EMPLOYING YOUNG TALENT FROM UNDERSERVED POPULATIONS

DESIGNING A FLEXIBLE ORGANIZATIONAL PROCESS FOR ASSIMILATION AND PRODUCTIVITY

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Abstract: This article describes an ongoing 13-year-old program designed to improve the ability of organizations to assimilate young talent from underserved populations, mostly students who have recently graduated from high school. Although many firms have internship and orientation programs, few have well-tested organizational approaches for assimilating 17-20 year-olds into their organizations in an efficient and productive manner. The objective of this study is to describe and evaluate the solution introduced by Workforce Opportunity Services (WOS), a non-profit agency that provides organizations with well-trained talent from underserved local communities. The WOS model is a systemic design involving a lead agency (WOS), corporate clients, training partnerships with local colleges and universities, and underutilized human capital. Over 290 students have completed the WOS program and obtained long-term employment, mostly in IT jobs that normally are outsourced. The results of the study show that companies have success employing young talent when they follow the WOS organizational process. Companies need to have patience with WOS student employees, but within six months most members of the WOS program make positive contributions to their sponsoring firm and have a strong likelihood of becoming permanently employed. Implications of the WOS model for organization design are discussed.

Keywords: New organizational forms; outsourcing; workforce development; mentoring; adult development theory; workplace transformation; workplace literacy

Over the past 20 years, the increased outsourcing of jobs in the United States and Europe has led to significant social and economic problems in many countries. Outsourcing has contributed to growing unemployment among underserved populations including disadvantaged youth and returning military veterans. Indeed, the employment rate for teens in U.S. households making less than $20,000 is nearly 20 percent less than their counterparts (16-19 years of age) in households whose incomes are between $75,000 and $100,000 (Fernandez-Alcantara, 2012). Returning military veterans have been similarly disadvantaged in the workforce, even though their skill levels typically are higher (Kleykamp, 2012). Workforce Opportunity Services (WOS) was created as one means of solving employment problems caused by outsourcing. The WOS approach is based on the belief that disadvantaged youth can be trained for jobs in areas such as information technology that would normally be outsourced offshore. WOS has developed an organizational model that has successfully placed 292 young individuals in such jobs. This article describes the WOS approach, presents data on its effectiveness, and discusses the main design issues faced by these intermediary organizations.

Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

WORKFORCE OPPORTUNITY SERVICES

Concept and history

The idea to create WOS was the result of a five-year study on workplace literacy conducted by Columbia University in New York City (Langer, 2003). That program involved 48 residents of public housing projects from the inner-city area and provided a community-based alternative to vocational education. Participants received training and mentoring plus guidance on how to seek jobs in information technology. Overall, the research was designed to understand the challenges of underserved young learners and how to help them develop skills that would enable them to effectively compete for jobs in the workplace. Participants attended classes at Columbia University one evening per week. During the training period, a select group of ten students was given the opportunity to work at companies on a trial basis. The participants' performance was measured based on their ability to perform IT functions as well as how they contributed to their assigned work teams.

The results of the study showed that the participants were capable of doing the work but needed mentoring and training to better develop their communications skills and individual self-esteem. Furthermore, the research showed that corporations were ill prepared to assimilate young talent from underserved populations because they did not have the infrastructure or the management experience to properly develop such individuals. The study also concluded that existing degree programs at this prestigious institution of higher education fail to provide the necessary combination of applied knowledge and communication skills necessary for underserved young adults to compete for jobs. The research suggested the need for a different model that could assist underserved populations to compete for skilled jobs while also allowing them to achieve post-secondary college degrees on a part-time basis. This new model needed to provide individuals with what Andrew Carnegie called "ladders of ascent," the ability for students to continue to advance socially and economically based on their previous accomplishments. Within the context of the study, the model needed to provide such individuals with a certificate program from a recognized college or university that would provide technical skills training, a job within a short period of time to address their desperate need for income, and a value proposition for corporations that would give them a pipeline of diverse talent but also a "try before you buy" employment arrangement. The model was actualized when the researcher created an organization called Workforce Opportunity Services (WOS) which was launched in 2005.

WOS is a U.S.-based non-profit organization licensed as a 501 (c) 3 charity. The social mission of WOS is to educate, train, and hire adults from underserved populations or those that are "socially excluded" from the mainstream, and to place them in companies as outsourced consultants. Firms can decide at some later point to convert them to permanent employees. Thus, WOS provides companies with a flexible option for finding talent that fits their needs. Moreover, by offering opportunities to those individuals who may not otherwise have the wherewithal to find the requisite training and education for a job, WOS facilitates their personal, professional, and financial independence and provides both the firm and the individual with assistance in matching organizational needs with the necessary talent. This flexible option is attractive to many organizations, since firms may have restrictions on hiring employees at any given time. With the WOS relationship, they can still utilize talent as outsourced consultants and convert them to employees when the option for employment is more favorable.

WOS has also established an economic development center in France and is currently developing centers in The Netherlands and Great Britain. WOS seeks corporate and educational sponsorship that enables the development of a pipeline of talent for hire. These centers provide a systemic flow of funds from the work performed by their employees who are local students simultaneously completing their education while working. Since WOS is a non-profit (or NGO), and because work is performed in local communities, the costs are very competitive with for-profit outsourcing services offered abroad.

Organizational process

The WOS model is a "just-in-time" on-demand approach. Employers determine the specific talent demographic they want and where they want the resources to be located. For example, an employer can request a specific ethnicity and gender for certain jobs, and it can specify the desired location. WOS has a defined implementation model but is flexible enough to provide for employers with special needs. The components and sequence of the WOS organizational process are described in the following sections.

Curriculum design. Each client provides WOS with the number of consultants needed and identifies the specific skills required. As stated above, clients can also determine the specific demographic preferences of the students they want as well as where to recruit students (specific local communities or schools). WOS completes a formal needs assessment document with the client. After reaching a joint agreement, WOS transforms the needs assessment document into a formal academic curriculum. Such curricula vary in length and by number of courses. The curriculum is implemented with a partnering college or university to conduct the training and issue the certificate. Table 1 shows the existing WOS installations and partner institutions of higher education.

Table 1. WOS Installations and Higher Education Partner Institutions

City	State/Country	Partner College/ University	Number of Corporate Clients	Student Consultants
Various	New Jersey	Rutgers University	10	154
Various	New York	Columbia University	10	56
Jacksonville	Florida	University of North Florida	1	17
Charlotte	North Carolina	University of North Carolina	1	13
Philadelphia	Pennsylvania	Penn State University	1	11
Allentown	Pennsylvania	Penn State University	1	11
Dubuque	Iowa	Northeast Iowa Community College	1	10
Hartford	Connecticut	Western Connecticut State University	1	10
Paris and Lyon	France	Groupe IGS	2	6
Cleveland	Ohio	University of Akron	1	4
Total			29	292

The agreement with the institution covers a specified number of students. The institution provides classrooms and instructors, although WOS assists in recruiting skilled teachers if needed. Sometimes client employees are hired directly by the institution if the topics to be covered in the course are client specific. Typical curricula include technical courses and special courses in business communication, writing skills, and personal development. The "soft skill" courses improve a student's success in transitioning culturally into the company. Certificate programs usually require students to take four classes per term for three terms. Typically, the classes meet two nights per week for 13 weeks. Other certificate programs vary depending on the specific needs of the client. An example of the Quality Assurance curriculum is provided in Appendix 1.

Recruitment. WOS recruits students by holding multiple information sessions at local public schools where formal applications are accepted. WOS personnel meet with students and parents to help applicants determine whether the WOS opportunity fits their interests and needs. Sponsoring clients often attend sessions to answer specific questions about their work environments. Applicants must complete a pre-certification before being accepted into the program. The pre-certification usually comprises six two-hour classes held weekly for six weeks. Students' skills are tested on logic, communication, and writing. Instructors also measure students' attendance, promptness to class, general behavior, tardiness in assignments, and academic performance. A faculty and client meeting is scheduled, and acceptances are jointly made to select a cohort of students.

Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

Assessment of student readiness. During the courses, students are required to write learning journals. These journals cover various topics assigned by the instructors. The purpose of the journals is to determine a student's status and progress across the Langer Workforce Maturity Arc (Langer, 2003). The LWMA is an instrument designed specifically to measure students' readiness for assimilation into a corporate environment. Learning journals are coded qualitatively by identifying cues that are used to create and maintain an individual arc for each student. Weaknesses in a particular student's workplace maturity are noted, and individual actions are determined to help students progress to more realistic thinking and reflection and thus make them more valuable employees for the sponsoring company. For example, if a student has limited communication skills, then a separate plan is developed to help develop growth in that area. Ultimately, a student's arc is representative of his or her chances of success in the workplace.

Students complete the first term of the certification in the evening, two nights per week. Two of the courses are designed to ensure that students have attained requisite work skills to be productive when they start to work. After successful completion of the first term, students are then employed by WOS and assigned to start work, typically at the client's site. To aid in assimilation, WOS usually employs students part-time (three days per week) to start while students continue to take four courses during the next two academic terms (26 weeks). Thus, students work three days and attend night school on the other two days. The rationale for this approach is to gradually teach students how to balance work and school. By the end of the third term, students earn a certificate and work full-time for WOS. Students are then funded to continue their college studies in the evenings to earn their bachelor's degree. Thus, over about a year's time, students engage in basic skills training (first term), work part-time for two academic terms (six months), complete their certificate, and become a full-time salaried WOS employee consulting for the client. After serving in this capacity for at least one year, the client has the option to employ the student.

Student consulting process. A Client Service Manager (CSM) is assigned by WOS to work in conjunction with the client. The ratio of students to CSM does not exceed 20:1. That is, for every 20 students employed there must be a dedicated CSM even if there are more than 20 students working for the same client. The CSM works closely with the client, student supervisors, and assigned HR personnel to ensure that students are assessed properly. A student's progress is monitored closely by the CSM. A client-designed performance review is completed quarterly along with a student's self-evaluation of his or her own progress. This process ensures that the client's view and the student's view of performance are reconciled. During the evaluation period, the CSM and client take any appropriate corrective actions. Those actions may include (a) academic tutoring to improve technical aptitude; (b) social support to develop communication skills; and (c) formal warning of unacceptable behavioral patterns such as spotty attendance, tardiness, or unprofessional demeanor. CSMs also communicate concerns about the ways in which certain client supervisors are managing students. This typically includes concerns about giving enough assignments or being available to answer questions. In some instances, client supervisors are uncooperative with students, show a disinterest in their development process, or even are prejudiced against a student of a certain ethnicity. In these cases, the CSM might suggest a reassignment of the student to a different client supervisor.

WOS performance and success

WOS has expanded in the United States during its first seven years of operation to nine client-designated locations. During its first three years of operation, WOS had a conservative growth plan and tested its methodology with over 200 underserved adults in the New York City area before expanding the operation to other locations. However, the agency has doubled in the number of students employed in the last three years and forecasts expanding to five new locations in 2013. In 2010, WOS broadened its focus beyond just underserved high-school graduates by also supporting returning enlisted veterans from the Iraq and Afghanistan wars. Currently, WOS employs over 75 veterans and expects to significantly expand support of this underserved population in the future. In 2012, WOS established a center in France, demonstrating that the model can be applied internationally. The agency is currently holding

Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

discussions about its model with companies in The Netherlands and Great Britain. To date, WOS has permanently placed 292 consultants at 22 diverse clients. Most of these clients are in the United States across the nine locations, although six students are now active in France. Ninety-two students have been hired away as permanent employees from WOS clients. Table 2 presents key employee statistics on the largest clients of WOS.

Table 2. WOS Client Organizations and Employee Statistics

Firm	Industry	Total Company Employees	Total WOS Contracted Resources	WOS Current Consultants	WOS Consultants Converted to Employment	Training In Progress
Finance A	Financial Services	35,000	93	24	45	24
Health A	Healthcare	4,700	56	43	3	10
Insurance A	Insurance	5,400	22	11	1	10
Software A	Software Solutions	3,000	23	0	23	0
Health B	Healthcare	13,120	9	7	2	0
All Others	Various		89	65	18	6
Total			292	150	92	50

RESEARCH STUDY

WOS has an ongoing research program that examines various aspects of its operations. The study reported here was done in Finance A, an anonymous name of one of WOS' sponsoring firms in the financial services industry. Finance A was selected because it: (a) was WOS' first client and has the longest association as a sponsoring firm; (b) has the largest population of WOS employees; (c) has converted the largest number of WOS student employees to permanent employees; and (d) has implemented the program in four different geographic locations. The sample that is the focus of this study includes the 46 students converted to employment and the 23 WOS consultants currently working at various Finance A locations. Forty-eight students are veterans and 21 are high-school graduates. Table 3 shows demographic information on the Finance A sample.

Table 3. Demographic Statistics on the Finance A Sample

Student Type	Total	Gender		Ethnicity			
		Male	Female	White	African American	Asian / Pacific	Hispanic / Latino
High School	21	15	6	2	8	2	9
Veterans	48	34	14	13	27	2	6
Total	69	49	20	15	35	4	15

Langer Workforce Maturity Arc

As stated earlier, the Langer Workforce Maturity Arc (LWMA) was developed to help evaluate a student's preparation to succeed in the workplace. The LWMA, initially known as the Inner-City Workplace Literacy Arc:

> *… charts the progression of underserved or 'excluded' individuals along defined stages of development in workplace culture and skills in relation to multiple dimensions of workplace literacy such as cognitive growth and self-reflection. When one is mapped in relation to the other (workplace culture in relation to stages of literacy assimilation), an Arc is created. LWMA traces the assimilation of workplace norms, a form of individual development. (Langer, 2003: 18)*

The LWMA addresses one of the major challenges confronting an organization's HR group: to find talent from diverse populations that can successfully respond to evolving business norms, especially those related to electronic and digital technologies. The LWMA

provides a method for measuring the assimilation of workplace cultural norms and thus can be used to meet the mounting demands of an increasingly global, dynamic, and multicultural workplace. Furthermore, if organizations are to attain acceptable quality of work from diverse employees, assimilation of socially or economically excluded populations must be evaluated based on (a) if and how individuals adopt workplace cultural norms and (b) how they become integrated into the business (Langer, 2003). Understanding the relationship between workplace assimilation and its development can provide important information on how to secure the work ethic, dignity, solidarity, culture, cognition, and self-esteem of individuals from underserved populations.

Theoretical constructs of the LWMA

The LWMA encompasses *sectors of workplace literacy* and *stages of literacy development*, and the Arc charts business acculturation requirements as they pertain to underserved adult learners. The relationship between workplace assimilation and literacy is a challenging subject. A specific form of literacy can be defined as a social practice that requires specific skills and knowledge (Rassool, 1999). In this instance, workplace literacy addresses the effects of workplace practices and culture on the social experiences of people in their workday as well as their everyday lives. We need to better understand how individual literacy in the workplace, which subordinates individuality to the demands of an organization, is formulated for diverse groups (Newman, 1999). Most important is the ways in which one learns how to behave effectively in the workplace – the knowledge, skill, and attitude sets required by business generally as well as by a specific organization. This is particularly important in underserved communities which are marginalized from the experiences of more affluent communities in terms of access to high-quality education, information technologies, job opportunities, and workplace socialization. Prior to determining what directions to pursue in educational pedagogies and infrastructures, it is necessary to understand what workplace literacy requirements are present and how and when they can be developed.

The LWMA assesses individual development in six distinct sectors of workplace literacy:

1. *Cognition*. Knowledge and skills required to learn and complete job duties in the business world including computational skills; ability to read, comprehend, and retain written information quickly; remembering and executing oral instructions; and critically examining data.
2. *Technology*. An aptitude for operating various electronic and digital technologies.
3. *Business Culture*. Knowledge and practice of proper etiquette in the workplace including dress codes, telephone and in-person interactions, punctuality, completing work and meeting deadlines, conflict resolution, deference and other protocols associated with supervisors and hierarchies.
4. *Socio-Economic Values*. Ability to articulate and act upon mainstream business values which shape the work ethic. Such values include independent initiative, dedication, integrity, and personal identification with career goals. Values are associated with a person's appreciation for intellectual life, cultural sensitivity to others, and sensitivity for how others view their role in the workplace. Individuals understand that they should make decisions based on principles and evidence rather than personal interests.
5. *Community and Ethnic Solidarity*. Commitment to the education and professional advancement of persons in ethnic minority groups and underserved communities. Individuals can use their ethnicity to explore the liberating capacities offered in the workplace without sacrificing their identity (i.e., they can assimilate workplace norms without abandoning cultural, ethnic, or self-defining principles and beliefs).
6. *Self-esteem*. The view that personal and professional success work in tandem, and the belief in one's capacity to succeed in both arenas. This includes a devotion to learning and self-improvement. Individuals with high self-esteem are reflective about themselves and their potential in business. They accept the realities of the business world in which they work and can comfortably confirm their business disposition independently of others' valuations.

Each stage in the course of an individual's workplace development reflects an underlying

Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

principle that guides the process of adopting workplace norms and behavior. The LWMA is a classificatory scheme that identifies progressive stages in the assimilated uses of workplace literacy. It reflects the perspective that an effective workplace participant is able to move through increasingly complex levels of thinking and to develop independence of thought and judgment (Knefelkamp, 1999). The profile of an individual who assimilates workplace norms can be characterized in five developmental stages:

1. *Concept Recognition*. The first stage represents the capacity to learn, conceptualize, and articulate key issues related to the six sectors of workplace literacy. Concept recognition provides the basis for becoming adaptive to all workplace requirements.

2. *Multiple Workplace Perspectives*. Ability to integrate points of view from different colleagues at various levels of the workplace hierarchy. By using multiple perspectives, the individual is in a position to augment his or her workplace literacy.

3. *Comprehension of Business Processes*. Individuals increase their understanding of workplace cooperation, competition, and advancement as they build on their recognition of business concepts and workplace perspectives. They increasingly understand the organization as a system of interconnected parts.

4. *Workplace Competence*. As assimilation and competence increase, the individual learns not only how to perform a particular job adequately but how to conduct oneself professionally within the workplace and larger business environment.

5. *Professional Independence*. Ability to employ all sectors of workplace literacy to compete effectively in corporate labor markets; obtain more responsible jobs through successful interviewing and workplace performance; and to demonstrate leadership abilities leading to greater independence in career pursuits. Professionally independent individuals are motivated and can use their skills for creative purposes.

The LWMA is a matrix that charts an individual's development across the six sectors of workplace literacy. Each cell within the matrix represents a particular stage of development relative to that sector of workplace literacy, and each cell contains definitions that can be used to identify where a particular individual stands in his or her development of workplace literacy. Figure 1 shows an example of the LWMA.

Sectors of Workplace Literacy	Stages of Workplace-Culture and Labor-Market Literacy				
	Concept Recognition	Multiple Workplace Perspectives	Comprehension of Business Processes	Workplace Competence	Professional Independence
Cognition					
Technology					
Business Culture					
Socio-Economic Values					
Community and Ethnic Solidarity					
Self-esteem					

Fig. 1. Langer Workforce Maturity Arc
Source: Langer (2003)

Methodology

The study was conducted in Finance A using an ethnographic technique of participant observation with group and individual interactions (Denzin & Lincoln, 2000). Journal writing was the main method of coding the LWMA to determine student readiness for the workplace. Students were required to write a weekly semi-structured learning journal during the mentoring course at the college certificate program. A semi-structured journal carries a certain amount of imposed form or constraint regarding the manner in which it is written. Its purpose is to benefit both instructor and student. The instructor obtains value by receiving

information on a range of formats and topics. This allows the instructor to compare student responses and reflections and obtain feedback on specific discussions and lectures – all to help determine student progress. The mentoring course spanned the entire certificate program (39 weeks or 39 distinct learning journals per participant). Journal topics were assigned weekly and designed by the instructor to gather data needed to code each individual LWMA and measure a student's growth. For example, typical journal topics required students to write about their experiences at work, challenges in learning new skills, and their personal development in general. Furthermore, the learning journals were designed to assist students in improving their comprehension of technical concepts. The literature offers evidence that students, regardless of the course topic, improve their learning by keeping journals, especially non-traditional learners in computer training courses (Langer, 2002). Further, Langer's (2009: 46) research showed that "mentors consistently encourage [reflective writing] for successes in classroom projects, employment settings, group discussions and reflection through weekly journaling, where students can increase their self-efficacy and self-esteem." Student growth was also measured at the client site, where the CSM and client jointly conducted three-month reviews that addressed the sectors of the LWMA. Reviews were completed using two forms, one a self-evaluation by the student, the other the client's standard review form. Journals, student performance reviews, and group discussions were all coded thematically and mapped onto the LWMA by two independent raters. A total of 2,691 journal entries were reviewed for Finance A (39 journals for 69 students).

Group discussions with the client and executive management interviews were conducted to ascertain the effects of the WOS organizational process on the Finance A organization. Further, ethnographic observations and participation by the CSM as an integrated member of the client's management team enhanced conclusions about the effectiveness of the WOS approach, particularly with respect to student assimilation of the workplace experience. Students converted to client employees were also monitored and assessed for continued professional growth. This assessment measured growth based on (a) individual promotion, (b) progress in completing a bachelor's degree, and (c) participation with future WOS client-sponsored cohorts.

Analytical method

Learning journals were coded to the LWMA by mapping what students write and by looking for cues that help determine an individual's maturity across the Arc. Journal assignments are constructed to require students to write about all sectors of the LWMA. Once a student demonstrates a cell level of maturity along the Arc, the coder can establish that the individual has reached that level of maturity. Each week's journal is coded using a different shade to display growth across the sectors of the Arc. Thus, each student has an individual arc that is tracked through the process of training to employment. Appendix 2 provides an example of an actual student coding and mapping to the LWMA.

RESULTS

This section presents the data used to measure students' progress across the LWMA in Finance A and assesses the changes administrators made to Finance A's existing organization in order to assimilate WOS graduates.

Maturity arcs

Students who completed the first term of the certification scored evenly across the six sectors of Stage 1: Concept Recognition. Seventy-five percent of the students also progressed to Stage 2: Multiple Workplace Perspectives in three other sectors: Cognition, Business Culture, and Self-esteem. During the following three-month period, where students worked at the client part-time (three days per week) and attended classes two evenings per week, 78 percent progressed to Stage 3: Comprehension of Business Processes in three sectors: Technology, Business Culture, and Self-esteem. Upon graduation from the certificate program where students also completed six months of part-time work, 42 percent advanced to Stage 3 in

Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

Cognition, and 16 percent moved to Stage 4 in Workplace Competence in the Technology sector. Table 4 shows the summary Arc of the Finance A students.

Table 4. Stages of Workplace Literacy for Finance A

Sectors of Workplace Literacy	Stages of Workplace Literacy				
	Concept Recognition	Multiple Workplace Perspectives	Comprehension of Business Processes	Workplace Competence	Professional Independence
Cognition	■	■	■		
Technology	■	■	■	■	
Business Culture	■	■	■		
Socio-Economic Values	■	■			
Community and Ethnic Solidarity	■	■			
Self-esteem	■	■	■		

■ 1st Term   ■ 2nd Term   ■ 3rd Term

Overall, these results show that students who are accepted into the WOS program after completing a pre-certification meet the minimum processing capacities across the Arc. Those students all scored in Stage 1 (Concept Recognition) across all sectors of the Arc. This suggests that pre-certified students have the ability to learn material and concepts as a precursor for advancing to subsequent stages of workplace maturity. Also, most students had already advanced to Stage 2 (Multiple Workplace Perspectives) of the Arc at the end of the first term before they entered the employment part of the program. The Finance A results confirm that those students who have advanced to Stage 2 at the end of the first term in the three sectors of Cognition, Business Culture, and Self-esteem tended to outperform those that were still in Stage 1. This finding confirms the results of previous research by Langer (2009) that self-esteem and integration with mentors in the workplace correlate with student assimilation into the workplace. At Finance A, most students reached Stage 3 in all sectors except Socio-Economic Values and Community and Ethnic Solidarity by the time they graduated from the 39-week certificate program. This result is significant in that it justifies the importance of students being able to deal with multiple workplace perspectives and learning how to transform their own beliefs to be consistent with those of the organizations where they work. Students who cannot transform in this manner, regardless of their cognitive processing abilities, are less likely to succeed. The lower scores in the final sector (Community and Ethnic Solidarity) are attributable to the relative importance to the client. In other words, a student's ability to relate back to his or her original community and low-income environment is not as relevant to the client as the other sectors. Whether or not more focus on the Community and Ethnic Solidarity sector improves performance and assimilation is unknown at this time.

The LWMA has served to provide WOS with a reliable instrument in the selection of students for the workplace. The results of the LWMA in this study of Finance A are consistent with WOS' other clients in that the lower the maturity of the student, the less the likelihood that he or she will achieve sustained success in assimilating into the organization. Table 5

shows further statistics on the use of the LWMA across WOS' various clients, resulting in an average 91 percent retention rate of students among their employers.

Table 5. WOS Supply and Retention Rates for Recent Cohorts

Client	Original Request for Students	Students Supplied	Current Number of Employed Students	Initial Supply Rate (Percentage)	Retention Rate (Percentage)
A	8	8	6	100	75
B	6	6	6	100	100
C	5	5	4	100	80
D	25	22	17	88	77
E	15	15	14	115	93
F	10	15	12	125	80
G	7	7	7	100	100
H	1	1	1	100	100
I	4	4	3	100	75
J	8	9	9	112.5	100
K	2	2	2	100	100
L	8	8	7	100	86
M	5	5	4	100	80
N	2	2	2	100	100
O	4	4	4	100	100
Total	108	113	98	105 (Average)	91 (Average)

Organizational changes at Finance A

Finance A's implementation began in 2005 in its Information Technology (IT) department. During the next eight years, the firm expanded into non-IT areas such as call center operations and project management. In 2010, the CEO asked WOS to expand the program to include enlisted veterans returning from the Iraq and Afghanistan wars. The executive sponsor for Finance A is the Chief Information Officer (CIO). Interviews were conducted with the CIO, the Vice President of Human Resources (HR), and with personnel who directly manage WOS student consultants. Interviews were conducted by WOS personnel and by a graduate student from Columbia University (Ijdens, 2013).

Finance A originally partnered with WOS to help establish a staff augmentation program in its IT organization. The CIO was concerned about the increasing number of retirements among older employees as well as the decline of available trained IT workers in the U.S. The WOS model offered an opportunity to train underserved local students and place them in jobs soon to be vacated by retiring employees. After the success of the first cohort, the CIO made the following organizational changes at Finance A:

- Created a dedicated project manager to determine positions that could benefit from the WOS program. This project manager was empowered to seek opportunities throughout the company, both inside and outside of IT, where WOS could potentially provide value. These areas of opportunity were typically positions that were hard to fill because of the lack of supply of trained candidates. For example, it can be difficult to find candidates to take positions that are deemed to be less than "leading edge." Such jobs are called "legacy" operations because they support older computer systems. Colleges and universities do not typically offer courses for these older systems. WOS' tailored training could address this shortfall and potentially bring a new cost-effective breed of talent.
- Expanded the role and responsibilities of the Vice President of HR to create a new architecture on how WOS students would be transformed from WOS consultants to full-time employees of Finance A. This required HR to formalize the internship portion of the program, engage managers in the selection process during the pre-certification, and ultimately produced a process that assigned a WOS student to the

appropriate job opportunity.
- Designed a unique WOS student evaluation system for use by Finance A managers. The new evaluation process needed to be integrated with the traditional employee review system. This meant modifying the evaluations to work with consultants (WOS) who eventually would be converted to a Finance A employee. Furthermore, managers needed to design a new system that allowed them to apply a measurement value that could be compared with other alternative solutions for new talent. In this way, managers could understand the true value of the WOS model compared with alternative solutions.
- Formed an advisory cabinet that reassigned WOS students who showed advanced capabilities. Finance A discovered that 25 percent of WOS students were capable of handling more responsibility and could contribute at a higher rate than others. The advisory cabinet also addressed demographic issues for future cohorts, specifically the number of high school graduates versus veterans, and the balance of gender and ethnicity of students.

The implementation of the WOS program at Finance A has led to a new infrastructure that blends the specialized needs of student consultants with traditional systems at the firm. For example, Finance A is considering an outsourced alternative that would use WOS students instead of traditional offshore vendors. In this design, WOS would provide traditional third-party outsourcing but doing so at locations in the U.S. This process has required a formalized valuation against competing third-party alternatives, providing competitively weighted criteria for assessment of where and how to use WOS in this regard.

IMPLICATIONS FOR ORGANIZATION DESIGN

Finance A represents only one of 22 current sponsoring organizations of WOS. The changes made at Finance A to accommodate WOS students are significant for a large organization and yet representative of the experiences with other organizations. For example, executive sponsorship coupled with the eventual acceptance of the line managers are major factors for creating new organizational designs. It took three years for the results of two cohorts of students before the organizational changes became comfortable to Finance A. This can be attributed to the cultural control that line managers have in an organization. Executive sponsorship is critical for initiating change, but line managers are the salient components for fostering new and systemic organizational design. The implications of the WOS program on organizational design can be classified into five areas: social responsibility through shared value, culture of collaboration, work-life balance, supply chain shifts and relational contracting, and open innovation.

Social responsibility through shared value

Porter and Kramer (2011: 64) state that companies need to formulate a new method of integrating business profits and societal responsibilities: "The solution lies in the principle of shared value, which involves creating economic value in a way that also creates value for society by addressing its needs and challenges." These authors suggest that companies need to expand the definition of corporate performance to include social progress. The WOS model is consistent with this direction as it is based on partnerships among businesses, educational institutions, and communities. Each of the interested parties experiences progress towards its financial and social objectives. Specifically, Finance A is able to attract diverse talent, have the student consultants trained specifically for its needs, and attains an economic return that fits its business models. The educational institution fulfills its desires to educate underserved populations through a funding source that provides administrative support, tuition costs, and mentoring to improve completion rates. Finally, the community adds jobs, which reduces crime rates and increases tax revenues. Thus, the funding corporation establishes an ecosystem that provides a shared value of performance consistent with Porter and Kramer's concept.

Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

Culture of collaboration

WOS integrates services collaboratively among its clients. The ability to collaborate both internally and externally is becoming increasingly important in the 21st century (Miles et al., 2010). WOS' approach establishes collaboration among various departments within the corporate client. The strategy to recruit, train, and employ workers can be viewed differently by the various internal stakeholders of an organization. Often each stakeholder's business has unique requirements that need to be integrated with other interdependent departments. Finance A is an example of a firm that has multiple business lines with unique and sometimes competing needs. WOS, because of its social mission and willingness to collaborate to come up with customized solutions, has minimized resistance to collaboration among disparate business units.

Collaborations among WOS clients have resulted in the formation of communities of practice, where members representing each business unit participate in the further development and expansion of the WOS model. Furthermore, new communities of practice have been formed outside the sponsoring firms, where multiple clients collaborate on such issues as best practices, shared investments in WOS, and the provision of services to local communities. These collaborations have resulted in the formation of an official advisory board of sponsoring clients who provide ongoing direction and support to the WOS mission.

Work-life balance

Young adults from underserved populations are more likely to have trouble balancing personal, social, and educational challenges with work obligations (Langer, 2003). The WOS model is designed to help this population achieve the requisite balance. While corporations traditionally expect employees to quickly assimilate and manage this process on their own, they need to create new organizational designs that allow this type of worker to transition over time to become productive members of the workforce. WOS provides a cushion for transitioning young adults by providing mentoring and financial support outside the boundaries of the sponsoring company. At the same time, WOS collaborates with the client to insure that some support mechanisms, if necessary, are executed outside of what might be considered standard practice within the sponsoring corporation.

The WOS model also emphasizes the importance of lifelong learning to the student consultants. As such, WOS consultants who are hired away by companies continue to attend college part-time in the evening while maintaining their full-time employment. This process has resulted in accelerated skills development through a process of learning and doing (Schank, 1995). In general, the learning and doing process provides a mechanism that improves sense-making by its participants. Through better sense-making, WOS-converted employees have been able to better balance competing priorities brought on by work requirements.

Supply chain shifts and relational contracting

Large companies are challenged to organize resources in supply chains in various locations throughout the world. Supplies of workers at the right cost have shifted significantly over the past 20 years and will likely continue to be a dynamic variable in the 21st century. Many of these shifts in worker populations relate to shifts in urbanization and the cost of labor. Ketchen et al. (2012) suggest that firms move toward a "best value" approach in the design of their supply chains and by investing strategically in their workforces. Ketchen et al. (2012: 66) define a best value approach as one where:

> *firms have enjoyed significant improvements in both efficiency and effectiveness by moving away from a focus on cost and toward a focus on total value added for the customer.*

To accomplish this best value approach, contractors need to be viewed as a partner rather than a mere vendor or supplier. This is called "relational contracting," and it focuses on the building of long-term relationships to avoid uncertainty and constant monitoring. Ketchen et al. (2012: 66) state that "organizations whose personnel have the highest levels of knowledge, skills, and abilities have been found to be the most efficient and effective."

The WOS model advocates a partnership relationship with clients. This partnership helps WOS consultants to reach an effective level of performance in order to become eligible to be hired away by the sponsoring company. This organizational design provides a sustainable process to replace older workers who are preparing to leave the workforce. Furthermore, the WOS model allows sponsoring firms to find skilled resources in favorable geographic locations. For example, WOS and Finance A are considering an outsourced operation in El Paso, Texas which has a significant supply of college students and veterans at lower employment costs than much of the rest of the United States. Without the WOS partnership, it would be difficult for Finance A to establish this supply chain shift in time to respond to a changing competitive landscape.

Open innovation

Organizations are challenged to keep up their competitiveness when they try to innovate only from within (Chesbrough, 2003). Indeed, the complexity of boundaries is challenging companies to "pursue a range of boundary options that include 'closed' vertical integration, strategic alliances with key partners, and 'open' boundaries characteristic of various open innovation approaches" (Tushman et al., 2012: 24). WOS provides such a range of boundaries by allowing an organization to adopt all or portions of a self-defined strategic alliance that best fits its own industry and culture. For example, the open innovation process at Finance A allowed the business to successfully recruit war veterans, which in the past had failed within the confines of a closed innovation model. Open innovation, in this case, allowed a lower-cost provider, WOS, to transform Finance A's market penetration to not only attract veterans but also to successfully train and prepare them for careers in the workforce.

In summary, the WOS model provides important new organizational designs – features that allow corporations to have flexible choices in the way they employ and use talent. The WOS design suggests that organizations use a non-profit entity that can compete effectively on cost and quality while providing a structured but flexible partnership. Such relationships are critical for firms competing for global resources because of the growing need for specialized skills with alternative options for employment.

CONCLUSION

WOS is an organizational model that can provide firms with the ability to assimilate cost-effective, well-trained talent recruited from underserved populations. By adopting WOS's integrated design of facilitator (WOS), educator (college or university), and employer (corporate client), organizations can successfully use socially excluded populations as a source of employment. The Langer Workforce Maturity Arc is a tool that can be used by organizations to measure the readiness of young adults to successfully respond to evolving business norms. Furthermore, the WOS model establishes new organizational designs that address social responsibility through shared value, culture of collaboration, work-life balance, supply chain shifts and relational contracting, and open innovation. Finally, organizations should utilize non-profit business partners similar to WOS when considering talent sources from local markets as an alternative to offshore outsourcing.

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Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

APPENDIX 1

Core Courses in the Quality Assurance Curriculum

Quality Assurance Fundamentals
Systems Analysis & Design
Quality Principles and Concepts
Test Planning, Design, and Execution
Test Automation Tools, Methods, and Scripting
Quality Assurance Laboratory

APPENDIX 2

Example of a Coded Learning Journal

Self-esteem					
Community and Ethnic Solidarity					
Socio-Economic Values					
Business Culture					
Technology					
Cognition					
Stages of Workplace Norm Assimilation	Concept Recognition	Multiple Workplace Perspectives	Comprehension of Business Process	Workplace Competence	Professional Independence

Concept Recognition/Cognition

In the analyst course, I just try to adjust to how our instructor teaches. The students started off fast and I understand how everyone feels. I just know that our textbook is detailed with a lot of information and we have a short amount of time to cover the different concepts. I am basically trying to go with the flow and learn as much as possible.

I am struggling a little bit with the course on Dreamweaver. I am trying to grasp the concept. As the term progresses, I believe that I will get the hang of things.

I am glad to be learning something new. My favorite class is MYSQL. Everything is fun about that class. The instructor makes it easy to grasp on to the subject. PHP is difficult, but I am still confident that I will be able to learn and apply the concept to future employment.

The most complicated task I had to do on the computer was dealing with the PHP course. I am handling these assignments by referring to class notes, textbook pages, browsing various websites relating to PHP and asking questions to people who work in the IT field that know PHP.

If I had to deal with a hard math question, I would focus on a method I used to solve similar math questions. In an English or History class, I would use the format for essay writing and write my opinions in my summary paragraph. The solution to both dilemmas is similar because they both have methods and formats that you should follow to complete the assignments.

Concept Recognition/Technology

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Arthur M. Langer

Employing Young Talent from Underserved Populations:
Designing a Flexible Organizational Process for
Assimilation and Productivity

PHP.

I am hoping that I will grasp on to the PHP classes and at least gain a basic understanding. It goes hand in hand with MYSQL and if I want to work in that area I have to work harder.

I was able to have a clearer understanding about certain functions that relate to MYSQL in the PHP course. In MYSQL, I am doing fine. The instructor has been really great.

The hardest programming function I can perform is connecting a database by using PHP that displays on the web. I can display the information from the database in various ways by using rendering HTML in PHP…[this was] learned in the PHP course. While I have some free time I play around with what I have learned to see if I can expand on what I have learned.

Prior to being in the SLICE program, I have had a limited amount of technology skills. During a brief enrollment in college, I took a computer science course. In that course, I was exposed to some technological skills, but they didn't develop. Working for different companies, I was exposed to different software applications related to my job responsibilities. At the companies where I work, I also have experienced going through changes in software systems.