Work-Based Education as a Pathway to Resilience

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Abstract: The purpose of this study was to explore the potential of work-based education (WBE) as a pathway for enhancing resilience among youth-at-risk for disengaging from school. For students who have experienced traditional academic school as an adverse context, the decision to pursue an alternative path to high school completion, for example WBE, can be interpreted as agentic. We propose that WBE may have the requisite features of an educational context that fosters resilience in at-risk youth. We used a multiple-perspective case study method involving three young people in their final stages of secondary school. The students were the focal participants in each case. Each was interviewed and observed on multiple occasions. We interviewed teachers and workplace supervisors associated with each student for additional perspectives. Cases were analyzed individually, followed by cross-case analyses utilizing a resilience framework. Our study revealed evidence that for the three youth we studied, WBE had many elements that appear to enhance resilience in a way that academic programs did not. WBE kept these students engaged in the school context and contributed to the eventual successful completion of secondary school for all three. Choosing WBE as a pathway to secondary school completion can be an agentic act by at-risk youth to achieve graduation. Engagement in WBE also appears to enhance resilience. WBE may foster resilience in at-risk youth, who despite academic adversity, progress to completion. Graduation from secondary school is frequently identified as a positive outcome and a predictor of success in productive occupation and adult life.

Keywords: *work-based education; secondary school; resilience; at-risk youth; case study*

1. Introduction

Graduation from high school is frequently identified as a positive outcome and a predictor of success in productive occupation and adult life (Hutchinson et al, 2011; Versnel, DeLuca, Hill, Hutchinson, & Chin, 2011). Recent research reveals that changing economic conditions, personal characteristics, and lack of educational opportunities can constrain youths' access to employment and render some groups vulnerable to social exclusion, particularly if they do not graduate from high school (Hango & de Broucker, 2007; Quintini, Martin, & Martin, 2007). Among those groups at risk of disrupted transitions between education and work are youth who lack workplace qualifications, are poorly educated or have disengaged from school (Versnel et al., 2011). Therefore, for students who have experienced traditional academic school as an adverse context, the decision to pursue work-base education (WBE) as an alternative path to high school completion can be an agentic act when such a context promotes resilience. Clinicians who work with at-risk youth (e.g., social workers, child mental health workers, psychologists, and occupational therapists) may find work-based education (WBE) a salient context in which to promote positive outcomes for these youth. We present findings from a qualitative study that examines the intersection between research in WBE and empirical work in the field of resilience applied to the cases of three adolescents. We argue that for some at-risk youth, the context of WBE may be better suited to developing resilience than traditional academic programs.

Educational researchers and practitioners have begun to consider whether vulnerable youth may be best served through distinct WBE programs tailored to meet their needs (Hutchinson et al., 2011; Taylor, 2007). WBE refers to interventions associated with educational programs that emphasize learning in the workplace (Stasz & Stern, 1998). Case-study research on youth who have participated in WBE programs has demonstrated that WBE can prevent vulnerable youth from leaving early and reengage dropouts (Cardon, 2000; DeLuca et al., 2010; Diamond, 2007). Specifically, the structures and supports afforded by WBE provide a context that has the capacity to respond to the agentic acts of youth in a way that traditional education

contexts can not. Thus there is a need to better understand WBE as a context for fostering resilience for at-risk youth.

Contexts that enable resilience have been described as those that promote positive outcomes despite exposure to risk and adversity. Ungar (2005a, 2005b) argued that the experiences of children and youth in formal delivery systems can be described as a dual process of *navigation* and *negotiation.* In this process, youth are encouraged to locate and use the resources they need to sustain themselves in the face of adversity. In this paper, we use Ungar's framework to analyze three cases of at risk youth engaged in WBE to demonstrate the potential of WBE as a pathway to resilience. Specifically, we examine the responsiveness of WBE contexts to youths' agentic acts of navigation and negotiation and provide evidence that WBE should be considered as a context that fosters resilience by clinicians and practitioners who work with at-risk youth.

2. Theoretical Framework

Resilience as a construct is complex and contested (McMurray, Connolly, Preston-Shoot & Wigley, 2008; Ungar, Brown, Liebenberg, Cheung, & Levine, 2008). Historically, resilience was conceptualized as an individual characteristic that was examined using a deficit model of inquiry. Resilience was thought to be developed through exposure to risk factors and followed by interventions designed to reduce the negative impact of risk (Garmezy, 1991; Rutter, 1993). In the 1990s, resilience was described as a positive outcome when, despite risk exposure, better-than-expected outcomes were experienced (Wexler, Di Fluvio, & Burke, 2009). The notion of protective factors across contexts––social, educational, and health––pre dominated the research (Masten, 1994). Theorists also articulated that family attributes such as parental attachment and characteristics of the broader social environment contributed to the development of resilience (Bradley et al., 1994). Influences external to the family including hobbies and interests and a connection with a non-related adult (Garmezy, 1991) were also postulated to affect resilience. In addition, individual characteristics such as an easy-going temperament and at least average intelligence were identified as protective factors (Fergusson, Horwood & Lynskey, 1994). More recently, researchers in the field of resilience have argued that the interplay among these factors as well as how individuals construct their experiences contribute to understandings of resilience (Ungar et al., 2008).

In summary, resilience can be explained as the interaction between a person's individual characteristics, their family, and the contexts in which they live. Resilience can therefore be seen as the dynamic interaction between risk and protective factors. However, the agentic interpretation of risk and protective factors by youth in specific contexts and the contextual response to that agentic interpretation is still not well understood particularly in relation to WBE. Specifically, there is a need to interrogate WBE as a structure that is responsive to the agentic acts of at risk youth and that has the capacity to promote a contemporary conception of resilience (DeLuca et al., 2010).

Ungar's Resilience Framework: Ungar's (2009) work on resilience represents one of the most recent and comprehensive conceptions of resilience, which is predicated on the following definition: In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural and physical resources that sustain their well-being, and their capacity to negotiate for these resources to be provided and experienced in culturally meaningful ways. *Navigation* involves purposefully seeking resources, manipulating providers to create access to services or, least effectively, hoping that chance will lead to resources (Ungar, 2005a). Navigation occurs when services are available and easily accessed. *Negotiation* is described as engaging in discussions to ensure that the provisions for resources occur in ways that are meaningful to individuals accessing the services. Ungar (2005b) demonstrated that resilience was more than an internal capacity, by showing how resilience in youth is enabled by the responsiveness of services (e.g., counselling), structures (e.g., socio-political means of ensuring access), and relationships that allow the youth to be seen positively. Thus resilience is the result of both navigation and negotiation processes that consider the interplay among social, cultural, and political aspects of the context.

More specifically, Ungar (2005b) articulated six principles that must be considered when designing interventions or implementing policies to build resilience. Three principles reflect strategies that can be used

to navigate toward resilience: *community reach*, *one-stop shopping*, and *a door back in*. The other three principles focus on successful negotiation processes: *less is more*, *unknown but not unknowable,* and *something to shout about*. *Community reach* emphasizes the contribution of families and communities to how services are organized and accessed, while *one-stop shopping* refers to the organization of services to facilitate access by reducing barriers and compartmentalization through partnerships and alliances. *A door back in* refers to the need for systems to allow access to services for youth who may need more than one attempt to succeed. Zero tolerance policies can create cast-aways and marginalization. *Less is more* reflects the need for youth to be served by fewer people, each of whom knows them well. Integrated services reduce the number of care providers and allow more in-depth relationships to be developed. *Unknown but not unknowable* signifies the need for service providers to appreciate difference and open the door to a negotiated definition of goals and needs. Openness and cultural sensitivity with an appreciation for self-knowledge and expertise about one's own situation are highly desirable. *Something to shout about* describes encouraging youth to identify what makes them unique and valuing what youth say about themselves.

Ungar (2005b) proposed that resilience was an outcome when children and youth successfully navigated their way to services, structures, and relationships and then negotiated to have services provided in youth-focused ways that sustain their well-being. Ungar (2005a) applied these principles to two cases within the healthcare context to illustrate health-enhancing and health-challenging patterns among high-risk youth. However, these principles have not yet been applied to WBE cases to examine the potential for WBE to promote resilience for at risk youth within an educational context. Given previous research on WBE as a context that reengages youth, we believe that the application of Ungar's (2005b) framework will shed light on WBE as a pathway to resilience for at-risk youth.

3. Methodology

In our population of previous case studies, the emerging pattern points to WBE as a pathway to resilience for at risk youth (DeLuca et al., 2010; Hutchinson et al., 2011; Versnel et al., 2011). We have used case study methods in order to enhance our understanding of how participants construct their worlds and how they interpret those (Simons, 2009). While each case is unique, our overall knowledge of WBE as a pathway to resilience is enriched through a comparison of cases involving discreet contexts and constellations of participants. Following Stake's (2000) approach to cross-case analysis, in this paper we analyze the cases of three youth who became disengaged from school and subsequently re-engaged through WBE. Stake asserts that as a population of cases accumulates, comparisons become meaningful, and patterns emerge that can inform more general practices, processes, and theories. For each of the three cases, we used a multi-perspective case study approach to optimize our understanding of each student's experience in WBE. These multiple-perspectives were solicited from individuals who were intimately involved in the experiences of our focal participants – Tim, Ashley and Daniel – as they were enrolled in a WBE experience during their adolescence. The cases of Tim and Ashley have been previously described in detail (DeLuca et al., 2010). The current analysis, which includes the case of Daniel, is novel in its application of Ungar's resilience framework to WBE.

Procedures: Data consisted of ethnographic observations and interviews (Patton, 2002). Two researchers observed each youth carrying out assigned tasks in their respective workplaces. For Tim observations (90 minutes in length) were made over a five-week period; four of which took place at the upholstery shop in the school, and one at the automotive shop where Tim secured employment at the end of his placement. Data collection with Ashley spanned six weeks during which time three 90-minute observations were made. Observations of Daniel occurred over a five-week period and consisted of two 90-minute sessions. We wrote field notes and held informal conversations with participants following our observations. Formal interviews were conducted with each youth, WBE teacher, and workplace supervisor. Student interviews focused on their perceptions of adversity in their lives, reasons for enrolling in WBE, and its benefits and challenges. Interviews with WBE teachers and workplace supervisors focused on their perceptions of the at risk status of the adolescents, and of how WBE met and failed to meet student needs. Interviews were audio taped and transcribed verbatim. In addition, one-year later follow-up data were obtained on the employment and education status of each youth.

Preliminary data analyses informed each stage of data collection, and we used standard methods of qualitative analysis to develop themes (Patton, 2002). For this paper we used a deductive analytic approach to coding based on Ungar's (2005a, 2005b) framework of resilience to seek evidence of WBE as a context for promoting resilience. Specifically, we first analyzed each case using Ungar's concepts of navigation and negotiation. We then conducted a more fine-grain analysis of resilience across cases by examining the prevalence of each of Ungar's six principles through a cross-case analysis. Simons (2009) refers to this as a theory-led approach to analysis where the case is analyzed through a particular theoretical perspective (in this study Ungar's resilience framework).

Focal Participants: Tim, 18, had been on the verge of dropping out of school when he enrolled in the WBE program. He was in a school-based program run by a qualified teacher who was also an upholsterer. Tim moved directly into employment as an upholsterer following his WBE program**.** Ashley, also 18, had previously dropped out of school but had returned for a co-operative (co-op) education program, a form of WBE. With the guidance of her principal and the co-op education teacher, she participated in the co-op program where she attended a half-day school-based academic program and then spent half days at a hair salon in the community. Daniel, 18, was skipping classes and at risk of dropping out of school. At his mother's insistence, the school administration requested that Mark, the school WBE coordinator, intervene. Within a short time, Daniel was enrolled in a co-op education program that was designed to meet his needs. He spent four full days each week working under supervision at a neighborhood garage and the fifth day at school to finish his required academic courses for graduation.

4. Findings

The following section describes each participant more fully and provides details about their respective WBE program. Based on an initial analysis of navigation and negotiation in each case, we then examine how Ungar's (2005b) six principles of resilience are experienced across the three cases—Tim, Ashley, and Daniel—to determine their viability within the context of WBE.

Tim's Case: Although Tim began high school by attending classes regularly, he became increasingly frustrated with the paper-and-pencil tasks of school and felt that school did not give him "a chance to do anything." Tim was more interested in automotive repair and detailing then he was in his academic subjects, and elected to take technology courses such as automotive, woodworking, and manufacturing in Grade 10. However, he still found these courses "…boring. I was in automotive shop and I knew it all already. I did not have to do much in class. The teacher just told me what to do." The adverse context for Tim was clearly the traditional academic environment of school. Tim was not stimulated to learn in the academic courses he took in Grade 9, nor was he engaged with the technology classes he took in Grade 10. By the end of Grade 10, in addition to becoming increasingly disengaged academically, Tim was also becoming socially disengaged. Many of Tim's friends had already left his high school through graduating, dropping out, or enrolling in one of the district school board's specialized programs. Clearly frustrated, Tim confessed, "I was just getting sick and tired of it, to tell you the truth, I just wanted out."

Tim knew that he needed to make a change and told us that his "buddy was originally going to come [to the upholstery program] and he wanted company, and so I actually signed up with him." Tim believed this decision to be a significant career decision. His family also supported him. Tim's mother, a seamstress, often supplied him with fabric and materials for his upholstery projects. His father helped him buy a sewing machine so that he could work on school assignments at home, and could help his brother with car detailing. Tim's older brother, a mechanic, offered to drive him to and from school daily. Throughout his WBE experience, Tim became socially re-engaged by reconnecting with previous friends at the new school.

Tim's WBE program: Tim was in a targeted, vocational, career development focus program that taught upholstery. Focus programs such as this are intended to help students meet the academic, social, and technical demands of specific career choices such as construction, upholstery, and esthetics. These specialized vocational programs are designed to provide students with the full experience of working in an area they are interested in to help them make well-informed career decisions. Tim's upholstery vocational program was taught by Nick, a teacher of 13 years who had previously owned his own upholstery business. In this

program, Nick assigned his students projects that were brought in by members of the community, and he encouraged them to take part in all aspects of the workplace including working with the clients, ordering materials, constructing a plan, and completing the upholstery project. The upholstery program provided a supportive environment, academically and socially, in which Tim had the opportunity to learn in a way that was more suited to him. Nick provided hands-on instruction in small groups or one-on-one to better meet Tim's learning needs. Nick also scaffolded his instruction and capitalized on Tim's aptitude for upholstering by encouraging him to assume more complex tasks, and by asking him to help other students wherever possible.

Through his focus program, Tim found value in what he was doing, "this is real world stuff." Tim identified several career relevant skills he was learning: "You're communicating with each other, you're writing down invoices or whatever, your work sheets, so you're writing; you're constantly measuring so you're constantly adding." Nick's teaching approach was deliberate, "this is reality." Nick also helped Tim secure a job in an auto glass shop that did automotive repairs and upholstering. Nick felt that he "had to find a shop for him that would fit his profile, what he wanted to be and what he likes to do." The fit was such a success that Tim was hired there full time once he completed the focus program. One year later, Tim remained a productive employee in the same establishment.

Navigation and negotiation: Tim had clearly manoeuvred his way to a WBE program that was responsive to his needs. Attending this program required the cooperation of his family, the school system, and himself. These community and institutional supports were perceived as a resource that could accommodate Tim's needs and re-engage him in a learning context. The integration of the work-based learning facility directly in the school setting was particularly beneficial, as it required less coordination of multiple sources of intervention. Nick's ability to offer multiple opportunities to complete a task provided the scaffolding Tim needed to learn from his mistakes, which proved crucial to the success of the learning experience. Tim also benefited from the structure of the program where there was only one instructor. The small enrolment facilitated one-on-one teaching, which Tim found highly useful. One aspect of the program that Tim identified as important was the recognition that not everyone learns the same way. This was a departure from his experiences in school. Nick clearly could see Tim's developing abilities and let Tim know he was being successful: "Yeah, it's perfect, yeah you got it!"

Ashley's Case: Like Tim, Ashley found the traditional school environment to be adverse to her learning. Ashley had dropped out of school in her final year but returned in January when the principal suggested she enrol in co-op. Ashley explained that she had enjoyed high school until Grade 10, which was when she quit cheerleading because the new coach made it not "fun anymore." She also confessed that she preferred to do courses that were easy: "I did a lot of the auto classes because they were easy" and she purposely chose "open" (everyday) math because it was "really easy." After leaving cheerleading, Ashley became progressively more disengaged academically and socially. She was frustrated with the traditional classroom setting, saying "I just don't like sitting in a class ... I just don't learn that way." Socially she felt she had few friends in school and was spending more time with her boyfriend who had dropped out of school in Grade 10 and who had been incarcerated. Ashley's attendance steadily worsened until, as she said, "I just stopped going to class. I was just done."

In order to graduate, Ashley needed to complete two compulsory credits (one English and one math), and seven co-op credits. She felt that she was more likely to succeed in her co-op courses because they were "more hands-on," "work-like," "practical" and "you're not sitting in a classroom ... I can't stand that." Ashley enrolled in a traditional co-op education program in which she spent approximately half of her school day in academic courses and half at a hair and esthetics salon in the community. At the end of her first term in the program, Ashley had successfully completed a math credit (having dropped her English class) and had accumulated 288 co-op hours–42 hours short of the three intended co-op credits. As with her school experience, Ashley had begun to lose interest at the salon when changes in the workplace made it less "fun." She started to miss shifts, and eventually stopped going. Despite not completing her co-op hours through her initial placement, Ashley remained in school and subsequently returned to the co-op placement in the following school term. Ashley would not have returned to school to complete her diploma requirements if it meant returning to regular classroom learning; she credited co-op education with enabling her return to

school. On follow-up to Ashley's case one year later, Ashley had received her credits to graduate and was planning to pursue a business-related program at a community college.

Ashley's WBE program: Ashley was in a co-op education program that consisted of both a classroom and a workplace component. Co-op programs differ from focus programs in that they (a) are based on the individual needs and interests of the student, (b) have distinct classroom (in the school) and workplace environments (in the community), and (c) involve a teacher and workplace supervisor. Students generally spend half a day in regular classrooms, and half a day at the co-op placement. Students in Ashley's co-op program were recruited annually by the teacher, Lori, who designed and ran the program. Students accepted into the program were given a five-week workplace preparation course, and were then sent to their placements where the workplace supervisors assume responsibility for the students. The students receive relevant work-based experience and often secure subsequent employment with their placement employer, or at related sites. Co-op programs offer an alternative way for students to obtain high school credits, which has been particularly beneficial for those students who have struggled in traditional classroom settings. Furthermore, because most of the placements are student driven, the programs have a high success rate.

Navigation and negotiation: Ashley's navigation to the WBE program had been facilitated by her mother and the school principal. Both felt that enrolling Ashley in the co-op education courses was a last chance for her to get her Grade 12 graduation diploma, something Ashley agreed was essential for her to be successful in her adult life. One significant challenge for Ashley was her ability to follow-through on the requirements of the co-op education program and abides by the restrictions placed on her activities at the salon. The lack of congruence between the two systems (i.e., school and work) proved to be a significant barrier in Ashley's ability to successfully navigate school and work contexts. As a result, Ashley became more and more disengaged from the co-op education setting and her supervisors grew increasingly frustrated. Despite knowing that Ashley was at risk for disengaging and having opened the door to this learning opportunity, the adults provided insufficient support for Ashley to succeed in her initial placement. In this case, the principle of *less is more*, was difficult to follow and the multiple demands and supervisors created a barrier for Ashley's success. Finally, it appeared that there was little to celebrate, despite Ashley's resilient return to school. Her co-op education teacher attempted to advocate on her behalf with other teachers, but Ashley's repeated difficulties in meeting expectations proved to be insurmountable during her first placement. However, as Ashley returned to a co-op placement in the following year, it was evident that the *door back in* principle was an enabling structure that promoted resilience in Ashley's case.

Daniel's Case: Daniel, another 18-year-old student, was disengaged, skipping classes, and at risk of dropping out of school in his final year when administrators at his school asked the WBE coordinator, Mark, to intervene. Within a short time, Mark had met with Daniel's mother, his teachers, and the members of the workplace to plan an appropriate co-op program for Daniel. In an arrangement designed to meet his needs, Daniel spent four days each week working under supervision in a neighbourhood garage. On Mondays, he attended school to complete a course in auto mechanics and a required literacy course. Daniel had initially been a strong student and Mark reported that "for several years … he was the student who got the highest mark overall in the workplace stream." Mark felt peer influences had negatively affected Daniel's learning: "I think that it's peer relations that really caused the problem" and that in Grade 12 Daniel "got involved with kids that were not so good and that really was the beginning." Daniel progressively became more discouraged with school and admitted that he "didn't really care that much [about school]."

Daniel considered the traditional school context to be a place of passive learning that didn't fit with how he learned best: "You'd be sitting in class and that is about it," and "I just find school boring, because all you do is, kind of, sit there, and you write down what the teacher writes down. I'm not good at writing and all that stuff, but … hands-on … that's what I'm good at." Daniel preferred to learn by doing, receiving one-on-one guidance, being shown rather than told, and doing things that he valued and could connect to his future. Mark also felt that the school setting was not the best environment for Daniel, "I don't think there was much here in school that he really liked." Daniel was optimistic about co-op being a more successful experience, "I was doing pretty bad at high school so, and I thought co-op would be easier because it's more working than writing stuff down." Daniel was right that co-op education was a good option for him as one year later Daniel was working a full workweek in two part-time positions and preparing to live independently.

Daniel's WBE program; The WBE program at Daniel's school was unique because it offered an opportunity for students to progress from workplace observations in the earlier grades to a focus program in Grade 11 (in-school vocationally focused courses and work experience) and ultimately to co-op in Grade 12 (in a workplace in the community). The WBE teacher, Mark, considered this progression critical for students who were gradually losing interest and were becoming unsuccessful in meeting the academic demands of the high school curriculum. "Every year there is a progression" with "co-op as the last step before they go into the workplace because, a lot of times, jobs come out of co-op." However, Daniel did not choose to enter the program in his early high school years but rather enrolled in the co-op program in his final year. Typically, in this program students either spend half-days in their work placement and the other half-attending regular classes, or attend full day work placements. Mark created a customized schedule that better suited Daniel's needs. Daniels spent four days each week in the work placement and one day at school.

Mark was diligent in striving to meet the individual needs of the students and therefore he designed an arrangement that he felt would best meet Daniel's needs. In working with Daniel's mother, Mark procured a placement in a garage that was close enough for Daniel to walk to and that also aligned with Daniel's interests and goals. Also, because of potentially negative peer influences, it was important that Daniel had a schedule that would minimize contact with peers, and a schedule was designed in which Daniel would spend four full days a week (Tuesday to Friday) working at the garage, and Mondays completing the required courses.

Navigation and negotiation: Like Ashley, Daniel's navigation to the work-based learning program had been facilitated by his family and teachers. Initially, it appeared that Daniel was more of a passenger in the navigation process but as he experienced success in the co-op education placement he moved to the driver's seat. This was not due solely to his own efforts but also his family, teacher, and workplace colleagues. The co-op education teacher was able to see the need for a more customized approach to Daniel's learning experience and created a combination of work-based and traditional academic experiences that ensured Daniel could graduate. The teacher's facilitation of this arrangement meant that Daniel was not forced to coordinate both systems so that he could be successful. Daniel's inclusion in the co-op education program, despite his lacklustre performance in the traditional academic program, gave him the opportunity he needed to re-engage. The co-op education teacher and the workplace supervisor collaborated to create a learning context for Daniel that emphasized his strengths and over time Daniel became a valued member of the workplace. He was regarded by his workplace supervisor as a "fast learner, someone who is willing to get right in there and help."

Principles of Resilience: Cross-case Analysis: Our analyses of these cases suggest that WBE can provide a pathway to resilience for students who have experienced contexts of adversity. Across the cases, all three adolescent participants described their experiences of traditional schooling as adverse. The emergent theme in Tim's data was "I just wanted out," and in Ashley's data, "I just don't learn that way," while Daniel reported that in traditional school, "I didn't really care that much, and now that I'm in co-op I do care." Our analysis has revealed that each of these students was able to navigate and negotiate, to varying degrees, within their WBE contexts toward a more positive outcome of school engagement and resilience. Thus in this section we examine further the alignment of our findings with each of Ungar's (2005b) six principles. Principles of navigation include *community reach*, *one-stop shopping,* and *a door back in*. Principles of negotiation include *less is more*, *unknown but not unknown able,* and *something to shout about*.

Community reach. Involving families and communities was most apparent in Daniel's case because his mother had secured the placement in the neighbourhood garage, and the garage had agreed to take Daniel as a student when they recognized a neighbour with a need. The families of Tim and Ashley were also involved in their WBE experiences. For example, Tim's brother drove him to the program, almost an hour each way; and Ashley's mother accompanied her to the school to ensure that she could earn most of her credits through co-op. All three teachers spoke of the support they received from their communities and from students' families when seeking placements for at risk youth. As expressed by the workplace supervisor in Daniel's case, the WBE program provided them with a willing worker who contributed productively to their business, which served mutually beneficial outcomes. This relationship reflects the reciprocal nature of co-op

education and other forms of WBE in which collaboration between school and community is a fundamental structure.

One-stop shopping: Clustering of services was more apparent in the programs of Daniel and Tim who were both more successful in WBE than Ashley. Daniel's teacher, Mark, minimized compartmentalization and described how he created a pathway to work for at risk youth through the high school years by developing a progression of workplace experiences of increasing length, intensity, and expectations, with "clear expectations expressed to all parties" based on the youth's interests and goals. Mark said that he developed a "cooperative effort with Daniel's parents, the adolescent case worker at the school, the vice principal, and teachers... and looked at it from every angle." Tim's program minimized compartmentalization by making one adult responsible for all the students' academic and vocational education. Specifically, Nick was able to construct a program that allowed Tim to receive academic credit for work done within the context of developing workplace skills such as writing work plans and measuring upholstery fabric. In addition, Nick's teaching ability in combination with his work background enabled him to meet individual students' learning needs without requiring students to navigate among multiple supervisors and teachers. These data demonstrate a variety of ways in which WBE provides a much needed one-stop shopping structure for youth who might otherwise give up on navigating the education system.

A door back in*:* Across the three cases, WBE afforded multiple opportunities for at risk youth to reconstruct their identities as positive contributing members of a community. Within the traditional school environment, these three students were failing and becoming increasingly disengaged. Ashley was only willing to re-enroll in school when she and her mother were assured that she could complete credits by spending only a half-day at school and a half-day in the workplace. Even when Ashley was not successful in her first co-op placement, the WBE program provided a structure through which Ashley could try again. This door back in structure proved successful for Ashley in her second placement, which led to her graduation from high school. Similarly, Daniel who was judged as a failure by his teachers in the traditional school context was viewed as a valued, loyal, and contributing member of the workplace once in co-op education. Our data illustrate the need for multiple opportunities for at risk youth to access and engage in learning.

Less is more*.* Less is more emphasizes the advantage of vulnerable youth negotiating with fewer individuals once they have been able to navigate to the resources they need. Strong evidence for the importance of this principle in WBE comes from the case of Ashley. In her placement, Ashley had multiple supervisors in the workplace leading to unclear expectations and to ineffective lines of communication. Moreover, minimal communication between the workplace supervisors and co-op education teacher allowed Ashley to manipulate these adults resulting in truancy, disengagement, and an unsuccessful outcome. Ashley's case could have been improved if she had had fewer supervisors and a better relationship between school and work. In contrast, Tim and his teacher were able to negotiate appropriately challenging tasks that provided him with the prerequisites to successfully integrate into a workplace in his chosen field upon program completion. Contexts that permit vulnerable youth to interact with a small number of adult mentors, teachers, and workplace supervisors appear to support students in overcoming adversity and to promote resilience for these youth.

Unknown but not unknowable: This principle refers to service providers recognizing and acting on the strengths and needs of at risk youth, which involves putting aside assumptions and building on the youth's interests and positive qualities. In the case of Daniel, his teacher Mark spoke of the importance of recognizing that academic failure did not mean that students would be unsuccessful in WBE. The mechanic who supervised Daniel could identify with his struggles in school and could see his potential to succeed despite his academic experience. Tim's workplace supervisor took the time to get to know each of his students individually and constructed a learning program that built on their strengths as well as their learning needs. In addition, he helped each student obtain work in a field of interest to them that matched their interests and experience. For example, Nick helped Tim to secure employment-upholstering cars in a garage because of his interest in automobiles. This principle of resilience aligns well with characteristics of WBE programs that effectively match students with contexts that respond to their interests and needs.

Something to shout about. Recognizing and celebrating their own strengths and contributions supports resilience for at risk youth. Our data illustrate that the students in these three cases knew the best strategies to help them learn but that these were not honored in the traditional academic context. However, in the WBE context, their teachers and supervisors were responsive to their strengths and were willing and able to accommodate these students' preferences for learning by doing. For example, Mark ensured that the workplace site knew that Daniel was a weak reader and asked that they demonstrate tasks to Daniel rather than expecting him to read a manual. In addition, recognizing and celebrating students' strengths in WBE contexts has the potential to change students' negative self-perceptions and to promote positive identity. For instance, Ashley's teacher credited her for "coming back to school" and predicted correctly that Ashley would try again the following year to complete high school. In the follow-up interview with Ashley, she was proud of the fact that she had successfully completed her co-op placement and had applied to college.

5. Discussion and Recommendations

Our analysis suggests alignment between contemporary understandings of resilience and characteristics of effective WBE programs. Across the cases, Ungar's (2005b) principles were applicable to varying degrees and in various ways, which suggests that WBE may be an effective protective context and pathway to resilience for at risk youth. Given these findings, clinicians and practitioners may want to advocate for participation in WBE programs for youth who are at risk of disengaging from school. In partnership, clinicians and educators can combine their expertise to optimize opportunities for at risk youth to realize the benefits of WBE. Because WBE programs are uniquely situated at the intersection of education, labor, and social service structures, we argue that they offer a particularly salient learning context for at risk youth to gain confidence as they navigate to and negotiate for the supports they need to remain engaged in learning and to transition toward participation in society. If school itself is an adverse experience for some youth, as our data suggest, it is urgent that we optimize the opportunities WBE affords for youth to assert agency, access resources, and sustain themselves in the face of adversity. While some students may feel hopeless in school, there is evidence that these students often feel more successful and agentic in the WBE context (Matsuba, Elder, Petrucci, & Marleau, 2008).

This paper offers a first step in bringing together the fields of resilience and WBE. Our data provide initial evidence for the use of Ungar's (2005b) principles in order to refine WBE programs so that they are more responsive to the individual needs of at risk youth. Given today's economy and the predictive power of high school completion for successful adult participation, students who experience the traditional academic program in high school as adverse can act agentically and select WBE as a pathway to resilience. WBE programs can harness the potential of the protective factors that are already known to foster resilience including parental involvement, development of outside interests, and connection with a non-related adult. Our data indicate the potential of Ungar's framework to inform the structure and processes within WBE. However, further work is needed to maximize this potential so that youth who are at risk of school disengagement can continue on a path to success in adult life.

Our analysis also raises issues about the integration of resilience principles with WBE. First, as the application of Ungar's (2005b) principles to WBE is novel, we believe that they would have greater applicability if the descriptions of the principles were broadened to be more inclusive of other contexts that hold the potential to promote resilience, such as WBE. For example, the principle of *unknown but not unknowable* could be expanded to consider what is known and not known about both the workplace context and the student. Second, the language used in naming and describing the six principles emphasized the responsibility of the at risk youth for initiating the navigation and negotiation processes. This emphasis puts the onus on students to change themselves and to take initiative to reengage. Given these students' context of adversity and their backgrounds, they are the least likely to be able to respond in this way. Placing more emphasis on understanding the responsibility for creating responsive contexts, such as WBE, shifts the emphasis toward a more balanced person and context approach and would enable youth to be seen and to see themselves differently.

Finally, larger contexts that affect the lives of at risk youth––cultural, economic, and political––were not fully addressed in Ungar's (2005b) principles of resilience. While more recent research on resilience articulates

the need to consider broader cultural implications (Ungar et al., 2008; Wexler et al., 2009), in WBE there is also a need to consider economic and political contexts that influence school-to-work transition for at risk youth (Billett, 2010; Chin, Hutchinson, Versnel, & Munby, 2010; Raffe, 2008). Evidence suggests that within the current economic context and with the growing impact of globalization, youth who are in transition from school to work experience notable challenges and needs that are different from those of adults who seek employment. Moreover, at-risk youth are three times more likely to be unemployed than their adult counterparts (Quintini et al., 2007). The current labour market context suggests that at risk youth require educational preparation, such as that offered through WBE that both addresses the immediacy of job-related skills and recognizes these larger socio-political and economic factors (Versnel et al., 2011).

Based on these issues, there remains a need for further work that bridges contemporary resilience with WBE. In particular, we see value in constructing a comprehensive model that adopts a person-in-context approach (Ford & Smith, 2007; Pintrich, 1994) to understanding the negotiation and navigation of at risk youth in transition from school-to-work. Such a model would serve to represent the various factors that influence the reengagement of at risk you in productive WBE experiences, leading to successful adult productivity, engagement in community, and labor force attachment. Specifically, the purpose of the model would be to (a) enhance our understanding of the resilience factors that contribute to successful transitions from school-to-work for at risk youth, and (b) help us to use this knowledge to choose a WBE program that would be a good fit to the characteristics of individual at risk youth, serving to promote resilience for these youth. We further suggest that the model be applied within diverse WBE contexts and refined through a cross-case analytic process (Eisenhardt, 2002; Stake, 2000). Ideally, this work would be undertaken through collaboration between researchers, clinicians, and practitioners in the fields of resilience and WBE.

Recommendations: Based on this discussion of our findings, we make three specific recommendations for enhancing both the use of and our understanding of work-based education as a pathway to resilience for at-risk and disengaged youth. We recommend that:

- communities offer all youth disengaged by academic school programs opportunities to participate in work-based education to earn credits toward graduation before they are asked to, or choose to, leave school prior to graduation;
- work-based education programs match disengaged youth to WBE opportunities to enhance resilience by considering the match between the characteristics (needs and strengths) of individual youth and the characteristics (supports and demands) of individual workplaces and workplace supervisors; and
- researchers conduct studies in a range of contexts with youth with varying characteristics to investigate the robustness of the proposed alignment of WBE and the principles of navigation and negotiation in Ungar's (2005a, 2005b) conception of resilience.

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