

## The Engagement Between Education, Community and the Needs of Industry

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**Abstract.** The engagement strategy, has been seen as an importance tools for enhancing students knowledge from their workplace, industry and community. Nevertheless, the study in this area was still limited, then this paper tried to identify the experiences of a university issues relating to workforce development and the engagement used by university and community. An in-depth interviewed was used with the purposive target groups. Qualitative research showed the relation between university and industry through the CEDEP five periods practice or four steps of Vickers et al. (2004); a) *work-based learning - WBL* (the period of formation and, promotion and working place), b) *Levers & enabler* (continuing to practice), c) *management of change* (information evaluation and feedback), d) *building partnership* (programme of work place for newly graduated student and online job application). These practice periods illustrated the excellent performance of participants with receiving the above or standard salary, having 95% of participants who obtained job, and satisfying toward job obtaining. The result, however, also demonstrated that the direct engagement between university and community needed to be improved.

**Keywords:** engagement, alliances, industry, education, community

### 1. Introduction

The modern economies were increasingly dependent on technology, science education for the preparation of researchers, technologists and the community at large. So, integral to a knowledge-based economy was a transformation of the educators, curriculum and learning environments so that there was relevance for students, today and in the future, as they prepared for an ever-changing world. Thus, the importance of university community and industry engagement has become increasingly apparent over the last decade (Langworthy, 2007). Engagement, a kind of alliances defined broadly as an agreement between two or more partners to share knowledge or resources, which could be beneficial to all parties involved (Thechatakerng, 2005) which in this study meant the collaboration between higher education institutions and their larger communities the mutually beneficial exchange of knowledge and resources (Boyte, 2009; Carnegie Foundation for the Advancement of Teaching Carnegie Classification Project: CFATCC, 2005). As university (higher education) and industry have played an important role in increasing competition to recruit students, the responding this could be industry engagement by university. The engage project between university and workforce (industry) should be overlapping in four areas or 5 practice periods of CEDEP (we observed the working process of professional development centre of Universidad ICESI (Centro de Desarrollo Profesional CEDEP). These 5 practice periods of CEDEP fit perfectly with workforce, those were work-based learning (WBL), levers and enablers, management of change, and building partnership (Dales & Arlett, 2008).

Moreover, university and community engagement typically finds expression in a variety of forms, ranging from informal and academic programmes addressed at particular community needs and some projects might be conducive towards the creation of a better environment for community engagement and others might be directly related to teaching and research. Community engagement was a two-way

relationship in which the university forms partnerships with the community that yield beneficial outcomes such as productive research outcomes, human capital development and the development of cultural and intellectual assets for the community (UNISA, 2008). We conceptualized as a continuum ‘determined by two important distinctions: who the primary beneficiaries of the service are (i.e. community or student); and what the primary goal of the service is (i.e. community service or student learning). This paper integrated the three institutes which these supported each others. The engage project between university and workforce should be overlapping in four areas or 5 practice periods of CEDEP. Subsequently, university and a community in which the university forms partnerships with the community those yield beneficial outcomes for both the community and the University, especially the primary beneficiaries of the service and the primary goal of the service. In addition, students practice their own career in industry or workforce would impact directly to community in term of community improvement. This paper, then tries to answer 3 research questions; what programs in the department of business administration at ICESI are engaged with industry and community? How are the characteristics of engaged firms? And which form of alliances use by the faculty of business administration, industry and community? Finally, we drew on the experiences of a project investigating issues relating to workforce development and the engagement used by university and community, focusing on business management and others area that engaged with industry and community.

## **2. Research Methodology**

We utilized a qualitative approach to this study, we have processed our paper as follows:

### **2.1. Method**

#### **2.1.1. Sample**

As an in-depth, we focused on the CEOs, for example the director of professional development, Maria Isabel Velasco who was in charge in the area professional development centre (CEDEP) and some of the assistants, Nathalia Gonzalez Alonzo, coordinator of promotion, who was concerning in this field. We aimed to review the engaged students in the school of administrative sciences and economics which was divided into three areas; Business administration, Economics and international business, and Public accounting and international finance. On behalf of selecting the case to interview and to analyze, we reviewed from the recorded data and the statistic since 2007-2009, which there were 372 students participated in the practice programme. An in depth interview was conducted involving a purposive participants at ICESI.

#### **2.1.2. Validity**

Several validity issues were inherent within this paper. The first issue was in the small sample size being used. We involved only the staffs in CEDEP and engaged students. In addition, the study relied on the co-investigator’s personal contacts as an initial source for university experts as well as participants in industry. This may limited the generalizability of the findings.

#### **2.1.3. Methods of data analysis and interpretation**

Documentary analysis, information synthesizes, and interviewed targets have observed in the study. Once we obtained all the data from the mentioned resources above, then one of our research team, analyzed the data by classifying them through social statistic programme. After that, all information was interpreted.

#### **2.1.4. Results**

The results found in this part were to explain the characteristic of participants and firms, the engagement between university and industry (workforce), the university and community engagement.

#### **2.1.5. Characteristic of engaged firms with university**

- Types and size of engaged firms

Types and size were classified as characteristics of the firms. In this study, firms that engaged with the university were large size firms (60.5%) which were in service and construction industries, follow up with “no identified” (21.0%), and medium size of the firms (12.9%) respectively.

Table 1 Type and size of the engaged firms

Type of the firms	size					Total
	Large	Medium	Small	Micro	No identified	
Electric pro	6 (1.6%)	3(8%)	-	-	2(.5%)	11(3.0%)
electric supplies	6(1.6%)	5(1.3%)	-	-	5(1.3%)	16(4.3%)
feed mills	2(.5%)	4(1.1%)	-	-	1(.3%)	7(1.9%)
Agricultural product	2(.5%)	3(8%)	-	-	-	5(1.3%)
Leather	-	-	-	1(.3%)	-	1(.3%)
Textile	3(.8%)	2(.5%)	2(.5%)	-	2(.5%)	9(2.4%)
Furniture	1(.3%)	3(8%)	1(.3%)	0	0	5(1.3%)
Service	131(35.2%)	22(5.9%)	13(3.5%)	-	41(11.0%)	207(55.6%)
constructions	73(19.6%)	4(1.1%)	-	-	2(.5%)	79(21.2%)
Others	1(.3%)	2(.5%)	-	4(1.1%)	25(6.7%)	32(8.6%)

- Type of engaged firms and area of study

The three areas of study consisted of Business administration, Economics and international business, Public accounting and international finance participated in service firms (55.9%), follows up with construction (21.4%), and other (8.1%), respectively.

Table 1 Type and size of the firms

Type of Firms	Program			Total
	Admin	Econ	Fin & Acc	
Electric pro	6(1.6%)	5(1.4%)	-	11(3.0%)
electric supplies	4(1.1%)	11(3.0%)	1(.3%)	16(4.3%)
feed mills	2(.5%)	2(.5%)	3(.8%)	7(1.9%)
Agricultural product	1(.3%)	4(1.1%)	-	5(1.3%)
Leather	-	1(.3%)	-	1(.3%)
Textile	3(.8%)	6(1.6%)	-	9(2.4%)
Furniture	1(.3%)	4(1.1%)	-	5(1.3%)
Service	55(14.9%)	135(36.5%)	17(4.6%)	207(55.6%)
construction	37(10.0%)	37(10.0%)	5(1.4%)	79(21.2%)
Others	8(2.2%)	18(4.9%)	4(1.1%)	32(8.6%)
<b>Total</b>	<b>117(31.6%)</b>	<b>223(60.3%)</b>	<b>30(8.1%)</b>	<b>372(100.0%)</b>

### 2.1.6. University and Industry (workforce) engagement

The university and workforce engagement have fit perfectly with the 5 practice periods of CEDEP (ICESI). We could integrate together as follows; a) *work-based learning - WBL* (the period of formation and, promotion and working place), b) *Levers & enabler* (continuing to practice), c) *management of change* (information evaluation and feedback), d) *building partnership* (programme of work place for newly graduated student and online job application).

- *Work-based learning – WBL* (the period of formation and, promotion and working place).

The steps in work-based learning were divided into 2 periods; the period of formation , promotion and working place. Natalia Gonzalez explained that at the first period participants would perceive the practice at

workplace that they desired. In this step, Angela Ximena Gomez Hurtado, a coordinator of formation, would have to observe and to meet students to evaluate basic situation. Then, the workshop plan would be established and sent to faculties by coordinator before the last semester of studying would start. All 280 students per semester, must participate in this workshop which would take 1 day/room/30 students. The students would be trained about the all necessary documents need by firms, and let students having experience to face with the real world. Here was the initial point to transit university world to working world via the learning that the students needed to willing developing and to robust the capacity from their knowledge follow the requirement from labor market. From this period the students would be able in having dynamic personal knowledge, and be able to create motivation to those jobs that allowed professional based on personality, interesting, expectation and capacity for giving initiate project of professional life. Furthermore, the methodology used by firms in the process of selecting labor would be clarified in this stage. In addition, the labor market trend would be indentified to prepare students in the professional area.

Natalia continued taking job from Angela, also started hunting job for students from companies only in Colombia. Normally, the workforce would offer places for students but would focus in the area need by firms. This second period would defend for the relation between university and the firms, and also would be indentified the vacancies encompass in the industry. Moreover, the interested area and professional of students would be explained to perceive whether the new professional knowledge would be obtained and be verified the career path that the students want to continue.

This step, the program would identify the labor opportunity in the industry which could be responding to the expectation of developed students. CEDEP would arrange the event to promote students getting the right job, such as “laboral fair job” by inviting companies to participate in the fair. Besides, the university would maintain the relation with the industry, and then presented the place that accepted the candidate students follow their interesting and expectation. For the activity in this period would be the introduction of the practice chief, labor market, company visiting, institute presentation, and academic event of each program.

- *Levers & enabler* (continuing to practice).

Sandra Monica Gallego gave detail that the CEDEP of ICESI prepared the continuing to practice for students. After the work-based learning steps has already done. The participants would have enough capacity to work with the company that they want. Then, the students would continue to practice with the company and its coach (professional in the company). The practice in this period divided into 3 steps; 1) working in the organization, the students would be give task, introduce to supervisor, visit the firms, and evaluate their practice. 2) individual working; the students need to identify and to robust their competences. 3) working group; to participate in Businesses club and workshop.

- *Management of change* (information evaluation and feedback)

In this steps, the participants would start to contact with their interested firms and would received the feedback from professional consultant about the students’ strengthen and weakness. Moreover, the relation selecting process’ paradigm and the labor demands would be explained from firms’ trainers. In addition, personal dynamic, motivation, competency, and personal talent would be integrated and adjusted in each person to firms. After this period, the participants could constructed the action plan that affected the process of selection from the potential firms, and started to practice their work where have been selected by firms (Sandra Mónica Gallego Díaz).

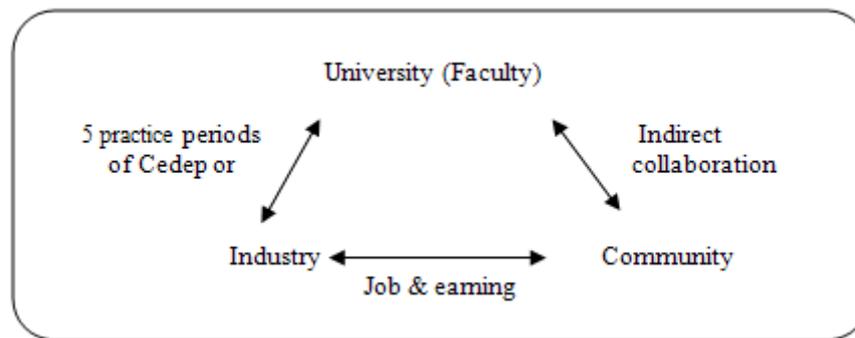
- *Building partnership* (programme of work place for newly graduated student and online job application).

The building partnership step which was managed by Sandra Milena Orejuela Villegas clarified that the period tried to facilitate the newly graduated student that hadn’t job, and want to work through presentation about different potential firms, and the process to achieve the firms with different activities to let the students known about the programme that offered job for newly graduated. By mean of this methodology, 95 percent of newly graduated could obtain the job and receive the standard or above the standard salary. Furthermore, online job application also offered a good chance to newly graduated students, made clear by Maria Isabel Martinez.

### **2.1.7. University and Community engagement (the area of Engagement)**

We designed this alliance as two important distinctions: the primary beneficiaries of the service (i.e. community or student); and the primary goal of the service (i.e. community service or student learning). Once, we have interviewed 3 prospective students which were studied in different area of business studies, we found that the university didn't have direct collaboration with community. However, the indirect engagement that we translated through university financial support (borrowed) to students for their tuition fee, was the primary beneficiaries of the service. Furthermore, the 5 periods practice programme that assisted students getting the right job and obtained country standard salary were the primary goal of the service. We interpreted these proxies were the collaboration between the university and community.

Figure 1 The relation between university, industry and community



Resource: Owned elaboration

## 2.2. Conclusion, Implication and Future research

We revised the information about ICESI in this field obtained from universities resources, for example the department of professional development (Centro de Desarrollo Profesional: CEDEP), which we utilized report evaluation of practiced students since 2007 – 2009 to analysis and to synthesize. Moreover, an in-depth interviewed was used with the purposive target. Frequency demonstrated participated firms characteristics were large and medium size and were in construction and service sectors. In addition, the students in Business area involved in the mentioned two sectors as well. These results implied that the large and medium size firms have played an important role in supporting the engagement between university and industry to their needs in driving country economy. Qualitative showed the relation between university, industry and community through the CEDEP five periods practice or four steps Vickers et al. (2004); a) *work-based learning - WBL* (the period of formation and, promotion and working place), b) *Levers & enabler* (continuing to practice), c) *management of change* (information evaluation and feedback), d) *building partnership* (programme of work place for newly graduated student and online job application). These alliances programmes illustrated the excellent performance of participants with receiving the above standard salary, having 95% of participants who obtained job, and satisfying toward job obtaining. Moreover, the firms in industry could obtain the resources from the university as their needs, as Thechatakerng (2005) argued that alliances could be beneficial to all parties involved. The result, however, also demonstrated that the direct engagement between university and community was still limited, only tuition fee could be borrowed in the period of time, and the good performance; the increasing of family economics value of students who participated with CEDEP 5 practice periods were manifested. These results can be translated as indirect engagement between university and community that enhanced the mutual benefits of both sides.

The future research should be focused in in-depth interview of the workforce side and community to gain more data to analyze. Furthermore, the comparative research should be focused between universities for example Maejo university in Thailand and ICESI university in Colombia to have suitable model in developing the relation between university, industry and community.

## 3. Acknowledgements

This project has been funded from the Office of the Higher Education Commission, Thailand; Faculty of Business Administration, Maejo University; and Universidad ICESI, Cali, Colombia under the University

Mobility in Asia and the Pacific (UMAP) Project. Special thanks to Dr. Melquicedec Lozano, Director de Investigaciones del CDEE and Maria Isabel Velasco, directora de Centro de Desarrollo Profesional, ICESI.

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