

Needed: A GPS for Learning and Work

A Solutions Concept for the NSF Career Compass Challenge

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Introduction

I have been thinking about and working on solutions to the issues and problems identified in the Career Compass Challenge for much of the last 25 years. More recently, as part of my research and concept development, I have written two books: Harnessing America's Wasted Talent: A New Ecology of Learning (Jossey-Bass, 2010) and Free-Range Learning in the Digital Age: The Emerging Revolution in College, Career, and Education (SelectBooks, 2018).

I am currently continuing this work at University of Maryland University College (UMUC), leading a project called "Qualified!" which will assess prior learning comprehensively and apply the results to both academic and employment standards. I have drawn from the concepts and content from both books as well as my former and my current work to describe and illustrate the concept I am proposing.

My resume (attached) will further elaborate on my professional experience and credentials to propose the effective concept and solution that the Challenge is seeking.

Thank you for this opportunity. I look forward to, hopefully, being part of this important effort.

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How the GPS for Learning and Work will Operate

The Metaphor. Every new car and mobile device has a GPS travel application that tells you how to get from where you are to your destination in the most efficient and direct way. Of course, if you decide to take a more scenic route, there are usually second and third options available. Whichever route you choose, however, you are secure in knowing that the information, the directions, and the time projected is essentially accurate and dependable.

The Concept. In the career development/learning world, there really aren't any good maps, let alone a GPS system. In fact, having interviewed dozens of adult learner/workers, employers, and educators, I believe trying to clarify one's career development path including opportunities, knowledge requirements and alignment with one's own current profile, let alone accessing resources to fill any gaps as needed, is like skiing in a blizzard without any goggles. For an engaged adult, finding the right resources and the integrated learning environment that is accessible and works for them - and that is responsive and affordable - is extraordinarily difficult. The successful solutions that are achieved are individual, not systemic or intentional.

The GPS for Learning and Work will bring the same kind of flexibility, consistency, and focus to learning and career development that the other GPS brings to travel. It will have no "beginning" and no "end" points. Instead, it will be "case-based", a dynamic process that includes diagnostics, content delivery, validation and recording of learning, and direct links that connect learning with college recognition and job requirements. The GPS will be accessible at any time to any person or set of needs and aspirations and available throughout a person's life.

The Organization's Characteristics. The team that supports the GPS will include the technical and continuous improvement capacity to build and operate the GPS as well as to continuously develop and improve it. The ultimate organizational solution will necessarily, I believe, draw on the capacities of multiple partners organized in a DNA which gets the job done. No existing individual entity, non-profit or for-profit, has or will have the capacity or the assets to be world-class at all of the GPS's needed components in a time of accelerating technical change.

Components in the GPS for Learning and Work

Dr. Allen Tough, a research professor and writer at the Ontario Institute for Studies in Education first identified, quantified, and characterized the learning that adults do outside of college in his ground-breaking book, The Adult's Learning Projects (Toronto: OISE, 1966). His and related research over the years has established that the average adult spends over 700 hours each year learning on her own through an average of 12 distinct learning projects. Each learning project has a clear purpose, a beginning and an end point. And each project meets a personal or professional need of the learner involved.

Ironically and cruelly, most of this learning is ignored by educators and employers, precisely because it did not occur in a formal academic setting. I have termed this practice "knowledge discrimination" because your knowledge, skills, and abilities are valued based on where you learned them, not how well you know and can apply them. The GPS for Learning and Work will:

- Eliminate knowledge discrimination by building bridges between work requirements and academic outcomes so that quality of knowledge and application comes first;
- Operate as an accelerator and expeditor of this natural instinct and appetite for learning as well as a validator of that learning's value.

With this in mind, my GPS solution builds on this instinctive human capacity and instinct to learn and the assumption that there is talent walking around our country (and our government) every day that is unrecognized and, as a result, wasted.

The GPS solution begins before the actual transaction(s) anticipated by the Career compass Challenge. It is cyclical and individually driven, based on need, opportunity, and demand. The GPS solution includes the following components.

Component 1 : Establish a validated record of all that the learner has done and learned to date. This record can then be used as a platform for future, more focused learning by providing a starting point for any future learning that occurs. It will include in-service learning, ACE-approved learning, and all other validated third party offerings, as well as assessed personal learning that occurred informally, when appropriate. Importantly, the validated record can be updated

throughout the learner's career, hence be a dynamic representation of all the learning s/he has accomplished.

Component 2 : Create a dynamic data base that can effectively translate between the language of academic outcomes and that of job descriptions and requirements. With this data base in place, all knowledge, skills, and abilities can be assigned both employment and academic value as is needed and appropriate.

Component 3: Create a "search and retrieval" engine that can identify and assign specific content in multiple media forms to the specific learning or talent development needs that the individual or the employer has identified.

Component 4: Identify an analytic which, like Gallup's "StrengthFinder", identifies how the individual takes on and processes information and thereby also identifies jobs and occupational areas and their skill and talent sets that are highly aligned with the individual's natural talents and inclinations.

Component 5: Develop a dynamic database of all positions, by level, that exist within the pertinent agencies, services, or private sector entities. The positions will be analyzed for specific knowledge, skill and ability levels. These analyses will include the knowledge and skill to do the job itself. But they will also include the assets, beyond skill, which drive success in the workplace. These assets include behaviors that are desired such as team-work, diversity, and leadership as well as cross-cutting intellectual capacities such as critical thinking, problem-solving, writing and numeration.

All components will be integrated into a user-friendly service that is personalized, confidential, accessible and definitive on a case-by-case basis. So, the individual learner, on a need-responsive basis, can ask the following questions and get the answers s/he needs for a successful and guided learning journey.

- Where Am I? What are my current capacities?
- Where do I want to go? What are my objectives for next steps in job and career?
- What are the jobs and their requirements that exist? Other job-related data?
- What is the gap that I need to fill with learning?

- How am I going to get there? What are the resources available to support my learning journey?

And the GPS will not only guide and support the learner, but also record and store the learning results for future analysis.

An additional important strength is that this technologically enhanced design will allow the GPS for Learning and Work to operate at scale, serving hundreds of thousands of worker/learners simultaneously.

An Example – NSF and the Armed Services

Whether it is the General Service Administration levels used at NSF and the rest of the Federal government or the ranks used in the Armed forces, both are organized by purpose and function within the pertinent sector or sub-sector of the organizational unit. They are also organized in a hierarchy of sophistication and capacity (knowledge, skills, and abilities) pertinent to the objectives of the agency and the unit within which they are placed. The GPS will evaluate and place a value on each job and/or occupational area, both horizontally and vertically, so that an individual's performance and progress can be given academic and employment value. Being able to assign employment and academic value to on-the-job learning will be a critical element of the GPS.

The Woof and the Warp. Just like an elaborate textile, the jobs in the Army and the NSF have interwoven horizontal and vertical characteristics that provide an agency-specific as well as a government-wide coherence. With any General Services job level (say, GS-7), there is a consistent level of "skill" expectations that is horizontal across all (or most) agencies and that can be categorized and defined using common language and consistent definitions. There is also a vertical set of knowledge and performance expectations which are specific to the purposes of the agency or sub-unit in question, again categorized in a hierarchy of content sophistication that is agency-specific.

So, all Colonels in the Army will have common levels (or attributed levels) of cross-cutting job skills. But they will also have attributes that are specific to the

purpose of the unit or the mission to which they are assigned. And similar “horizontal” and “vertical” requirements would exist for all GS-7’s or GS-13’s.

Using the steps outlined above, the GPS would closely define and validate all of the requirements, both horizontal and vertical, across the ranks in the military as well as the GS levels at NSF, using consistent language and definitions along both axes. This database of requirements would create two critical assets.

The first is a dynamic database that informs personalized career development paths by clearly indicating requirements and, therefore, career development steps required to qualify. It is the “grease” that allows aspiring career-changers or developers to chart their paths towards more sophisticated or challenging and better-paying work. And, importantly, it puts them in the driver’s seat (or at least the co-pilot’s seat) when it comes to attaining and asserting accurately their qualifications for employment. The target for success would be clear.

The second asset would be a defined and validated academic value that would be assigned to every GS level and every rank in terms of knowledge, skills, and abilities. That value would greatly improve the translation of validated knowledge between the academic and employment worlds. So, a GS-7 would automatically be recognized at a pre-determined academic level, saving time and money by getting value for her work achievements if she wanted to climb the degree/certificate ladder. Correspondingly, a person coming out of an academic or training program could align their learning outcomes with the appropriate GS level.

Importantly, once these definitions and assignments of value had been made, then the behavioral and cross cutting intellectual characteristics and levels of sophistication can be assigned. This would assure a far closer alignment between the candidate’s comprehensive professional profile and the requirements for success in the position being sought. These characteristics can also be aligned with academic outcomes and levels as mentioned above.

Obstacles

- HR traditions and practices including lack of precise information about job requirements
- Lack of precise information about what is actually learned in a course, whether offered by a college, and employer, a union, or a different third party.
- Bias on the part of employers and academics against learning done away from college or school.

Needed Changes in Behavior, Policy and Practice

- Common and translatable language and definitions between academic and employment worlds.
- Learning outcomes and job requirements that are specific and detailed.
- Colleges and Universities willing to dramatically rethink advanced standing policies and practices to accept assessed learning from other sources.
- Employers willing to accept non-college as well as college-based learning as valid.

Conclusion

Through my research, professional experience, and Board involvements over the years, I know that the talent, knowledge, and technology exists to build and implement the GPS for learning and work. As the founder of three innovative institutions of higher education, however, I have learned that the model being implemented will only be as successful as the organizational culture that supports it and the larger environment within which it operates. With that in mind, I believe that the actual conception and construction of the “compass” including selecting and developing the solution, is only the first part of the hill we are climbing. We must also anticipate implementation challenges that include testing and perfecting the solution selected as well as resistance from some higher educators and employers.

In my experience, the organizational cultural obstacles that exist within both the higher education and employment worlds are deep, obdurate, and largely invisible. In his theory of disruption, Clayton Christiansen describes how successful and profitable businesses failed because their organizational structure, including current customers, was an economic structure also. And, when challenged by external disruptive forces including new competitive products and technologies with lower cost/price structures and higher capacity, the CEO's favored the status quo with its known results over the new and unknown. And that's why they went out of business.

In higher education, the academic structure is a policy and practice structure organized around faculty prerogatives. And, on most campuses, the facilities have a destination resort quality. Both are also cost and economic structures which are supported, in many cases, by fervent alumni. When you talk about educating learners in the workplace, assessing learning done elsewhere for academic recognition, or increasing advanced standing levels thus reducing time to degree, you are threatening the hegemony and the economics, as well as the traditions of a campus-based, faculty-centric organization.

Working with HR directors and employers over the last 5-7 years, I have encountered parallel though different obstacles. They (HR directors especially) also fear any serious erosion of their control over their domain, the hiring and evaluation process. The ambiguity of most traditional hiring criteria and job descriptions encourages the use of significant discretion on their part. Even when confronted with the huge expense of having 30-40% of new hires leave within 9-12 months, or the added value of up-skilling existing employees, they are reluctant to engage in any significant change.

The Career Compass Challenge has to anticipate these tensions without compromising the very purpose of the Compass solution which is ultimately selected. Having raised this specter, however, I believe the Career Compass Challenge solution will bring with it at least 2 important advantages to the implementation phase of the disruptive development being proposed.

- First, the reputation of the NSF and its commitment to rigorous process as well as creativity will give instant credibility to the concepts and the final solution that is chosen. Also, having proven and credible players developing

the Solution will increase confidence. Having support among responsible observers is a huge opening tactical advantage.

- Second, having at least one and possibly two settings where the solution can be tested, modified, and improved before going to prime time is both substantively and tactically wise. This intermediate stage of development and testing mitigates the perceived downstream risk by improving the model while generating data/evidence to support it as a preferred solution going forward.

The concepts that comprise my proposed GPS for Learning and Work can inform and help frame the dramatic changes that must occur for our country to seize the opportunities that lie ahead in the world of learning and work.