, and so long as labor conditions have offered such unequal opportunities for self-realization, this educational problem has been insoluble. The solution is coming, not through the impossible plan of lifting all people into the professions, but through lifting all vocations to the social level of the professions. The process is making the door to any useful vocation a door of opportunity.145

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