

SITUATED LEARNING AS THE THEORETICAL BASIS FOR THE HARBOR FREIGHT FELLOWSHIP INITIATIVE

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WestEd

August 2019

The design of the Harbor Freight Fellowship Initiative (HFFI) is based on the principles of situated learning which “concerns the process by which newcomers become part of a ‘community of practice.’ A person’s intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a socio-cultural practice.” In *Situated Cognition and the Culture of Learning*, Brown, Collins, and Duguid (1989) propose learning as a process of enculturation that is “supported in part through social interaction and the circulation of narrative,” and posit that groups of practitioners are therefore particularly important, “for it is only within groups that social interaction and conversation take place.” They cite benefits of “cognitive apprenticeship and collaborative learning” which include collective problem solving; display of the multiple roles needed in any venture to complete a task; access to perspectives that challenge ineffective strategies and misconceptions; and the opportunity to develop and exercise collaborative work skills.

HFFI has focused especially on three interconnected aspects of learning “in situ”: 1) interest, which is the driver of engagement and sustains motivation (NRC, 2000); 2) practice, which allows the young worker to join in and absorb the culture of the workplace and the profession through embodied learning, use of tools, equipment, vocabulary, and participation in daily and episodic rituals (Resnick, 1987; Giddens & Stasz, 1999); and 3) the relationships and networks that are formed at the workplace which provide a) the mentoring of young workers by caring or respected experts needed for novices to engage with confidence, and b) the sharing of tacit knowledge (“tricks of the trade”), as well as c) connections to further learning and work opportunities (Billet, 2010). Above all, the focus is on the individual learner in a community of practice — and responding to his or her interests and needs in a flexible way through personal attention from both teachers and mentors.

The results of such engagement, the research suggests, are improved technical skills, improved social-emotional skills, including identity formation, and improved career knowledge and navigational skills.

This paper¹ begins by providing a context for “situated learning theory,” describes the importance of situated learning, and discusses three key elements of situated learning that are focus areas for the Harbor Freight Fellowship Initiative (HFFI): learning through interests, practice, and relationships. It ends with a brief discussion of additional outcomes expected from the HFFI’s approach to situated learning.

SITUATED LEARNING AND ITS IMPORTANCE

Learning viewed as situated activity has its central defining characteristic a process that we call legitimate peripheral participation. By this we mean to draw attention to the point that learners inevitably participate in communities of practitioners and that the mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of a community. ... there is no activity that is not situated. It implies emphasis on comprehensive understanding involving the whole person rather than “receiving” a body of factual knowledge about the world; on activity in and with the world, and on the view that agent, activity, and the world mutually constitute each other. (Lave & Wenger, 1991, p. 29)

“Situating” Situated Learning

This paper begins by “situating” the concept of “situated learning” within the context of career technical education programs, intended to foster deep learning and prepare students for careers, for further education and training, and for lifelong learning. “Work-based learning” (WBL) is a central feature of career technical education programs. The situated learning opportunities offered by the Harbor Freight Fellowship Initiative (HFFI) could be classified as intensive WBL — “career training” opportunities, in the continuum of WBL experiences, ranging from career awareness and exploration, to career preparation and training (LLA, 2012). They are immersive experiences for high school students in grades 11 or 12, driven by the employer-mentors, not by teachers.²

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Some paragraphs in this paper are adapted from an unpublished literature review on work-based learning prepared for the California Department of Education in 2015 as a foundation piece for a report entitled “Student Success in the 21st Century.”

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Immersive WBL can be considered “... a form of applied learning that links school-based instruction with activity that has consequences beyond the class or value beyond success in school. It is judged by professional standards; it uses the workplace, or in-depth experience with employer or community input, to engage students and promote learning and access to future educational and career opportunities” (CDE, 2010; Darche, Nayar & Bracco, 2009). In the case of career training programs, “school-based instruction” is often supplanted by “on-the-job” instruction, with the teacher, advisor, or coordinator playing the limited but important role of facilitating reflection, coordinating the placement, and helping to ensure a quality experience for both the young person and the employer.

The most important aspect of immersive WBL is that it “situates” learning within the context of a community of practice at a worksite, offering an authentic setting for young people to interact with and learn from more advanced professionals, and to learn in ways that are both deep and transferable. The term coined for this approach to learning is “situated learning” (Lave & Wenger, 1991).

Situated learning theory was informed by cross-cultural observations that revealed contextual variation in skills. Psychologist Barbara Rogoff, writing in the Introduction to *Everyday Cognition: Development in Social Context* (1984, 1999), explains:

Concern with contextual variation in skills has been influenced by cross-cultural observations that people who have difficulty with a task embodying a particular skill in the laboratory spontaneously evidence the skill in their everyday activities (Laboratory of Comparative Human Cognition, 1970; Rogoff, 1981). Micronesian navigators who show phenomenal skills in memory, inference, and calculation when traveling from island to island perform abominably on standard tests of intellectual functioning (Gladwin, 1970). Subjects who perform poorly on logic or communication problems in a test situation often reason precisely and communicate persuasively in more familiar contexts (Labov, 1970; Cole, 1975; Scribner, 1976). (pp. 1-2)

Providing the opportunity for students to both learn and demonstrate learning in context allows for a full apprehension — and appreciation — of their abilities.

Standards Are Not Enough: Situated Learning for Development of Real Career Readiness

Since the publication in 1983 of *A Nation at Risk*, and the subsequent development of the “SCANS skills”³, researchers, employers and policy actors have been trumpeting the importance of higher order thinking skills (Bailey, Hughes, & Moore, 2004). In recent years, these have been expanded and called “21st century skills”. Most recently, a key policy initiative enacted in many states throughout the nation has been the adoption of the Common Core State Standards (CCSS) which emphasize the application of learning and many of the “21st century skills” outlined by the Partnerships for 21st Century Skills (P21), including critical thinking. The assessments developed to assess the CCSS include tasks that require students to demonstrate their understanding, not just rely on memorization. Similarly, the Next Generation Science Standards (NGSS) include Science and Engineering Practices, as well as Core Disciplinary Ideas and Cross-Cutting Concepts. The CCSS and NGSS signal a national

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The Secretary's Commission on Achieving Necessary Skills (SCANS) was appointed by the U.S. Secretary of Labor to determine the skills young people need to succeed in the world of work. The initial SCANS report, *What Work Requires of Schools*, published in 1991, outlined the foundation skills (basic skills, thinking skills, and personal qualities) and the workplace competencies the workplace requires of workers. See <https://wdr.doleta.gov/SCANS/whatwork/>

direction toward application and demonstration of learning and higher order thinking skills which require educators to examine how students learn and how they can transfer their learning to new situations — the ultimate goal of schooling (NRC, 2000).

“Career readiness” standards, such as those developed by the Career Readiness Partnership Council, a collaboration among many leaders of national education and workforce organizations, emphasize applied skills above all. Researchers in the field of “career readiness” argue that skills needed in the workplace are in fact *broader* and *deeper* than those tested by the CCSS assessments. Needed skills include collaboration with individuals of all ethnicities and ages, oral as well as written communication skills, the ability to be adaptive and solve novel problems, and many more. (CRPC, n.d.; Darche & Stam, 2012; Darche & Stern, 2013; USED Employability Skills, n.d.)

Research has shown that contextualized and situated approaches to learning are critical to facilitating the development of the kinds of skills needed in the workplace. According to Nancy Karweit (1998),

...the traditional view of learning as abstract and generalizable is being challenged by a view of cognition as situated and specific. Rather than seeing knowledge as something that is true for all time and all place, knowledge is seen as dependent upon and embedded in the context and activity in which it is acquired and used. Traditional schooling, by abstracting knowledge from use, in an attempt to promote generalizability, creates inaccessible and unusable knowledge. (p. 54)

In her 1987 Presidential Address for the American Educational Research Association “Learning In School and Out of School,” Lauren Resnick discusses the value of “out of school” experiences: they offer the opportunity for shared learning and collaboration and to work with tools that “shape, enable, and share cognition.” (Resnick, 1987).

In addition, access to multiple learning contexts — in school and out of school, and multiple work settings — is also important for promoting transfer of learning. According to Bransford and other researchers (NRC, 2000) “Knowledge that is taught in only a single context is less likely to support flexible transfer than knowledge that is taught in multiple contexts. With multiple contexts, students are more likely to abstract the relevant features of concepts and develop a more flexible representation of knowledge. The use of carefully-chosen contrasting cases can help students learn the conditions under which new knowledge is applicable and promotes the ability to solve novel problems” — a skill that is sought after by employers (NRC, 2012).

Transfer of learning is critical to success, whether one is talking about the transfer of academic knowledge to the workplace (NRC, 2000), or transfer of learning from one job to another (Carnevale, Gainer, & Meltzer, 1990; Carnevale & Desrochers, 2003).

Transfer is supported when students understand the general principles underlying their original learning and the transfer situation or problem involves the same general principles, as reflected in the CCSS and NGSS. Yet, Resnick (1987) warns, to be truly skillful outside school, people must develop situation-specific forms of competence, as would be found in specific industry settings. Research on learning and teaching for transfer has highlighted the “situated” nature of learning. (NRC, 2000; NRC, 2012; Lave & Wenger, 1991) That is, “it is not fruitful to try to teach high-level thinking skills in general; rather, transferable knowledge is best learned within the disciplinary situations or focused on the sets of topics with which it will be used” (NRC, 2012, p. 6-24). Giddens and Stasz (1999) explain as follows:

But context matters in another sense as well: A work setting determines the way employees use workplace skills like problem solving to facilitate a task. Paradoxically, although the way these skills are tapped also varies, exposing students to learning situations that mirror some of the exigencies of work (the need to recognize a practical problem, determine a means of addressing it, and carrying out a repair) may help prepare them for such challenges and responsibilities in many lines of work. The reason is, simply, that technical work is often improvisational. To succeed at it, workers need to master a repertoire of skills and draw on them as they become needed. Because teaching students by way of authentic tasks is likely to help them develop the confidence to improvise on textbook learning or on terse job guidelines, classes designed around apprentice methods may be beneficial for all students, both those heading to college and to work. In short, learning the process of feeling one's way through a work problem to a solution can be used in many situations. (p. 12)

Access to Communities of Practice that Support Identity Formation

The communities of practice offered by situated learning environments such as workplaces not only promote contextual learning and reasoning opportunities (NRC, 2012) but also the development of identity (Lave & Wenger, 1991; Wenger, 1998); “one is what one practices, to some extent” (NRC, 2012).

A central task of adolescence is identity formation, and Erikson (1968) believed that career exploration and the testing of “vocational roles” were central to identity development. As discussed in Zimmer-Gembeck & Mortimer (2006), “Adolescent Work, Vocational Development, and Education,” according to Erikson (1968), the inability to explore and commit to an occupational identity during adolescence is a source of “significant disturbance” among young people. Erikson and Marcia (1966) claimed that “optimum psychological health and well-being are outcomes of a process of exploration followed by commitment, or identity achievement.” Work experience can give adolescents and their parents cues as to whether they are successfully moving toward their future possible selves as adult workers (Mortimer, 2003, as cited in Zimmer-Gembeck & Mortimer, 2006, p. 9).

The relation of work to identity is developmental and applies to adults as well. Blustein (2006) describes Donald Super’s “self-concept view of career development... The self-concept represents the internal ‘I’ or ‘me’ that one develops over the course of the lifespan. One of the functions of work, therefore, is to find an outlet for one’s self-concept in the occupational world” (p.19).

As described further below, development of skills and career identity in a workplace setting is a complex process. Situated learning, as exemplified in HFFI, develops students’ interests, practice, and relationships, building social capital and confidence, in a virtuous cycle that propels the students forward.

SUPPORTING INTEREST, PRACTICE, AND RELATIONSHIPS

Situated learning opportunities, as offered by HFFI, respond to and support the interests, practice, and relationships of members of the communities of practice. The three facets of the model are deeply interconnected.



Interest: Motivation for Learning

Scientific understanding of the influence of emotions on thinking and learning has undergone a major transformation in recent years. In particular, a revolution in neuroscience over the past two decades has overturned early notions that emotions interfere with learning, revealing instead that emotion and cognition are supported by interdependent neural processes. It is literally neurobiologically impossible to build memories, engage complex thoughts, or make meaningful decisions without emotion. And after all, this makes sense. The brain is highly metabolically expensive tissue, and evolution would not support wasting energy and oxygen thinking about things that don't matter to us. Put succinctly, we only think about things we care about. (Immordino-Yang, 2015, p. 2)

Neuroscientists such as Antonio Damasio argue for the inseparability of the mind and body, and for the location of emotion and feeling in the body as well as the mind (Damasio, 2010). This view of practice necessarily engages interest to motivate action. Damasio explains: “Feelings work as motives to respond to a problem and as monitors of the success or lack thereof” (Damasio, 2018, p. 16).

Interest as a motivator is central to reform efforts such as career academies and to work-based learning initiatives of all kinds, including the Harbor Freight Fellowship programs. Drawing on the literature, researchers at the University of Chicago Consortium on Chicago School Research, looking at “non-cognitive” factors in adolescent learning, concluded that “Learners are naturally motivated to learn when they perceive a task to be inherently interesting (McCombs, 1991, 1993, 1994). Bruner (1960) noted that ‘interest in the material is the best stimulus to learning’ (p. 14).” (Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum, 2012).

According to Bransford and other researchers in *How People Learn* (NRC, 2000) learners of all ages “are more motivated when they can see the usefulness of what they are learning and when they can use that information to do something that has an impact on others — especially their local community” (McCombs, 1996; Pintrich and Schunk, 1996, as cited by NRC, 2000).

Working with practitioners and peers at other schools on projects with meaning beyond the school classroom is also a great motivator for K-12 students, according to Bransford and his colleagues. Students are not only enthusiastic, but they also produce some “impressive intellectual achievements” when they can interact with professionals, including working scientists (Means et al., 1996; O’Neill et al., 1996; O’Neill, 1996; Wagner, 1996, as presented by NRC, 2000, p. 213).

Motivation is also enhanced for youth when they are paid, as they often are in HFFI Fellowships. According to Holzer and Lerman in “Work-Based Learning to Expand Jobs and Occupational Qualifications for Youth”, “disadvantaged students often seem more motivated to learn when they are paid to do so.” (Holzer & Lerman, 2014). Compensation for internships is one of the ten standards in NAF’s *Gold Standards for High School Internships*, in view of NAF’s commitment to educational equity (NAF, 2011). According to Zimmer-Gembeck, & Mortimer (2006), “When asked, adolescents will say they work ‘for the money’ (Greenberger & Steinberg, 1986) and parents now believe that adolescents should have discretion over how they spend their earnings (Phillips & Sandstrom, 1990).” Financial compensation contributes to adolescents’ and young adults’ need to develop autonomy and their ability to contribute to family income. Research has also found benefits to moderate levels of employment for youth (Zimmer-Gembeck, & Mortimer, 2006; Stern & Briggs, 2001).

Practice: Connecting Body and Mind, Working with Attention, and Meeting Professional Standards

Central to HFFI is the concept of “practice” within communities of practice, whereby students learn in an “embodied” way, through all their senses and physical as well as mental faculties. Unlike traditional learning that separates the mind and body, the embodied, practice-based approach to learning, as mentioned above, recognizes the inseparability of the mind and body (Damasio, 2010). In a study of mathematical reasoning skills in a dairy, researchers found that “workers who packed crates in a warehouse applied sophisticated mathematical reasoning in their heads to make the most efficient use of storage space, even though they may not have been able to solve the same problem expressed as a standard numerical equation (Scribner, 1984).” Scribner describes an observation of “more economical”, “practical thinking” as follows:

In contrast, preloaders often appeared to shortcut the arithmetic and work “directly” from the visual display. A pre-loader discusses how he filled an order:

Pre-loader: I walked over and I visualized. I know the case I was looking at had 10 out of it, and I only wanted eight, so I just added two to it. (Later, in an exchange with the interviewer on another order.) I was throwing myself off, counting the units. I don’t ever count when I’m making the order. I do it visual, a visual thing, you know.

Interviewer: OK, well, do it the way that you would do it, I mean, as far as that’s concerned.

Pre-loader: If I did it that way, you wouldn’t understand it. See, that’s why...this is what’s throwing me off, doing it so slow. (p. 26)

Embodied practice also promotes well-being, a state “where we are immersed within our environment, engaged in an activity, involved with others (Arikha, n.d.).

This definition of well-being is closely tied to that of “flow”, defined by Mihaly Csikszentmihalyi — “the state in which people are so involved in an activity that nothing else seems to matter” (Csikszentmihalyi, 1990, p. 4). He explains:

The optimal state of inner experience is one in which there is order in consciousness. This happens when psychic energy — or attention — is invested with realistic goals, and when skills match the opportunities for action. The pursuit of a goal brings order in awareness because a person must concentrate attention on the task at hand and momentarily forget everything else. These periods of struggling to overcome challenges are what people find to be the most enjoyable times in their lives. A person who has achieved control over psychic energy and has invested it in consciously chosen goals cannot help but grow into a more complex being. By stretching skills, by reaching toward higher challenges, such a person becomes an increasingly extraordinary individual. (Csikszentmihalyi, 1990, p. 6)

In offering the opportunity for students to practice deeply, situated learning as applied through programs such as HFFI also provides the opportunity for students to meet adult professional standards. While national organizations and state agencies have codified these for use in classroom-based programs,⁴ the workplace is the proving ground. In authentic workplaces, standards may be more specific, more nuanced, more challenging, or altogether different, if an industry is rapidly changing.

Cognitive scientists corroborate the value of shared, meaningful, criteria for competence. According to Bransford and his colleagues (NRC, 2000), “Studies of the social context of learning show that, in a responsive social setting, learners observe the criteria that others use to judge competence and can adopt these criteria. Learners then apply these criteria to judge and perfect the adequacy of their own performance. Shared performance promotes a sense of goal orientation as learning becomes attuned to the constraints and resources of the environment.”

Importantly, in situated learning settings, students receive feedback on whether they have met a standard. “Youth see themselves judged by the established standards of a discipline, including deadlines and the genuine constraints and unexpected difficulties that arise in the profession. Supervisors provide the close monitoring and frequent feedback that helps apprentices keep their focus on performing well at the work site and in the classroom”, according to Holzer & Lerman (2014).

In addition, in high quality experiences, employers are in true mentoring relationships with students, providing feedback with explanation. Research has shown that explanatory feedback is more valuable for learning than feedback that simply flags errors (Roscoe and Chi, 2007; National Research Council, 2011a; Shute, 2008; as cited in NRC, 2012); students who received explanatory feedback performed significantly better than students who received only corrective feedback on a test designed to measure both retention of the targeted botany concepts and transfer of these concepts to new problems of plant design based on the same general principles (NRC, 2012; pp. 4-11).

As illustrated below, in the arts, as in many disciplines, practice is ongoing and often supported by a caring mentor (Bloom, 1985). Beyond providing explanatory feedback, mentors provide access to networks and powerful encouragement.

In summary, as described by Wenger-Trayner and Wenger Trayner (2015) “A community of practice is not merely a community of interest — people who like certain kinds of movies, for instance. Members of a community of practice are practitioners. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems — in short, a shared practice.”

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See the national “Career Ready Practices” adopted by the Common Career Technical Core (CCTC). The CCTC practices are posted at <http://www.careertech.org/>.

Relationships: Access to Mentors and Networks

“Relationships,” considered the “third R” of Rigor and Relevance in the school reform literature, are central to Harbor Freight fellowships. As described in an extensive needs assessment conducted in preparation for development of 2008-2012 California State Plan Career Technical Education⁵ (WestEd, 2006), in effective CTE, positive student-staff relationships are key to ensuring student achievement (Allen & Steinberg, 2004; Darling-Hammond, 2002; Walcott, Owens-West, and Makkonen, 2005).

Reform proposals also stress the importance of building positive and supportive relationships between youth and adults. Such relationships can motivate students, guide them in making sound curricular and extracurricular choices, and connect students to their communities. (Walcott, Owens-West, and Makkonen, 2005, p. 31)

In many workplace settings, young people work with an adult mentor who can guide them but also allow them to make their own mistakes (Holzer & Lerman, 2014). Mentors also may provide informal career guidance, introduce students to other employees and supervisors, walk students through other departments, and generally pave the way into the community of practice, wherein students learn about the culture, vocabulary, and norms of the profession and particular workplace. Bloom (1985) writes about the arts:

We probably cannot overestimate how important the artist-teachers were to the process of exceptional development. They not only created a context for successful learning (inspiring, modeling, setting high standards), but they also provided individual assistance and encouragement in many different ways. Teachers told students about special summer programs (one at Skowhegan and another at Yale, for instance) and arranged for them to take part in these intensive workshops. These programs exposed the students to other professional artists and serious students, and to the different perspectives different artists bring to their work.” (Bloom, 1985)

In addition, relationships allow for the transmittal of “tacit knowledge” and “tricks of the trade”. (Billett, 2010). Billet writes:

There are also other forms of direct guidance by more experienced co-workers such as their providing partially worked examples or half complete tasks, and

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See <https://www.wested.org/resources/california-state-plan-for-career-technical-education-56230/>

the use of direct instruction. This form of guidance is exemplified in instances of more expert partners engaging in 'hands on' interactions with novices. These can comprise their holding and guiding of the novice's hands when performing tactile tasks, to assist the novice to achieve the desired outcome. This guidance can also include the use of artefacts, such as notation systems for making lace as being a basis by which novices could come to learn the task of lace making (Makovichy, 2010). Yet, it is noteworthy that very few instances were identified where direct inter-personal engagement and guidance by experts occurred. Where it did occur... it was usually focused upon the expert assisting the novice do something that they might find difficult to learn by themselves... This goes directly back to... the difficulty of learning skills which are richly honed and are difficult to articulate. There were also other kinds of contributions made by more experienced workers including the use of tricks of the trade or heuristics (Billett, 1994) to assist the effective enactment of practice and bases for effective performance, as well as the mnemonics used by doctors, for instance (Sinclair, 1997), to assist novices develop schemas for undertaking their tasks. (p. 11)

All of this constitutes access to “social capital.” Stanton-Salazar defines social capital as resources and social support embedded in an individual’s network or associations and accessible through direct or indirect ties with “institutional agents.” Institutional agents are “high-status, non-kin, agents who occupy relatively high positions in the multiple dimensional stratification system, and who are well positioned to provide key forms of social and institutional support to youth,” including information, resources and empowerment (Stanton-Salazar, 2010, p. 21; Zimmer-Gembeck & Mortimer, 2006). Social capital in the domains of postsecondary education, career, and civic life gives students access to information and relationships that can make the difference between success and failure in their encounters with college, employment, and civic institutions. This is particularly true for young people who are the first in their families to go to college, choose a career, or engage in political activity (Darche & Stam, 2012). It is in building social capital as researched by Karen Arnold (Washor, E., Arnold, K.D., & Mojkowski, C., 2008) in her Longitudinal Study of students from Big Picture Learning schools that she found that high percentages of students had work from the internships they had while they were in high school. Not only did they have the diplomas and certifications but they also had the access to work through relationships built at Big Picture Learning’s intensive internship program while they were in high school.

In short, interest, practice, and relationships enacted “in situ” in authentic workplace contexts can catalyze a virtuous cycle of well-being and “increasingly extraordinary” outcomes.

ASSESSMENT OF LEARNING

Central to the Harbor Freight program is a shift in the pedagogical paradigm: from teaching to learning; from standardized to personal; from curriculum-driven to student interest-driven; from classroom to applied setting; passive to active; and solitary to relationship-supported — reflecting the ways that people really learn (NRC,

2000). Assessment, which both measures learning and spotlights what is important, must be aligned. In the Harbor Freight program, assessment not only goes beyond multiple choice tests, it also goes beyond discrete “performance tasks.” In Harbor Freight fellowships, “knowledge is embedded in the skills,”...and “the ‘performer’ is thinking through doing and doing through thinking, formulating and testing heuristics for addressing challenges in a system full of assessment checks and balances where self-assessment is balanced with judgments from a community of assessors — peers and expert practitioners as well as traditional teachers” (Washor & Mojkowski, 2018). The fellowship program begins the assessment and personalization of learning with an entering interview, to fully understand students’ interests, academic, cultural, social-emotional, and health needs, their progress in various domains, and their personal stories (Washor, 2018). Then, throughout the fellowship both teachers and mentors, as well as the fellows themselves, provide information on an ongoing basis, both formally — through surveys and assessments of growing interests, practice, relationships, and a variety of burgeoning outcomes — and informally, through continuous dialogue.

EXPECTED OUTCOMES

The HFFI program not only expects to deepen students’ interests, help them hone their practice, and help them build networks and social capital in the short term. It also aspires to strengthen students’ technical skills, develop their social-emotional skills, and build their career knowledge and navigational skills as the foundation for long-term success. Some of the long-term benefits of situated learning such as offered through HFFI are described below.

Through deep practice, relationships with mentors, and participation in communities of practice, students learn technical skills and “tricks of the trade” that are impossible to learn in a classroom alone.

Further, as mentioned above, recent discussions about “college and career readiness” are revealing interest in a set of dispositions and skills beyond academic proficiency in English Language Arts and mathematics as contributing to student success — career readiness as well as college readiness (NRC, 2012; Darche & Stam, 2012; Mattern et al., 2014). Among these are included both intra- and interpersonal skills (NRC, 2012). Engagement with a community of practice can provide the opportunity for students to learn many intra- and interpersonal skills needed for long-term success in both postsecondary education and careers — skills such as initiative and the ability to work with diverse teams. These skills, alluded to in the Common Core State Standards, but very explicit in such frameworks as proposed by the Partnership for 21st Century Skills (P21), may be easier to learn — and assess — through real work situations, where students are expected to solve problems as they come up, and work effectively with colleagues come from diverse age groups and cultural backgrounds (Darche & Stern, 2013).

The Organisation for Economic cooperation and Development (OECD) corroborates these findings. With “learning” rather than employment as its focus, *Learning for Jobs* concludes that, done well, immersive work-based learning, such as offered by HFFI, appears to be the best way for the majority of young people to prepare for the world of work. As the report explains, workplaces provide a good place to learn both hard technical skills on modern equipment and the interpersonal and intrapersonal skills needed to work with people in a real-world context (OECD, 2009).

Development of workplace “navigation” skills are also needed for long-term career development. (Darche & Stam, 2012; Farrington et al., 2013; Mattern et al., 2014). “Workplace navigation skills” include how to talk to a supervisor or understand what behaviors will lead to a promotion. These are difficult to learn without direct exposure to the workplace, just as college navigation skills are difficult to learn without direct exposure to college campuses (Conley, 2011) — especially for students whose parents have not worked in the US, or have not worked in the professional environment to which the students aspire. “Navigation skills” also require some understanding of the career options and paths beyond the initial experience. While these can be explained didactically, situated learning theory posits that students will learn this information more effectively through engagement with the community of practice and access to professional networks.

The Harbor Freight Fellowship Initiative is currently examining the outcomes of the fellowship program in the three areas described above: technical skill, social-emotional development, and career knowledge and navigational skills, in addition to assessing growth in interest, practice, and relationships, with new tools and approaches. Evaluation results have shown growth in all areas. “We’ve learned these things because we’ve asked the right questions of our students, their peers, their teachers, and others, and because we have made it a priority to assign mentors to collect such information, observe students in school and at work sites, and keep an eye on progress over time (Washor, 2018). Ongoing assessment and evaluation will continue to shed light both on how students learn in authentic “situated” settings and the results programs like the Harbor Freight Fellowship Initiative can achieve in supporting students’ career development and well-being. In “expand[ing] our understanding of what young people can do”, it can serve as a model for all CTE programs, reflecting a wider “vision of success” (Washor, 2018) in the 21st century.

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