

# Learning by Doing: Assessment of Apprentices Performances across Partner Institutions in Metro Manila

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## ABSTRACT

*Apprenticeship is one particular way of learning by doing. The Student Apprenticeship Program (SAP) or Apprenticeship as referred to in this study is a curricular program of the Institute of Accounts, Business and Finance (IABF) of the Far Eastern University – Manila. It aims to enhance the preparation of the students for actual employment after college graduation. A study was conducted on the sixty nine (69) Business administration interns of a private university in Manila during the first semester of academic year 2017 - 2018. Performance Evaluation forms were distributed to all the supervisors of host companies. Evaluation forms were personally monitored by the Apprentices Adviser which made it possible to collect a 100% response. A sort of quantitative analysis was used to analyze the information provided for in the evaluation forms. The purposes of this study is to assess the interns' performances and skills as well as their strengths and weaknesses based upon the personal and direct observation by the supervisor of the various host companies. This study will also find the gap in the interns' skills based upon the Institute expectation and observation by the supervisors. The study is limited to one time period observation by supervisors of various host companies. This study is underpinned by sociocultural theory, cognitive apprentice theory, situated learning theory and the 21st Century Skills Framework.*

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## 1. Introduction

In order to select a field of work, an individual should ideally have a clear understanding of themselves, their attitudes, abilities, interests, ambitions and their resource limitations, as well as knowledge of the requirements and conditions of success in different lines of work (Parsons, 1989). Therefore, on-the-job training students must acquire these attributes in order to prepare themselves for the workplace. These knowledge and attributes were provided by higher educational institution like Far Eastern University but to apply these knowledge and attributes in the workplace a graduating student must have the necessary period of transition

Logically, on-the-job training is training for the job. According to the Department of Labor and Employment (On-the-Job Training Manual, 2015) on-the-job training is a training program for students designed to immerse them in a work environment relevant to their courses as they desire to acquire productivity in, knowledge on, and respect for the workplace. It is a course requirement providing an opportunity to not only apply the theories, principles and ideas learned in the academe but also enhance the technical knowledge, skills and attitudes of students towards work necessary for satisfactory job performance.

In response to Republic Act No. 7722 or the Higher Education Act of 1994, which aims to develop and promote policies, systems, procedures and programs that address globalization, changing policies, and liberalization of trade in goods and services the Commission on Higher Education (CHED), the lead agency of the government was tasked to supervise student internship programs in the country. Pursuant to this mandate, CHED issued CHED Memorandum Order

(CMO) No. 23, Series of 2009 or the "Guidelines for Student Internship Program in the Philippines (SIPP) for all Programs with Practicum Subject".

Under the Guidelines, business enterprises offering OJT or apprenticeship opportunities are called Host Training Establishment (HTE). These business enterprises, as HTE, must partner with a Higher Education Institution (HEI). Business enterprises must see to it that the partner institution program must have government recognition if it is a private school, an appropriate board resolution if it is a State University or College, or a local government ordinance if a local university or college. If the school does not have any of these, it cannot offer a practicum subject.

According to Lutterman et al. (2002, cited by Roberts et al., 2013) students by themselves cannot effectively explore their own experiences and reflect on these. They must be taught how to properly reflect in an in-depth manner. Apprentice supervisors are the ones guiding the apprentice throughout the experiential process.

In a long history of education in the Philippines, higher educational institutions have engaged the partnership of domestic companies as well as international companies in training their students for future employment and occupations via work-based learning opportunities, primarily in the form of apprenticeships. The concept of learning by doing can be best articulated through work based learning or experiential learning. This concept of learning by doing is consistent with the philosophy of John Dewey (1916) that life and learning should be assimilated together.

The Student Apprenticeship Program (SAP) or Apprenticeship as referred to in this study is a curricular program of the Institute of Accounts, Business and Finance

(IABF) or Institute as referred to in this study to enhance the preparation of the students for actual employment and to explain the application of principles, concepts and procedures learned in the classroom, in industry, government and specific professions (SAP Handbook 2015).

The International Labor Organization (2017) defines apprenticeships as a form of "systematic long-term training for a recognized occupation that takes place substantially within an undertaking or under an independent craftsman and should be governed by a written contract... and be subject to established standards".

Internships generally refer to a part-time field experiences and encompass a wider variety of academic disciplines and organizational settings (Gault, Redington and Schlager 2000). Formal apprenticeship system have the following characteristics (a) a training regime set up by, or with the approval of government; (b) a combination of off and on the job training; (c) the assumption of responsibility by the faculty adviser and employer for the development of the apprentice; (d) the work may be paid or unpaid; and (e) the award of a qualification and/or credit hours and/or license and/or some other recognition that enables an occupation to be practiced independently once the apprenticeship is successfully completed (DiLorenzo-Aiss and Mathisen, 1996; Smith, 2010).

Those criteria are found in The Manual for On-the-job training of the Department of Labor and Employment (2015). The same criteria are being followed by the Institute of Accounts, Business and Finance.

Apprenticeship, internship and On-the-job training are used interchangeably in this study.

Under the Institute of Accounts, Business and Finance (IABF) Student Apprenticeship Program manual (SAP 2016-2017), the program is equivalent to a 6 course. It is offered to 4<sup>th</sup> year students both in the Business Administration and Accountancy Programs. It is usually offered during the second semester of every academic year. Through SAP the Institute is partnering with companies. These companies should be on the Top 1000 corporations in the Philippines. A Memorandum of Agreement is signed by the representatives of the University and Partner Institutions.

Customarily, the program allows the students to look for a host company where they can render the required number of OJT hours, which at IABF is 400 hours. Through SAP students are allowed to experience interpersonal relationship in corporate setting, get hands-on training and develop their prospective future careers. Students can start to acquire real work experiences by receiving relevant on-the-job training (OJT) from their respective host company.

SAP students are also exposed into varieties of corporate job opportunities. The program is the prime test of the application of students' abilities and skills, which they acquired and developed for several years inside the classrooms. An OJT student who performed well during the program would have a greater chance of being absorbed by the host company as this was some of the cases in the past Student Apprenticeship Programs.

During the duration of the program, OJT students are required to keep track of their attendance, daily activities, take pictures of their works. These are some of the requirements that they will have to present during the Case Study presentation. SAP Adviser is task to visit each OJT student

three times during the entire program. Aside from checking if the OJT student is indeed accepted by the host company, the purpose of the visit is to see to it that students are doing their OJTs in-line with their courses.

The research proponent was among the SAP Advisers who given two (2) sections from the Business Administration Department, which were composed of a total of sixty nine (69) students. During the academic year 2016-2017 there were SAP students who performed and completed the program in the United States under the Summer Work and Travel Program by the Institute of Accounts, Business and Finance (IABF). Other students have concluded their apprenticeship program in Singapore under the Bloomberg-IABF Partnership.

The purposes of this study is to assess the interns' performances and skills as well as their strengths and weaknesses based upon the personal and direct observation by the supervisor of the various host companies. This study will also find the gap in the interns' skills based upon the Institute expectation and observation by the supervisors. The study is limited to one time period observation by supervisors of various host companies. Academic and behavioral skills of students during the performance of their apprenticeship training with their respective host companies will be paired with using the 21<sup>st</sup> century skills framework and the theories underlying apprenticeship.

## 2. Theoretical Underpinnings

### a. Sociocultural Theory

According to Wilson and Peterson (2006), previous generations of psychologists have focused on individuals' learning. Current work has placed more emphasis on the critical role of social groups in the development of understanding. Although solitude and peaceful silence provide good opportunities for learning, the social occasions of conversation, discussion, joint work, and debate also play a critical role in learning. This cluster of theories dealing with the social aspects of learning is known by varying labels, including *social constructivism*, *sociocultural theory*, or *activity theory*. Many theorists identified with these traditions trace their ideas back to Vygotsky (1978, 1981; see also Wertsch 1981, 1985 cited by Wilson and Peterson, 2006), a psychologist who theorized about the influence of the social world on an individual's development.

Sociocultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture. The major theme of Vigotsky's theoretical framework (Wilson and Petron, 2006) is that social interaction plays a fundamental role in the development of cognition. An important concept in sociocultural theory is known as the "zone of proximal development". It is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under the adult guidance or in collaboration of more capable peers. Essentially, it includes all of the knowledge and skills that a person cannot yet understand or perform on their own yet but capable of learning with guidance.

Students entered college and acquired knowledge and various skills necessary to prepare them into the world of work. Students might be doing well in the classroom but the world of work is far different from the classroom. Students need to get in

touch with realities of the workplace. In this case students were in the Zone of Proximal Development. They needed a little of coaching and scaffolding. They need someone to guide them and coach them how to learn and understand the system of “ins and outs” in the workplace. Apprenticeship program was an appropriate support so that students would be able to achieve the demands of the workplace.

**b. Cognitive Apprentices Theory**

The term cognitive apprenticeship proposed that contemporary classroom instructional methods be incorporated with the concept of apprenticeship. That modern pedagogical practice inside the classroom must engaged students with problems in the context of real-world experiences. (Cash, et al, 1996; Collins et al. as cited by Dennen and Jonassen 2004). Cognitive apprentice theory follows the philosophy of constructivism, which is basically the idea that all people learn through real world experiences and how they deal with those experiences in different situations supposedly changes behavior and therefore guarantees learning (Cooney, 2011).

According to Dennen (2008) learning in a cognitive apprenticeship occurs through legitimate peripheral participation, a process in which newcomers enter on the periphery and gradually move toward full participation. It is not a technique or strategy, as it tends to happen quite naturally on its own.

**c. Situated Learning Theory**

Lunce (2006) defined situated learning as a methodology of instruction whereby students use the process of learning through real-life situations, engaging in practical implementation of the course content. Situated learning is an instructional approach developed by Jean Lave and Etienne Wenger (1991) and follows the work of Dewey, Vygotsky, and others who claim that students are more inclined to learn by actively participating in the learning experience. They argued that learning is necessarily situated, a process of participation in communities of practice, and that newcomers join such communities via a process of ‘legitimate peripheral participation’—or learning by immersion in the new community and absorbing its modes of action and meaning as a part of the process of becoming a community member.

Accordingly, situated learning environments place students in authentic learning situations where they are actively immersed in an activity while facilitating the relationship between teaching and learning. These opportunities should involve community engagements which replicate real world situations. In the end, the situated learning experience should encourage students to discover methods of instruction on their own and to integrate and apply knowledge into the realistic context (Stein, 1998; Nicotera, Cutforth, Fretz, & Summers Thompson, 2011).

Situated learning theory as an approach according to Fuller and Unwin (2010 citing Guile and Young, 1999) derived from cultural anthropology, which do not discuss theories of instructions and present apprenticeship as ‘not dependent upon any formal teaching’.

Institutions of higher education today are challenged by the issues of accountability and demonstration that their students are able to apply what they learned in real-world practice (Gardiner, Corbitt, & Adams, 2010). Typical college

classes engage students in acquiring knowledge with little relevance to their own experiences (Donham, Heinrich, & Bostwick, 2010 cited by Meyers and Lester, 2013). Classroom instructions and programs that focus on lectures, discussion, and demonstration would be enhanced by incorporating authentic hands-on activities. The situated learning instructional model brings the students to the experience through a connection of improved teaching that leads to improved learning (Utley, 2006).

**d. 21<sup>st</sup> Century Skills Framework**

Higher educational institutions that are producing more of the same knowledge and skills will not suffice to address the challenges of the 21<sup>st</sup> century. What students have learned a generation ago would still probably be useful today but can they thrive to the challenges and necessities of the present times? With all the inevitable changes that are happening, schools have to prepare students for jobs, which are inexistent at present, technologies that have not yet been invented and snags that we do not know will arise.

P21 or the Partnership for Twenty-first Century Skills was founded in 2002 by American and international business leaders, consultants and educators. It consist of eleven competencies which are classified into three gist elements including (1) learning and innovation skills, (2) information, media, and technology skills, and (3) life and career skills.

Framework based on Organization for Economic Cooperation and Development (OECD) countries was developed by Ananiado and Claro (2009; cited by Chu et al., 2017). The OECD framework was detailed in a document entitled “Twenty-first century skills and competencies for new millennium learners in OECD countries. The three major dimensions of the framework include (1) Communication, (2) Information, and (3) Ethics and Social Impact.

The Assessment and Teaching of Twenty-first Century Skills (ACTS) is an international research initiative headquartered at the University of Melbourne and sponsored by Cisco, Intel, and Microsoft. The ACTS categorized twenty-first century skills into four prime types, namely (1) Ways of thinking, (2) Ways of working, (3) Tools for working, and (4) Living in the world.

**Table 1: A comparison of 21st century skills frameworks in accordance with the P21 skill sets**

P21 (Skill sets)	OECD (Dimensions)	ATCS (Categories)
Learning and innovation skills	Communication	Ways of thinking Ways of working
Information, media and technology skills	Information	Tools for working
Life and career skills	Ethics and social impact	Living in the world

Source: Chu, Samuel & Reynolds, Rebecca & Tavares, Nicole & Notari, Michele & Lee, Celina. (2017). *Twenty-First Century Skills and Global Education Roadmaps*. 10.1007/978-981-10-2481-8\_2.

The 21<sup>st</sup> century being described by Castels (2010; as cited by Chu et al. 2017) as a period of intense transformation, is an unprecedented era as business operations have become so globalized that core business competencies place greater emphasis on knowledge, mobility and collaboration. Today

more than ever, education plays an integral part in preparing learners to become global conscious citizens, and also to be ready for challenges associated with the highly mobilized and technology-dominated society (Berry 2010; Castels 2010 as cited by Chu et al, 2017). Scholars in the field of education have thus advocated the need for modification to be made to the education system to support the development of the requisite skills and literacies (Dunning 2000; UNESCO 2003; Levy and Murnane 2004; Pigozzi 2006; Kozna 2008; Black 2009, cited by Chu et al, 2017).

According to The Glossary of Education Reform (2014) “the term 21<sup>st</sup> century skills refers to a broad set of knowledge,

skills, work habits, and character traits that are believed—by educators, school reformers, college professors, employers, and others—to be critically important to success in today’s world, particularly in collegiate programs and contemporary careers and workplaces. Generally speaking, 21<sup>st</sup> century skills can be applied in all academic subject areas, and in all educational, career, and civic settings throughout a student’s life”. Furthermore, while the “21<sup>st</sup> century skills” may be defined, categorized, and determined differently from person to person, place to place, or school to school, the term does reflect a general consensus.

**Table 2: 21st century skills (adapted from P21, 2009 and The Glossary of Education Reform, 2014)**

Skills Set		
Learning and Innovation	Digital Literacies	Life and Career Skills
<ul style="list-style-type: none"> <li>• Core subjects</li> <li>• Critical thinking, problem solving and synthesizing information</li> <li>• Research skills and practices</li> <li>• Scientific literacy and reasoning, the scientific method</li> <li>• Oral and written communication and public speaking</li> <li>• Collaboration, cooperation and facility in using virtual workspaces</li> <li>• Creativity, artistry, personal expression and innovation</li> </ul>	<ul style="list-style-type: none"> <li>• Information literacy</li> <li>• Media literacy</li> <li>• Information and communication technology literacy</li> <li>• Computer programming and data interpretation</li> <li>• Internet literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Flexibility and adaptability</li> <li>• Initiative, self-direction, planning and self-discipline</li> <li>• Social and cross-cultural interaction</li> <li>• Productivity and accountability</li> <li>• Leadership and responsibility, and teamwork</li> <li>• Economic and financial literacy, entrepreneurialism</li> <li>• Civic, ethical, and social-justice literacy</li> <li>• Global awareness, multicultural literacy, humanitarianism</li> <li>• Environmental and conservation literacy, ecosystems understanding</li> <li>• Environmental and conservation literacy, ecosystems understanding</li> <li>• Health and wellness literacy, including nutrition, diet, exercise, and public health and safety</li> </ul>

According to Chu et al. (2017) education system around the world have been undergoing substantial reforms to ensure the younger generations receive training that enables them to meet the challenges brought about by technological advances and changes in the global economic structure, and therefore play a more central part in sustaining the development of their society. In Asia, Hong Kong aligns its education system with competencies denoted by twenty-first century skills (P21).

Studies have shown that the skills students learn and the skills students need are still separated by a gap and is becoming more obvious, as traditional learning falls short of equipping students with the knowledge they need to thrive (World Economic Forum, 2016).

Whether students choose a career right out after college, they need to acquire the so called “soft skills,” such as creative problem solving, conflict resolution, communication, and teamwork. In addition to these skills, employers want to hire individuals who display positive social skills such as self-respect and reliability (Bremer & Madzar, 1995 as cited by Rogers-Chapman and Darling-Hammond 2013). On-the-job training programs provide the opportunity for students to develop the skills that will be highly valued in future careers.

Quoting Fadel (2012) “My hope is that schools, universities and training programs will become more responsive to the workforce and the societal needs of today, and students will increasingly focus on growing and applying 21<sup>st</sup> century skills

and knowledge to real problems and issues, not just learning textbook facts and formulas.”

**3. Statements of the Problems**

In view of the foregoing theoretical underpinnings, this study postulates the following statements of the problems:

1. *Base on the percentage rating of OJT Supervisors across host companies, how do the apprentices across gender and courses demonstrated their performances as evaluated under the ten (10) criteria?*
2. *Under the assumptions that classroom learning is the application of various skills acquired by the apprentice inside the classroom, how these various skills paired with the 21<sup>st</sup> century skills?*
3. *Base on the general observations of OJT Supervisors across host companies, what are the strengths and weaknesses of apprentices across gender?*

**4. Method**

**a. Subject/Participants**

Participants in this study were seventy one (71) students enrolled in Student Apprenticeship Program of the first semester of academic year 2017 – 2018 under the Institute of Accounts, Business and Finance – Far Eastern University,

Manila. These students were required to render a total of four hundred (400) hours of internship starting from the month of August 2017 – December 2017.

Institute of Accounts, Business and Finance – Far Eastern University, Manila.

**Table 3: Gender profile of apprenticeship students**

Gender	Number of students and Percentage
Male	48 or 70%
Female	21 or 30%
Total	69 or 100%

These participants have already acquired and possessed knowledge, skills as well as weaknesses and strengths. But then, classroom preparations were not the only the elements necessary for each and every one of the sixty nine (69) students to get employment in the world of work.

All these apprenticeship students were taking up Bachelor of Science and Business Administration program at the

**Table 4: Apprenticeship students field of specialization under the Bachelor of Science in Business Administration**

Field of specialization	Number of students and Percentage
Financial Management	32 or 46%
Marketing Management	30 or 44%
Business Management	6 or 8%
Legal Management	1 or 2%

The table below shows the distribution of apprenticeship training with various companies, which were categorized according to industry.

**Table 5: Distribution of apprenticeship training by sector, industry and name of company**

Private Sector		
Industry	Company Name	Number of Apprentices
Manufacturing	• Suyen Corporation,	5
	• Cocal-cola FEMSA ,	5
	• Emerson	2
	• Sterling Group of Companies	2
<i>Sub-total</i>	4	14
Electricity	• Meralco FEMSA,	3
<i>Sub-total</i>	1	3
Wholesale and retail trade	• Toyota Motors dealership	2
	• Chevrolet Motors dealership	3
<i>Sub-total</i>	2	5
Administrative and Support Services	• JTC Group of Companies,	3
	• CBC Corporate Center	3
<i>Sub-total</i>	2	6
Information and Communication	• Rex Group of Companies	5
<i>Sub-total</i>	1	5
Real estate	• SMDC	2
	• New San Jose Builders	6
<i>Sub-total</i>	2	8
Public Sector		
Local government agency	• Quezon City Treasury Department	2
<i>Sub-total</i>	1	2
National government agencies	• Bureau of Internal Revenue	5
	• Banko Sentral ng Pilipinas	3
	• Philippine. Coconut Authority	2
	• National Commission for Muslim Filipino	1
	• Securities and Exchange Commission	6
	• Department of Finance	5
<i>Sub-total</i>	6	22
Foreign Sector		
Embassy of the United States	Reservation Office	2
Work and Travel Program of the University	Dairy Quenn-Beulah, North Dakota	1
	Six Flags Fiesta, Texas, U.S.A.	1

	Bret/Robinson, Alabama, U.S.A.	2
Sub-total (Foreign firms)	4	6
	Private sector: 12 Public sector: 7 Foreign sector: 4	41 or 59% 22 or 32% 6 or 9%
TOTAL	23	69 or 100%

Source of industry category: Standards and Classification System Division. 2009 Philippines Standard Industrial Classification. National Statistical Coordination Board; 403 Gil Puyat Avenue, Makati City, Philippines; [www.nscb.gov.ph](http://www.nscb.gov.ph)

**b. Instrument**

The instrument used in this study was the Performance Evaluation Form, which was prepared, formulated and approved for dissemination and use by the Institute. It was utilized by the Institute every semester of Student Apprenticeship program and it became a practice for a long period of time. It contains some personal circumstances of the Apprentice, brief job description of the trainee, the performance evaluation questionnaire composed of ten (10) criteria; strengths and weaknesses of the Apprentice, skills observed by the supervisor, and some personal circumstances of the evaluator. The instrument also includes three (3) open-ended questions.

The evaluation is spread over in the following criteria: Job Knowledge and Organization; Personality; Cooperation; Diligence and Reliability; Ability to Learn; and, Personal Appearance; Work Output and Quality of Work; Communication Skills; Judgment and Initiative; and, Attendance and Punctuality. The criteria are rated in terms of percentage.

Another performance evaluation of the same set questionnaire is evaluated by supervisors using the rating scale of 1 to 10 grouped into five (5) as follows: 1 – 2 or 50% to 59%, apprentice has never demonstrated; 3 – 4 or 60% to 69%, apprentice has rarely demonstrated; 5 – 6 or 70% to 79%, apprentice has sometimes demonstrated; 7 – 8 or 80% to 89%,

apprentice has oftentimes demonstrated; and, 9 – 10 or 90% - 99%, apprentice has demonstrated at all time.

**c. Procedure**

Towards the end of the on-the-job training period, the Apprentice' supervisor shall fill up and answer the instrument. Supervisors evaluated the apprentices twice using the same set of questionnaire with different set of rating in two different occasions. The properly filled-up instruments will be placed inside an envelope, sealed and duly signed by supervisors. Retrieval of instruments is initiated personally by the OJT Advisers or hand carried by the apprentice. It will either be retrieved personally by the Apprentice adviser or by the Apprentice himself and deliver it to his adviser.

**5. Results and Discussion**

Below were the results from the three open-ended questions based from the general observations of the OJT Supervisors:

1. Base on the performance evaluation of OJT Supervisors across host companies, how do the apprentices across gender and courses demonstrated their performances as evaluated under the ten (10) criteria?

**Table 6: Evaluation results based on the ten (10) criteria using the Likert scale rating and percentage rating**

Criteria	Likert Scale Rating	Percentage Rating
Personal Appearance	(9 – 10) Demonstrated at all times	98%
Personality		98%
Job Knowledge and Organization		95%
Diligence and Reliability		96%
Ability to Learn		95%
Cooperation		95%
Work Output and Quality of Work	(7 – 8) Demonstrated often times	89%
Judgment and Initiative		89%
Communication Skills		88%
Attendance and Punctuality		88%

Generally, all the items show cohesiveness and consistencies of responses. There is no polarization of responses. Therefore, it can be inferred from the results that there is none of the questions which is out of place. Otherwise, results will either skewed or difficult to formulate conclusions based on the result.

Base from the data above, trainees both across genders and across courses have demonstrated well the required

performance criteria to pass the apprenticeship program. Some of the criteria were demonstrated at all times by the apprentice while other criteria were demonstrated often times by the apprentice during the performance of their duties with their respective host companies. The data were consistent with the research finding of various studies.

To reiterate the wisdoms of authors: for Wilson and Peterson (2006), the social occasions of conversation,

discussion, joint work, and perhaps at some point debate with their apprentice supervisors play a critical role in learning; for Dennen (2008) an apprentice who is a newcomer enter on the periphery of participation and gradually move toward full participation; and, for Stein, (1998) and Nicotera et al. (2011) students should be encouraged to be able to integrate and apply knowledge into the realistic context.

2. Under the assumptions that classroom learning is the application of various skills acquired by the apprentice inside

**Table 7: Supervisors observation and rating of the apprentice skills based on the skill set**

Skills set	Supervisors observation and rating
Learning and Innovation	demonstrated often times to demonstrated at all times
Digital Literacies	
Life and Career Skills	

It was evident by the pronouncement made by various host companies across industry that they were willing to absorb about a total of fifteen percent of the total apprentices to work and be employed with them.

In emphasizing the findings of Berry (2010), Castels (2010) both cited by Chu et al. (2017) it is apparent that today more than ever, education must prepare learners to become global conscious citizens, and ready for challenges in a society which is highly mobilized and dominated by technology. To reiterate Fadel (2012), Education must be responsive to the needs of the workplace - applying 21<sup>st</sup> century skills.

the classroom, how these various skills paired with the 21<sup>st</sup> century skills?

Based on the Skills set, Table 6, most of the apprentice supervisors across partner institutions have rated apprentices as having demonstrated often times to having demonstrated at all times most of the necessary skills that apprentices needed to be able to adapt themselves to the demands of the corporate world.

3. Base on the general observations of OJT Supervisors across host companies, what are the major and minor strengths as well as the major and minor weaknesses of apprentices across gender?

Personal and direct supervisions of the supervisors have revealed the following strengths and weaknesses, which were the common observations among the apprentices. The results were based on the individual observations regardless of the nature of work and interactions of the apprentices. These strengths and weaknesses were based on the personal knowledge of the apprentice supervisors across host companies.

**Table 8: Apprentice Strengths and Weaknesses**

Apprentices strengths	Apprentices weaknesses
<ul style="list-style-type: none"> <li>• Polite and approachable</li> <li>• Performs accurately and timely</li> <li>• Demonstrates initiatives</li> <li>• Good technical knowledge</li> <li>• Attentive; seldom commit errors</li> <li>• Team player</li> <li>• Can work with less supervision</li> <li>• Can perform multitask; fast learner</li> <li>• Dependable; reliable; flexible</li> </ul>	<ul style="list-style-type: none"> <li>• Afraid to learn new things</li> <li>• With some delays in performing task</li> <li>• Shy from people; timid</li> <li>• Emotional and sensitive</li> <li>• Lacks confidence</li> <li>• Want of communication skill</li> </ul>

The list of strength and weaknesses above was not a trend across gender and courses among sixty nine (69) interns who were the participants in this study. The lists were not arranged according to preference in terms rank.

Communication skills is the attribute area that is perhaps the most universally valued by employers (Spence 2004; Vice and Carnes 2001 cited by Divine, Miller and Wilson, 2006). However, research study in the United States revealed that communication skills have been consistently rated low among interns in the areas of marketing, advertising, sales, logistics, hospitality and retailing. This study was conducted in a medium-sized mid-western university during four different summer semesters and two fall semester within a five year timeframe (Divine, Miller and Wilson, 2006).

Further to the findings of Divine, Miller and Wilson (2006) it should be pointed out according to them that the key limitation of this study is that all of the students came from the same program and thus the strengths and weaknesses identified may only be reflective of this particular program's educational

process. However, three things may mitigate this limitation. First, the internship is a requirement in this program, and therefore the students examined in this study were not a "cherry picked" sample of the best, brightest and most determined but rather represents a complete cross-section of abilities (Divine, Miller and Wilson, 2006).

At Far Eastern University, students should possess the three distinct core values, which they should exemplify whether inside or outside the campus, whether discussing with professor or classmates, and whenever attending conferences, seminars, conventions and the likes in both local and abroad. These core values are Fortitude, Excellence and Uprightness.

Fortitude. Moral courage and strength of character allows student to persevere and achieve more than is expected of them. FEU provides the academic, social and cultural environment to help develop in its students the strength of mind and spirit in the midst of internal and external pressures.

Excellence. Students perform competently to their fullest potential, thus rewarding the FEU community with countless

achievements in all fields of endeavor. The FEU community cultivates a campus environment committed to a culture of excellence in academics and beyond – in the more important journey of life.

Uprightness. Full development of morality and integrity is among the primary purposes of FEU as an educational institution. Thus, FEU steadfastly adheres to a set of principles and a code of conduct which are integrated into the curriculum and academic and management policies and instilled in all members of the FEU community. This way, FEU aims to contribute to the moral advancement of Philippine society.

According to Fadel (2012) as complexities increase, humankind is rediscovering the importance of teaching character traits such as performance-related traits (adaptability, persistence, resilience) and moral-related traits (integrity, justice, empathy, ethics). The challenges both for public school systems are similar to those for skills, with the extra complexity of accepting that character development is also becoming an intrinsic part of its mission as it is for private schools.

## 6. Conclusion

In apprenticeship or internship or on-the-job training students learn by doing in real and actual corporate work situations. Such is a hand-on experience where they can apply what they have learned and acquired formally inside the classroom or during laboratory hours. During apprenticeship, assigned supervisor of Host Company will coach, mentor and train the apprentice in one or two or several functions in the office. Some host companies have several apprentices while others only have one or two depending on the need of the host company.

Apprenticeship is the way students learn real learning in the natural way. Apprentice is evaluated and assessed by both the host company supervisor and the apprentice adviser. At the Institute, this is being done towards the end of the apprentice period.

Apprenticeship is real learning. The apprentice is not confined within the four walls of the classroom. Learning is not dependent upon any formal teaching. The learning environment involves social interaction. It includes all of the knowledge and skills that an apprentice cannot yet understand or perform on their own yet but capable of learning with guidance.

On one hand, students need to acquire skills necessary for them to become employable. And on the other hand, teachers have to teach students how to develop their skills to perform well in the workplace and to adapt to the tests and challenges of workplace.

Apprenticeship or internship or on-the-job training represents a form of education. It can offer a range of formats for relating learning to practice. Premise on the above theories and framework, apprenticeship program must therefore be culture-oriented, skills-oriented and career-oriented curriculum in order to make sense the reality of apprenticeship program to students.

To conclude, this study would like to recommend for future researchers to conduct a trend analysis on different time interval regarding the performances and skills as well the strengths and weaknesses of future interns in order to set directions for curriculum design and policies in higher educational institutions.

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## References

- [1]. Abbot, S. (Ed.). (2014). 21st century skills. *The Glossary of Education Reform*. Retrieved from <http://edglossary.org/21st-century-skills/>
- [2]. Cash, J. R., Behrmann, M. B., Stadt, R. W., and McDaniels, H (1996). Effectiveness of cognitive apprenticeship instructional methods in college automotive technology classrooms. *Journal of Industrial Teacher Education*, 34(2), 29-49. Retrieved from <http://scholar.lib.vt.edu/ejournals/JITE/v34n2/Cash.html>.
- [3]. Chu, S.K.W.; Reynolds, R.B.; Tavares, N.J.; Notari, M.; Lee, C.W.Y. 21st Century Skills Through Inquiry-Based Learning: From theory to practice. (2017). Springer Science Business Media, Singapore. DOI 10.1007/978-981-10-2481-8-2.
- [4]. Cooney, L., (April 2011). Cognitive Apprenticeship. Retrieved from: <https://sites.google.com/a/nau.edu/learning-theories-etc547-spring-2011/theory/cognitive-apprenticeship>
- [5]. Dennen, P. V. and Jonassen, D. H. (eds.) (2004) Cognitive apprenticeship in educational practice: research on scaffolding, modeling, mentoring, and coaching as instructional strategies. *Handbook of research on educational communications and technology* pp. 813-828. Lawrence Erlbaum Associates, Mahwah, NJ Retrieved from <http://www.aect.org/edtech/ed1/31.pdf>
- [6]. Dennen, V. P. (2008); Cognitive Apprenticeship in Educational Practice: Research on Scaffolding, Modeling, Mentoring, and Coaching As Instructional Strategies. Retrieved from: <https://www.routledgehandbooks.com/doi/10.4324/9780203880869.ch34>
- [7]. Department of Labor and Employment On-the-Job Training Manual. (June 1, 2015). Retrieved from: <http://ro6.dole.gov.ph/fndr/mis/files/OJT%20Manual%20Updated%20June%201,%202015.pdf>
- [8]. Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: MacMillan.
- [9]. DiLorenzo-Aiss, Janet, and Mathisen, R.E.. (1996). Marketing Higher Education: Models of marketing internship programs as tools for the recruitment and retention of undergraduate majors. *Journal of Marketing for Higher Education* 7 (1): 71-84. Retrieved from: <http://files.eric.ed.gov/fulltext/ED452762.pdf>
- [10]. Divine, R., Miller, R., and Wilson, H. J. (2006). Analysis of Student Performance in an Internship Program in a U.S. university *International Journal of Quality and Productivity Management* Vol.06 No.01 December 15, 2006. Analysis of Student Performance in an Internship Program in a U.S. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.468.922&rep=rep1&type=pdf>

- [11]. Fuller, A. & Unwin, L. (2003). Learning as Apprentice in the Contemporary UK Workplace: Creating and Managing Expansive and Restrictive Participation, *Journal of Education and Work*, 16:4, 407-426, DOI: 10.1080/1363908032000093012.
- [12]. Gardiner, L. R., Corbitt, G., & Adams, S. J. (2010). Program assessment: Getting to a practical how-to model. *Journal of Education for Business*, 85, 139-144. DOI: 10.1080/08832320903258576. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.468.6996&rep=rep1&type=pdf>
- [13]. Gault, J., Redington, J. and Schager, T. (2000). Undergraduate Business Internships and Career Success: Are they related? *Journal of Marketing Education* 22:45. DOI: 10.1177/0273475300221006. Retrieved from: <http://jmd.sagepub.com/content/22/1/45>
- [14]. Hidden curriculum (2014, August 26). In S. Abbot (Ed.), *The glossary of education reform*. Retrieved from: <http://edglossary.org/hdden-curriculum>.
- [15]. Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press. pp. 33, 29, 40. Retrieved from: <http://newlearningonline.com/new-learning/chapter-6/lave-and-wenger-on-situated-learning>
- [16]. Lunce, L. M. (2006). Simulations: Bringing the benefits of situated learning to the traditional classroom. *Journal of Applied Educational Technology*, 3, 37-45.
- [17]. Meyers, S. and Lester, D. The Effects of Situated Learning through a Community Partnership in a Teacher Preparation Program (2013). *SAGE Open*, July-September 2013. DOI: 10.1177/2158244013497025 sgo.sagepub.com
- [18]. Nicotera, N., Cutforth, N., Fretz, E., & Summers Thompson, S. (2011). Dedication to community engagement: A higher education conundrum? *Journal of Community Engagement and Scholarship*, 4, 37-49.
- [19]. OECD/ILO (2017), *Engaging Employers in Apprenticeship Opportunities*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264266681-en>
- [20]. Oregon Technology in Education Council (OTEC) (2007). *Situated Learning (From: Theories and Transfer of Learning*. Retrieved from: [http://otec.uoregon.edu/learning\\_theory.htm#SituatedLearning](http://otec.uoregon.edu/learning_theory.htm#SituatedLearning)
- [21]. Parsons, F. (1989). *Choosing a vocation*. Garrett Park, MD: Garrett Park Press. (Original work published in 1909, Publisher Houghton Mifflin company) Retrieved from: <https://archive.org/details/choosingavocati00parsgoog>
- [22]. Roberts, T., Conner, N., & Jones, B. (2013). An Experiential Learning Framework for Engaging Learners During Study Abroad Experiences. *NACTA Journal*, 57(3a), 28-35. Retrieved August 8, 2020, from [www.jstor.org/stable/nactajournal.57.3a.28](http://www.jstor.org/stable/nactajournal.57.3a.28)
- [23]. Rogers-Chapman, F. M. and Darling-Hammond, L. Preparing 21st Century Citizens: The Role of Work-Based Learning in Linked Learning. (August 2013). Retrieved from: <http://edpolicy.stanford.edu/node/661> T P.
- [24]. Smith, E. (2010). Apprenticeships. In P. Peterson, B. McGaw, and E. Baker (3rd Ed.). *International Encyclopedia of Education* (pp.312-319). Oxford: Elsevier.
- [25]. *Student Handbook* (2015 – 2016). Far Eastern University Publications. Far Eastern University, Nicanor Reyes St., Sampaloc, Manila, Philippines
- [26]. *Student Apprenticeship Program Handbook* (2015 ed.). Macachor C. C. et al.; Far Eastern University Publications. Far Eastern University, Nicanor Reyes St., Sampaloc, Manila, Philippines
- [27]. Stein, D. (1998). Situated learning in adult education. Retrieved from: <http://www.ericdigests.org/1998-3/adult-education.html>
- [28]. Utley, B. L. (2006). Effects of situated learning on knowledge gain of instructional strategies by students in a graduate level course. *Teacher Education and Special Education*, 29, 69-82. Retrieved from: <https://doi.org/10.1177/088840640602900108>
- [29]. Wilson, S. M and Peterson, P. L. *Theories of Learning and Teaching What Do They Mean for Educators?* (July 2006). National Education Association, 1201 16th Street, N.W. Washington, DC 20036-3290
- [30]. World Economic Forum New Vision for Education Report: *Fostering Social and Emotional Learning through Technology*, (2016). Retrieved from: <https://www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-students/>