“Education Goals and Strategies For the 21st Century: Building Blocks in a “Just-in-case Toolkit” of Human Capital”

Paper prepared for presentation at the Knowledge Crossing Borders Conference West Chester, Pennsylvania, June 1, 2012

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ABSTRACT

Recent environmental and workplace changes are reshaping the types of skills and knowledge that have currency in the labor market today. Examples of significant workplace changes include the evolving use of information technologies in the workplace, the increasing application of flexibility and team structures within organizations, and the resulting effects these changes have for employment relationships and professional careers. Industry, organizational, and employment changes should have implications for the curriculum taught in educational institutions at every level. Specifically we respond to the issue of how should academic curriculum be reshaped to be more responsive to these new economic changes to better leverage the success of our students. In the more volatile economic environment that our students face, we argue that academic curriculum needs to emphasize and address human capital—both knowledge and skills—that is transferable from one workplace context and institutional role to another. In this paper, we begin to operationalize important types of transferable human capital in the 21st century workplace. We conceive of our curricular strategy as preparing students with a “just-in-case toolkit” of transferable human capital skills that will more successfully prepare students for a variety of professional roles in the post-industrial workplace. In conclusion, we briefly address the challenges moving forward with a human capital agenda in education.
INTRODUCTION

The stable, hierarchical and bureaucratic organization grew and came to predominate in the early to mid 20th century when the US economy and American companies were growing. Our system of public education was institutionalized during this time as well. Because of the stability in the US economy and in organizations during this time, public education systems did an effective job of preparing students for common roles in and across job silos—for example, assembly and clerical roles or progressive levels in professional management—that experienced relatively little change within bureaucratic organizations during these glory years of the American economy.

The economic context of today’s post-industrial period in America differs significantly because of the economy’s increasingly global, technical, and volatile nature. To remain successful in an economically volatile environment, organizations have been changing by instituting greater flexibility, developing more team structured organizations, and they have been embedding technology in most business processes to make them more responsive, effective, and less costly to produce. Corresponding to these structural changes, the content and work requirements of many job roles within organizations now differs significantly as well. Industrial workers who produce material things have generally been replaced by professional, technical, managerial, and sales (PTMS) workers who produce information, knowledge, and they deliver services. PTMS workers now represent a majority of the American work force. Contrary to the image of the “organization man” depicted in the 1950s, jobs and careers in the post-industrial economy are also much less secure and stable (Whyte XXX). On average, professionals can expect to change jobs over a career about XXX times and “retool” themselves at least three times (Sennett 1998 and 2012).

Educational institutions, to the contrary, have not kept pace with these changes. Stories about the ill-preparedness of today’s high school and college graduates for skilled trades and technical professional jobs have become increasingly common. As scholars who have occupied teaching, academic, and career advisement roles in public university systems, we acknowledge the criticisms of traditional goals and strategies commonly used in academic education and we have responded with a call for changes that make our educational systems more responsive to the new economy and a better guarantor of student success (Zalewski and Shaffer 2009). We recognize that our system of education, at all levels, would benefit from a realigning of academic goals, philosophies, and dominant pedagogies that will develop the appropriate skills and special knowledge that help to leverage success for students in professional careers in a continuously evolving, post-industrial workplace.

How should academic curriculum be reshaped to be more responsive to these new economic changes to better leverage the success of our students? In the more volatile economic environment that our students face, we argue that academic curriculum needs to emphasize and address human capital—both knowledge and skills—that is transferable from one workplace context and institutional role to another. In this paper, we begin to operationalize important types of transferable human capital in the 21st century workplace. We conceive of our curricular strategy as preparing students with a “just-in-case toolkit” of human capital that will more successfully prepare students for a variety of professional roles in the post-industrial workplace. In conclusion, we briefly address the challenges moving forward with a human capital agenda in education.
BACKGROUND ON THE ISSUE

The shift to an information society is commonly recognized as a new and defining feature of our post-industrial era. The digitization of the workplace allows most workers to link to a common virtual platform using a personal computing device and quickly input, analyze, and respond to electronic information. Similarly, the personal use of digitized mobile devices, applications, and websites that function for social networking continues to add to the proliferation of information. In this post-industrial era, a majority of the labor force now work in roles that require acting upon this continuously accruing and evolving body of information and data. Professional, technical, managerial, and sales workers (PTMS), who help to collect, analyze, and use this information, now represent a majority of the American labor force (BLS 2001). In these job categories information, knowledge, and service work involves complex abstract thinking skills using special knowledge about the industry and internal knowledge about the firm. Professionals involved in PTMS roles in the post-industrial workplace have traditionally prepared for the complex skills and special knowledge they will need by completing a baccalaureate degree and/or technical certification program. Ideally, this human capital, over time, is augmented by special knowledge and skills gleaned from ongoing on-the-job experiences, professional development activities, and from doing “stretchwork” (XXX).

Another central feature of the information society is ongoing workplace restructuring and its effects on organizations. Very simply, flexibility has been increasingly required of the organization of work because of the greater competition and risks that manifest in a global and digital networked economy. Typically, flexibility is embedded in relationships between organizations. An organization also applies flexibility internally, through projects, deadlines, and teams, by continuously reorganizing parts of their business and their business processes to become more responsive, automated, efficient, and less costly to produce the work. The flexible organization introduces greater contingencies in employment and jobs across the professions. In earlier work, we have used the military acronym VUCA and used the term VUCA environment to describe the economy and its effects on professional labor markets (Shaffer and Zalewski 2011). Greater contingencies, risks, and “accidental career” paths punctuate employment, jobs, and careers today (Sennett 1998; Zalewski and Shaffer 2011). Increasingly, work is perceived by professionals as short-term, temporary, or contingent (XXX). Earlier, we have described the implications of an information society and a VUCA environment on professional workers (Shaffer and Zalewski 2011). In advising, students should be instructed on the need to take a more proactive approach to the management of “portfolio careers;” a collection of facts and evidence of the special knowledge and skills they have obtained in their coursework and in various professional roles over their emergent careers.

In this paper, we begin the process of articulating the types of special knowledge and transferable skills that represent valuable human capital in professional labor markets in the 21st century post-industrial workplace. It is our hope to begin making the case for the institutionalization of a transferable “just-in-case toolkit” of human capital in curricular goals and strategies at all levels in education.

THE ISSUE: HOW TO DIRECT ACADEMIC CURRICULUM?

To better ensure the success of students in professional work, in an earlier publication we
asked, when will education institutions become more responsive to the easy availability of new information and new realities in the post-industrial workplace (Zalewski and Shaffer 2009)? We argued that academic goals and practices would benefit by instituting a more “just-in-time” framework to reflect evolving roles, skills, and knowledge in the post-industrial workplace and information society. After some reflection on this thesis and after examining the state of scholarship on educational reform, we argue here that the more important question for academic administrators and educators to address is: What becomes the essential background, the “just-in-case” context that will be beneficial for students to know in order to prepare for different types of work in the 21st century? What curricular goals and strategies need to be developed and instituted?

For theoretical and practical reasons, we argue that the human capital concept and theory can usefully inform education reform. Human capital represents both an effective way of conceiving of the types of skills and special knowledge that have currency in the post-industrial economy; e.g., the knowledge and competencies that add value to organizational goals such as the coordination of work, productivity, and profitability. We argue that human capital is also a useful way to operationalize the types of skills that prepare students for successful careers in an information, service, and knowledge society. Human capital skill development should shape the curricular goals and dominant pedagogies in education at all levels. And so, more specifically, we ask the question: What constitutes the necessary background, the core knowledge and competencies—a transferable skills “toolkit” of human capital—for further learning? In the remainder of this paper we begin the task of describing and operationalizing the initial building blocks of transferable skills that represent, we show, valuable “just-in-case” human capital in the 21st century workplace.

“JUST-IN-CASE” TRANSFERABLE HUMAN CAPITAL SKILLS AND KNOWLEDGE

Based upon the post-industrial characteristics of the economy, labor markets, and professional careers today, we describe initial building blocks of transferable skills that represent valuable “just-in-case” human capital in the 21st century workplace. The transferable skills we describe below include: 1. project management and teamwork skills; 2. leadership skills; 3. social or “dialogic skills” in conversation; and 4. the habits of reflection and imagination. We operationalize each of these transferable skills by giving specific examples of what we mean by these concepts. In these descriptions, there is cross-over between these types of transferable human capital.

To develop the initial building blocks of transferable human capital skills and knowledge in the 21st century workplace, we use sociological theory on the interactional basis of social life; scholarship on organizational, technical, and social changes to work and the workplace; empirical facts from nonpartisan sources like the Bureau of Labor Statistics; and facts on the common qualities that employers look for in the vast majority of their job candidates. The last source of facts comes from the “Job Outlook 2011” NACE survey of colleges and employers, which is conducted annually to determine the common qualities or aptitudes that employers say they are seeking in prospective job candidates.

"Project Management and Teamwork Skills Operationalized"
The first building block in a toolkit of “just-in-case,” transferable human capital is a combination of project management and teamwork skills. In the sociological work literature, projects, project deadlines, and teams are well-noted features in the post-industrial workplace. They represent new management strategies to coordinate, control, and manage the process of organizational change (see, for example, Barker 1993; Graham 1995; Murakami 1997; O’Riain 2002; and Smith 1996 and 1994).

Business process reengineering is a common way that managers frame organizational change. It involves the systematic and detailed examination of work flows to reengineer them so they become more responsive, standard or automated, and less costly to produce and deliver. Work like business process reengineering typically falls under the purview of timelines, projects, and project managers. Teams, tasked with project goals and outcomes, are drawn from various areas of the organization and are assigned the parts of the project that correspond with their expertise or internal knowledge of the company. Teams must have effective leaders, or project managers, who have an understanding of the big picture—including the roles and people who represent important points for interaction while completing the work. Project managers are also charged with defining the scope of work, delegating assignments, developing possible solutions and testing them, facilitating feedback or accountability loops, making regular reports and recommendations, and instituting a new, more efficient and less costly way of doing particular work. Project management and teamwork skills, therefore, represent transferable human capital in the 21st century workplace. Operationalizing them by describing their central elements can help reshape academic goals and predominant pedagogical strategies to better prepare students for these common requirements across professional roles in the 21st century workplace.

Several Job Outlook 2011 qualities from the last NACE survey correspond with the growth of project and teamwork and can be effective ways of operationalizing project management and teamwork skills. These qualities include:

- the ability to plan, organize, and prioritize work
- technical knowledge related to the job
- the ability to obtain and process information
- the ability to analyze quantitative data
- editing and reporting skills.

Most of these skills and special knowledge represent important facets of work in business process reengineering, which explains—in part—why project management and leadership skills represent a transferable “just-in-case” human capital trait.

In addition to the NACE qualities that correspond to project management and teamwork knowledge and skills, we would add the following:

- the ability to understand the big picture.

By this, we mean important contextual features in the work environment like statuses, roles, and relationships and having a historical sense of events in the organization, their significance, and other special features that will help to move the work forward.

Finally, to move work forward, project managers also need to be

- process oriented.

Someone who is process-oriented recognizes when to foster innovative thinking by helping to facilitate “dialogical conversations” (Sennett 2012) among team mates as they think about an issue and develop an expert but fresh approach to resolving it. A process-oriented project manager will also perceive social and technical points of interaction along the entire length of the work flow. For example, instead of addressing a problem at the point in the work flow where it
arises, a process oriented project manager will recognize that the problem probably begins in an earlier part of the work process. Conversely, a process oriented project manager will recognize that the part of the work flow they are responsible for will have consequences for departments that interface with the work further down the line. For example, a modification that is made to resolve a problem in the clinical systems at a hospital could cause a problem for an administrative department down the line, like billing. The hospital would incur unnecessary costs from the wages of technical staff that need to be directed to resolve the problem, from the down-time of the application, and possibly from lost revenue from a complete technology system’s failure. Because of the integrated nature of technical systems in the professions, therefore, a process-oriented project manager will know when it is necessary to impose more structure on teams and what form that structure should necessarily take.

Leadership Skills Operationalized

The second building block in a transferable “just-in-case toolkit” of human capital is leadership skills. Leadership is a central part of formal organizations, residing all the way from the top levels of the elite executives to the first level supervisors at the bottom of hierarchies. Leadership is also present in the team work that constitutes a significant part of jobs and careers across the professions today. In teamwork, leadership typically resides in the role of the project manager. We draw on several sources to operationalize what we mean by leadership skills.

An obvious responsibility in any leadership role is:

- the ability to make decisions and solve problems (NACE 2011).

This quality implies that persons are able to do the necessary analysis of problems, know where to go to get their questions answered correctly, have an understanding of the type and availability of resources, and develop and implement logical solutions.

In terms of individual productivity and organizational performance, economic organizations’ scholarship shows that it is better to manifest “consummate cooperation” from personnel as compared to “perfunctory cooperation” (Blau XXX; Williamson XXX). In our research, professionals embody consummate cooperation when they speak about “going the extra mile” and staying very late to solve problems or help out another colleague because of the high commitment levels they have to coworkers and employers. Perfunctory cooperation can be described as “doing what needs to be done and squeaking by...” Organizations run more effectively and more productively when leaders consciously foster consummate cooperation among colleagues. When colleagues “go the extra mile” as significant problems arise, they reduce the costs from these problems. They are more productive, and some future problems are likely avoided because employees become more proactive and quality conscious when they perceive that their leaders are recognizing and showing high levels of support for their work (Mayo XXX). Effective leadership, therefore, entails the skill of:

- being able to foster the ongoing loyalty, commitment, and cooperation of team members.

This corresponds closely to an important quality employers say they seek in prospective job candidates (NACE 2011).

- The ability to sell, [motivate], or influence others.

The skillful influence over others likely arises from a combination of demonstrated rationality, charisma, and fealty in leadership processes, decisions, and the resources and respect that this garners from others (Weber XXX; Jackall XXX).

Finally, effective leadership skills would also include the:
After informally questioning some professionals we know in leadership roles (e.g., chief applications officer, administrative manager in a regional government role, purchasing director, sales director for media services), the vast majority said “their ability to pick good people” is the most significant reason for the upward mobility they have experienced in professions. This makes sense. While leaders make decisions, team members will be the ones responsible for carrying out the work. Leaders who have effective team members will look more effective to higher levels in their management silo. More likely, they will be considered when upward opportunities occur within firms or they will be able to draw on their successes in professional roles to open up opportunities elsewhere.

Social or “Dialogic Skills” in Conversation Operationalized

Because of the greater social and discretionary nature of work across the professions, a third pillar in a “just-in-case toolkit” of transferable human capital has to include what are commonly called “soft skills.” We prefer to call them social or “dialogic skills” in conversation, following Richard Sennett (2012). Using social theory—which places the social aspects of economic and everyday life under analysis—and our sources for important facts on post-industrial jobs and careers, we identify important characteristics that fall within the category of social or dialogic skills in conversation to show what we mean. Our aim is to demonstrate why these skills and knowledge are important and represent transferable human capital across the professions.

An important quality of any form of social organization, from an informal social group to a large formal institution, is:

- Reciprocity (Whyte 2008; cultural anthropology references XXX).

Reciprocity typically implies the sharing of material objects or the exchange of favors between people. The latter is captured in the conventional saying, “I’ll scratch your back if you scratch mine.” We would add that reciprocity also mandates a trading or sharing of attitudes, conversation styles, and status signifiers. For example, classic sociological theories about micro-level interaction in social groups argue that participants in conversation move between actions conceived of as “deference and demeanor” (Goffman 195X) and/or “faithfulness and gratitude” (Simmel XXX). Because reciprocity is such a central part of social groups overall and of team work specifically, it affirms the importance of establishing and participating in reciprocal relationships in the workplace. Thus, reciprocity represents an important transferable human capital skill there.

Another important attribute of social skills in conversation is clearly identified in the NACE survey (2011), which—year after year—consistently finds that employers want job candidates who have the:

- Ability to verbally communicate with personnel inside and outside the organization.

This quality relates to the shift in our economy to information, knowledge, and service work, which we described earlier. Professionals at various levels and in different silos of the firm can expect to interact regularly with colleagues and clients as part of their job to produce and deliver information, knowledge, and service work. Because of the more temporary and short-term nature of work today, we would also argue that professionals need “the ability to adopt the local cultural language.” This was how one professional subject succinctly stated it. Cultures across organizations vary. So too, personnel in a given profession but located in different firms may
talk about the same thing in a different way. The study of pragmatics also suggests that when communicating with others people demonstrate skill when they use language appropriate to the relationship. For example, the conversation that two colleagues of an equivalent status have will use language signifiers recognizing the relationship as peers in comparison to a conversation involving a super- and subordinate. The former would be expected to use language that conveys status and a particular demeanor and the latter will use language signifying deference. Because the workplace today is predominantly centered upon producing and delivering knowledge and services, because culture tends to vary according to locale, and because most conversations take place between people with varying statuses that require different language use, the ability to effectively communicate across the conversation spectrum (i.e., with different people, in different contexts, about various things...) depends on complex knowledge and skills. Therefore, it represents an important transferable skill in post-industrial society.

The next attribute in the category of social skills is:

- “dialogic skills” in conversation (Sennett 2012).

The importance of dialogic skills in conversation can be traced to the changes in our culture, economy, and organizations. There is no denying the demographic changes taking place in our society. In a demographically and culturally changing society and professional workplace, we would expect for people to become more conscious of difference and for tolerance of diversity to grow. To add, the opportunities and new ideas that arise when people with diverse backgrounds and perspectives interact are qualities and outcomes that formal organizations say they now embrace. From their perspective, new ideas and innovations are often sparked by differences and by discussing the different ways of perceiving the same thing.

What is meant by “dialogic skills” in conversation? Dialogic skills, according to Richard Sennett (2012), include: “being attentive; listening; demonstrating empathy and indirection.” Both Sennett and professional friends caution that listening and interpreting what others say always includes “the unsaid,” or “the ability to track conversations.” The unsaid represents content that others assume, brush over, or fail to connect from one part of the stated to another. It also includes “the expressions, silences, offhand suggestions, and connotations” in conversations. As this implies, dialogic skills in conversation depend upon one conversant knowing the other well enough so they can better infer—based on past experiences and by demonstrating empathy—what is not being specifically stated. Dialogic skills in conversation are also characterized by cooperative exchange that, instead of working to produce a synthesis of two divergent set of ideas into one idea (a “dialectic conversation”), leads to greater understanding of divergent perspectives. Perspectives and minds are not expected to conform into one stream of thought in dialogic conversations. Rather, a conversant in a dialogic conversation will be open, recognize, and respect the diverse perspectives of others. To reiterate, in a diverse and more tolerant social world and in an economy and organizational environment that seeks innovative ideas, dialogic skills represent a transferable human capital skill in the post-industrial workplace.

Another way that social and “dialogic skills” in conversation can be operationalized is:

- Emotional and political labor skills.

The term emotional labor was popularized in sociology because of the growth of service work in the 1970s (Hochschild XXX). An important part of the labor workers provide in the service delivery process is the conscious acting upon and display of positive emotions. Emotional labor has economic value across service professions and work. We have stated that the Millennial generation often does not recognize the value of doing emotional labor in the workplace
We would add political labor skills also represent an important human capital skill today. For various reasons, the workplace is increasingly a political place. Professional work requires discretion, for example, but getting support for the work a professional is doing can be challenging. Professional work is often organized around teams, which can be very political (XXX). Most post-industrial workplaces operate much leaner than they once use to (the recession has made this fact worse, as it is generally acknowledged that the people cut during the recession never made their way back to old jobs when the economy improved). The workplace has become even more of a “greedy institution,” as the time people spend at their jobs and work increases for a greater proportion of the American work force. Finally, more jobs are contingent. For these reasons and for the psychological effects all of these conditions can have on professionals, political skills such as the ability to negotiate can be expected to play an important role in the control one has over the conditions and resources of their work, in maintaining job security, and experiencing job opportunities and mobility. Therefore, the ability to negotiate the political landscape in jobs and through careers represents transferable human capital knowledge and skills in the 21st century workplace.

A final way of operationalizing social or dialogic skills in conversation includes:

- The ability to foster authentic relationships and social networks.

Relational and social networking knowledge and skills are important today for reasons that relate to both the characteristics of the post-industrial workplace and individual security, well-being, and professional opportunities such as job mobility. The post-industrial workplace is characterized by more team organization and greater contingencies in the job. Strong relationships with colleagues that are based on faithfulness and gratitude, for example, are necessary for the creation of consummate cooperation and coordination in social organizations (Blau XXX). Organizational effectiveness also relies on strong, effective working relationships among personnel. Social networks, especially “weak social ties,” have been empirically proven to lead to greater job mobility (Granovetter XXX) and can be expected to improve job security and positive well-being. Therefore, the ability to foster authentic relationships and develop social networks of strong and weak social ties represents valuable human capital knowledge and skills in the post-industrial workplace.

Habits of Reflection and Imagination Operationalized

The fourth building block in a “just-in-case toolkit” of transferable human capital is what we call

- habits of reflection and imagination.

By reflection, we mean the ability to think back and critically analyze why things did not turn out as we might expect. Reflection involves reflexivity, the ability to analyze our self and our behavior, to ask: how did we contribute to a particular project outcome, problem, or system failure? By imagine, we mean being able to take time to reflect upon how things could have gone better. Also developing the habit of imagining how a profession will fit one’s personal likes, satisfactions. This should also lead into exploration of the scope of particular roles in a profession by talking to persons occupying them, shadowing a professional, or interning within a work environment. Developing habits of reflection and imagination benefit organizations, for example the organizational change process, and professionals, in terms of better career decisions. For these reasons, developing habits of reflection and imagination represent transferable knowledge and skills for professional jobs and careers in the post-industrial workplace.
THE CHALLENGES MOVING FORWARD

The longstanding debate on the vocationalism of academics

Identifying curricular goals and pedagogical strategies

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