

A Human Capital Approach to Career Advising

Leigh S. Shaffer, Downingtown, Pennsylvania
Jacqueline M. Zalewski, West Chester University

We began this series by addressing the challenges of career advising in a volatile, uncertain, complex, and ambiguous environment. In this article, we define human capital and suggest that advisors encourage students to utilize the principle of maximizing human capital when making decisions. We describe the personal traits and attitudes needed to succeed in the new economy as well as the working lifestyle of continuous, lifelong, self-directed learning that characterizes knowledge workers of today. We also emphasize the strategic importance of acquiring the transferable skills that allow workers to move from one job opportunity to another, and we advocate advisors helping students develop the habit of documenting their human capital development by starting portfolios early in their college careers.

KEY WORDS: advising approaches, boundaryless careers, educational planning, portfolios, protean careers, VUCA environment

Many, if not most, of today's college students will hold jobs in their lifetimes that do not exist today (Gioia & Herman, 2005). In all probability, these jobs, as well as many of those currently recognizable, will not be associated with a traditional career ladder (Arthur & Rousseau, 1996; Bernstein, 2003; Lautsch, 2002; Lazarova & Taylor, 2009; Royal & Althausen, 2003; Waterman, Waterman, & Collard, 1994). In fact, the preponderance of evidence suggests that young workers entering the knowledge-driven economy should not expect traditional careers (Cooper, 2002; Hall, 1996a, 1996b, 1997; Hall & Moss, 1998; Nash, 1994; O'Mahony & Bechky, 2006; Mihail, 2008; Shaffer & Zalewski, 2011). In this climate, the phrase *career advising* is, at least, a misnomer for the services that academic advisors should offer in the 21st century. The substance of academic advising in the current climate must be radically revised to serve the needs of current and future students who are planning to participate in the postindustrial economy.

While American colleges and universities were not created as vocational institutions (Grubb & Lazerson, 2005), and the college community still offers higher learning for its intrinsic value,

preparation for entry into the labor market is of paramount importance for the vast majority of college students (and their parents). Indeed, informed discussions of parents' interests in higher education suggest that parents view a college education as an economic investment on which they expect some return (McCalla-Wriggins, Hughey, Damminger, & Nelson, 2009). The clearest demonstration of students' and parents' belief that a college education is an economic investment is their willingness to incur debt to pay for it (Murray, 2007). Parents and students expect that a college education will increase graduates' prospects for employment and enable them to find work lucrative enough to repay the student loans (including accrued interest) and maintain an attractive level of earnings over their working lifetimes. (See Shaffer [1998b] for an algorithm for estimating the true costs of a college education as well as estimating the length of time needed to amortize the costs.)

Academic advising without career advising builds a bridge to nowhere, and academic advisors know it: When polled, nearly 84% of academic advisors reported that they needed to know more about the changing workplace and its implications for their students, and 78% reported that they needed to know more about how to integrate career advising and academic advising (Hughey & Hughey, 2009). This concern also runs throughout the essays collected in NACADA's recent publication of *The Handbook of Career Advising* (Hughey, Nelson, Damminger, & McCalla-Wriggins, 2009). While this new volume is filled with current and valuable information about career paths as well as thoughtful and practical advice about the process of integrating career advising into academic advising sessions, the need remains for a coherent philosophy within which to frame and present student development and decision making with regard to career choice. In this article, we suggest one such philosophy: a human capital approach to both academic and career advising.

In the previous article in this series (Shaffer & Zalewski, 2011) [pp. 64–74], we surveyed the literature on the disappearance of careers in the postindustrial economy and through the lens of a volatile, uncertain, complex, and ambiguous (VUCA) environment, and we suggested long-range, strategic

planning as a framework for understanding the challenges facing students and advisors regarding vocational and professional planning. In this article, we redefine career advising in line with a human capital approach to academic advising (Shaffer, 1998a, 1998b, 1997/2009). Because it meets the specifications of the *new contract* (Arthur & Rousseau, 1996; Cooper, 2002; Hall, 1996a, 1996b; Hall & Moss, 1998; Handy, 1996; Lazarova & Taylor, 2009; Mirvis & Hall, 1994; Nash, 1994; Sullivan, 1999), under which employers provide opportunities for workers to grow and learn new skills in place of offering long-term job security, the human capital philosophy offers coherence to academic advisors' efforts on a student's behalf. We make a series of concrete and practical suggestions for advisors working with students making academic decisions that can serve as the platform for a lifetime of employment and success.

The Human Capital Approach to Academic and Career Advising

Today, however, upon graduation, students are no longer asked, "What courses did you take and pass when you were in college?" Instead, the question has shifted to "What do you know and what can you do?" (DiConti, 2004, p. 172)

Human capital, a term from economics, has been used by observers in a variety of fields to understand the economic value of many forms of learning, especially the learning outcomes of formal course work and college degrees. It is defined as any characteristic of a worker that contributes to his or her productivity and was recently offered as a unifying theme around which to develop a theory of academic advising (Shaffer, 1997/2009, 1998a, 1998b). A description of any individual's human capital highlights the person's special knowledge (what do you know?) and skills (what can you do?), regardless of whether the knowledge or skills came from formal education or from any other source such as work-related experience. Shaffer advocates advising that encourages students to maximize their human capital as an explicit criterion for making every significant academic decision. He described the human capital approach as follows:

The appropriate question for students to ask of each choice is, "What does this choice contribute to the building of my human capital?" Students should realize that every choice has consequences for human capital, and be aware of those consequences in making those choices.

Choosing a science course with a laboratory over a survey course with no laboratory can increase a student's human capital. Choosing one section of a course that is writing-intensive over one that uses only objective testing can increase a student's human capital. Choosing an elective that offers a skill or specialized body of knowledge over an elective that offers only an interesting topic can increase a student's human capital. This principle should not be slavishly applied, but it is one useful criterion to keep in mind when making the dozens of decisions that chart the course of a student's progress toward a baccalaureate degree.... Such considerations are at the heart of the developmental model of academic advising. (Shaffer, 1997/2009, p. 104)

While Shaffer initially explored the human capital approach in the context of student progress toward a baccalaureate degree, his articles hint at a broader significance for it, such as for career advising, as well: "Each time the principle of maximizing human capital is considered, students are actively engaged in considering their futures and the preparatory role of their current educational activities" (Shaffer, 1997/2009, p. 104).

The expression "investment in human capital" refers to any actions taken to increase the productivity of a worker. Most academic and career advisors would argue that formal, postsecondary education is the preeminent form of such investment (Kivinen & Ahola, 1999). Following Schultz (1961), Shaffer (1997/2009) identified five categories of human capital investment. In addition to formal education, a worker's productivity is affected by health, geographic mobility, adult education, and on-the-job training (OJT). Health and geographic mobility are extremely important in each worker's life, but we refer the reader to Shaffer's discussion of these factors and will not comment further on them in this article. While adult education and OJT remain important investments in human capital, these categories no longer exhaust the possibilities now available (Eisner 2010a, 2010b). Additional categories of investment include informal learning, stretchwork, and networking (social capital).

Emerging trends in career trajectories under the new contract include, among others, the commonly discussed *protean*, *boundaryless*, and *portfolio* careers (Shaffer & Zalewski, 2011) [pp. 64–74]. *Protean* refers to the transformed personal qualities of the worker; *boundaryless* describes the transferable skills of the worker; *portfolio* relates to the

enhanced requirements for building and documenting a worker's human capital.

Personal Traits and Attitudes

In the industrial economy, formal educational credentials and OJT provided the means for finding entry-level work and maintaining lifelong employment in a traditional career (Shaffer, 1997/2009; Shaffer & Zalewski, 2011 [pp 64–74]). In the knowledge-driven, postindustrial economy, rapid obsolescence of job skills and specialized knowledge culminates into a need for workers who can reinvent themselves and manage their own careers, and criteria based on personal traits and attitudes, major components of human capital, supplant the once-important formal credentials in employee recruitment.

Hall heralded the new era of protean careers in these words:

The business environment is highly turbulent and complex, resulting in terribly ambiguous and contradictory career signals. Individuals, perhaps in self-defense, are becoming correspondingly ambivalent about their desires and plans for career development. The traditional psychological contract in which an employee entered a firm, worked hard, performed well, was loyal and committed, and thus received ever-greater rewards and job security, has been replaced by a new contract based on continuous learning and identity change, guided by the search for what Herb Shepard called “the path with a heart.” In short, the organizational career is dead, while the protean career is alive and flourishing. (Hall, 1996b, p. 8)

Proteus, the shape-shifting Greek god, is the fitting icon for the worker best suited to handle the challenges and opportunities of a VUCA environment. The traditional psychometric approaches used to match student traits and attitudes to major and career selection will prove increasingly useless because stability will define neither the future workplace nor the worker (Arthur & Rousseau, 1996; Bright & Pryor, 2005; Hall & Moss, 1998; Sullivan, 1999; van Vianen, De Pater, & Preenen, 2009). While in the past academic psychologists typically believed that personality traits were set after childhood and adolescence, like plaster that had dried (Dweck, 2008; Roberts & Mroczek, 2008), contemporary schools of thought, such as *positive psychology*, suggest that individuals can continue to consciously grow and develop in adaptive ways (Seligman & Csikszentmihalyi, 2000;

Seligman, Rashid, & Parks, 2006).

Psychologists use the term *proactive personality* (Bateman & Crant, 1993; Crant, 2000; Thompson, 2005) for the profile of adaptive traits demanded by the new contract. Workers with proactive personalities take initiative to affect positive changes in the organization and to manage personal growth (Bateman & Crant, 1993; Crant, 2000; Thompson, 2005). Academic advisors need to help students see the need to develop a realistic sense of their current traits and attitudes before cultivating those that will serve their continuing adaptability in the future.

A composite picture of the desirable personality traits and attitudes that promote success in a protean career is growing more clear (Arthur & Rousseau, 1996; Bateman & Crant, 1993; Bridgstock, 2009; Crant, 2000; Dweck, 2008; Friedman, 2005; Gelatt, 1989; “In the thick of it . . .,” 2007; McWilliam & Haukka, 2008; Parker, 2008; Sullivan, 1999; Thompson, 2005; van Vianen et al., 2009; Waterman et al., 1994). Students willing to grow in ways that will benefit their employability should strive for the following:

- extraversion—seeking new experiences and activities;
- conscientious—setting and persistently striving for goals;
- openness—willingness to learn, flexibility in viewpoints, and tolerance of new ideas;
- adaptability—willingness and ability to change behavior to meet new demands;
- tolerant of ambiguity—acceptance of limited understanding and recognition of contradiction;
- intrinsic career motivation—a self-starter;
- resiliency—appropriate living with disappointment, uncertainty, and letting go of the outdated or the obsolete;
- risk tolerance—not averse to taking reasonable, calculated risks.

Simply stated, workers who can maintain composure in a VUCA environment, set a direction for themselves, and learn to manage the opportunities and threats to their immediate work environment bring far more human capital to their employers than those lacking these abilities.

Self-directed attitude. The new employee contract expects protean workers to display initiative in managing personal employability by creating their own opportunities for growth and development (Bridgstock, 2009; Hall & Moss, 1998) and to make a positive change in the organization (Thompson, 2005). Under the old contract, employers wanted

new hires with mastery of the functional skills of their business or industry and transmitted firm-specific skills through OJT (Shaffer & Zalewski, 2011 [pp. 64–74]). Now, employers and employees both recognize that mastery of all necessary functional skills for any particular job is an unrealistic standard. The growth of knowledge and the rapid obsolescence of skills and specialized knowledge mean that all new hires must be quick studies who advance rapidly along the learning curve.

Workers looking to grow human capital may search for *stretchwork* (O'Mahony & Bechky, 2006); that is, one accepts work precisely because she or he cannot initially do all the activities required of the job. When looking for stretchwork, applicants seek new tasks that fit within their existing work experience but that introduce new skills and special knowledge. In the short-run, such experiences increase the worker's human capital, and in the long-run, they confer abilities that will allow the individual to move in new career directions. In the new economy, employability means that workers have demonstrated their ability to grow into a job description.

Because boundaryless career paths are not automatic or linear, one must act as the broker of his or her own career (Arthur & Rousseau, 1996; Parker, 2008; Waterman et al., 1994).

You will be an agent of your own career, simultaneously respectful of the work for which you have contracted and the careers of others. Working tradespeople have much to teach us here. The plumber, electrician, tailor or hairdresser doesn't always know where or for whom he or she will be working next week. But they all know they will be working, because one of their regular accounts, or a new customer referred by one of those accounts, will show up and need help. These working people typically succeed without trade unions or employment law to represent them. The extent of their accountabilities, and established reputation through honoring those accountabilities, continue to get them work. How can you imitate the tradesperson, and build a broader, opportunity-enhancing, set of accountabilities into your own work? (Arthur & Rousseau, 1996, p. 36)

In steps counterintuitive for the traditionally career minded, a self-manager of the 21st century knows when to leave a job or occupation (Parker, 2008; Waterman et al., 1994). Job security in a VUCA work environment does not result from

being employed, but from purposely and self-consciously maintaining a currency of skills and special knowledge that assures one's employability (Friedman, 2005; Parker, 2008). Therefore, one must view current employment as a primary source of continuous upgrading of skill and special knowledge, and the worker must move to a new job when the current job no longer provides the ongoing learning necessary to maintain the currency of one's skill set (Parker, 2008; Waterman et al., 1994). Because they benefit from the opportunity to learn new skills and grow human capital, new hires must also recognize when an opportunity has been exhausted and move to the next job. Feller and O'Bruba (2009) refer to such workers as *knowledge nomads*.

Ability to add value. According to Feller & O'Bruba (2009) knowledge nomads add value to any assigned work activity or project and deliver on-demand excellence. They use the term *nomad* to emphasize that these workers are defined more by their skills and abilities than by the positions that they currently hold. Knowledge nomads are willing and able to move between and within organizations as new challenges and opportunities arise, and their proactive personalities and self-initiative bring benefits to their employers (Feller & O'Bruba, 2009; Thompson, 2005). They do not fill their positions in the organization the way cement fills a hole; they take action to effect positive changes in their working environments and initiate actions that advance organizational goals. Knowledge nomads are comfortable with ambiguity, seeing the turmoil experienced in the workplace, as part of a larger VUCA environment, as an opportunity for professional education and growth.

Modern organizations offer their employees advantages that they cannot purchase in a formal educational setting—advanced training and real-world experience. In exchange, corporations expect new hires to act as *intrapreneurs* by taking ownership of the projects to which they are assigned and working cooperatively with others to add value to the organization (Nash, 1994; Seshadri & Tripathy, 2006).

Studies show that knowledge nomads typically make an impact by building social capital—networks of contacts inside and outside the organization that allow them to leverage their skills into even greater levels of productivity (Baber & Waymon, 2010; Cross, 2009; Thompson, 2005). Protean employees are expected to help one another in teams to build skills (Elkeles, 2009; Roy, 2010). Advisors already know that millennials enjoy both

familiarity and facility with Internet tools for social networking (Jordan & Blevins, 2009); they simply need to direct them into using those tools to develop their skills of network building, a key political skill in the new workplace (Bingham, 2009; Galagan, 2009; Greig, 2009; Thompson, 2005).

Ability to adapt. The ability to deal with “messy, complex, unscripted problems” is now considered an essential learning outcome of higher education (Nelson Laird, Niskode-Dossett, & Kuh, 2009, p. 65). “Thus all enterprise associated with global production is now faster and less certain, demanding more tolerance for ambiguity, more risk-taking, and more capacity devoted to experiment, variety and adaptation on the run” (McWilliam & Haukka, 2008, p. 655).

Several success attributes of knowledge nomads prove crucial to functioning in a VUCA environment: comfort with ambiguity; ability to quickly evaluate the quality of data; talent for identifying options when blocked, challenged, or rebuffed; skills in scanning media widely and efficiently; capacity for accurately identifying the core issues in a conflict; and willingness to challenge traditional methods, systems, and thinking (will ask “Why not?”); and vision (Feller & O’Bruba, 2009, pp. 40-41). “The successful future employee will be the person with transferable skills, high self-motivation—and no demands on the company pension plan. This is the ‘new deal’” (Nash, 1994, p. 78). Transferable skills needed for success in virtual jobs include interpersonal skills, ability as a team player, intuitive reasoning, people skills, and creative thinking (Nash, 1994).

An engineer’s old work on a hydroelectric plant in Egypt finds [*sic*] his new employer assigning him to a product design team based on his knowledge of the Middle East. A schoolteacher’s old classroom presentation skills [*sic*] have her new customers warming up to the software services she now sells. Fill in examples about what you have seen. Fill in examples about yourself. (Arthur & Rousseau, 1996, p. 3)

In the postindustrial economy employers know that even recruits with the appropriate skills and abilities quickly become costly liabilities if they display bad attitudes, especially if they infect other workers. However, capable people with good attitudes and interpersonal skills can be taught new skills by competent trainers. The slogan “hire attitude, train skill” (Eisner, 2010a) captures these lessons.

Traits for lifelong, self-directed learning. “Under the old employment contract, workers exchanged loyalty for job security. Under the new contract, workers exchange performance for continuous learning and marketability” (Sullivan, 1999, p. 458). The new economy has changed the nature of learning and instruction. The need for lifelong learning in the postindustrial economy has been widely recognized for many years (Feller & O’Bruba, 2009; Shaffer, 1997/2009), and the new contract has revolutionized the nature of learning as well. OJT, delivered in formal, small group, instructor-led formats, is being replaced by informal, individual, self-directed learning facilitated by Internet connectivity and delivered with a new philosophy called *just-in-time* (JiT) learning (Emens & Gorospe, 2008; Ferencick, Feters, & Carse, 2008; Guerton, Zappe, & Kim, 2007; Harrison, 2005; Higdon & Topa, 2009; Kutzick, 2005; Popa, Stegaroiu, Georgescu, & Popescu, 2010; Rushby, 2006; Simkins & Maiser, 2004; Trotter, 2007). The rapidity with which new skills are created, marketed, filled, and then discarded as obsolete means that formal training programs lack profitability (Davies, 2009; Harrison, 2005; Trotter, 2007).

To learn new skills, job seekers (such as those seeking stretchwork) must subsequently acquire the demanded skills at the same time they are employed on that job. In the past, these skills would have been acquired through OJT; now, more likely, they are to be acquired informally by learning-by-doing (Shaffer, 2005). “The secret of success seems to reside in continuously learning to do what one does not know how to do. This should be the basic tenet of any advising development plan” (Feller & O’Bruba, 2009, p. 42). To stretch workers’ skills and special knowledge so they grow competent at jobs for which they lack formal education or training, business and industry provide the connectivity needed for JiT learning.

The emerging rationale for the JiT training revolution is based on the assumptions that useful retrieval of learned information declines very rapidly over time and that material presented just in time for learners to use in their current activities provides optimal worker preparation. In addition, experience shows that formal, planned instruction delivered in an untimely fashion tends to be packed with material of uncertain future utility and that just-in-time material ultimately proves most useful. In organizations, the orientation is the classic example of an outdated formal program. They often prove frustrating for participants who perceive that the venue offers too much, too

soon; that is, without an immediate context, participants struggle to understand orientation materials and consequently show low motivation to learn information for which they see little relevance. In addition, to be cost-effective, organizations typically offer orientations to groups heterogeneous in terms of participant job description, background, and training, so personalizing the content proves impractical. As a consequence of the generalized information overload and poor timing, participants often cannot remember the material when they most need to recall it.

In contrast, the Internet effectively delivers important content by allowing individual workers to call up the information where and when they need it. That is, learning is now available *on demand* (Bondarouk & Ruel, 2010; Rushby, 2006). Therefore, the mantra of JiT learning is “just enough, just-in-time, just for you” (Cramer, 2007).

Students who select a college major and complete the curriculum over a period of years often complain that they cannot remember the content of their course work when they find a relevant job or when they begin graduate or professional school (Eisner, 2010a, 2010b). Employers over the last 30 years have continually pointed out that college graduates entering the workforce are unprepared to tackle the tasks of entry-level positions (Shaffer, 1997/2009). Critics and reformers alike have focused on the content of higher education as the source of the problem. In particular, the devolving anti-intellectualistic arguments are characterized by assaults against “useless” content (e.g., the arts and humanities) and a push to the return to “basics” or more vocationally oriented, applied “practical” course work. However, over the last 20 years, college professors have begun to adopt the JiT approach to delivering skills and special knowledge as an effective pedagogy for the college classroom (Benedict & Anderton, 2004; Clark, 2006; Cramer, 2007; Emens & Gorospe, 2008; Ferencick et al., 2008; Higdon & Topa, 2009; Simkins & Maser, 2004; Wiley, 2000).

Conceptualizing the relationship between the classroom and the workplace in the 21st century is a bit like viewing a reversible figure. Due to the knowledge-driven, postindustrial economy, the cynical distinction between the ivory tower and the real world is rapidly becoming an anachronism: More and more, the real world is a classroom and vice versa. Lifelong or continuous learning is the norm; technologically driven change means that today’s skill set and special knowledge will be obsolete very soon and workers must keep up or

lose their jobs (Arthur & Rousseau, 1996; Bernstein, 2003; Bridgstock, 2009; Lautsch, 2002; Lazarova & Taylor, 2009; Royal & Althausen, 2003; Waterman et al., 1994). Regardless of the major students choose, the undergraduate curriculum will prove insufficient for ensuring employability throughout a graduate’s working lifetime (Arthur & Rousseau, 1996; Bernstein, 2003; Bridgstock, 2009; Lautsch, 2002; Lazarova & Taylor, 2009; Royal & Althausen, 2003; Waterman et al., 1994). To hold a job, graduates will need stay current in the skills and special knowledge necessary to meet today’s standards of good practice. Homework is, indeed, forever!

Many firms are now constituted as *learning organizations*, and many provide time and resources for formal instruction so that the workplace does resemble a classroom (Clark, 2006; Kerdprasop & Kerdprasop, 2008; Mindrum, 2009; Nguyen & Hartzel, 2007). Following the model of learning organizations, many college instructors now provide resources through the Internet for students to use as ancillary learning materials either during or between formal classes (Benedict & Anderton, 2004; Brooks-Young, 2005; Cramer, 2007; Fons, 2009; “Just-in-Time Learning,” 2005; Linneman & Plake, 2006; Simkins & Maser, 2004; Wiley, 2000).

College classes have always had the freedom to simulate or re-create the workplace on the campus through laboratories and studios, and students have gone to work sites during the course of internships, field trips, and service learning projects to enhance their learning experiences. However, until lately, classroom paradigms were not integrated into the work site; now the distinction between the classroom and the workplace is so blurred as to be rendered unimportant.

We recommend a brief exercise to illustrate the concept of JiT learning. Some readers (perhaps many) were frustrated by the allusion to *reversible figures* in the last paragraph. We encourage irritated readers to temporarily stop reading this article and type “reversible figures” into a search engine of choice. Although Internet content is posted, taken down, and modified regularly (and without notice), the search will likely produce a dozen or more hits. Within a few minutes of the search, one can find many definitions of reversible figures as well as many illustrations of it, including classic examples such as the Necker cube, the rabbit-duck figure, the vase-face figure, the young girl–old woman image, the Schroder staircase, and so forth. We believe that through this new information, readers

can re-read our previous paragraph and follow the meaning of the assertion that the relationship between the classroom and the workplace is like a reversible figure.

Upon introducing the phrase, we could have provided a definition and some additional words of explanation. We could have listed the names of some of the most common reversible images (as in the preceding paragraph). Both communication strategies illustrate the just-in-case approach that characterizes the traditional means of designing and providing curricula (Harrison, 2005; Zalewski & Shaffer, 2007). We had assumed that many readers would be unfamiliar with the reversible figures concept and that many would need some background to follow our point, and so providing further explanation would have been a justifiable approach to presenting our ideas. However, as the classroom and the workplace converge, more and more college instructors are adopting the approach, pioneered in industry, of providing JiT content in lieu of prerequisite course work (Benedict & Anderton, 2004; Brooks-Young, 2005; Cramer, 2007; Fons, 2009; "Just-in-Time Learning," 2005; Linneman & Plake, 2006; Simkins & Maiser, 2004; Wiley, 2000). Therefore, to illustrate this new JiT world of the academy, we eschewed the standard approach and forced the reader to find the information in a new, self-directed way.

Preparing Students for Human Capital Acquisition

Classroom Socialization

Because graduates will need to continually adapt, advisors and instructors, when reasonable, should design class situations as socialization experiences for continuous, lifelong, self-directed learning. Due to the blurred boundaries between the classroom and the workplace, we advocate that advisors, as well as faculty members and administrators, seriously think of the college classroom as the first opportunity for students to gain the experience needed to acquire and maintain an acceptable level of skill and specific knowledge to find and hold desirable jobs at the beginning of their protean, boundaryless, portfolio careers. College professors and advisors should adopt the mind-set that students are knowledge workers learning to do intellectual work in the classroom and that the formal curriculum should provide students with anticipatory socialization experiences into the workplace. Thus, they should design learning environments and formal assignments that allow students to develop the transferable skills of employability.

Indeed, once people acquire Internet skills, they rarely prefer the folkways of the classroom at all. Speaking of formal OJT in the field of marketing, Davies wrote,

Frankly, it's an indictment of our lack of curiosity and surfeit of sloth that there are companies training executives on how to use Twitter and Facebook. Regular people learn how to use these things themselves: We should be capable of the same. (Davies, 2009, p.14)

Major Selection

Formulated upon the assumptions of just-in-case learning, academic majors represent an enduring institution of higher education (Richardson & Mancabelli, 2007). We assert that now higher education, once characterized with just-in-case learning, is experiencing transformation just as business and industry did when JiT instruction supplanted OJT approaches. With the explosive growth of knowledge and discovery in all fields, accompanied by the rapid obsolescence of outdated knowledge and related skills, no academic major can offer all of the specialized knowledge and skills graduates need to perform in their chosen field (Reeves, 2008). Furthermore, specialized knowledge and professional skills are better learned just in time than in the college classroom. For example, Morris (1995, p. 4) noted that "business practitioners do not care what students learn in functional academic disciplines such as marketing." Taylor (2003) expressed the new reality bluntly while discussing students in a marketing major:

Undergraduate students majoring in marketing might reasonably assume that they would be well qualified to land a marketing job upon graduation. The reality, however, is that a marketing degree is not required for many entry-level marketing jobs, meaning that marketing majors must compete for them against college graduates from other fields....Indeed, as employers increasingly focus on hiring applicants who demonstrate skills that will help them perform well on the job, such as critical thinking, written and verbal communication, and quantitative reasoning....rather than specific knowledge of the marketing function, marketing majors might be no more desirable than any other business or liberal arts major.... (p. 97)

"Employability is a multidimensional aggregate of career identity, personal adaptability, and social

and human capital” (Parker, 2008, p. 8). In addition to firm-specific, technical skills required to succeed in one particular job, employability depends on a broader set of transferable skills that have currency across prospective employers and across whole industries (Parker, 2008). *Transferable* skills, also called *soft* or *portable* skills, are learned in one location but are valuable and applicable in others (Lu & Lambright, 2010; Shaffer, 1997/2009). They include observable and measurable expertise in areas of interpersonal communication, negotiation, conflict resolution, leadership, relationship building, and teamwork (Joseph, Schon, Chang, & Slaughter, 2010; Parker, 2008). Another vital transferable skill is managing a task, which includes knowing where and how to find relevant knowledge outside of one’s primary domain of knowledge, just-in-time to apply it to a project at hand (Joseph et al., 2010).

Transferable skills are applicable in any occupation, at any level of job (from entry-level to executive), and at any stage of a career (Alpay & Walsh, 2008; Parker, 2008). They are often viewed as equally (or more) valuable than discipline or occupation specific skills (Harris, 2006; Taylor, 2003), making graduates’ major selection neither a guarantee of successful placement in a major-related field nor necessarily a barrier for those applying for jobs outside of their academic specialty. By the 1990s, observers were beginning to predict the emerging importance of portable or transferable skills (“Futurists Predict Need for Portable Skills,” 1995), and according to Hyslop (2008), portable skills are being documented by career and technician education certificates. Professionals now need both the hard skills of their formal professional training as well as soft skills, such as the ability of listen to and communicate with clients (Schmitt, 2009; Taylor, 2010; Thomson, 2009).

Advisors need to find ways for undergraduates to engage in activities that expose them to the attitudes and new skills they will need once they graduate and enter the new economy. Advisors can help students realize three important aspects to 21st century careers. First, general education is a valuable source of transferable skills. Shaffer (1997/2009) noted that the very skills that employers say they value in a college graduate are often taught in general education courses (see also Nelson Laird et al., 2009). Second, liberal arts curricula are excellent sources of transferable skills (DiConti, 2004; Harris, 2006; Hawkins, 1990; Knotts, 2002; Shaffer, 1997/2009). Third, because many equate employability with career

specialization, students need to be reminded of the value of the mind-set and skills of a generalist. For example, sociologist Edward Sabin surveyed job prospects for students with the federal government and discovered that “the Washington area seems to be a city of quick-study generalists. Few persons seem to be working on the fields for which they were trained in college” (Sabin, 1987, p. 395).

Portfolios

Because documentation supplants formal educational credentials and transcripts in the new economy, advisors should encourage students to begin portfolio careers well before graduation. Most students do not see the value of building a resume or maintaining a portfolio until they approach graduation and when they formally search for employment (Eigles, 1993). However, they need to understand that in a portfolio career, documentation of experience, learned skills, and special knowledge is a part of the human-capital development process, which is based on the principle: *If you can’t document it, you don’t have it*. They need to identify the acquired skills and special knowledge that can be counted as human capital and accumulate documentation for each element (through such means as accumulating course syllabi, writing assignments, capstone projects, evidence of participation in human capital-building activities, letters of documentation and recommendation, etc.). Institutional transcripts and cocurricular transcripts or portfolios (if available) (Bresciani, 2005) will document some activities (such as formal internships), but students must account for much of the rest by themselves (Barry & Shannon, 1997; Ireland, 2002). Advisors can play a pivotal role in helping students understand the need for such activity and helping them get started.

Advisors should encourage students to develop the habit of reflection as a mark of professionalization. The habit of reflecting on one’s activities and accomplishments is essential for successful documentation. In this article, we have defined transferable skills by enumeration, but neither a definitive, standardized listing of transferable skills is available for access nor do most academic courses or job descriptions come with a listing of transferable skills they teach or require. Therefore, students’ efforts to document their human capital absolutely requires thoughtful reflection upon all of their jobs, courses, internships, service-learning projects, volunteer work, and cocurricular activities to realize and communicate the skills and special knowledge they have acquired during

their undergraduate years. For example, students can increase their human capital through service-learning projects (Hagan, 2004; Lu & Lambright, 2010; Simons & Cleary, 2006), often increasing social capital by developing networks of valuable contacts (D'Agostino, 2010). Service learning projects are also excellent opportunities to learn multicultural competence skills (Baggerly, 2006; Busch, 2009).

Beginning with the seminal writings of Donald Schon (1987, 1992), educators have come to understand the role of reflection as an essential process in both the preparation for and the practice of all professions (see also Erlandson & Beach, 2008). While classroom instructors will undoubtedly introduce students to the necessity of reflection, advisors can reinforce these lessons when encouraging students to accumulate documentation of their own development through a functional resume, curriculum vita, or a literal portfolio (Chalfen, 2004; Franzinger, 2003; Ireland, 2002).

Conclusion

Advisors should encourage students to make decisions that maximize their human capital accumulation. However, accepted models of continuous economic growth and progress based upon investment in education and the matching of students' human capital to a growing labor market are far too simplistic (Kivinen & Ahola, 1999). In fact, the relationship between education and demand for skilled labor is often mismatched, with shortages of skilled labor being reported at the same time as rising unemployment. Labor markets are a VUCA environment where student investment in education is, in fact, at risk (Kivinen & Ahola, 1999). Because many employers continue to use credentials such as formal academic degrees as proxies for students' human capital, many still perceive a college degree as a form of insurance against the prospect of underemployment and downward social mobility (Kivinen & Ahola, 1999). However, the degree is not a guarantee of success; it may be a key that unlocks doors, but it does not necessarily open them (Brown & Scase, 1994; Kivinen & Ahola, 1999). College graduates may very well underutilize their investment in education, and advisors and academic and career advisors will play an important role in guiding students to a better understanding of the human capital risk reality (Kivinen & Ahola, 1999).

Advisors should not become discouraged by student resistance to their efforts. Although students express the goal of graduating from college

fully prepared to find a "good job," they often do nothing to prepare themselves to obtain any job at all (McCalla-Wriggins et al., 2009). We, therefore, readily admit that making suggestions to advisors about their advisees is easier than helping them motivate their students to engage in any of the suggested actions. Nonetheless, advisors may find comfort in knowing that anything they do will give their students an advantage over their less diligent peers! As Shaffer once heard Buddy Ryan, the former NFL coach, admit (Eagles training camp, West Chester, Pennsylvania, 1988): "If you can get 90 percent effort out of your players, you will probably beat the other coach who is only getting 70 percent effort out of your opponents!"

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Authors' Notes

Leigh S. Shaffer is retired from the Department of Anthropology and Sociology, West Chester University and is now living in Downington, Pennsylvania. Jacqueline M. Zalewski is in the Department of Anthropology and Sociology, West Chester University.

Correspondence concerning this article should be addressed to Leigh S. Shaffer at lshaffer@wcupa.edu.