

The Conscious Capitalist and Education Policy Southwire's STEM for Life Program

Adrian N. Neely & Deron Boyles
Georgia State University

Abstract

This article illustrates how education policies, through the commodification of STEM fields, have transferred public education funding to private corporations. Specifically, this article shows how Georgia responded to the need for “work-force skills” asserted in *Rising Above the Gathering Storm* (National Academies, 2007/2010/2015) and provided an opportunity for a private corporation, Southwire Company, LLC, to successfully access public education money. As a case study, this paper highlights how the popular metanarratives about the goals and purposes of schools benefit private corporations at the expense of public schools and their students.

Keywords: Education Policy Reform, STEM, Conscious Capitalism, Southwire

Introduction

Over the past three decades, education reform policies have altered the expectations of and funding for schools (Hursh, 2007; Suggs, 2018). These policies center on market logics and the convergence between corporations and public schools (Apple, 2005; Brosio, 1994; Buras, 2015; Hursh, 2005; Lipman, 2015; Saltman, 2012). The discourse that shapes the educational terrain, largely based on economic rationales, is supported by the socio-political agendas of both progressives and conservatives (Brown, 2015; Saltman, 2012). In other words, most people in the

U.S. believe that the primary purpose of school is to prepare students for future jobs (Xiao, Newman, and Chu, 2016). This is the discourse and ideology of neoliberalism—the idea that all aspects of society, including education, should be transformed, by state action if necessary, into commodities that are bought and sold on the market (Apple, 2005; Hursh, 2005; Mirowski and Plehwe, 2015). The ideological appeal of neoliberalism is the characterization of individuals as economic actors competing in the market for resources and that schools should be oriented toward preparing students for economic competition locally, nationally, and internationally (Saltman, 2014). This view positions knowledge as a consumable commodity that teachers deliver, effectively or ineffectively, to their consumers, the students. Moreover, corporate school reform—the idea of restructuring educational agendas to fit under neoliberal ideology—has won over the public discourse to the extent that educational attainment equates to an individual’s ability to participate as a consumer and a worker in a corporate economy (Saltman, 2014). In short, the appeal of neoliberal policies has created an atmosphere of corporations exercising control over curriculum, instruction, and knowledge expectations in public schools. Corporate meta-narratives, furthered by both Democrats *and* Republicans, create a mechanism for providing human capital to maintain the United States position as an international economic power, specifically in school-to-work programs linked to science and technology. These corporate-consumer rationales increasingly replace civic and intellectual virtues of public schooling. As Saltman (2012) notes, “The crisis of neoliberal U.S. public schooling involves a profound abdication of commitment toward investing in public schools as a site for fostering democratic cultural and social renewal” (p. 5). In this study, we critically examine how federal education reform policies promote private-public partnerships. We show, via a case study, how public school student labor is exploited for private profit and justified by corporate rationales that are *also* embraced by schools.

Critical Policy Analysis as a Tool for Critique

As a case study, we clarify how the metanarratives about the goals and purposes of schools benefit private corporations at the expense of public school students. We draw on Critical Policy Analysis (CPA) as a tool to examine and critique how dominant federal education policy discourse influences public schools in the form of public-private partnerships. The CPA framework allows us to examine complex systems and environments in which policy is constructed and implemented (Diem et al., 2014; Fairclough, 2013;). CPA is normative critique. It goes beyond

identifying and describing what a policy is or means. CPA also evaluates policy and “assesses the extent to which they match up to values that are taken (contentiously) to be fundamental for just or decent societies” (Fairclough, 2013, p. 178). We begin, then, by providing an overview of the sociopolitical context of policy-making in Georgia that advances an economistic agenda for schools in the form of Science, Technology, Engineering, and Math (STEM) education. Next, we note the policy actors influencing the construction of policy. Finally, we present a specific case and examine how dominant federal education policies of private-public partnerships positions STEM as a commodity that uses public schools to financially benefit a private corporation.

Background

A Nation at Risk (National Commission, 1983) blamed schools for the economic recession at the time and the inability of U.S. students to compete on an international level (Hursh, 2007). The report was arguably an extension of the 1917 Smith-Hughes Act—the first instance of federal money supplied to schools to further vocational ends. The National Defense Education Act (NDEA) of 1958 further heightened federal interest in curriculum by mandating, among other things (like foreign languages), an increased focus on science. The lineage of federal policy continued through *A Nation at Risk* to initiatives like Goals 2000 and America 2000, merging Bill Clinton and George H.W. Bush in neoliberal rationales for schooling (e.g., workforce readiness and economic productivity). No Child Left Behind built on these initiatives and, while gesturing toward inclusivity and “high standards,” had as a central tenet workforce preparedness to compete in a global economy (Boyles, 1998). Importantly, the federal government leveraged this rhetoric to create policies, enacted by the states, that invoked care and concern through a progressive frame (Apple, 2005; Hursh, 2007). As we explore in more detail later, the Race to the Top grant program is an example of using an arguably progressive lens of care and concern to nonetheless advance neoliberal thinking and the meta-narrative of capitalist economics over critical inquiry for schools.

Another report that examined the status of education from a global economic context was The National Academy of Sciences’ report, *Rising Above the Gathering Storm*. This report extended economistic discourse of competitive, comparative rankings by repeating the trope that the U.S. essentially lags behind other nations in the push toward technology and globalization. The Academy urged government intervention in education to maintain a stable U.S. economy (National Academies Press,

2007, p.3). More specifically, the Committee on Prospering in the Global Economy of the 21st Century (a committee within the Academy) was assembled at the request of U.S. policy makers. The committee identified criteria that multinational companies use when determining a location for their facilities and the jobs associated with those facilities. Notably, the list includes the cost of a workforce, availability of capital, and the taxation environment (National Academies Press, 2007, p.3). Public money amounting to, in some cases, hundreds of millions of dollars are offered to “incentivize” corporations to relocate to specific regions on the promise of economic prosperity. On this logic, maintaining and expanding economic growth in the U.S. is the central focus of existence. As recent research shows, however, school financing suffers from tax breaks given to relocated companies (Parilla & Liu, 2018). School funding is sacrificed in favor of tax giveaways to private companies at the same time as they are reinforced as incubators of a national workforce training students in the skills and knowledge necessary for meeting the demands of a global marketplace, particularly in the areas of STEM. (National Academies Press, 2007). In addition, the Committee included recommendations for the U.S. to implement tax incentives for US-based innovation and the encouragement of private investment in innovation (National Academies Press, 2007, pp.11–12).

The Academy, therefore, advocated education reform policies that have increased the transfer of public education funds to private organizations with a specific vow to prepare STEM-literate students. Our case-study illustrates how economics-driven education reform, through the commodification of STEM, created policies that transferred public education funding to a private corporation. Specifically, we demonstrate how Georgia responded to the need for “work-force skills” in STEM and provided Southwire Company, LLC, access to public education money to serve their private company’s purposes. As a case study, this paper highlights how the popular metanarratives about the goals and purposes of schools benefit private corporations at the expense of public school students. A focus on the context of the Georgia legislature and the development of a tax-friendly corporate environment is discussed in the next section. This context provides the factual basis for our critique and offers insight into how policy is enacted in the state.

Historical and Political Context: Policy Actors in Georgia

Our examination of the political context of Georgia helps explain how the creation of a business-friendly environment facilitated private-public partnerships to address the need for a STEM-ready workforce

(Apple, 2005). One outcome of such education policies in Georgia was the insertion of a business model directly into the core function of STEM education in Georgia public schools. Georgia's General Assembly evaluated, developed, and passed laws that specifically created and promoted a tax-friendly environment for corporations and start-up companies in the science and technology industry. Connecting this environment to public schools is a primary concern of our research.

During the 2011 Georgia General Assembly, Senate Resolution 68 commissioned a committee of state leaders, including members of the state legislature, state government workers, and leaders in the science and technology industries (State of Georgia, 2012).¹ The committee, named the Georgia Science and Technology Strategic Plan Joint Study Commission (hereafter, "Commission"), was tasked with developing a strategic plan that would facilitate a relationship between the state and science and technology-related business and industry. The stated purpose of the Commission was to assess Georgia's strengths and weaknesses and develop recommendations for government policy changes and legislative actions that would encourage and support the future growth of the business and technology sector in Georgia (State of Georgia, 2012). Specifically, the commission was charged to:

1. Inventory Georgia's current assets in the science and technology sector and assess current strengths and weaknesses;
2. Review national and state policies to determine best practices regarding public policy that will support growth in the science and technology sector;
3. Conduct meetings around the state to solicit input from science and technology stakeholders to determine barriers to growth; and
4. Develop the state's strategic plan complete with recommendations to support growth and advancement in the science and technology sector. (State of Georgia, 2012, p. 5)

According to the final report, submitted on January 9, 2012, the Commission conducted approximately seven hearings throughout Georgia with eight to 12 participants present at each location. From the 70 witnesses, the report noted that Georgia industries complained that they had difficulty finding adequately trained workers. The industries also noted the need for access to capital. The recommendations of the Commission regarding access to capital ranged from extending the Georgia Angel Investor Tax Credit, an annual \$50,000 tax credit for high-tech start-up companies, to utilizing the Teacher and Georgia State Employee retirement pension fund to invest in alternative assets, including capital

ventures, with a portion allocated toward investment in Georgia (State of Georgia, 2012). Statements in the report also suggest rebranding the proposal to use pension funds by avoiding the word “alternative” and to replicate Florida and North Carolina’s use of the pension fund to support venture capital.

Specifically regarding K-12 schooling, recommendations were made to increase student achievement in the areas of science and math on the state’s standardized assessments and to increase the number of post-secondary graduate students with STEM-related degrees (State of Georgia, 2012). More specifically, the recommendation for K-12 was to provide more “support for College and Career Academies, and other high school programs that provide curricula that meet industry workforce needs and provide dual-enrollment to their high school students” (State of Georgia, 2012, p. 9). To “incentivize” economic growth in the STEM sector, Georgia’s education institutions would be responsible for addressing the state’s “weakness” in not providing enough trained and skilled workers for private industry. Furthermore, school funding plans were recommended that would provide tax credits to support business interests. Even more specifically, curricula and dual-enrollment high school programs were singled out as important initiatives by the Commission.

In response to the recommendations, then Georgia governor, Nathan Deal, signed into law business-friendly bills that benefitted technology and other start-up companies in the life sciences and technology sector. During a time when the U.S. economy was recovering from a major recession and education funding in Georgia was cut by nearly U.S. \$8 billion over several years, corporations and small businesses benefited from government incentives. Saltman (2012) describes the tax incentive phenomena as an upward redistribution of public wealth and governance by defunding K-16 public education institutions – a benefit for corporations and wealthy individuals. A small sample of Georgia’s legislated corporate tax credits are listed in Table 1.

We suggest that these laws indicate Georgia’s support for meeting the demands of producing a globally competitive workforce and creating an environment amenable for the technology sector. We also suggest that these initiatives illustrate a problem in the public-private nexus between government, schools, and corporations. Bridging the state political and economic interests, we now turn to the Race to the Top federal initiative and its link to Georgia to show how legislative action provided public tax money to advance private corporate interests.

The American Recovery and Investment Act of 2009, signed into law by Barack Obama, allocated U.S. \$4.35 billion for the establishment of Race to the Top (RTTT), a competitive grant program designed

to implement neoliberal policies under the guise of education reform (Howell, 2015). Any state submitting a grant application was required to outline a comprehensive process for implementing education reform around four core areas: adopting college and career-ready standards and assessments; building a longitudinal data system measuring student growth and success; recruiting, developing, rewarding, and retaining effective teachers and administrators; and turning around low achieving schools (U.S. Department of Education, 2009). The education policy initiatives in RTTT were derived from the 2007 National Academy of Sciences' Report, *Rising Above the Gathering Storm*, mentioned earlier, and the central details of the report were reflected in various national and state educational policy reforms. A high priority of the RTTT application required states to submit a plan that incorporated a rigorous STEM curriculum. Incorporating STEM was designated a "competitive

Table 1
Summary of Georgia Congressional Bills

<i>Legislative Bill Number</i>	<i>Bill summary</i>	<i>Effective date</i>
HB 386	Elimination of the Sales and Use tax on energy used in manufacturing and construction materials.	4/19/2012
HB 48	Freeport expansion and the elimination of local inventory tax allows an exemption from property tax any business inventory or real property not currently covered under the bill.	4/17/2012
HB 868 and HB 1027	Provide tax credits to companies employing 1800 new employees, investing a minimum of U.S. \$450 million, or meeting an annual payroll of U.S. \$150 million.	5/3/2012 and 5/2/2012, respectively
SB 402	Employees Retirement System of Georgia Enhanced Investment Authority Act allows yearly investments (at a 1% cap) towards alternative investments and other private investments (i.e. venture capitalists now have access to state pension funds that support start-up companies).	July 1, 2012

Note: Senate Bills (SB) and House Bills (HB) from the Georgia General Assembly. (Adapted from the Georgia General Assembly website, www.legis.ga.gov).

preference priority,” meaning that states could increase their probability of securing federal grant funding by receiving additional “score points” if the incorporation of STEM was adequately addressed in the proposals (U.S. Department of Education, 2009, p. 4). Each state and the District of Columbia (D.C.) had three opportunities to successfully submit an application for funding. On March, 29, 2010, the U.S. Secretary of Education, Arne Duncan, announced two states, Delaware and Tennessee, were the winners of the Phase 1 submission and were awarded approximately U.S. \$100 million and U.S. \$500 million, respectively, to implement their comprehensive school reform plans over the next four years. (U.S. Department of Education, 2010). This left approximately U.S. \$3.4 billion in awards for Phase 2 grant proposals.

As one of the ten “winners” of RTTT grant funding during Phase 2, Georgia received U.S. \$400 million to support education reform throughout the state. Of the total funding awarded, Georgia allocated a budget of U.S. \$19.4 million to implement the Innovation Fund, managed by the Governor’s Office of Student Achievement. The Innovation Fund was a statewide competitive grants program “to support the establishment and deepening of partnerships between Georgia local education authorities (LEAs) or charter schools, institutions of higher education (IHEs), businesses, and non-profit organizations to advance the applied learning and academic achievement of Georgia’s K-12 students”(Governor’s Office of Planning & Budget, 2011, p.4). As stated in the grant application, the mission was to use public funds to develop innovative instructional and curricular methods.

The specific purpose of the Innovation Fund was to provide money to partnerships that developed or implemented innovative and high-impact programs aimed at producing positive outcomes for students. Additionally, the Innovation Fund was marketed to determine best practices in innovative programming related to STEM education, applied learning, and teacher and leader recruitment and development (Governor’s Office of Student Achievement, n.d.). The four priorities of the Innovation Fund were 1) creating applied learning opportunities for students; 2) developing comprehensive teacher/leader induction programs; 3) growing the pipeline of teachers/leaders; and 4) opening or expanding charter schools with special characteristics (Governor’s Office of Student Achievement, n.d.). According to the Innovation Fund’s Request for Proposals Announcement and Application Instructions released on March 31, 2011, the Innovation Fund employed the following logic:

IF, public and private organizations are encouraged by financial resources, policy environments and supportive operating conditions,
THEN, the State of Georgia will benefit from a stronger commitment

from diverse stakeholders to support and advance K-12 public education, the ability to replicate innovative practices with a demonstrated record of success, and ultimately, improved outcomes for students. (Governor's Office of Planning & Budget, 2011, p. 4)

Accordingly, as we show below, this rationale of funding innovative practices to improve student outcomes was used as a mechanism to systematically disinvest in public education in Georgia. The Innovation Fund provided access to capital for privatization through charter schools and private teacher induction programs. Additionally, the fund facilitated access to money and human capital to private corporations. In what follows, we examine in detail a specific partnership between a public school system and a private corporation to demonstrate the commodification of STEM curricula through a dual-enrollment public high school program in Georgia. Our point is to illustrate how the commodification of education policy is enacted and what implications might follow for public schools and students, particularly those students who are vulnerable to exploitation.

A Private-Public Partnership: Southwire, LLC, and the Exploitation of Public Schooling

Georgia's Innovation Fund was modeled on the U.S. Department of Education's RTTT award process insofar as it provided three rounds to submit an application for funding. In April 2011, during the first round, Georgia awarded five programs out of 73 eligible applications. The programs funded ranged from creating the first STEAM (Science, Technology, Engineering, Arts and Mathematics) school to the creation of a STEM-themed charter school. In addition, two teacher induction programs were funded with programs promoting partnerships with Teach for America and KIPP's (Knowledge is Power Program) Teacher Fellows Program. In the second set of awards, released in September 2011, 11 winners out of 60 eligible submissions were funded (Governor's Office of Student Achievement, n.d.; U.S. Department of Education, 2012). Seven of these newly funded programs were STEM-related while four programs focused on teacher and early career principals induction programs (Governor's Office of Student Achievement, n.d.). The heavy funding of STEM-related programs illustrates a major trend in schools to orchestrate the production of a workforce with the skills and knowledge to support the STEM sector.

One of the funded programs, *STEM for Life*, is described as a partnership between Southwire Company, LLC, and the Carroll County School System (CCSS) to replicate and expand Southwire's *12 for Life*

program that ostensibly provides students classroom supplements with real-world experience in advanced manufacturing (Southwire Company, LLC, n.d.). A previous partnership between Southwire and CCSS had been in existence since the creation of their work program, *12 for Life*, in 2007. Southwire's website notes that students who do not complete high school often drop out of school altogether (Southwire Company, LLC, n.d.). Students who dropout often do so because of poverty, low academic performance, and lack of support. Southwire's solution to the problem is a dual-enrollment program that includes a combination of STEM-based curriculum and on-the-job training. Students engage in instructional time with a STEM teacher and participate in actual employment in a manufacturing plant. Some theorists argue that American capitalism has created poverty and despair and the solution, offered by Southwire, centers on the exploitation of the laboring working class and under-educated individuals (Buras, 2015; McLaren, 2006; Saltman, 2012). Southwire claims that students receive a STEM-based education, key work and life skills, and a paycheck all while earning high school credit toward graduation (Southwire Company, LLC, n.d.).

Southwire and CCSS were awarded an "Enterprise Grant" in the amount of U.S. \$999,981 over a period of three years (Governor's Office of Student Achievement, n.d.). An Enterprise Grant is a multi-year award to support the implementation of programs that provide evidence that the program shows statistically significant improvement in student outcomes (Governor's Office of Planning & Budget, 2011). In addition, the grantee must sustain and replicate the program during the grant period (Governor's Office of Planning & Budget, 2011). According to the application narrative submitted by Southwire, the company developed a plan that includes a partnership with the Georgia Department of Community Affairs (DCA) to replicate the *STEM for Life* model in six school districts. The narrative also suggests that Southwire would discuss with several school districts and corporations, such as neighboring Polk County Schools and HON Company, how to expand and scale-up their anti-drop out initiative (Carroll County School System, 2011). After receiving state funds from Georgia's Innovation Fund, Southwire and CCSS applied and received a federal Investing in Innovation (i3) grant from the United States Department of Education, in 2013, amounting to U.S. \$2,999,793 (U.S. Department of Education, 2015). The i3 grants are ostensibly designed to test the practices and program theory that have the potential for national significance (U.S. Department of Education, n.d.). In sum, Southwire received about four million dollars in state and federal funds to implement and scale-up the *STEM for Life* program. We argue that such programs are covers for corporations to increase

private profits not only from public tax dollars, but also at the expense of students—indeed, at-risk students who are among the most vulnerable students in schools. Before we consider what we think is exploitation, we turn to an examination of Southwire to clarify how education policy facilitates the merging of corporate interests with public education through the commodification of STEM.

The Conscious Capitalist: Southwire Company, LLC

Kristin Buras (2015) argues that capitalists frame their work, not in the traditional sense of profitability, but rather by utilizing a socially conscious framework and discourse to advance equity and improve public schools. “Conscious capitalists” (Buras, 2015) are not viewed as corporations exploiting under-funded schools. Rather, conscious capitalists are cast as beneficent, caring entities. Moreover, corporations seeking to increase revenue through what they identify and promote as philanthropic overtures to public schools co-opt social justice narratives by appealing to the public’s sense of empathy. What could be more honorable or noble than “helping” at-risk students? In what follows, we detail Southwire’s effort to increase the graduation rate of at-risk students by receiving both state and federal grant funding to add a manufacturing curriculum to the school day in order to support their school-to-work, dual enrollment program, *12 for Life*. Direct references to the *12 for Life* program are in response to the original program established in 2007 while references to the *STEM for Life* program are in response to the state and federally funded grant programs awarded in 2012 and 2013, respectively, which required a STEM-focus for award consideration.

Southwire is a private, manufacturing company started in 1937 by Roy Richards in Carrollton, Georgia. The company produces utility cable, industrial power cables, aluminum rods, and copper wiring (MarketLine, 2014). The initial function of Southwire was erecting power poles and hanging telephone and electrical wire. However, since its inception, Southwire has become known as one of North America’s largest wire and cable producers, has acquired 20 factories in the U.S. and Mexico, and is heavily vested in global distribution (MarketLine, 2014). Estimated at producing over U.S. \$5 billion in sales annually, Southwire’s 7500-person workforce is comprised of high-tech and highly-skilled workers (MarketLine, 2014, p. 4); however, there is also a substantial need for unskilled laborers, which is where the *12 for Life* program provides manufacturing jobs to students at-risk of dropping out of school. Indicative of this initiative, we argue, is Southwire’s CEO Stu Thomas’ claim, “You need to think of the school system the way you think of your supply chain” (Helman, 2014, p. 2).

As we already noted, Southwire partnered with their local school system, Carroll County School System (CCSS), to develop and replicate the *12 for Life* program. According to the census data for 2014, the estimated population of Carroll County was 114,000: roughly 70% white; 19 % African American; 7 % Latino; 2 % mix-raced; and 2 % Asian (U.S. Census Report, 2014). CCSS is situated in western Georgia and serves over 16,000 students in 30 schools from a mix of suburban and rural communities (Carroll County School System, 2011). The stated mission of the Southwire partnership is to “improve the graduation rate of students and provide innovative, high-impact strategies using applied learning through a public-private partnership” (Carroll County School System, 2011, p. 1). Since successful grant applications for both state and federal funding include STEM-education as a required focus, Southwire and CCSS realigned their initiatives from the original 12 for Life program to reflect such a focus. They called the modification STEM applied learning opportunities and changed *12 for Life* to *STEM for Life*. In effect, Southwire repurposed the existing *12 for Life* program to a STEM-based program in order to access public money—and student workers—via government grants.

STEM for Life: “Better Lives through Education and Employment”

The *STEM for Life* program attempts to identify students who are “at-risk” of not graduating and dropping out of high school. To participate in the program, students must be at least 16 years old, successfully pass a drug test, and submit a referral by a counselor, graduation coach, or an administrator indicating a need for additional support. An assessment rubric is used to evaluate attendance, credit deficiencies, the level of economic disadvantage, and a disciplinary history. The scores from the rubric are ranked in order of appropriateness for enrolling in the program (Southwire Company, LLC., n.d.).

In 2012, 283 students out of 385 applicants were identified as high risk for not graduating and were admitted into the program (Carroll County School System, 2014). Recruitment for the program focused on identifying economically disadvantaged students from seven high schools: Bowdon, Central, Mt. Zion, Open Campus, Temple, Villa Rica, and New Heard County (Carroll County School System, 2011). According to the mid-year evaluation report, 240 students participated in the *STEM for Life* program, 43 fewer students than the original 283 admitted. As noted in the report, “7 students elected not to participate, 1 student completed one mini-semester of the program, 10 students returned to their base

schools at the beginning of the fall semester, 23 students were dropped for not meeting *STEM for Life* attendance requirements and 2 students were dismissed for theft” (Carroll County School System, 2014, p.14). Of the remaining participants, 44 percent were female and 56 percent were male (Carroll County School System, 2014, p. 10).²

Participating students receive STEM-focused learning in the area of manufacturing, additional social supports to address barriers to successful participation, and access to enrolling in a manufacturing career pathway. In addition, as a requirement of the grant, the *STEM for Life* program is to be replicated in the neighboring Heard County School System with plans to expand adoption of the model in at least six Local Education Agencies (LEAs) in Georgia (Carroll County School System, 2014).

To remain in the program, students are required to average 20 hours a week working in the manufacturing plant. Students labor in a variety of packaging and shipping departments (Southwire Company, LLC, n.d.) and they work in one, four-hour shift. Students can work from 8:30 a.m. to 12:30 p.m., 1 p.m. to 5 p.m., or 5:30 p.m. to 9:30 p.m. Students earn U.S. \$8 an hour with incentives to increase their hourly wage by U.S. \$1. If students have perfect attendance in school and on the job site, they can earn an additional U.S. \$.50 an hour. Also, if students are meeting their manufacturing performance targets, then an additional U.S. \$.50 an hour is awarded (Southwire Company, LLC., n.d.). Full-time employees performing the same tasks as students make U.S. \$14-15 an hour (Rivkin & Lee, 2013). According to Rivkin and Lee’s study:

Students at *12 for Life* completed tasks that were—in the words of manufacturing SVP Richard Miller—‘real Southwire tasks ... legitimate business needs, not something we were making up ... typically something very labor-intensive.’ For instance, students at *12 for Life* might take wire from large, industrial-sized reels, cut it to consumer-sized lengths, and package the coils in plastic to be shipped to retail customers such as Home Depot, Lowe’s, or others. Or they might assemble the large wooden reels used in other Southwire factories to spool newly-made cable. As *12 for Life* grew and attrition at other Southwire facilities permitted, manual tasks were shifted from those other facilities to *12 for Life*. (p. 4)

The performance targets are related to the efficiency of students’ packaging and shipping methods. Rivkin and Lee (2013) noted that the students were “30-40% more productive than adult employees working 12-hour shifts on the same tasks” (p. 5).

Southwire’s *STEM for Life* grant application includes three goals: (1) ensure students graduate with the necessary skills to be successful in college or careers; (2) prepare students for advanced study in STEM

careers; and (3) develop an applied learning model focused on STEM that is replicable and sustainable (Carroll County School System, 2014). Grant funding is intended to support awareness and student recruitment efforts, STEM course alignment and professional development for STEM teachers, construction of a “state-of-the-art quality assurance lab,” construction of a “raw materials warehouse,” development of a replication manual, and hiring personnel to support “sustainability and replication” (Carroll County School System, 2014, p. 16).³

Student Program Evaluation

The Evaluation Group (TEG), an external evaluator of *STEM for Life* completed an audit of the *STEM for Life* Program (Carroll County School System, 2014). TEG’s evaluation included a student survey rating the effectiveness of the *STEM for Life* program using a 5-point Likert scale where one signifies very poor and five signifies excellent (*STEM for Life Student Questionnaire*, 2012). In the first annual assessment, conducted in December of 2012, although 95% of the students rated the program as good or excellent with an average score of 4.63, the students also indicated the program did not allow them the opportunity to interact with STEM professionals (*STEM for Life Student Questionnaire*, 2012, pp. 6–7). Additionally, students indicated they were not working on real-world problems nor utilizing the scientific method for investigation of problems.

In a subsequent survey, administered in December 2013, students indicated there was a lack of STEM-based resources, methods, and interaction with professionals to supplement the curriculum (Carroll County School System, 2014). Instead of offering a STEM curriculum in which students engage in general and critical problem-solving, student responses indicate that the *STEM for Life* program merely overlays STEM language onto narrow vocationalism for the benefit of the company. That is, students recognize that their learning is functional rather than critical and fits with Southwire CEO’s Stu Thorn’s conceptualization of their school as a “supply chain,” as noted earlier.

Students did identify strengths of the *STEM for Life* program, including the credit recovery initiative to support on-time and early graduation, experience in a work environment, and the ability to earn money. Students listed weaknesses in the areas of work hours, wages, production, and their lack of relationships with other students and their supervisors (Carroll County School System, 2014). Students indicated that the adults and supervisors demonstrated a superiority complex and treated the students “unkindly.” One student noted, “The supervisors, they are never in a positive mood and it effects [sic] the day I have

at work, by making me in a negative mood as well” (Carroll County School System, 2014, p. 20). Students further described the difficulty in meeting production numbers. One student noted that Southwire was “expecting students to produce more than safety regulations will allow” (Carroll County School System, 2014, p. 20). Another student noted, “The production on the work floor is high and some people are not as fast as others at running machines” (Carroll County School System, 2014, p. 19). Although students noted a lack of STEM support, Southwire’s response to the evaluation was to change an attendance policy and allow students to make up work hours on Saturdays (Carroll County School System, 2014).

Considerations and Concerns

We argue that such minimal response to student concerns is indicative of neoliberal orthodoxy and hierarchy. For Southwire to reduce students to a “supply chain” means that students are not the central focus of the program, but that profit is the fundamental purpose of *STEM for Life*. The access to teenage human capital as an asset to Southwire was explained in an article in *Forbes* magazine in 2014 (Helman, 2014). Christopher Helman (2014) wrote, “This year Southwire expects its philanthropic investment to generate more than U.S. \$1.7 million in pretax profit. It turns out that the kids, who work in four-hour shifts, have higher rates of productivity than grown-ups in Southwire’s other factories” (p. 1). What is most telling about this quote is that “conscious capitalism” actually boasts about the exploitation of children. That the students “outperform” their adult peers on the factory floor only indicates that the drudgery of work that students perform at Southwire is increasingly dehumanizing and deflating the longer one is employed there. By focusing on attendance, Southwire reinforces the mythology of hard work equaling good or interesting work. What is actually behind such compulsory rules is the logic of production for the benefit of the owning class, not working class. Consider Southwire’s articulation of the “lessons learned” from their program included in the mid-year evaluation report:

Over the course of summer and fall semester, we have tried to improve work attendance. Like many companies, Southwire has a strict attendance policy for its adult workers. For example, adults are given a six-month probationary period, and during this time, these employees are not allowed to miss work for any reason. The goal of the attendance policy has been to prepare students for these kinds of workplace expectations. In addition, since high school graduation is the first goal of the program, school attendance is directly connected to work attendance. Students are not allowed to work if they have an unexcused absence from school.

It is also important to realize that we are working with teenagers, most of whom have a history of poor attendance. The new policy requires that students maintain an average of 20 hours of work per week over a nine-week period. Students are expected to make up work hours if they fall below this average, and opportunities are available for all students to work additional shifts and Saturdays as long as they are meeting work production. This change in the policy has made the students realize that they are in complete control of their success in the program. If they truly want the opportunity, there is a safety net in place to help them satisfy the work attendance requirements. (Carroll County School System, 2014, p. 22)

The terms “opportunity” and “success” along with the theme of personal control are important elements of Southwire’s narrative. This is another example of co-opted language indicative of the “conscious capitalist.” When Southwire suggests “school attendance is directly connected to work attendance,” they are reifying a Fordist work ethic that subsumes student identity and agency to corporate production. One’s value is tied to showing up to do work that marginally benefits, in this case, students. By shifting such “responsibility” to individuals, the company rids itself of having to care for its workers in any way other than nominally. Lower productivity is a problem of employees, in other words, not employers. Students suffer under this logic because, even though they are young adults, the students on whom Southwire preys are among the most vulnerable—fractured home lives, self-esteem warped by competitive tracking practices in schools, often impoverished financially, etc. As among the most vulnerable, they are converted from students to laborers and subsume their agency to a worker’s contract.

Ironically, it seems, the business assumptions about schooling are reified by the popular press. A front-page story in the *Atlanta Journal-Constitution* (*AJC*) featured Southwire’s education program (Stirgus and Davis, 2015, p. A1). Calling it “innovative” and “successful,” the reporters cast the story in only positive terms. Using the cliché “a win-win situation” between the schools and Southwire, the journalists abdicated any responsibility to raise even the appearance of a critique. Instead, Southwire is championed as a solution to students dropping out of high school and is promoted as a model for corporations to replicate. Eric Stirgus and Janel Davis (2015), the reporters, interviewed a student, Zach Harness, who began the program with failing grades and who was two years behind on credits for graduation. According to the newspaper’s account, Zach now “mans high-powered machinery on a morning shift at Southwire before taking classes at the factory later in the day” (Stirgus & Davis, 2015, p. A1). As though cheerleading for Southwire, the *AJC* effectively reifies the language and logic of business

involvement in schools. Nowhere did the reporters consider whether the students were exploited or whether public money flowing to a private company was ethical—or even questionable. This is only one example, of course, but if the press is complicit in advancing a “conscious capitalist” narrative, we worry that critique becomes increasingly remote and ultimately unthinkable.

The article itself accepts capitalist profiteers directing and controlling the purpose of schools. The purpose of education is then not to support critically-thinking students contributing perspectives and ideologies to enact a better, more ethical and humane world. Instead, schools are employee training grounds to produce workers who financially benefit the “conscious capitalist.” Said differently, not only are businesses not seen as infiltrating and exploiting, they are part of the savior narrative. Beneficent and charitable, private business comes to the rescue of “failing” students and “struggling” schools. Never mind that schools are “suffering,” in part, because corporations continue to reap huge tax reductions and, as we show here, millions in public tax money (Parilla & Liu, 2018). The questions about ethics are largely absent in a neoliberal discourse that valorizes work over thought and money over principles.

In the same *AJC* article noted above, Michael Thurmond, former Georgia Labor Department commissioner and superintendent of DeKalb County (GA) Schools, stated, “The expectation to train the workers has shifted to the educational system” (Stirgus and Davis, 2015, p.A1). Thurmond describes how employers have reduced on-the-job training programs during the recession and has placed the “onus” on the schools to train the workforce. When, as David Bergman, president of a manufacturing company in Georgia, stated in the *AJC* article, “What I would like is to be a part of curriculum development” (Stirgus & Davis, 2015, p. A1), we catch a glimpse of the hubris of corporate leaders in thinking they know what is best for schools. They may know what is best for schools that serve their private interests, but the difference between public and private appears no longer distinguishable (Higgins & Knight-Abowitz, 2011). The *AJC* is not alone in perpetuating a mainstream narrative that suggests “conscious capitalists” have the solution to all of education’s problems, but they are complicit in mindlessly advancing a corporate agenda that socially and financially exploits vulnerable children in public schools for private profit.

Implications:

Extending Interpretations of Student Experiences at Southwire

In this examination, we have illustrated how federal policies have

transformed STEM into a commodity of social reproduction to maintain the status quo. In partnership with CCSS, Southwire has benefited from tax incentives, public funds, and a teenage labor force. By focusing a school to work program on “at-risk” students, Southwire is preparing a stratified work force of students in low-wage, low-skill jobs rather than supporting and nurturing interests in high-paid STEM jobs. This was noted in the evaluations by students reporting a lack of STEM resources and support. Although students received payment for their labor, the benefits in production and net gains are primarily for Southwire.

Also, as noted earlier, Southwire has repurposed the original *12 for Life* program to become a *STEM for Life* program that shifts state and federal funding to a private corporation that enacts a neoliberal, exploitative hidden curriculum (Saltman, 2012). Southwire’s approach reflects Saltman’s (2012) description of how a new market positivism proffering a school to work program justifies increasing the graduation rate as a natural concept while stratifying the workforce and reproducing a class hierarchy (Anyon, 2014). Instead of identifying the chronic effects of poverty, such as absenteeism, as an outcome that overwhelmingly affects impoverished children (Ullucci & Howard, 2015), Southwire’s response is to characterize absenteeism as an individual responsibility subject to punishment.

This market positivism was achieved at Southwire, in part, by ignoring or marginalizing elements of STEM from their curriculum for two consecutive years. The focus of the program was not on STEM, but rather on the work skills and production goals that increased Southwire’s profits. To restate the point: public funds are used to enhance a privately-owned company by utilizing a “STEM” program to promote a school-to-work program by exploiting students for capitalist gains. As noted by the student surveys, the curriculum and pedagogy do not reflect inquiry, self-study, or the development of critical thinking. The overbearing emphasis on “work skills” removes students from utilizing scientific concepts and processes to support personal decision-making in contexts outside of the factory. Moreover, developing students to engage in public discourse and debate regarding matters of scientific and technological concern have been disregarded. Southwire is receiving about U.S. \$4 million in state and federal funding, other government entitlements via tax incentives and credits, and profits from a teenage workforce that receives lower wages for producing at higher rates than adults in the company.

CPA was the guiding framework that allowed us to illuminate the divestment of public education and the transfer of wealth to private corporations through neoliberal education reform. Using Southwire, LLC

as a case study, our examination revealed how education reform policies may create environments, through private-public partnerships, to maintain the status quo through social reproduction—the maintenance of exploitative and oppressive social structures through inequitable access to resources and life opportunities (Levinson, 2000). Southwire, in tandem with CCSS, identified students at-risk of not graduating and provided a mechanism of recovering course credits, while working in a manufacturing plant. This created a win-win situation for Southwire (increased productivity production and profits from a teenage labor force) and CCSS (possibly improving school completion metrics). Utilizing and preparing “at-risk” teenagers to serve in a work capacity that primarily exposes them to the inner workings of a factory and is described as having a “prison-like atmosphere” (Carroll County School System, 2014, p.5) means that public school authorities in Georgia, in this case, abdicated their responsibility to students by suppressing their life choices and sending the not-so-subliminal message that servitude is not hegemonically oppressive, but the goal of human existence. Neoliberalism in the form of education policy still dominates in the absence of critique and critical examination of the consequences of enacting private market logics to public spheres.

Notes

¹ A list of commission members can be found in Appendix A.

² The program demographics for the second year of the grant is listed in Appendix B.

³ See Appendix C for a list of the instructional methods employed by STEM for Life.

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Appendix A

<i>Appointing Entity</i>	<i>Commission Member Appointed</i>
One member of the Georgia General Assembly Senate Science and Technology Committee	Barry Loudermilk (Co-Chairman) State Senator Georgia State Senate
One member of the Georgia General Assembly Senate Economic Development Committee	John Albers State Senator Georgia State Senate
One member of the Georgia General Assembly House Committee on Science and Technology	Charlice Byrd State Representative Georgia State House of Representatives
One member of the Georgia General Assembly House Committee on Economic Development	Barbara Sims (Co-Chairman) State Representative Georgia State House of Representatives
Governor's private sector appointee	None
Lieutenant Governor's private sector appointee	Tino Mantella, CEO & President Technology Association of Georgia
Speaker of the House's private sector appointee	Steve Dickinson, Vice President, Global Corporate Communications Merial Limited
Commissioner of Economic Development or his or her designee	Michael Cassidy President & CEO Georgia Research Alliance
Georgia Technology Authority Chief Information Officer or his or her designee	Calvin Rhodes Chief Information Officer & Executive Director Georgia Technology Authority
State School Superintendent or his or her designee	Dr. Gilda Lyon STEM Coordinator Georgia Department of Education
Chairperson of the Board of Regents or his or her designee	Dr. Steve E. Cross, Executive Vice President for Research Georgia Institute of Technology
Chairperson of the State Board of Technical and Adult Education or his or her designee	Dean Alford, Chairman Technical College System of Georgia

Note: The Science and Technology Strategic Initiative Joint Study Commission created by the Georgia General Assembly. Listed below are Commission Members.

Appendix C.

<i>Instructional Method</i>	<i>Approximate Frequency</i>	<i>Description</i>
Project-based learning (for example, hands-on, inquiry-based activities)	Once per week	Inquiry-based labs, project design to prove principles discussed in class, field trips, research papers
Cooperative learning (for example, peer tutoring, learning in small groups) with students	Daily	Peer-to-peer tutoring, small group research, small group investigations in lab
Tiered interventions (for example, targeted/pull-out services for struggling students, intensive support to students who do not respond to interventions)	Two times per week	One-on-one help for struggling students while facilitating peer-to-peer tutoring and small groups with other students
Computer-assisted instruction	Two times per week	Student research via iPad, PCs; creating presentations using Prezi; writing papers

Note: Adapted from the STEM for Life Mid-Year evaluation report for June 2013 through December 2013 submitted to the Governor's Office of Student Achievement on February 7, 2014.