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Strategies for Implementing a "Service Learning Program" in Higher Education Institutions (HEIs): Learning Strategies to Improve Employability

Houinsou Dedehouanou

School of Economics, Socio-Anthropology and Communication for Rural Development, University of Abomey-Calavi, Abomey-Calavi, Benin
Email: hdedehouanou@hotmail.com

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Abstract

The question of improving employability, and employer and graduate students' satisfaction is still pending whether or not we rely on direct internships of students into businesses or their impregnation in a so-called "service learning program (SLP)". Recall that SLP involves Higher Education Institutions (HEIs), Businesses and Communities as partners with the ultimate goal to improve the welfare of the communities. There are missing elements that HEIs and their lecturers should take care off. Teaching "declarative knowledge" to students and the ways in which such an input must be transformed into "procedural knowledge" or "know-how" is the key to improving employability and employer and graduate students' satisfaction. That is the rationale why this paper is suggesting settling down at the forefront of the learning strategies before building a service-learning program. The lesson to be learned is that a service learning program engaging several groups of actors can deliver unpredictable results; but what should remain a constant must be employability, and employer and students' satisfaction.

Keywords

Employability, Employer and Students' Satisfaction, Learning Strategies, A Service-Learning Program

1. Introduction

As lecturers working in the fields of service-learning programs, we were concerned with the extent to which employability of graduate students could im-

prove. In fact, education is not only a game, but rather a way out for livelihoods (Hashim, 2011). We then invested effort in considering the contact between students and businesses on the one side and between students and communities on the other side. There are, however, flourishing grounds to a service-learning program with very little impact on employability, and on employer and student satisfaction (Powell & McGrath, 2014). There is much to say about enthusiasm of lecturers and professionals involved, while gains for communities were obvious even when they scarcely met the expectations (Shaw, 2013).

It was of much concerns given more than twenty years of experience as chief of a committee in charge of a service-learning program at the faculty, facilitator of the generalization of service-learning programs at the University of Parakou, instructor for service-learning programs at the National University of Agriculture, and facilitator of the process of validating good practices of service-learning programs at the University of Abomey-Calavi.

As a way of service to the communities, a service-learning program pulls together Higher Education Institutions (HEIs) with their lecturers, Businesses with their professionals and at last the communities with their social workers. The main assumption that a service-learning program is aimed at communities is pushed too far from our point of view and little is done to enhance employability of graduate students (Hashim, 2011; Blagojevic, 1997).

That is the rationale why our goal here is to bring back employability of graduate students at the core of a service-learning program. This is to establish that a service-learning program is useless without a minimal improvement of employability of graduate students.

Through empirical experiences during the last twenty years, we could assume strengths and weaknesses of various approaches at hand, although we lacked theories to highlight our findings. Therefore, we consulted first the literature on language learning: English for General Purposes (EGP) and English for Specific Purposes (ESP) and how to move successfully from EGP learning strategies to ESP learning process (Blagojevic, 1997)? More importantly, we realized that skills acquisition could also be achieved through successfully transmitting Skills for General Purposes (SGP) learning strategies to Skills for Specific Purposes (SSP) learning process. Then, we could easily put a theory on the empirical experiments we faced during the last two decades.

The present paper is about a service-learning program, i.e. knowledge and its acquisition through the process of learning in the Higher Education Institutions (HEIs). Recall that knowledge is socially elaborated based on the language and other systems implying human senses (Djambian & Agostinelli, 2013). In order to recap very quickly the evolution of professional knowledge, this embraces qualification which was attached to a worker, to a work post, then took up a social dimension which entailed competence, whose fascinating challenge is to value various skills of which the know-who, social knowledge, capacity to communicate, and so on; around which HEIs, businesses and communities get together (Hashim, 2011; Blagojevic, 1997; Djambian & Agostinelli, 2013).

In fact, the acquisition of professional knowledge bears cognitive processes as well as human sense-guided processes. Those processes subordinate knowledge to practice and action (Blagojevic, 1997). In the remaining sections, we will present the theoretical and empirical foundation of learning strategies, the Analytical learning framework, the experiential service-learning and results, the discussion and the concluding comments.

2. Theoretical Foundation of Learning Strategies

In most Higher Education Institutions (HEIs), professional learning referred to behavioristic theory. The latter considers human behavior the only objectively reliable area for psychological analysis (Blagojevic, 1997). In the same vein, cognitive psychology deals with the mental processes that underlie intellectual performance. It then tries to explain some important intellectual achievements, which the former theory was not capable of, such as problem solving and the acquisition of some basic learning skills.

Hence, the findings of cognitive psychology were inevitably built into the majority of the modern studies of knowledge acquisition, especially on learning and teaching theories. The cognitive approach of "Languages for Specific Purposes (LSP)" consists of creating an information-processing's framework for learning. This suggests the transformations of information from "input" to "output". The first set entails principles, definitions and proper relations in a field. These are descriptive, independently anchored to practices and far behind of concrete facts. For conceptual purpose, input is such information which is transferred to the working memory, where it is stored. It is referred to as: declarative knowledge (Blagojevic, 1997). The second set, more procedural and prescriptive, is very specific to usage. In fact, stored information may be retrieved and organized by the response generator into a performance pattern, which is referred to as: procedural knowledge. There is the need of a mechanism which helps learners to connect with the learning activities and to activate declarative knowledge stored in memory (Molaie, 2016).

Of course, declarative knowledge provides the data needed to perform some procedures, while procedural knowledge involves the transformation of information.

There is still a long way to go from information-processing's framework (information comprehension/declarative knowledge) to learning/procedural knowledge.

Cognitive psychology has greatly influenced the modern skills learning methodology; its previous search for the best learning method has now been replaced by the analysis of the skills learning process and explication of the mental activities the learners employ in order to become successful skills learners (Blagojevic, 1997; Djambian & Agostinelli, 2013).

The cognitive approach views skills acquisition as an active process, which can be facilitated by means of using adequate cognitive operations, or "the special thoughts or behaviors that individuals use to help them comprehend, learn and

retain new information". These "special thoughts" are commonly called "learning strategies" (Blagojevic, 1997). In the skills acquisition/learning process, they are expected to lead skills learners to successful skills performance, e.g., skills comprehension and skills production. Despite the accuracy of the scientific processes, few flaws are still embedded in them (Marletta, 2013). However, we would not provide here details on the flaws.

3. Empirical Foundation of Learning Strategies

In the Higher Education Institutions (HEIs), there is a belief that lecturers can make their tasks more successful by concentrating their attention on the way their learners approach the learning process and by instructing them in the use of learning strategies.

Can skills for general purposes (SGP) learning strategies be successfully used in the skills for specific purposes (SSP) learning process? In other words, to what extent declarative knowledge can be transformed into procedural knowledge?

The initial assumptions in using learning strategies in SSP are that: 1) they can be instructed; 2) in the same way as in SGP, the lecturer demonstrates them by "thinking aloud" to his students, and 3) the essential difference between teaching SGP and SSP conditions the selection and choice of the learning strategies, which are to be used in the SSP learning process. As opposed to teaching SGP, where the development of general skills capacity is required, SSP teaching is aimed at fulfilling specific tasks, leading to the development of so-called "restricted competence".

4. Analytical Learning Framework

The below sketched framework is grounded on various practices and the literature on psychological analysis and cognitive processes. As an organizing nexus for transforming "declarative knowledge" into "procedural knowledge", (Blagojevic, 1997) suggested six rhetorical structures: generalization, classification, description, enumeration, comparison/contrast, and sequence structures. In order to provide learning strategies for graduate students at the margin of a service-learning program, these rhetorical structures were to be combined with each one or more of the five human senses: seeing, hearing, smelling, tasting, and touching.

Recall how the human body receives sensory information: sight, sound, smell, taste, and touch.

Putting in perspective "experiential learning environments" (Somerville, 2013), which bring together actors from the HEIs and those of public or private businesses, and communities, the suggested framework follows the platform approach (repertoire of knowledge and competencies) and leaves ample room for collaboration, participation, and engagement of actors and institutions (Robinson, 2019). The analytical framework described below, as a normative structure, has been grounded in the training process that students experience during their formative years (**Figure 1**).

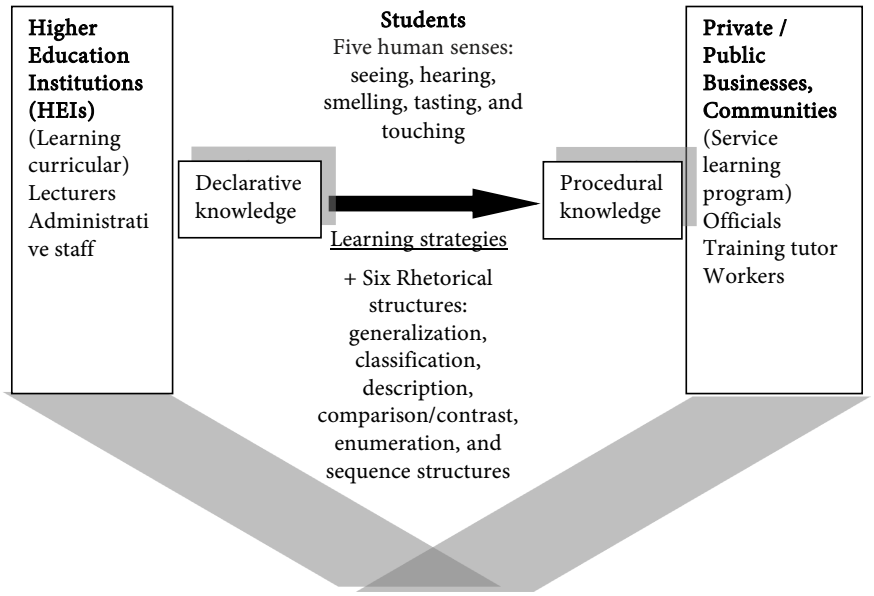

Figure 1. Experiential Learning Environments: the *Platform Approach* leaves ample room for Collaboration, Participation, and Engagement (adapted from (Blagojevic, 1997) & (Molaie, 2016); and more than twenty years of experience as lecturer in charge of a service-learning program).

5. Experiential Service-Learning and Results

It is being documented here long standing processes of sending students to various public or private businesses and to communities. In fact, there used to be a guide which provided students with general instructions. Learning objectives were set beforehand and activities to be carried out in line with those objectives. Lecturers as supervision staffs visited the sites and provided additional instructions. The question was whether those instructions were clear enough to enlighten students on the learning processes. Over several years of experimentation, the answer was no as soon as students could not report their learning processes and lessons captured.

The first years, most reports were blind in terms of the learning strategies: "knowledge how to do something". Lecturers later found out that they should "think aloud" to their students, as suggested by Blagojevic (1997); i.e. they should demonstrate the use of the learning strategy needed for decoding how to move from declarative knowledge to procedural knowledge.

Below, few examples are provided of how a co-construction of learning strategies took place year in and year out with the help of students and lecturers.

Example 1: A student from agricultural field at the level of license and with a background in agricultural marketing and management, was assisting a manager of an agricultural input store. There were three learning strategies with a combination of rhetorical structures and one or more of the five human senses.

As assistant manager, he/she provided assistance to the manager to collect some commands from suppliers at the stockroom. This was a case of agricultural input contained in Rectangular Prism cartoons.

What was the declarative knowledge? Before a manager certifies the delivery of goods, he/she musts check and even double check the quality and the number of goods which are delivered.

Therefore, an assistant (the student) would make use of a rhetorical structure named: enumeration; and of the human sense: seeing to facilitate the manager's job (Figure 2).

By combining both, the student should construct a geometrical form with the overall delivery as such that the manager would spend less time monitoring this operation.

Example 2: The student heard about nitrogen at several instances in class. But, he/she discovered nitrogen at the input store.

As "declarative knowledge", how could he/she recognize nitrogen in the future?

First of all, the student needed to combine a rhetorical structure: comparison/contrast; and one human sense: smelling. Nitrogen has a very specific and strong odor.

Secondly, nitrogen can be recognized by comparing/contrasting its color (transparent) with those of other agricultural inputs by using the sight.

Thirdly and the last, a good professional could also combine a rhetorical structure, sequence structures, with a human sense, touching. In fact, nitrogen melts after a while when exposed to the atmosphere.

Example 3: Stock management at the stockroom.

As "declarative knowledge": "first in; first out".

The student was aware of the principle that agricultural inputs are perishable goods and one should care about periods of conservation. That is the rationale why the manager of an agricultural store should verify the expiring dates of agricultural inputs. Then, he/she needed to combine a rhetorical structure: classification; and a human sense: seeing. Expiring dates could be read. Therefore, agricultural inputs should be classified according to their expiring dates; stocking to an accessible site the products with the nearest expiring dates; and to a less accessible site the products with the latest expiring dates.

Example 4: Students from various learning programs at the level of license. As soon as one was concerned with production, i.e. operational activities; there was what is called the "step by step production process".

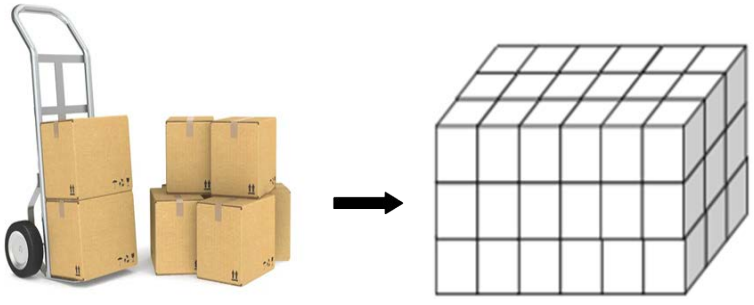

Figure 2. Illustration of how students (acting as assistant manager) should range cartoons so as to facilitate a monitoring from the manager.

It was recommended that students appropriated the step by step production process as the "declarative knowledge". Then, how could this information be transformed into "procedural knowledge"?

The student needed to combine one or more rhetorical structures: generalization, description, sequence structures; and one or more of the five human senses: seeing, hearing, smelling, tasting, and touching; depending on the step of production.

Example 5: Various production units or private and public businesses

What is the "declarative knowledge"? Step by step production process.

1) For language production: translation

rhetorical structure: generalization;

human senses: seeing, and hearing.

2) For communication production

rhetorical structures: generalization, classification, description, comparison/contrast, and sequence structures;

human senses: seeing, and hearing.

3) For industrial production

rhetorical structures: generalization, classification, description, comparison/contrast, enumeration, and sequence structures;

human senses: seeing, hearing, smelling, tasting, and touching.

Example 6: Student from a learning program titled "bio-medical analysis". He /she could not seek to learn technical skills following a service-leaning program, but rather social as well as communicational skills. It is of interest to stress that each HEI should manage to supply equipments and laboratories for technical skills acquisition.

For instance, communication in order to welcome clients/patients: he/she should carefully listen to the speech delivered by professionals through a rhetorical structure, sequence structures and a human sense, hearing.

Example 7: Taking of blood-sample in order to carry out biomedical analyses.

Several verifications were to be carried out: 1) preliminary conditions (materials, equipment, sanitary, etc.) to this kind of activity are-they fixed? If not! Why and what is missing? If yes! How? In which ways the fixed conditions were similar to those taught at the HEI?

Declarative knowledge: fixed preliminary conditions to collect blood-sample.

Then students would call for:

Rhetorical structure: "comparison/contrast"

Human sense: "seeing"

With this learning strategy, students could investigate strengths and weaknesses of both HEIs and businesses. Such a learning process would help students to capture useful lessons.

6. Discussion

Given six rhetorical structures (Blagojevic, 1997), and five human senses, it is

presumed thirty combinations and then thirty available learning strategies. However, some learning strategies do not apply. Any learning strategy which combines one of the rhetorical structure with "tasting" as a human sense does not apply for nitrogen.

Of course, learning strategies are incrementally ranged from complex to simple (Robinson, 2019). Wherever complex is a learning strategy, complex are the skills to be acquired. When learning strategy is simple, this can lead to the so-called "restricted competence". By the times, students themselves can innovate in their learning strategies and arrive at even modifying the combination of rhetorical structures and human senses for performance purpose, moving then from beginners to confirmed professionals, and finally to experts (Le Boterf, 2006).

The concept of "competence" is very controversial for anyone with a common sense, because it entails more than technical knowledge, rather it encompasses social knowledge and the capacity to communicate (Djambian & Agostinelli, 2013). According to (Blagojevic, 1997), declarative knowledge is "knowledge that something is the case" whereas procedural knowledge is "knowledge how to do something", the so-called "competence". From examples 1 to 5, "declarative knowledge" must be provided by HEIs to students and then the combinations of the rhetorical structures and human senses are intrinsic to each student. That is the rationale why competence; i.e. employability is not a group issue, but rather attributes of the personality.

With respect to examples 6 and 7, students may be technically prepared, but not enough to handle communicational and social issues (Djambian & Agostinelli, 2013). That is the rationale justifying a service learning program. HEIs must not expect their students to look for technical skills through any kind of scheme, being it internship or a service learning program. These are to be acquired internally. It is also a question of affordance since HEIs with significant resources must hire external competences to provide complementary communicational, social, diagnosis and cost-benefit skills to their students.

If experiential learning environments require disciplinary as well as multidisciplinary partnerships, there is a need to unfold the kind of research works to be expected for evaluation purpose. Various researches should target most technical fields involved such as agriculture, communication, marketing, mechanics, industrial concerns in general, and more specifically disciplines like didactics, psychology and sociology and the ways in which they contribute to the learning processes (Galaup, Lelardeux, & Lagarrigue, 2016). The outputs from researches will then enhance the learning experiences whether or not students are dealing with a service learning program or a direct internship. Institutions such as laboratories, businesses and more importantly the corporate structures (association of employers, trade unions and so on) are, contrary to the developed countries, still aside of the process (Djambian & Agostinelli, 2013; Robinson, 2019; Galaup, Lelardeux, & Lagarrigue, 2016). The next challenge is how to bring them

in; for this to be sufficiently heard, however, there is still work ahead (Drennig, 2015).

7. Concluding Remarks

There is a real need to promote a platform with HEIs on the one side, and public or private businesses and communities on the other side. Such an approach leaves ample room for Collaboration, Participation, and Engagement within Experiential Learning Environments. What compels the three types of institutions, HEIs, Businesses and communities, to agree upon overall orientation on competence.

Competence is taking over qualification, as training is substituted to education, and before this, to instruction. Enterprises are not just for production, but rather training agents.

Competence is not only grounded on formal technical knowledge, but also on experiential knowledge. As such, it diverges from technical knowledge by social and communicating skills. The question is how to trigger partnerships between the various institutions which are needed to settle such platforms?

At the level of public authorities and decision makers:

To really invest in competence building as a levering mechanism for economic growth and poverty alleviation;

Backing political platforms and experiential learning environments for multiple actors will help children, adolescents and adults to streamline their livelihoods.

At the level of businesses/communities:

To engage in such partnerships with their functional role as training agents;

To really open employment to graduate students from HEIs as soon as satisfactory competence arises.

At the level of private promoters of HEIs:

To avoid the creation of all-encompassing learning programs which lead to incongruent partnerships with businesses/communities;

To adopt mutuality in resource allocation in order to provide the required technical and preliminary communicational and social skills to students.

At the level of lecturers and researchers:

To continue researches on cognitive analysis, psychology of the learning processes, sociology of employment and communicational skills and so on;

To define and facilitate the transmission of competence by defining the most readable and relevant learning strategies;

To acknowledge a change in the ways lectures are delivered before engaging into a service-learning program;

To adapt and communicate "clear and full-fledged declarative knowledge" to students.

At the level of students/learners:

To remember the learning strategies, the combinations of the rhetorical structures and the human senses, and the learning processes are then fulfilled.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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