Ignorance or Apathy?

The Disconnect Between the Marcellus Shale Industry and Lycoming County Youth

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Williamsport is a town located in rural Lycoming County, PA. The region has roughly 29,814 residents and is approximately 84% Caucasian. It was established in the 19th Century and became known as "the Lumber Capital of the World" as its residents exploited the region's natural resources. When lumber was found to be more cost-effective elsewhere, the industry left and Lycoming County turned to coal for a brief period as a source of employment and regional prosperity. Most recently, the area has begun to exploit its vast resources of natural gas as a means of economic rejuvenation. There are many socioeconomic shifts related to labor and the job market when development occurs, and changes in labor migration and economic prosperity are particularly perceptible in rural areas. The Marcellus Shale Industry in Pennsylvania advertises a drastic increase in job opportunities as a direct result of its growth in rural areas such as Williamsport. Yet, most of the jobs directly related to the gas industry require specific higher education and skill sets. As preexisting data supports, regional development in energy is rarely an equalizer in local finances and often forms boom-towns (Weber 1979). Williamsport has had an extended history of unsustainable development and economic strain. This economic instability and fluctuating job market has, in the past, caused out-migration to more developed regions. Consequently, rural boom-towns like Williamsport have more youth moving out of the area and face an aging workforce. The goal of my research is to understand how local Williamsport youth view Marcellus Shale development, if they contextualize themselves or their peers within the industry, whether or not job growth will encourage local youth to stay within the Williamsport region, and if higher education or training is a deterrent for seeking jobs in the industry.

Rural Youth Out-Migration

Garasky (2002) shows how American rural communities had a period of extreme prosperity in the 1970's, followed by a drastic decline of productivity in the 1980's when

massive youth out-migration caused an agriculture crisis. Agriculture as an industry is highly dependent on generational rejuvenation. The familial agricultural tradition can only continue if younger generations continue the practice. If youth do not seek to carry on farming, elderly relatives remain in charge until they leave their land to family members or sell/lease the property to an outside party. Sociologists acknowledge that rural population crisis is ongoing as outmigration from rural areas increases while in-migration decreases (Garasky 2002). The retention of youth has become increasingly urgent as rural communities face an aging workforce, most of which received limited education and do not possess the necessary skills to participate in a hightech industry. The relocation and outsourcing of many American factories and other blue collar jobs has limited job markets in rural areas. The exit of major industry out of an area is referred to as industrial restructuring, and it affects rural areas more than urban areas because nonmetropolitan business cycles have a higher chance of leading to extended periods of unemployment and poverty. The familial farming tradition has become less feasible in light of industrial farming techniques which make mom and pop farming look antiquated in comparison. Rural communities have not needed a workforce with extensive higher education until recently. This is slowly becoming a necessity due to the lack of unskilled/lowskilled jobs and the deindustrialization of much of America (Garasky 2002).

To many sociologists, the decision to out-migrate is largely determined by familial views regarding both high school and higher education and the extent to which parents help teens with their choices (Corbett 2009). There has been a persistent trend in modern society to treat teens like young adults, to expect them to monitor their own education with the knowledge that their career/higher education is reliant upon their grades, build their portfolio upon the extracurricular activities they engage in, learn the practicalities of independence, foster the values that

employers look for, and learn how to advertise themselves within the job market. Modern maturation comes with checkpoints and deadlines that are often unspoken. It is statistically shown that teens who miss these key decision-making processes regarding education and training are the ones that appear in the low or unskilled job market (Corbett 2009). They tend to be kids from the lower or middle classes. Current expectations for teens favor the middle and upper classes, as they are the social classes equipped with social capital and resources to invest in their children. The evolution into a more educated workforce is setting unprecedented pressure on youth to present themselves as adults, to mentally enter the workforce in high school and select a reliable occupation to pursue. It is evident that rural youth struggle with educational choices because of lack of funds, lack of previous examples, uncertainty over the subject or practicality of further education, and a lack of context within their communities for educated youth (Corbett 2009). Often, educational choices determine whether or not teens stay within the confines of the common local industry and whether or not that particular industry is a reliable source of income. Education is a way out of communities with limited earning opportunities and a deteriorating economy.

Previous literature has shown that rural youth who receive higher education and seek higher paying jobs are more likely to move away from their hometown than their high school counterparts (Garasky 2002). The American dream is based on consumer-oriented success, and for many rural youth, local job markets offering low or unskilled jobs do not provide adequate funds to achieve the twenty-first century paradigm existence (Corbett 2009). An educated and young workforce is not, then, motivated to stay in rural areas and therefore will out-migrate, seeking employment in suburbs and cities. Rural communities also have a tendency to push males into the familial occupation early on as a means of patriarchal lineage. Females have no

set inherited niche that will provide an income. Thus, educated females that have no preexisting professional role in rural communities are likely to migrate out of the community (Corbett 2009). Brighter youth are almost certain to out-migrate to a region with a more reliable and creative economy. Research shows that rural youth who went away to college are more likely to move out of state; this fully supports the "brain drain" immigration concept (Garasky 2002). The brain drain concept, also known as human capital flight, is a term for the mass immigration of a population with knowledge or technical skills. Areas that suffer from brain drain are often bereft of locally born and raised community members who received a higher education. Rural areas do not have a wealth of high status, higher-paying jobs built into the socioeconomic structure, and therefore they offer very little incentive for highly educated populations to stay.

According to the US Census Bureau, Pennsylvania ranked 5th among all states in net out-migration for the period 1995-2000. From 1995-2000, 669,000 people moved into the state, while 800,000 left the state, resulting in a net loss of 131,000 people. Pennsylvania's in-migration rate of 58 people per 1000 residents ranked 6th lowest in the nation (Shields et al. 2004). The estimated population of Williamsport dipped 3% between 2000 and 2006. It remains to be seen what the 2010 Williamsport Census population results will reveal and if a rise in population due to the Marcellus Shale Industry will be tangible.

Rural Development and Employment

Rural development has often been driven by the extraction or utilization of natural resources (Weber 1979). Lumber, coal, and most recently, natural gas have all been industries in the Williamsport region and were some of the prime reasons for the area to become developed. Yet, industries that are built upon natural resources have a tendency to follow a boom and bust pattern (Weber 1979). For a time, a great number of locals will be employed, labor migration will

increase, and the area will have a period of great prosperity, but then the natural resource is depleted or found to be more economical elsewhere, and the industry disappears. Literature supports the idea that energy development follows the same pattern (Weber 1979). In these instances, census data from industry areas show a jump in employment statistics due to the influx of labor migrants already associated with the industry.

Struggling rural communities have turned to other industries nonrelated to natural resources as a source of development and jobs. For example, rural regions have invited prison development as a means to stimulate economic growth, bring jobs to the area, and deter outmigration (Deller 2010). Prison development fails to provide the jobs that the industry promises and communities hope for. Prisons come pre-staffed, leaving locals to compete for jobs with people who have been transferred to the area because they already have the prior experience, skill sets, and possible higher education related to prison jobs (Hooks et al. 2010). The winners will always be the migrant prison workers as they have seniority and, as most prisons are staterun, guaranteed job security. Another less-structured industry that rural communities have employed to improve local economic conditions is tourism. Tourism has been semi-successful in providing local regions with employment but does not succeed in creating skilled or high-paying jobs. Most of the employment options that are created by tourism are unskilled or deskilled service positions, and such jobs are highly susceptible to economic trends (Deller 2010). Tourism is also dependent upon historical character, recreational space, and natural beauty. Williamsport boasts its previous title of "the Lumber Capital of the World," its status as "the Home of Little League Baseball," and its growing reputation as "the Home of the Mailbox Millionaires" and, possibly, "Marcellus Shale Central." These titles have added to the prestige of the area, marking it as a Central PA natural resource fixture—a sign that, for the first time in over a century, industry has come to Williamsport.

Marcellus Shale Workforce Needs Assessment

The Marcellus Shale under a large portion of Pennsylvania and parts of New York, West Virginia, and Ohio has large natural gas reserves trapped in the rock. Energy companies have been aware of this for some time, but the technology to build and use highly specific drills has only recently been invented. Now that the technology exists, energy companies have begun development in small rural regions such as Lycoming County, PA, buying gas, land, and mineral rights in order to drill, collect, and capture natural gas. Energy companies have spent millions of dollars investing in miles of pipeline, exploration, and development of the technologies necessary for drilling and exportation of product (Brundage et al. 2009). The influx of energy companies has caused a spike in labor migration, a housing boom, and a growing number of service positions as hotels struggle to meet the lodging demand. However, the true draw of the energy companies is not the rise in trickle-down service positions. The Marcellus Shale and natural gas industries have pledged to hire as many people from the region to work as possible. This pledge is stipulated with the understanding that a large portion of their workforce will at first be imported, as locals are not yet qualified to participate in production (Brundage et al. 2009).

The Marcellus Shale Workforce Needs Assessment was drawn up by the Marcellus Shale Education and Training Center, which is an affiliate of Penn State and the Pennsylvania College of Technology (Brundage et al. 2009). The Assessment was created to give an unbiased prediction of industry needs and development, but the method of data collection and the lack of response rate makes the report unreliable at best. Out of 170 administered surveys to gas

companies, 50 surveys were returned partially answered, and only 30 were answered in considerable detail (Brundage et al. 2009). A 29% response rate makes the data used for workforce projections unsound and the resulting industry estimates misleading and flawed. The report was composed of the analysis of public statements made by energy companies.

One of the proposed manifest benefits of the Marcellus Shale Industry's coming to the Williamsport region was to provide locals with well-paying jobs. Yet, even the industry is skeptical about the local untrained workforce. In the Marcellus Shale Workforce Needs Assessment, the Marcellus Shale Education and Training Center expresses that it will be hard to find individuals who have the skill sets and work ethic for the various positions—let alone those who can achieve an acceptable level of experience—to ever switch over to a completely local workforce (Brundage et al. 2009). Given that the industry has a pre-trained, experienced, and mobile imported workforce, there is no motivation for the industry to ever pursue a completely local workforce, regardless of local promises of employment. Even if the companies do hire a significant number of locals, the report mentions that the future of the industry cannot be accurately projected. The report estimates that over 410 individuals in assorted positions and varying levels of skill participate in the drilling of one well (Brundage et al. 2009). While that gives the impression that employment rates are high and that there are a wealth of occupations across education levels, those positions will only last as long as the companies continue to drill. Aside from a flawed estimate presented in the assessment, there is no way to estimate how long the natural gas reserves will last or how long the industry will stay in the region. It is impossible to predict the workforce needs within one location, let alone state that Marcellus Shale drilling will not be a boom and bust industry.

Jobs associated with drilling are only necessary in the short-term preparation of the drill site and drilling, while production phase jobs are permanent positions that stay within the community. Drilling jobs are mentioned in the assessment as "low-skill positions," with low wages and long shifts without the benefit of health care coverage. Conversely, these jobs are high risk and require a specific skill set. Often, skills such as welding a pipe determine the safety of an area for up to five years. A failure to do a job efficiently could jeopardize the safety of the crew and other people nearby. These are the types of jobs that locals may enter once they qualify through specific training. In contrast, pre- and post-drilling production jobs such as Geologists and Natural Gas Marketers typically require highly specialized education with the added bonus of health benefits and a low-risk work environment. They come in before and after drilling and fracking, the most dangerous time of production, and consequently these jobs do not have the same level of risk as production workers. These are the jobs that are likely to be permanently occupied by migrant employees of the energy companies, according to the Marcellus Shale Workforce Needs Assessment (Brundage et al. 2009). If locals want to enter the industry, they must provide adequate proof of skill sets, training, licenses, and higher education. The minimum education for some drilling positions is "some high school education," but it should be noted that energy companies have imported workers from Texas to work in these positions that may have higher education and who already have experience (Brundage et al. 2009). The minimum education and skill sets are not enough for locals to qualify for positions. Energy companies claim that 75% of the jobs in the industry require very little education and are mainly experience based (Brundage et al. 2009). This provides very little motivation for companies to fire experienced employees to hire locals. The need for local education and training has led to the development of eighty-six career and technical programs across Pennsylvania, two of which are

based in Williamsport. The report was written by professionals affiliated with these new education programs that are structured to train locals for a highly specific industry.

Thus far, two main training programs have been established in the Williamsport region.

The first program is run through the Pennsylvania College of Technology, which is a trade school associated with the Pennsylvania State University. This program is headed by Jeff Lorson, an Industrial Technology Specialist, Director of the Marcellus Shale Education and Training Center, and co-author of the Marcellus Shale Workforce Needs Assessment. During Lorson's presentation of the Marcellus Shale Workforce Needs Overview and Secondary Education Implications during the October 6th Marcellus Shale Education Conference, he presented the Workforce Needs Assessment as a paradoxical cause and effect scenario (2010). The industry wants to hire locals as soon as possible for entry level jobs, which require a minimum of some high school education or previous experience. Yet, even the most educated Williamsport locals lack the discipline, skill sets, and training necessary for these "entry level," "low-skill" jobs.

Thus, programs such as the series of courses at Pennsylvania College of Technology are necessary for locals who want to pursue higher, better-paying, white collar industry jobs.

Lorson (2010) was quick to critique the population that had enrolled in his Penn College program in the past. He said that he has worked hard to set realistic industry expectations upon all participants in his program and admitted to being a stickler for punctuality, a value that not all participants shared. Training days are long and all work is held to industry standard. Tardiness (being one minute late for training), failure to pass background tests, lack of preparation for training, positive drug tests, and the influence or evidence of personal troubles interfering with work were all considered reasonable grounds for termination from the program. There is no refund. Program attrition was high: From a training class of 60 participants, only 6 graduated.

Lorson stated that this is an issue with the local population: a lack of work ethic and timeliness and a pronounced expression of apathy towards opportunity. He encouraged all educators present at the conference to instill the value of punctuality, work, attendance, and structure to students so that they can partake in the wealth of industry jobs when the students mature. There was no indication that Lorson considered any alternative reasons for the low graduation rate of the program besides the fact that participants "didn't want [it] enough....didn't try hard enough." However, there is a clear disconnect between industry needs and the local population. Whether or not Lorson's program will serve as effective means to bridge that gap remains to be seen.

The second program for industry preparation is run through PA CareerLink as a training option for unemployed locals who wish to gain the skills necessary for entry level positions within the Marcellus Shale Industry—specifically, the blue collar positions of Roughneck and Roustabout. The positions of Roughneck and Roustabout are both drilling jobs that will cease to exist in the area when drilling stops. They are entry level positions whose minimal education/experience qualification level is listed as "only some high school education" on the Marcellus Coalition Web site (*Job Profiles*). The free program is called Fit 4 Natural Gas and it provides unemployed residents of Williamsport the opportunity to study under industry experts, receiving certification in OSHA 10-hour for the gas and oil industry. First-Aid and CPR, Defensive Driving, OSHA Forklift Operation, Oilfield Heavy Equipment Operation and Excavation, Oilfield Terminology, and Technical Drilling Skills Training. The program also provides participants with a WorkKeys® Career Readiness Certificate, a scale measurement of applicant's quantitative and qualitative abilities. In addition, Fit 4 Natural Gas provides the opportunity for program graduates to meet Marcellus Shale representatives directly after

graduation. It is common practice for representatives to be present during program graduation ceremonies and sign trained individuals on the spot post-graduation in an effort to keep local employment pledges. The Williamsport Fit 4 Natural Gas program is also present in Tioga, Clinton, and Bradford county PA CareerLink offices.

When discussing this program with Fit 4 Natural Gas Coordinator Dianne Bubb, it became clear to me that the program was not operating to its full potential despite a high initial interest level. Approximately forty individuals showed up for a Fit program information session in late September-early October. Yet, after the prerequisite measures necessary for participants were listed (that participants must be at least 18 years of age with a GED or high school diploma, must submit to a background check and drug testing, and must be on time and attend all scheduled program events), half of the people left the information session. Matriculation is dismal. People are not enrolling in the program, and of those that have, few have graduated. Although the intense militarization of the industry has been a clear deterrent for a large percentage of people that have previously expressed interest in the Fit program and job specialization, Bubb made it clear that the program has been an overwhelming success for specific populations. Veterans, law enforcement officers, and retired farmers are three populations that are perfectly suited for the program. They are used to long hours, rigid schedules, all-weather work, background checks, and drug tests. People who held these specific occupations have the discipline that is required of industry employees; they are already predisposed to the high-risk working conditions that they would be subject to in entry level industry jobs. These are populations with "usable" experience and are typically the "sandwich generation," 30-40 years old. Yet, youth are conspicuously absent from the Fit training program, as are females.

Youth are not expressing the level of interest in the industry that was expected when the Fit program was established. Bubb hypothesized that this could be due to the prevailing opinion that the industry "will only be around for 5 years or so" or that the means of program advertising (newspaper advertisements and word of mouth) were not reaching the "right people." While it is true that industry longevity is regularly called into question, this does not explain the obvious absence of youth. While newspapers may very well be a media medium that youth and the general unemployed population no longer encounter daily, it is also likely that the "requirements" speech, the laundry list of obligations that starts every informational Fit meeting is a major deterrent. The introduction to the program does not sell the long-term benefits of the training. Consequently, the pros of entering the industry could very well be lost on youth or other possible populations that see only lifestyle constraints and inconveniences. Another problem that could determine the success of the Fit program is the timing of the training: weekdays during business hours. The schedule would render program participants unable to work even part-time jobs during their training period. In response to this, Bubb has established a weekend training program for people who have weekday jobs or obligations.

As for the pronounced lack of estrogen within the industry, the genderization of job positions could be seen as a deterrent for females who are looking into the industry. Job titles such as Draftsman, Landman, and Production Foreman are used ubiquitously rather than gender neutral titles such as Cartographer, Lease Agent, and Production Manager. The gender specific job titles may be having a tangible effect on local females' contextualization within the industry. During Lorson's presentation of the Marcellus Shale Workforce Needs Overview and Secondary Education Implications, I raised my hand and asked him whether he thought the omnipresent gendered titles would prevent women from going into the industry. Lorson grinned at me and

suggested that women's place was in pre- and post-drilling jobs, not labor jobs. Pre- and post-drilling jobs were the roles in which, he assured me, I wouldn't get dirty (Lorson 2010). His and the industry's prescription to gender roles and genderized terms could be major reasons women aren't expressing interest in the field. As Bubb pointed out, as of early October, only two females have graduated the Fit program. While these women received jobs, they were clearly the minority within the program, reinforcing the undeniable fact that the Marcellus Shale Industry is a male-dominated field. Regardless of the reason, youth and females are not contextualizing themselves within the industry. As a result, they are not pursuing or consistently achieving the training available to them in regional programs specifically related to the Marcellus Shale Industry.

Drawing the Sample and Selecting the Population

The goal of my research is to understand how local Williamsport youth view Marcellus Shale development, if they contextualize themselves or their peers within the industry, whether or not job growth will encourage local youth to stay within the Williamsport region, and if higher education or training is a deterrent for seeking jobs in the industry. Selecting a population of youth to work with was a challenge. Ideally, the study would have been conducted working with a transient population of undirected teens, but the difficulty of finding and consolidating such a group eliminated the possibility. To collect adequate data, it was necessary to sample a preexisting network. Although there are two training programs specifically related to the Marcellus Shale Industry in the Williamsport region, my goal was to find youth that were not yet active in becoming part of the industry. After considering several local populations, the Williamsport YouthBuild program stood out as an opportunity to sample youth that are making a concentrated effort to improve their education and work ethic before entering the workforce.

YouthBuild is a program through which low-income young adults can earn a GED while receiving training and instruction in life skills. The program is set up for youth who have dropped out of high school as a means to progress in the job market. YouthBuild is open to individuals sixteen to twenty-four years old. For the first segment of the sample, I surveyed a group of twenty-one YouthBuild participants at the beginning of one of their classroom training days in late October. The second portion of the sample was conducted by proxy; a YouthBuild employee distributed surveys to two youths who had already graduated the program during predetermined "update" meetings. This added an interesting compound sample as graduates of the program are entering the workforce and trying to contextualize themselves within the local labor market, are debating whether or not to leave the area, are pursuing further education and training, or have achieved getting a job. The sample is therefore comprised of youths that are at various stages of deciding their future and possible employment.

Constructing the Survey

The first portion of the survey provided a list of all the jobs involved in the Marcellus Shale Industry in no specific order. The survey participants were instructed to check the boxes next to the job positions they felt qualified to perform. This section was designed to determine preconceptions that youth have of the industry and the level of education and training necessary for many of the job positions. The results can be seen in Table 1 below:

Table 1. Self -Perceptions of Personal Qualification Level									
	Jobs that Respondents with Some High School Education Felt Qualified to Perform	Jobs that Respondents that Received a GED Felt Qualified to Perform		Jobs that Respondents with Some High School Education Felt Qualified to Perform	Jobs that Respondents that Received a GED Felt Qualified to Perform				
	n=15	n=6		n=15	n=6				
Previous Experience	7	0	Trade School Certification or Two Year College Degree	5	1				
Skill/Specific Training	5	1	Trade School Certification	4	0				
Specific License	9	4	2 Year College Degree	3	1				
Some High School	7	3	College Degree	6	1				
High School Graduate or Recipient of a GED	11	5	Two Year College Degree and 5+ years Experience	2	1				
High School and Certification	5	2	Graduate School	1	1				
Previous Experience or Trade School Certification	7	3							

Survey participants were then asked if they thought that training or specialized education was necessary for the listed positions and whether or not they expected the jobs to come with benefits. These two questions were designed to determine the expectations that youth hold concerning the industry. Only twenty out of the possible twenty-one survey participants answered this section, as Table 2 indicates:

Table 2. Misconceptions						
N= 21	Yes	No				
Do you think that job training or a specialized education is necessary for these positions?	20	0				
Do you expect these jobs to have benefits?	20	0				

In order to gauge youth opinion on the Marcellus Shale Industry and the local job market, I included a seven-question Likert Scale which posed questions relating to the individual, peers, general local employment, and job opportunities within the Marcellus Shale Industry. The results are evident in Table 3:

Table 3. Youth Attitudes Concerning Job Availability								
Likert Scale Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
The Marcellus Shale Industry will be a consistent and lasting source of jobs for residents of Williamsport	3	4	10	3	1			
My peers are staying in the Williamsport region and are seeking or have found jobs	2	8	7	3	1			
The Marcellus Shale Industry and local job growth is not a strong reason to stay in the area	2	1	12	2	4			
The Marcellus Shale Industry offers opportunities that are accessible to my peers	2	6	11	2	0			
I would seek higher education to work within the industry	7	9	3	1	1			
I see other opportunities unrelated to the gas industry for people of my age	4	8	6	2	0			
I do not see the recent job opportunities as viable to a person of my economic status	0	1	16	1	2			

Demographic questions on the survey focused on the sex, age, education level, current job title, current hours/employment status, current wage level, average number of hours worked per week, and living arrangement of the sample. Five of the twenty-one survey participants were

female, and fifteen of the participants had some high school education while the remaining six were recipients of GEDs. Employment information was later discarded due to the fact that all participants of the YouthBuild program received stipends for their time spent in the classroom.

Possible Issues

There were two issues that became evident to me through the distribution of the survey. The first segment of the sample was a population that was still involved in YouthBuild. Since YouthBuild pays its participants for their time spent in training, technically every person surveyed was employed, though they could have had a second, higher-paying side job. Consequently, many of the youth surveyed had questions regarding the employment section of the survey, and many of them marked unemployed, not seeing their involvement in the program as a paid job despite the stipend they received.

The second issue that arose was of an attitudinal nature. As survey results will indicate, the majority of those surveyed during the first segment of the sample were young males. The atmosphere of testosterone and hyperactivity that was induced in the classroom environment was not particularly conducive to filling out surveys. At least two of the males refused to read the directions and continually asked me what every job title was, what they were supposed to do, and how they were supposed to fill the survey out. Those same individuals arbitrarily decided that they were fully qualified for most of positions on the list, despite not knowing what over half of the jobs even entailed. Their presence was disruptive to the others filling out the surveys and their contribution to the research might have slightly skewed the results for the Marcellus Shale Position survey section. Consequently, two of the surveys were removed from the sample to prevent the distortion of survey results.

Analysis

100% of all survey participants, regardless of education level, felt qualified to perform jobs above or outside of their education/training level. This demonstrates a gross misunderstanding of industry requirements as even a job as simple as driving trucks requires a specific industry certification and training. The job title of Driller was the most popular choice of survey participants; eleven people indicated that they felt qualified to perform the vocation. Whether this was due to the clarity of the job title in comparison to more cryptic labels, or the masculine ideal that is latently attached to the "macho" job, the prevailing thought throughout the job title section was almost that of over-qualification. Given that YouthBuild participants receive some training in building, it may be logical that they thought they were qualified to perform certain technical or experience-based jobs. Table 4 illustrates the minimum training and/or education level necessary for all listed job positions within the Marcellus Shale/Gas Industry (Job Profiles).

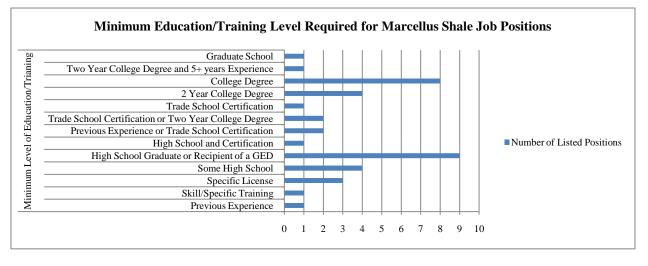


Table 4. Industry Requirements

While twenty survey respondents correctly agreed with the statement that job training or a specialized education are necessary for the job positions that were listed on the survey, the same twenty expected those jobs to come with benefits. This demonstrates a misconception of Marcellus Shale Industry jobs as steady, consistent work. Most Marcellus Industry positions are contract jobs without benefits. As Table 3 indicates, only 14.3% of survey participants said that they did not see the Marcellus Shale Industry and local job growth as a strong enough reason to stay in the area, while 33.3% agreed that the industry will be a consistent and lasting source of jobs for residents of Williamsport. Almost half of the survey participants indicated that their peers are staying in the area and have found jobs, but only 38.1% thought that the Marcellus Shale Industry offered opportunities that were available to their peers. This indicates that youth are struggling to contextualize themselves and their peers within the industry.

Discussion

The Marcellus Shale Industry imports experienced employees in the development stage of the industry. These employees remain until qualified, trained locals take their place. While the minimum education/training level is listed for jobs on the Marcellus Coalition website, local individuals are competing with preexisting experienced and qualified industry employees with seniority. It is not enough to meet the minimum requirements. If it was, training and education programs that have been specifically tailored to industry standards would have never been developed. Youth lack the skill sets necessary for the industry, let alone finer experience and education/training, but they do not perceive this disconnect. The sheer quantity of neutral responses on the Likert Scale questions engender a proposal that Williamsport youth are either ignorant or apathetic to the industry and possible employment opportunities. The responses indicate more than just a lack of knowledge; they display a lack of thought and a lack of context. This is in keeping with the responses I received when I discussed my research with the first segment of the sample population after the surveys were turned in. When I told them what my research topic was, they were nonplused. One YouthBuild student asked me, "Why did you do

that question thing with us then?" When I explained that my interest is closely related to how youth such as themselves react to the local job market shift and the educational opportunities such as the Fit 4 Natural Gas program, interest rose and hands went up. An African American student said, "I don't see any of my people with those kind of jobs. These industry people don't come around to my neighborhood and talk about this stuff." When asked what kind of talk they had heard about Marcellus Shale, not one student mentioned any training programs, though several mentioned hearing that the industry was a temporary local development. Only one of the students mentioned a friend who had worked twelve-hour shifts in the industry. I used the opportunity to open the discussion as to why, exactly, the industry is not actively encouraging youth such as themselves to become involved in the Industry. They responded with "Because they forget we are here" and "Why should they hire us? They've got people hired already, right?" They expressed lack of context and lack of acknowledgement. They had never really been asked about the industry and never had a discussion about the opportunities. When asked what they thought about training and employment, one student said, "We aren't used to being asked what we think."

Some students expressed instant interest in the Fit program or in receiving a driving certification through a program: "It's like an investment, right? I'd pay for the certification but I'd get paid back for it long-term?" One student asked a YouthBuild instructor if they could put a good word in for him with Mrs. Bubb. Others were interested in the weekend training option.

When I prepared to leave, I was asked: "Can we get a yellow (Fit 4 Natural Gas) pamphlet too?" My intent was not to sell the survey participants on the industry, but in talking to them about the future and including them within the context of the Williamsport job market, I inadvertently made opportunities more real. I had mentioned all of the obligations and parameters of both the

Penn College and Fit programs and described the long hours, low pay, and lack of benefits of entry level industry jobs, and while some scoffed at drug testing, the majority of the students remained positive about the training programs.

From my interactions with the YouthBuild students and their survey responses, it is clear that at least a small portion of Williamsport youth know very little about the industry and have had little reason to picture themselves within it. One girl who had told me she "couldn't ever do a training program like that" and "didn't feel like she belonged" in the industry later asked me to email her information about Lycoming College's pre-law program and financial aid because she wanted to pursue higher education and go to law school. If we are to understand why youth are not being trained or employed by the industry, it is important to understand why law school seems more available to a GED recipient than a free training program run through a local unemployment office.

Future research is necessary to understand other motivations for youth to stay in the area and pursue training to enter the industry. Familial ties, romantic interests, economic limitations, race, and gender could, in theory, affect youths' decision to stay in the area or leave as much as employment opportunities. It must be pointed out that because the sample population was so small, these conclusions cannot be applied to the Williamsport population at large. Further research needs to be conducted on whether or not gas/drilling companies are hiring locals at the rate that has been projected, if the amount of funds allocated for the specific education is sufficient, if economic trickle-down will provide demand for more service-level jobs, and if youth will meet these needs within the greater Williamsport community. Further research on the Marcellus Shale Industry must be carried out in order to understand how local Williamsport employment in the industry, or lack thereof, will affect the socioeconomic landscape of the

region. Further studies on this subject will offer insight on the industry's impact on rural Pennsylvania, creating a model that could serve as a cost-benefit analysis for other states that may consider employing the industry in the future as a means of energy development, economic rejuvenation, and job creation.

References

- Albrecht, Don E. 2004. "Amenities, Natural Resources, Economic Restructuring, and Socioeconomic Outcomes in Nonmetropolitan America." *Journal of the Community Development Society* 35: 36-52.
- Brundage, Tracy, Jeffrey Jacquet, James R. Ladlee, Larry L. Michael, Susan Clark-Teisher, Timothy W. Kelsey, Jeffery F. Lorson, Thomas B. Murphy. 2009. "Marcellus Shale Workforce Needs Assessment." Retrieved from www.pct.edu/msetc.
- Corbett, Michael. 2009. "No Time to Fool Around with the Wrong Education: Socialisation Frames, Timing and High-Stakes Educational Decision Making in Changing Rural Places." *Rural Society* 19: 163-177.
- Deller, Steven. 2010. "Rural Poverty, Tourism and Spatial Heterogeneity." *Annals of Tourism Research* 37: 180-205.
- Garasky, Steven. 2002. "Where Are They Going? A Comparison of Urban and Rural Youths' Locational Choices after Leaving the Parental Home." *Social Science Research* 31: 409-431.
- Lorson, Jeff. 2010. "Marcellus Shale Workforce Needs Overview and Secondary Education Implications." Presentation at the Pennsylvania College of Technology.
- Shields, Martin, Stephan Goetz, Latika Bharadwaj. 2004. "An Analysis of Gross In- and Out-Migration Flows for Pennsylvania Counties: A Closer Look at the Relative Importance of Labor Market and Amenity Differentials Between Origin and Destination." Retrieved from http://cecd.aers.psu.edu/pubs/wrsav22004.pdf.
- Job Profiles. (n.d.) retrieved from http://www.marcelluscoalition.org/site/profiles.html.

Weber, Kenneth R. 1979. "Out-Migration and Economic Marginality: A Case Study of Local Demographic and Economic Conditions Prior to Proposed Energy Development in Southern Utah." *The Social Science Journal* 16: 9-25.