The effects of learners' Autonomy on the Learning Motivation: Case of second and third year Civil Engineering students at the National Polytechnic school of Oran.

آثار استقلالية المتعلمين على دافعية التعلم:

التقنيات بوهران دراسة حالة طلبة السنة الثانية والثالثة في الهندسة المدنية بالمدرسة الوطنية المتعددة

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Article abstract:

This article explores the effects of learners' autonomy on the motivation of second and third-year civil engineering students at the National Polytechnic School of Oran. Using a mixed-methods approach, it examines how autonomy, defined as control over one's learning, influences intrinsic and extrinsic motivation. Data from surveys and observations reveal that greater autonomy enhances motivation, especially in collaborative and project-based settings. The study highlights the importance of fostering autonomy in student-centered learning to boost engagement and academic performance. It recommends curriculum designs and teaching strategies that prioritize autonomy in engineering education.

Key words : Learners' autonomy; motivation; second and third year Civil engineering students; National polytechnic school of Oran.

ملخص المقال:

تتناول هذه المقالة تأثير استقلالية المتعلمين على دافعية طلاب السنة الثانية والثالثة في الهندسة المدنية بالمدرسة الوطنية المتعددة التقنيات بوهران. تعتمد الدراسة على منهجية مختلطة لفحص كيف تؤثر الاستقلالية، التي تُعرّف بأنها قدرة الطالب على التحكم في عملية تعلمه، على الدافعية الذاتية والخارجية. تكشف البيانات المستخلصة من الاستبيانات والملاحظات أن زيادة الاستقلالية تعزز الدافعية، خاصة في بيئات التعلم التعاوني والمشاريع. وتوصي الدراسة بتصميم مناهج واستراتيجيات تدريس تدعم الاستقلالية لتحسين الأداء الأكاديمي في التعليم الهندسي.

كلمات مفتاحية: الاستقلالية في التعلم، دافعية التعلم، التعليم الهندسي، التعلم التعاوني، مناهج تعليمية، استراتيجيات التدريس، المشاريع التعليمية، الأداء الأكاديمي.

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Introduction

Today, learning English as a second or foreign language is becoming an inevitable task for all students around the world. Students who undertake English courses aim at developing their language proficiency by acquiring all information about this field. In order to learn a foreign language successfully, students need to emphasize on factors that result to a successful learning. One of the most important factors is learners' autonomy which means the students responsibility and control of their own learning. It begins with the assumption that the students are capable of self-direction and can adopt a proactive individual strategy to their education.

According to Holec (1981), students should be responsible for making decisions about their own learning styles, needs and strategies. Constructivist learning theories, according to Fener and Newby (2000) and Benson(1997), provide the primary theoretical basis for the psychological element of learner autonomy. In light of their pedagogical background, Fener and Newby (2000) assert that each person constructs his/her own reality in his/her own special manner. To make sense of events, everybody creates rules and mental models. Besides when we learn we try to build up meaning. Thus each learner must start with the task of constructing meaning of his/her own, rather than trying to recite or remember someone else' meaning. Therefore, if we give learners the freedom of decision making when learning; it would be more focused and well determined and of course successful both immediately and in the long term (Little,1991,p.8).

Motivation is also an important factor which plays a remarkable role in language learning. Keller defines motivation as:" The choices people make as to what experiences or goals they will approach or avoid and the degree of effort they will exert in this respect (Keller 1983). According to Deci and Ryan (1985) there are two types of motivation; the intrinsic motivation and the extrinsic motivation. Dornyei and cseizer (1998) think that without motivation, even the most competent people would be unable to achieve their aims and objectives. Gardner (1985) also claims that" the motivated person spends efforts towards the aim; but the person expending effort is not inevitably motivated". He adds that the motivation and attitude are the primary sources contributing to individual language learning. So in language learning motivation refers to the combination of attempts together with the desire to obtain the objective of language learning besides that learners need desirable attitudes towards the language they are learning. Many researchers have studied these two factors (autonomy and motivation) in language learning and they all agreed that there is a strong relationship between them. Dickinson (1995) compares the role of autonomy and motivation in language learning and concludes:

" *...there is substantial evidence from cognitive motivational studies that learning success and enhanced motivation are conditional on learners taking responsibility for their own learning, being able to control their own learning and perceiving that their learning successes or failures are to be attributed to their own efforts and strategies rather than to factors outside their control. Each of these conditions is a characteristic of learner autonomy as it is described in applied linguistics" (p. 147).*

Learning autonomy requires higher motivation from the students (Zimmerman and Moylan 2009:113). Motivational advantages are frequently seen as a reason of learning autonomy. Dickenson argues that point by saying that "autonomous learners are motivated and do more effective work". He adds in this respect:

"Learners 'active and independent involvement in their own learning (autonomy) increases motivation to learn and consequently increases learning effectiveness".

(Dickenson,1995,p.165)

So there is a strong link between motivation and autonomy according to the researches held by specialists. The question is which of these two important factors comes first? Or they both work together reinforcing each other leading to a successful learning. Another issue is discussed within this

paper is the question of how can teachers help their learners become motivated and autonomous at the same time?

1. Literature review:

1.1 Autonomy in language learning:

The concept of autonomy seems to be a new and fashionable one but in fact it goes back to the 1970s when a group of educators gathered to discuss the idea at Cambridge University (Benson). According to Holec (1997); who defined clearly the concept in his report entitled "Autonomy in Foreign Language Learning";" the starting point to encourage learners to become autonomous is to have them accept the responsibility for their own learning ". Learner autonomy arises from a learner's acceptance of personal responsibility for his or her own education. Little states that at the beginning of its appearance autonomy seemed to be" a matter of learners doing things on their own", but after it has spread and with the development of theories and programs based on the learner-centered approaches the idea has been clarified and starts to be considered as "a matter of students doing things not necessarily on their own but for themselves". (Little,2007.p.14) . According to Little (1991), autonomy is principally a "capacity-for detachment, critical reflection, decision-making, an independent action" (p.4).

Benson and Voller state the ways in which the autonomy concept has been used:

1. Situations in which learners study entirely on their own,
2. An inborn capacity which is suppressed by institutional education,
3. A set of skills which can be learned and applied in self-directed learning,
4. The right of learners to determine the direction of their own learning,
5. The exercise of learners' responsibility for their own learning.

(Benson and Voller, 1997.p.2)

Empirical research has helped to improve language learning principles and identify probable links between results, the learning process, learner characteristics, and learning circumstances. i.e. the social, linguistic, and social framework in which learning takes place. In the 1960s, arguments concerning the establishment of life-long learning skills and the creation of independent thinkers spawned the notion of "autonomous learning." Holec (1981, p. 3), defined autonomy in 1981 as: "the ability to take charge of one's own learning." Dickinson (1987, p. 11) supported the definition of autonomy as "the learner is totally responsible for the decisions concerned with his/her learning and the implementation of these decisions". Littlewood (1997) provides a comprehensive description of how a language learner's autonomy develops during the language acquisition process. He begins by defining three types of autonomy that must be fostered in relation to language teaching: Students' capacity to function freely with the language and utilize the language to communicate in real-life and unexpected settings, is a goal for language teachers. Students' capacity to take responsibility for their own learning and use active, personally relevant techniques to their work both inside and outside the classroom is a goal for language teachers. Language teachers strive to help their learners acquire greater generalized autonomy as people while assisting them in improving their capacity to communicate and study independently. Then, in language instruction, instructors must assist students in developing the motivation, confidence, knowledge, and abilities they need to speak more independently, study more independently, and be more self-sufficient as people. (Littlewood 1997,p83)

What follows is a figure used by Littlewood to illustrate the idea of the development of autonomy through teaching foreign languages.

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Communication strategies

Learning strategies

Autonomy as a communicator

Autonomy as a learner

Motivation Confidence Knowledge Skills

Linguistic creativity

Independent work

Expression of personal meanings

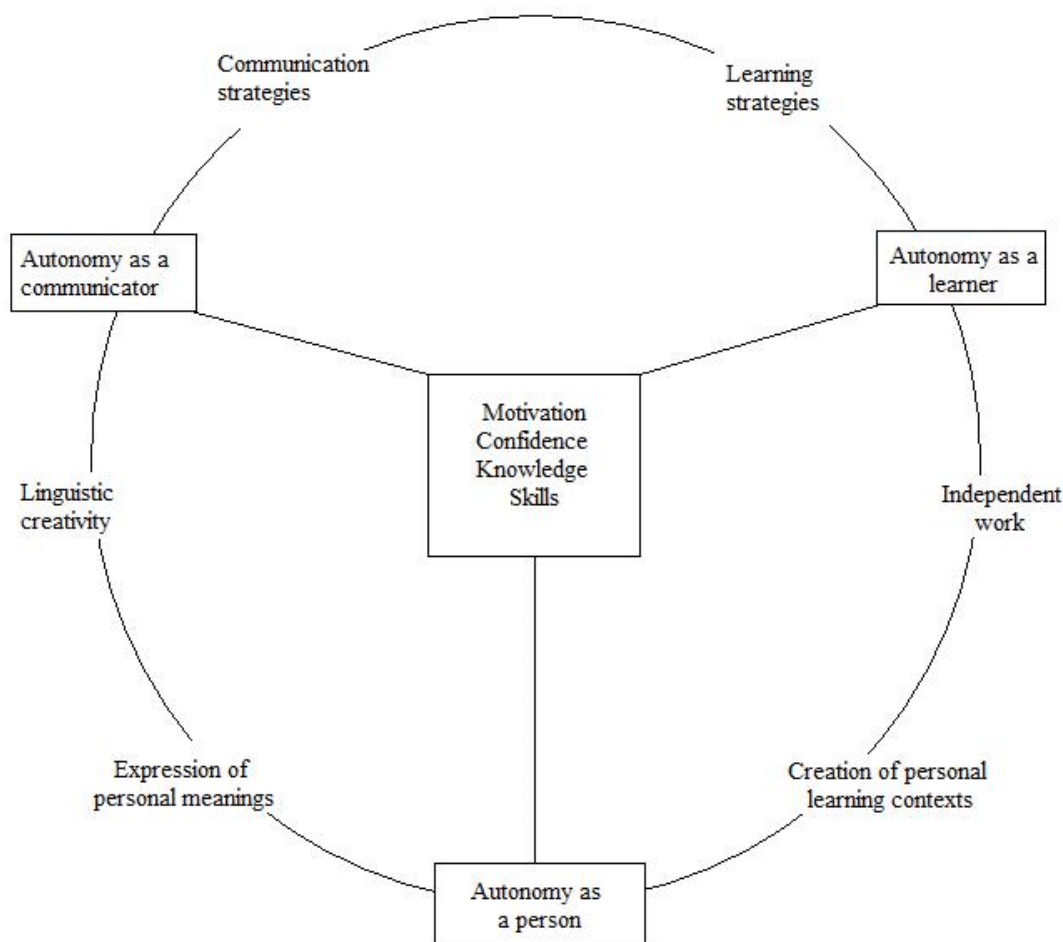Creation of personal learning contexts

Autonomy as a person

Figure1: developing autonomy through teaching (Littlewood,1997,p83)

According to the figure above, the four components that influence the learner's willingness and capacity to behave autonomously are found in the middle box. The three boxes depict the many types of autonomy that students may acquire (autonomy as a communicator, autonomy as a learner, and autonomy as a person). Communication methods, Learning strategies, Linguistics creativity, Independent work, Expression of personal meanings, and Creation of personal learning settings are some of the other categories surrounding the circle. Each method is positioned next to the type of autonomy to which it is most closely related.

It is widely believed that when a student has control over the goals and content of a course of study, language learning improves dramatically (Little, 1991; Dam, 1995). There are several approaches to assisting learners in developing autonomous learning capacities. Learner training encompasses a variety of tactics, including awareness rising, scaffolding, strategy training, greater social engagement, and the encouraging of reflection.

The idea that autonomous learners become more strongly motivated and that autonomy leads to better, more productive work is a recurrent theme in reasons for autonomy, notably in general education but also in language acquisition (Dickinson1995). When autonomous learners accept responsibility for their own learning and commit to developing reflective self-management skills in learning, they tap into their intrinsic motivation. It is required to consult the literature on motivation in general education, particularly the literature on cognitive motivation, in order to discover the link between motivation and autonomy (Dickinson 1995) (Zejun Ma, Ruixue Ma,2012 ,p839).Here comes the relationship between the learners' autonomy and motivation.

1. 2-Motivation in language learning:

The function of motivation in learning a second/foreign language is one of the main themes in the study of second language acquisition. Motivation is often characterized as the forces that account for arousal, selection, direction, and continuation of behavior (Biehler 1993, P. 508). Researchers have studied language learning motivation from several viewpoints throughout the last few decades. Gardner and Lambert (1959, 1972) look at motivation from a sociological standpoint. Among the age, personality, and motivational factors that influence Second Language Acquisition, motivation is the most essential (Cook, 2000). What is the definition of motivation? "Choices people make about what experiences or goals they will pursue or avoid , and the degree of effort they will exert in this regard" is how motivation is defined (Keller, 1983).

Learning a language other than one's native tongue necessitates a strong sense of motivation; else, learning can become a burdensome and time-consuming task. This role in second language learning has been the subject of a considerable collection of study. In the context of language learning, motivation can be defined as a student's attitude toward the objective of learning a second/ foreign language. Gardner and Lambert introduced motivation to the science of language learning in 1959 (Igoudin, 2008). Motivation is tough to define because it is such a complex and vast notion. Gardner and Lalonde (1985) define it as the desire to learn a language as well as the emotional responses toward it (Sung & Tsai, 2014). The above-mentioned complexity of motivation is confirmed by Lightbrown and Spada (2006), who add an attitudinal aspect to their definition. They believe that motivation is a complex concept that can help students strike a balance between their demands and their perceptions of the individuals who speak the language. Other definitions of motivation exist as well. Most of these definitions appear to coincide in certain areas and are frequently just paraphrases of the same concept. Motivation has many various definitions for scholars, including affect, cognition, motivated behavior, process, inner drive, attitudinal complex, and so on (Dörnyei, 1998). Motivation is defined as the power that "determines human behavior by energizing it" (Dörnyei,1998). It is also regarded to be one of the key factors of success and failure (Linnenbrink & Pintrich, 2002; Thronbury, 2006). Dörnyei & Ushioda (2011, p. 4) explain motivation as follows: why people decide to do something (the reason for the specific choice), how long their willingness to undertake that activity will last (persistent), and how hard they will run after it (effort expended on way of reaching the goal). Motivation, according to Thronbury (2006), is "what drives learners to reach a goal and is a major aspect in determining language learning success or failure" (p. 137). The majority of experts appear to believe that motivation influences human behavior by motivating and driving people toward a goal (Dörnyei, 1998). Knowles' claims that: "… there is convincing evidence that people who take the initiative in learning (proactive learners) learn more things and learn better than do people who sit at the feet of teachers, passively waiting to be taught (reactive learners)…. They enter into learning more purposefully and with greater motivation" (1975: p. 14)

He believes that the language learners should be active in their learning, and have to take part in the learning process rather than remaining passive; waiting for their teacher spoon feed them. And here again we come back to the previously mentioned idea that confirms the relationship between the concepts: **Autonomy and Motivation.**

According to Mitra Alizedah(P.14.VOL.1,No.1, 2016) learners 'motivation can go up and down and all this depends on the context thought by language teachers. The researcher argues that the teachers play a crucial role in the development of their learner's language skills. Mitra states in that article:

 "…. The teachers should help the students find motivation in the areas where they do not expect it and also to research for their own motivational processes so they can take advantage of it ."

Although there are different opinions on whether autonomy reinforces motivation or the opposite, Most of the researches have shown that motivation is increased when students exercise more control over their education, and autonomy is strongly linked to metacognitive strategies that involve reflection on the learning process, planning for learning, monitoring the learning task, and self-

assessment.(Lamb 2001; da Silva 2002; Sakui 2002; Takagi 2003; Ushioda 2003, 2006). So after all what had been mentioned about autonomy and its influence on learners' motivation; one can conclude that if the teachers do not provide their learners with the freedom to control their education they will not be motivated to learn. In light of this; we can say that" autonomous learners are motivated learners".(Ushioda 2007)

3- The teacher's role in promoting learner autonomy and motivation:

It is difficult to motivate all the students to persist at learning simply because they do not get interested at the same pace. Some learners persist longer than others, and some tasks seem to be more important than do others. Most of the researchers tend to investigate the point of how does the classroom environment influence students motivation? The overall findings lead to the fact that environments characterized by mutual respect, high standards, and caring attitude do help in making the learners persist more than in other environments.(Richards Arends p 103) Motivation is a rather abstract concept that is not easy to define and to implement due to the fact that it is internal and cannot really be seen or touched. However, skilled teachers know the basic role of learners' motivation in guiding their actions. Besides, teachers can enhance the motivation in their students by exploring their autonomy in learning the language.

2. Methodology

a- Research questions:

The present paper investigates the relationship between the learning autonomy and motivation among second and third year Civil Engineering students at the National Polytechnic school of Oran. The target learners have two years of ESP learning in preparatory classes, and then they move to Three years of study for an engineering degree in the domain of Civil Engineering more precisely the field of sustainable buildings. The current research is built on three questions:

1- Are second and third year engineering students autonomous in their learning of English as a module?
2- Are the target learners motivated to learn under an ESP context?
3- Does autonomy affects the students 'motivation?

b-Participants:

The research is conducted to question the existence of the concepts 'Autonomy and Motivation' in the target learners learning context. Two groups of learners are engaged into the study. A sample of 10 second and 20 third year sustainable building students is taken for investigation. In addition to the questionnaire, classroom observations are made by the researcher to give further facts to the research.

C-Instruments:

The sample comprised 30 students among which 10 are in second year and 20 are in third year groups. The sample is mixed between males and females. Questionnaires are answered by the target learners. Besides, observations during the lectures were noted by the researcher to foster the result and guarantee the effectiveness of the study.

The questions within the questionnaire are built upon many researches. Notably, questions stress the existence of autonomy and motivation among the target sample.

D- Results interpretation and Analysis:

1- Results of the questionnaire:

After collecting the answers from second and third year civil engineering students the outcomes have been represented on the form of a table to discuss them point by point.

Section one: Learners' autonomy

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Questions	Response options	Percentage %
1- Choice of the study topics	Always	5
	Often	10
	Sometimes	20
	Rarely	35
	Never	30
2- Comfort in decision making	Very comfortable	40
	comfortable	35
	neutral	5
	uncomfortable	15
	Very uncomfortable	5

Question about	Answer options	Percentage%
3-The impact of choices on engagement	Strongly agree	40
	Agree	35
	Neutral	5
	Disagree	10
	Strongly disagree	10
4-Setting personal learning goals	Always	35
	Often	20
	Sometimes	20
	Rarely	15
	Never	10

The analysis of the first section questions:

The first question is about the choice of the topic, on which the majority of the students state that it happens rarely or it never happens. This is because they have never been given the chance to decide on what to study. The second, third and fourth questions got a majority of positive answers favoring their engagement in the learning process in terms of goals setting and decisions making . The later grants their learning autonomy and thus fosters their motivation. Most of the students believe that they are more comfortable when they decide what to learn than when they are taught a stable syllabus. Moreover they know that when they choose what to learn they are likely more engaged in the learning not just receivers of knowledge. Finally, if they participate in making the lectures they are also realizing the goals they settled in mind before starting.

Section two: Learning 'motivation

Question	options	Percentage %
1-Motivational factors	Interest in the Language	20
	Academic Requirements	20
	Career Opportunities	45
	Personal Growth	10
	Social Interaction	5
2-Overall motivation rating	Very high	30
	High	25
	Moderate	20
	Low	15
	Very low	10
3-Satisfaction with the progress	Always	20
	Often	15
	Sometimes	15
	Rarely	35
	Never	15

The analysis of motivation questions:

The motivation questions emphasized the motivational factors, overall motivation rating and the satisfaction about the progress in learning the language. A great majority stated that they are motivated to learn English because they see it as a tool that provides them with career opportunities.

Whereas others stated that they learn it because they are interested in the language as it is the standard language or because they are obliged to learn it. Few of them stated they need it for further academic researches or social interaction. On the other hand, when they were asked to rate their motivation for learning the English as a transversal module, most of them answered with very high. The others 'answers varied between moderate low and very low. Finally, when it came to satisfaction with their learning progress, we can say that a great number stated that it is rarely that they are satisfied about their progress in learning. This is because of the fact that most of them are not motivated with the actual syllabus or way of teaching.

The open ended questions:

Concerning the open ended questions, the students expressed their ideas in different ways. But the great majority agreed on the fact that they face challenges in terms of research as well as in learning the other modules of their specialty. They showed a great desire for more opportunities for collaborative and practical work. The latter is most required, simply because they really aim at being engaged in their learning process in terms of being active in their learning rather than being passive.

Some of the sample answers went through the concept of individualized feedback as a means of goals support. They argued that the teachers can enhance their autonomy by giving them the chance to decide on what to study and how to study it. Besides, they pointed the issue of resources and their availability. Their interests vary as well as their learning preferences.

Classroom observations results:

According to the researcher's observations during the classes, we can say that the Civil engineers are not really motivated for the lessons provided. The syllabus is prepared by the teacher. And the lectures vary between vocabulary related lectures and grammar lectures; with materials that are typically technical.

We noticed that the sample learners are receivers of knowledge and they act only when being asked to answer a question in the lesson. Despite the fact that most of the students have a very good level of English, they seem to be passive in the classroom setting .They show no interest to what is presented. We feel that they somehow get bored during the lectures. We deduce that this is because they are not given the chance to act in their learning. Besides that, the teacher also feels demotivated when he sees no interaction with him\her during the lesson.

Conclusion:

Second and third year Civil engineering students have faced and are still facing several challenges in their learning of English as a module. The study has shown their desire for a more learner-centered way of teaching. Believing that by doing so they become autonomous and thus highly motivated. According to the questionnaire results, the target learners expressed their readiness for learning engagement. They favored the choice of the topics as well as the decisions of their learning. Thus more learning goals will be developed and engagement will be guaranteed. The sample's most important motivation factor for learning English is to gain career's opportunities. On the other hand, the classroom observation process proved that the students do not really enjoy the learning of English as a module. They feel passive and bored with the lessons provided.

 Finally, to help civil engineering students become autonomous and motivated to learn English we have to focus on making the language relevant and engaging to their field of interest. Teachers should emphasize the importance of English by connecting it to their field, such as specialized vocabulary,

global opportunities, and technical resources in English. Technology should be used; Apps and online materials are useful examples. Project-based learning that involves English research should be encouraged as a mean to guarantee autonomy. In addition, teachers should foster peer collaboration through study groups and language exchanges. At the end of the study we can say that making an effective syllabus build upon well studied strategies and techniques is challenging for ESP teachers. It requires good planning and should depend on the target learners' expectations and needs.

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