

# Academic Motivations' Measure among Congolese's Students

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**Abstract** The linking of Congolese Higher Education to LMD should encourage researchers on monitoring and supervising of students prospects. In particular self-determination problem of Congolese's Students, who will be more actors in their own training than simples auditors. The aims of this paper were intended (i) measure the Congolese's Students motivations, and (ii) determine the influence of gender, age, academic fee care and institution (culture) on it. Survey method and questionnaire technique were used, precisely Academic Motivation Scale (AMS-28) of Vallerand, Blais, Brière, & Pelletier to test 76 participants students, composed by Females and males, aged from 18 to 48 years old, attending the University of Lubumbashi or ISP/Gombe, either educational fee care or own fee care. After data analyse, we discovered that gender, age and academic fee care are not influenced the academic motivation of Congolese's Students tested. Only institution or culture variable exposed that the study environment influenced the academic motivation. So it is better working with educational psychologist in creating optimal scenarios and conditions for students' self-determination learning in the context of LMD reform.

**Keywords:** *academic motivation, intrinsic motivation, extrinsic motivation, amotivation, self-determination, Congolese's student*

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## 1. Introduction

### 1.1. Problem and Aims

The linkage to the LMD (licence-master-doctorat) decided by the supervision of higher education in the DR of the Congo (DRC) motive us to communicate quickly, in order to insist on taking into account the part of student in the implementation of LMD which insists on the well-targeted skills that student must develop, by granting him the free choice of subjects, readings and acquisition of knowledge. This LDM, which is based on professional, curricular and evaluative references, will therefore be effective in the DRC from this academic year 2021-2022. Reforms undoubtedly ambitious, but in most cases, there are not respecting the stages standardizing of any reform.

These reforms concerned all levels of training in the DRC, both primary, secondary and university. And the university reform is the latest of the educational revolutions that the Congo is going through. The Congolese's LMD is a hasty decision for some, though necessary for others.

The Congolese education system is currently undergoing several reforms, in particular that of the establishment of basic education. In order to solve the

problem of the usefulness of the child who must complete his elementary education, the government transformed the two first classes of secondary in 7th and 8th year (a logical continuation of primary school formation); one of the essential innovations of Basic Education which aims at the acquisition of basic knowledge by the child from primary level to general secondary education, i.e. eight years of education. According to Congolese national education Framework Law No. 14/004 of February 11, 2014, the concept of "Basic Education" for all aims to meet the need to learn of children, young people and adults, in particular the needs to learn to write, to read, to calculate, to express oneself orally and by signs, to know how to solve problems and to acquire life skills, know-how, know-how doing, knowing how to become and civic sense.

Recently (the school back 2019-2020), there was another reform, the generalization of free schooling in the public's primaries schools in Congolese education system. This has increased the number of children attending school, with however, the problem of training quality in these classes, which have become overcrowded.

Following the previous reform, there were mergers various fields of study, in particular, biochemistry and math-physics merged into only field scientific humanities, as well as, the revision of the curricula and a subsequent addition of certain courses necessary for this new option.

Nevertheless, in addition to these educational reforms, the quality of Congolese education has declined as a

whole, following various and numerous factors, among them the question of management of human, financial and material resources, even the question of psycho-pedagogical impulse.

Indeed, human resource management requires good recruitment of teachers and other education support staff, but above all good placement and good motivation, financial and non-financial. Good financial management goes through salary and realistic benefits to standing and seated teachers, consistent, rational and tangible funding of the education sector to establish the educational policy as enacted in the laws and regulations of all the country and those ratified at an international level. The good management of material resources refers to an effective and efficient use of school equipment buildings, even teaching materials and textbooks.

It should be remembered that this whole panoply of Congolese educational problems is crowned by other challenges, not the least of which are those relating to the psycho-pedagogical methods and processes of teaching and learning.

In the school environment, it is up to the psychologist to deal with these psycho-pedagogical problems of teaching and learning. The Educational psychologist is the expert in charge of adapting the learner to education and education to the learner, through the improvement of curricula, methods and psycho-pedagogical processes, trainer-learner interactions, as well as questions related to the learner's perception of his training and his motivations for studying. The motivation of the student to studies is thus our only question which will be analyzed in this paper.

University training is a level that relies more on the student's free will and will, both in the choice of his training and in his involvement in the training process. Moreover, as the word indicates the learner at the university level studies, so he forms much more than he is formed; it studies by analysis, synthesis, extrapolation, experimentation, discovery, innovation, even creation of goods and services. He is no longer simply a learner, but he becomes a creator of knowledge, a revolutionary of achievements by capitalizing on all the skills gradually acquired during his training, both theoretical and practical.

To meet all these challenges, of which this is simply a sample? Academic motivation will be essential. It will not only be measured, but above all developed and encouraged both among students and their trainers. Thus the reflections must now focus more on development and increase of the personal energy propelling the learning action in the students.

Also, the Educational psychologist will insist on academic motivation, which remains a key factor in student success. They will be free to choose the teaching units (at least for elective courses). The educational psychologist will be particularly useful in the administration of psychotechnical tests so that students know their strengths and weaknesses in all learning disciplines, thus promoting awareness and greater investment in the academic task.

Moreover, in each discipline, each learning unit, the Educational psychologist will ensure that training is provided using techniques, processes and exercises to

increase skills with academic motivation, both intrinsic and extrinsic.

Many scales and tests, or motivation inventories exist, and measure a specific field of behaviour or conative skill. Chang, Wong and Teo [1] and Smith [2] told about:

1. *Contextual Achievement Motivation Survey*, CAMS (by McClelland in 1961) which measures Basic motivation to achieve;
2. *Work and family Orientation*, WOFO (by Helmreich and Spence in 1978) which assess Basic motivation to achieve into three related dimensions: mastery, competitiveness or competition, and work;
3. *Social-oriented achievement motivation*, SOAM (by Yang and Yu in 1988), which measures Social oriented dimensions of the basic motive to achieve;
4. *Individual-oriented achievement motivation*, IOAM (by Yang and Yu in 1988) which evaluates Self-oriented dimensions of the basic motive to achieve.
5. The *Achievement Motivation Inventory* (AMI) is a personality inventory designed to measure a number of work-related constructs (by Schuler & Prochaska in 2000). The AMI employs a 7-point Likert scale and consists of 170 items. Areas measured are Compensatory Effort, Competitiveness, and Confidence in Success, Dominance, Eagerness to Learn, Engagement, Fearlessness, Flexibility, Flow, Goal Setting, Independence, Internality, Persistence, Preference for Difficult Tasks, Pride in Productivity, Self-Control, and Status Orientation.
6. The *Questionnaire on Current Motivation* (QCM; by Rheinberg, Vollmeyer, & Burns in 2001) tests four factors believed to correlate with one's current achievement motivation: anxiety, challenge, interest, and probability of success.
7. *Achievement Motivation Profile* (AMP) is a self-report assessment tool measuring a students' motivation to achieve as well as personality characteristics, interpersonal skills, and work style. The AMP consists of 140 self-descriptive statements that are answered on a 5-point Likert scale. The AMP has been used with students ages 14 and older in educational settings.
8. The *Achievement Motives Scale* (AMS) focuses on two factors of achievement motivation: hope of success and fear of failure. An original version of the AMS included 30-items. Lang & Fries developed a revised form with the use of confirmatory factor analysis.

The aims of this study are in particular:

- 1) Measure the Congolese's Students motivations at universities using the Academic Motivation Scale;
- 2) To determine the influence of gender, age, academic fee care and institution (culture) on it.

## 1.2. Literature Reviewed on Academic Motivation

Tremblay [3] mentioned more recent studies have also reported significant relationships between motivation variables and academic achievement in samples of element: (i) School students; (ii) High-school students; (iii) Junior college students; and (iv) Post-secondary students.

Same studies suggest that the correlations between motivational measures and academic achievement are between  $-0.20$  and  $0.40$ . The relatively low size of these correlations may suggest to some that motivation plays only a minor role in learning and achievement. It is clear the motivation-achievement correlations are not as high as those that are typically found between cognitive abilities and school achievement [3].

Leblond [4] informed that some authors indicate a convergence in the motivation of girls and boys, the latter being favored at the start of secondary school, but the students would subsequently find a motivational level comparable to the end of secondary school, regardless of gender. On a sample of 3,440 students (1,864 girls and 1,576 boys), She measured the motivational variables: the feeling of competence, performance anxiety, the perception of the usefulness of mathematics, interest in mathematics and achievement goals); and its conclusion is that the gender differences analyzed in this study indicate that girls and boys do not differ much in their motivation for mathematics, but girls are overall less motivated in mathematics than students boys enrolled in their training sequence.

Out of a sample of 332 adolescent students (180 boys and 152 girls) from the three levels of the orientation cycle (lower secondary education), Genoud, Ruiz and Gurtner [5] administered the *'Multidimensional motivation scale for school learning* limited to 4 dimensions; and found that if motivation decreases overall over the three years of secondary school regardless of the dimension considered, it turns out to be clearly different depending on the course of study and according to gender. An interaction effect between gender, degree and sector is also observed on the dimension of the feeling of competence.

On a sample of 552 students (194 women and 358 men) of the first year students of the University Faculty of Agronomic Sciences of Gembloux, Mignon [6] administered the scale of Motivation en Education de Vallerand, Blais, Brière and Pelletier (AMS-28); and his conclusion is that neither the gender of the student nor his performance over the year seems to be able to explain the inter-individual variance in academic motivation.

### 1.3. Educational Motivation Research

#### 1.3.1. Definitions of Motivation

Motivation is a physiological and psychological process responsible for the initiation, maintenance and cessation of a behavior as well as the appetitive or aversive value conferred on the elements of the environment on which this behavior is exerted [7].

Lieury and Fenouillet [8] noted that motivation is an internal force but its determinants can be internal or

external. For example, it is possible to reward a student to motivate him to learn. However, the reward does not characterize the force that will animate the behavior of the student. This force causes four effects:

- The triggering of a behavior;
- The orientation of behavior, attraction towards a goal or on the contrary rejection or flight;
- The intensity of energy mobilization, emotion, attention;
- And finally, the persistence of the behavior over time.

Tenaerts [9] noted that Vallerand and Thill considered motivation as an impulse, a force or an energy which directs and pushes a behavior. But Pintrich and Schunk retorted that motivation is not a force, but a process seen from the angle of a motivational chain, from determinants to consequences.

#### 1.3.2. Self-Determination Theory

Self-motivation is a form of demotivation that comes close to learned resignation. The perception of competence, which is a cause of motivation, is also common with learned resignation and with the different forms of extrinsic and intrinsic motivation [10]. Generally, Self-determination theory takes the experience of freedom inside one's commencing behavior as reference [11] and proposes a multidimensional theory of motivation which developed out of the idea that intrinsic and extrinsic reasons for behaving will lead to differential performance and well-being outcomes for individuals [12,13,14].

Classification, better known as the Self-Determination Continuum, breaks down extrinsic motivation into four types of regulations. Among these are external, introjected, identified, and finally integrated regulation [15,16].

Therefore Self-determination is appreciated according to type of motivation, regulation and quality of behavior, also is composed of three types of motivation (Amotivation, intrinsic and extrinsic motivation), and six types of regulation (Non-regulation, External, Introjected, Identified, Integrated, Intrinsic).

#### 1.3.3. Types of Motivation

Gagné *et al.* [19] noted that three major categories of motivation are discerned.

- First, amotivation is defined as the absence of motivation towards an activity.
- Second, intrinsic motivation is defined as doing an activity for its own sake, that is, because it is interesting and enjoyable in itself.
- Third, extrinsic motivation refers to engaging in the activity for instrumental reasons, such as receiving rewards and approval, avoiding punishments or criticism, boosting one's self-esteem, or reaching a personally valued goal.

**Table 1. Self-determination continuum with the different types of motivation and regulation**

Type of motivation	Amotivation	Extrinsic motivation				Intrinsic motivation
Type of regulation	Non-regulation	External regulation	Introjected regulation	Identified regulation	Integrated regulation	Intrinsic regulation
Quality of behavior	Nonself-determined					Self-determined

Source: Ryan & Deci [17].

The traditional dichotomy between intrinsic and extrinsic motivation is generally well known in psychology [14,20] that there can be considered as a continuum. It is necessary to see that intrinsic motivation is based on the individual factors, and the extrinsic motivation is based on the organization level. As it can be distinguished in motivational theories, in particular, intrinsic motivation is the case when a person is not motivated by a prize other than the work that s/he is doing. Extrinsic motivation on the other side appears with the presence of activities driven by external awards (status, appreciation or promotion etc.).

Another difference between these two types of motivation is the effect of individual control in intrinsic motivation, and environmental factors in extrinsic motivation [21]. Moreover, Deci and Ryan, cited by Bourgeois and Saint-Pierre [22], postulated that there are four types of extrinsic motivation, namely extrinsic motivation by external regulations, by introjection, by identification and by integration, which constitute an upward gradation on a continuum of self-determination.

#### a) Intrinsic motivation

In 1999, Deci, Koestner and Ryan [14] found that intrinsic motivation is negatively affected when real extrinsic motivation is attached to the behaviour of an individual. This undermining of intrinsic motivation is postulated to be the result of a perceived decrease in independence and proficiency by the individual receiving the extrinsic reward.

Intrinsic motivation has been operationally defined in various ways, although there have been two measures that have been most often used [13].

Nevertheless, several definitions exist on intrinsic motivation; some authors [13,14,16,17,18,21,23,24] insist on the fact that intrinsic motivation is the realization of an activity compared to an internal stimulation unjustified, just by simple pleasure and interest, or satisfaction. The actor does not expect any (external) reward here, but the activity interests him following an internal causality, often difficult to explain. Others [13] specify the conditions of its discovery, or its importance in the learning process; still others, the fact that it depends on innate needs [11].

In education, intrinsic motivation is an important source of learning and capacity development. In such a way that the learner does not expect any real reward, he is motivated to learn just to satisfy a pleasure. He will therefore not need any pressure; he acts alone and for a long time, often with a certain intensity, vivacity and tenacious will. He therefore learns better than someone who expects a positive (reward) or negative (punishment) sanction if he does not act.

Cause of that Ryan and Deci [13] underline that intrinsic motivation has emerged as an important phenomena for educators, a natural wellspring of learning and achievement that can be systematically catalyzed or undermined by parent and teacher practices. Because intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that engender versus undermine it.

Mignon [25] described three kinds of intrinsic motivation:

1° *intrinsic motivation to know*: Performing an activity primarily for the pleasure and satisfaction experienced when learning or performing a new action (example: because I experience pleasure and satisfaction while learning new things);

2° *intrinsic motivation to accomplish*: Undertake an activity for the pleasure and satisfaction of creating something or to feel efficient and competent (example: for the pleasure I experience while surpassing myself in my studies);

3° *intrinsic motivation to experience stimulation*: Do an activity in order to experience the pleasure (and other sensations) that comes from being involved in the activity (example: for the intense feelings I experience when I am communicating my own ideas to others).

#### b) Extrinsic Motivation

In contrast with intrinsic motivation, extrinsic motivation refers to engaging in an activity for instrumental reasons rather than for the intrinsic qualities of the activity [16]. Extrinsic motivation is a construct that pertains whenever an activity is done in order to attain some separable outcome. Extrinsic motivation thus contrasts with intrinsic motivation, which refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value [13].

So external factors determine extrinsic motivation [14,17,19]. These external factors can in particular be, on behalf of Dupont *et al.* [17] the rewards, obligations, pressures, etc., or any other external regulator; Here the person expects a positive sanction (reward) or negative (punishment) if he does not act according to Gagné *et al.* [19].

Extrinsic motivation brings together a set of behaviors performed for instrumental reasons. An extrinsically motivated person does not do the activity for the latter but rather to derive something pleasant from it or to avoid something unpleasant once the activity is over [26]. Also, extrinsic motivation is more governed by an immediate effect, by a quest for material, palpable or real satisfaction. This is how Armstrong [27] emphasizes those external motivators can have an immediate and powerful effect, but this will not necessarily last too long. Internal motivators, who are linked to the quality of work, are likely to have a deeper and longer-term effect, because they are inherent to individuals and not imposed on them from abroad.

Reena and Rosalia [14] informed us few points on the matter that we should consider about effectivity of extrinsic motivation:

- Extrinsic motivation does induce an individual to perform a certain task even if there is no interest in it. But it doesn't mean that the person does not get pleasure from working or completing the task. It's just that the external reward lengthens the duration of the anticipated reward even if interest is long gone.

- It paves the way for the individual to set goals. By setting their eyes on the prize, the individual will consort to playing by the rules and even develop a huge amount of persistence towards getting that reward.

- Extrinsic motivators can release stress. The lack of extrinsic motivation cannot distract a person from the pressure that he gets from his job.

• Extrinsic motivation is not sustainable. Eliminate the reward and you eliminate the action. Withdraw the punishment or reward, sayonara motivation! It gives diminishing returns. Motivation slowly vanishes when the punishment or reward stay at equivalent levels. More motivation means bigger rewards.

Let recall that Extrinsic motivation is separated into four categories four as external regulation, introjected regulation, identified motivation and integrated regulation [11].

#### 1° External regulation

*External regulation* means behaviour is stimulate and oriented by external factors like punishment reward etc. [11,16,19,28,29]. A first form of extrinsic motivation, which is completely non-internalized, is *external regulation*. It refers to doing an activity to obtain rewards or avoid punishments administered by others [19]. This kind of regulation depends on external contingencies, for example, to attain a reward or likewise avoid negative feedback. External regulation can be described as the 'classic' extrinsic motivation [29]. Çetin [11] noted that External regulation occurs when (i) the behaviour is formed externally; (ii) students relate results in order to control for the function of time and rewards they attribute to learned activities.

#### 2° Introjected regulation

*Introjected regulation* describes behaviours performed in response to internal pressures forces such as obligation or guilt: the individual somewhat endorses the reasons for doing something, but in a controlled way [16] or such as ego-involvement, shame, and guilt [19]. Introjected regulation includes actions aimed at contingencies that relate to one's self-esteem. This could mean that a person studies in order to impress others, or because it is 'right and proper' to act in a certain way. The cause of action may come from the person him/herself, yet is hardly self-determined. It is external to the persons' sense of self [29].

#### 3° Identified motivation

*Identified regulation* designates doing an activity because one identifies with its value or meaning and accepts it as one's own, such that this form of internalization is volitional [19] or when they personally find it important [16]. Regulation through identification is a more self-determined form of extrinsic motivation, because it includes valuing of a behavioral goal or regulation. Identification is important in transforming external regulation into true self-regulation. Identification seems to have an internal perceived locus of causality [11]. Here, the focus is on the personal relevance of an action. For example: a learner identifies with the values and aims of his studies and integrates them into his/her self. She/he might not be interested in a certain subject, but nevertheless the final exams and graduation are of personal relevance. The SDT believes that the learner in this case regulates his behavior according to his/her identification with long-term targets, such as his/her degree [29].

#### 4° Integrated regulation

*Integrated regulation* occurs when the identified regulation is congruent with other values and needs [16].

Identification is the process of specification of an activity by its value and the way an acceptable regulation of one's dynamism is taken as reference [11]. More than any form of external regulation, integrated regulation depends on self-determination. It integrates identified values into the coherent sense of self. These values coexist harmoniously along other aspects of the self. This regulatory style is close to intrinsic, self-determined regulation and it is difficult to differentiate empirically between intrinsic and integrated motivation. Hence, in our empirical study this regulatory style has not been considered [29].

#### c) Amotivation

*Amotivation* shows non-regulation and according to the SDT cannot be described as motivated behavior, because it is not task-oriented. Deci and Ryan [29] speak of motivated behavior only if it is an intentional activity. Amotivated behavior refers to activities such as snoozing, relaxing or random channel-hopping. Amotivation which is defined as "the absence of any motivation in the individual" (Ryan & Deci, cited by Dupont *et al.* [17]. it involves not having a motive to act. Amotivation is strongly and negatively related to educational outcomes and results when one perceives oneself as incompetent to reach intended outcomes. It takes the lack of motivation and the observation of the individual's inability to sense the conditions between his or her actions and consequences as reference. It occurs when individual students cannot get positive feedback regarding their performance or believe that they have failed on a repetitive basis. According to the revised theory of helplessness, non-contingent environments lead to amotivation [11].

### 1.3.4. Determinants of Motivation

Whatever the cause, does the motivation relate to multiple causes or to a single cause? Before answering this question, it should be noted that there is currently not one but dozens of motivational theories which each will advance different causes to explain the presence or absence of motivation [10].

In a learning activity, the motivational dynamics of a pupil and / or a student are made up [30,31]:

- (a) three determinants, namely the perception that a student has of the value of the learning activity, the perception that he has of his competence to accomplish it and the perception of the degree of control that he can exercise on the progress and the consequences of this activity;
- (b) the main learning behaviors that the determinants influence, namely the student's cognitive engagement, perseverance and performance.

The three determinants of motivational dynamics are defined as follows [31]:

- The perception of the value of an activity is the judgment that a pupil makes on the usefulness and interest of an activity in order to achieve the goals he is pursuing;
- The perception of his competence is a self-perception by which a pupil, before undertaking an activity which involves a high degree of uncertainty as to his success, assesses his capacities to accomplish it adequately;
- The perception of controllability is defined as the perception that a student has of the degree of control he can exercise over the course and consequences of a learning activity.

The analysis of recent research on motivation to learn in a school context, shows us that the four factors that most influence the motivational dynamics of students in the classroom are the learning activities that the teacher offers, the evaluation that he imposes the rewards and sanctions he uses, and himself, above all because of his passion for his subject and the respect he has for his students [32].

Despite their differences, motivational theories have in common that they seek to explain the same result which without them can pass for a cause: Motivation. Beyond the causes, motivation is perceptible by a number of phenomena that can allow us to identify and even define it. Motivational theories will therefore seek to explain the force or forces that push the individual to persist where he should give up, to provide the additional effort allowing him to achieve the goal he has set [10].

## 2. Investigation's Fields and Methods

### 2.1. Investigation's Fields

Situated at the extremities of the country, in the West and in the South-East, for a distance of about 2000 Km (about 1242,742 miles), the two sites which make up our field of investigation (ISP/Gombe in Kinshasa and UNILU in Lubumbashi) are the first two Cities of the Democratic Republic of the Congo, a country of Central Africa with continental dimensions and the immense potential riches of its soil and subsoil [33].

The ISP/Gombe (*Institut Supérieur Pédagogique de la Gombe*) is a pedagogy's' high Institute of Gombe, located in Kinshasa downtown precisely in the Gombe municipality. It is a public high institution in the DRC and organizes 10 departments, including psycho-pedagogy. Kinshasa originated from *Teke*, a local language, Kinshasa means: a little *Salt Market* (*insasa, insa or insa-insa*). This name became official after the country's independence in 1966, replacing that of Leopoldville, which was given in 1881 by the explorer Henry Morton Stanley in honor of the King of the Belgians, Leopold II, whose service he was. Kinshasa is a cosmopolitan city that knows an exponential demography estimated to date to more than twelve million inhabitants [33].

UNILU (*Université de Lubumbashi*) is a public high school institution in the DRC. Localize in the city of Lubumbashi, it includes fifteen faculties and schools, counting the Faculty of Psychology and Education Sciences. The city of Lubumbashi, with an area of 747 km<sup>2</sup>, is an important city of the DRC. Originally a mining town, then administrative, it has a tropical two-season climate (dry and rainy). Lubumbashi is a name originated from *Lubumbashi River*. That in *Lamba*, local language, Lubumbashi means: *ulubumba* (clay). The clay that women used to shape vases and pots (*lubumba* also means potter producing clay pots). And founded in 1910 by the Belgians under the name of "Elisabethville", the city was renamed Lubumbashi in 1965 [33].

### 2.2. Research Participants

We carried out our research with 76 students in two academic institutions in the DRC: the University of

Lubumbashi and ISP/Gombe. Here is also the synoptic table of the characteristics of the sample we used

**Table 2. Demographics of participants tested**

		f (n=76)	%
Gender	Female	32	42.1
	Male	44	57.9
Age	Old student [34-48]	7	9.21
	Young student [26-33]	19	25.00
	Very young student [18-25]	50	65.79
Institution	ISP/Gombe	40	52.63
	UNILU	36	47.37
Academic fee care	Fee care	65	85.53
	Own fee care	11	14.47

The characteristics of the sample, summarized in the Table 1 above, show for gender, it included 42.1% of women students and 57.9% of men students; for age, 65.79% of participants are Very young students [18-25 year old], 25% are Young students [26-33 year old], and 9.21% are Old students [34-48 year old]; for institution (culture), it enclosed students from ISP/Gombe (52.63%) or Kinshasa and from UNILU (47.37%) or Lubumbashi; and finally, for Academic fee care, it contained 85.53% of students Fee care and 14.47%.

### 2.3. Method and technics Data Collection

As Research design, cross-sectional design was used to perform data collection and attainment of the research goals for the current study. Then we used the survey method and questionnaire technique, precisely the Academic Motivation Scale (AMS) of Vallerand, Blais, Brière, & Pelletier in 1992.

Let note that the Academic Motivation Scale consists of 28 items, to which students respond to the questions [29] grouped in seven subscales. The scale has a French version as well [26]. The AMS is made up of 7 subscales measuring three types of intrinsic motivation (motivation intrinsic to knowledge, accomplishment and sensations), three types of extrinsic motivation (external regulation, introjected and identified) and amotivation [26]. Exactly, we discover: amotivation (AMOT), external regulation (EMER), introjected regulation (EMIN), identified regulation (EMID), intrinsic motivation to know (IMTK), intrinsic motivation to experience stimulation (IMES), and intrinsic motivation to accomplish (IMTA). The items are rated on a scale ranging from one (does not correspond at all) to seven (corresponds exactly). Each subscale consists of four items each; thus, subscale scores can range from 4 to 28 [29].

### 2.4. Data Analysis

In the data analyse, we had to calculated some indices: Autonomous motivation (AM), Controlled motivation (CM), Motivational Index Global (MIG), and Self Determination Index (SDI). We also used statistical tests: Anova and t of student to estimate the signification between means. Anova for the means of subtests scores obtained by students by age, and t of student for the means of subtests scores obtained by students by gender, institution, and Academic Fee care.

In contrast to controlled motivation and amotivation, *autonomous motivation* has been found to yield the most desirable behavioural, attitudinal, and affective outcomes. However, depending on the research question, it is sometimes better to use the first order factors (i.e., external, introjected, identified and intrinsic motivation), as these motivational subtypes have in some cases been found to yield different behavioural and attitudinal outcomes in certain domains. Therefore, a scale tapping into each of the different motivation forms is necessary [19].

**Table 3. Formulas to calculated CM, AM and GIM**

Autonomous motivation	CM	$2 \frac{(IMTK + IMTA + IMES)}{3} + ExR$
Controlled motivation	AM	$\frac{(IjR + IdR)}{2} + 2 AMOT$
Motivational Index Global	MIG	Autonomous motivation - Controlled motivation

Source: Mignon [6].

Several researchers have merged external and introjected regulations into a controlled motivation composite score, and combined identified and intrinsic motivation into an autonomous motivation composite score [19].

Mignon [6] informs that the Motivational Index Global (MIG) assigns a weight to the different types of self-determined motivations according to their position on the self-determined motivation continuum. This index was baptized Positive motivation index by Martin-Albo, Gonzaley-Cutres and Nurez [34].

His formula is:

$$MIG = \left[ 2 \frac{(IMTK + IMTA + IMES)}{3} + ExR \right] - \left[ \frac{(IjR + IdR)}{2} + 2AMOT \right] \quad [34]$$

The self-determination index (SDI) can reach a maximum score of +12 and a minimum score of -12.

The SDI can therefore summarize self-determined motivation (positive scores) or controlled regulation (negative scores) [35].

His formula is:

$$SDI = \left[ 2 \frac{(IMTK + IMTA + IMES)}{3} + IdR \right] - (2XExR + IjR) \quad [35,36]$$

### 3. Study Results

We studied differences related to gender, age, Academic Fee care and institution for the seven subtests of the academic motivation scale administered to 76 students. Remember that the seven subtests of the academic motivation scale relate to 1° Intrinsic motivation to know; 2° Intrinsic motivation to accomplish; 3° Intrinsic motivation to experience stimulation; 4° External regulation; 5° Introjected regulation; 6° Identified regulation and 7° Amotivation.

For a synthetic analysis, these seven subtests will be grouped into three. Namely Amotivation, Intrinsic Motivation and Extrinsic Motivation. The extrinsic motivation subtests will be kept, because necessary in the calculations of certain indexes like Controlled motivation (CM), Motivational Index Global (MIG) and Self-Determination Index (SDI).

**Table 4. Different academic motivations of Congolese students by gender**

Gender Subscale	Females (n=32)		Males (44)	
	Mean	SD	Mean	SD
Intrinsic motivation	3.58	0.75	3.41	0.81
External (ExR)	4.24	0.56	4.25	0.85
Introjection (IjR)	3.28	1.07	3.36	0.73
Identification (IdR)	3.61	0.87	3.61	0.86
Amotivation (Amot)	1.56	0.54	1.65	0.77
Autonomous motivation (AM)	11.40	2.06	11.07	2.47
Controlled motivation (CM)	6.57	2.05	6.79	2.34
Motivational Index Global (MIG)	4.84	0.01	4.29	0.14
Self-Determination Index (SDI)	-0.99	0.18	-1.43	0.05

Females' students have a high intrinsic motivation than males' students (Mean: 3.58). Concerning extrinsic motivation, males' students have more External (4.25), Introjection (3.36), although females', as well as, males' students have an equal Identification (3.61), but males' students have an extra Amotivation (1.65).

The results show that, in general, females have a high intrinsic motivation and males a superior extrinsic motivation. However the Statistical calculations at T de student reported a False Statistical signification (P=0.7314; Calculated value=0.3768; Critical value=3.1824), and conclusion is that there is no significant difference between the two averages of women and men on the academic motivation scale. Gender does not influence the academic motivation of Congolese students tested.

Concerning indexes, males' students have more Controlled motivation (Mean: 6.79) although females' students have more Autonomous motivation (11.40), Motivational Index Global (4.84) and Self-Determination Index (-0.99).

**Table 5. Different academic motivations of Congolese students by age**

Year old (N=76) Subscale	Old student [34-48] (n=7)		Young student [26-33] (n=19)		Very young student [18-25] (n=50)	
	Mean	SD	Mean	SD	Mean	SD
Intrinsic motivation	3.48	0.81	3.45	0.91	3.48	0.77
External (ExR)	4.25	0.74	4.31	0.92	4.20	0.69
Introjection (IjR)	3.33	0.90	3.22	0.96	3.30	0.84
Identification (IdR)	3.61	0.86	3.55	0.60	3.56	0.93
Amotivation (Amot)	1.62	0.68	1.78	0.92	1.56	0.54
Autonomous motivation (AM)	11.21	2.36	11.21	2.74	11.16	2.23
Controlled motivation (CM)	6.71	2.24	6.95	2.62	6.55	1.97
Motivational Index Global (MIG)	4.50	0.12	4.27	0.12	4.61	0.27
Self-Determination Index (SDI)	-1.26	0.1	-1.39	-0.38	-1.18	0.25

Old students and Very young students have a superior Intrinsic motivation (Mean:3.48) and extrinsic motivation, mainly External (4.25), Introjection (3.33) and Identification (3.61), then Young students have a superior Amotivation (1.78).

The results show that, in general, age influenced the Intrinsic and extrinsic motivation. Conversely the Statistical calculations at Anova test reported a False Statistical signification (P=0.9916; Calculated value=0.0085; Critical value=4.2565), and conclusion is that there is no significant difference between the three age group means on the academic motivation scale. Age does not influence the academic motivation of Congolese students tested.

Concerning indexes, Old and young students have a high Autonomous motivation (Mean: 11.21), Young students have a superior Controlled motivation (6.95) but Very young students have more Motivational Index Global (4.61) and Self-Determination Index (-1.18).

**Table 6. Different academic motivations of Congolese students by institution**

Institution Subscale	ISP/Gombe (n=40)		UNILU (n=36)	
	Mean	SD	Mean	SD
Intrinsic motivation	3.40	0.79	3.57	0.78
External (ExR)	4.18	0.7	4.33	0.78
Introjection (IjR)	3.29	0.95	3.38	0.81
Identification (IdR)	3.49	0.95	3.73	0.74
Amotivation (Amot)	1.44	0.5	1.81	0.8
Autonomous motivation (AM)	10.98	2.28	11.47	2.34
Controlled motivation (CM)	6.27	1.95	7.18	2.38
Motivational Index Global (MIG)	4.71	0.33	4.30	-0.04
Self-Determination Index (SDI)	-1.36	0.18	-1.17	-0.07

The alterations in responses to the various subtests considered of academic motivation scale are distributed as follows in the two university education institutions concerned among the Congolese students tested: UNILU students have a high Intrinsic and extrinsic motivation than Isp/Gombe students. Principally, Intrinsic motivation (Mean: 3.57), External regulation (4.33), Introjection regulation (3.38), Identification regulation (3.73), and an Amotivation (1.81).

The Statistical calculations at T de student reported a True Statistical signification (P=0.0134; Calculated value=5.2549; Critical value=3.1824), and conclusion is that there a significant difference between the two averages of UNILU students and those of ISP/Gombe on the academic motivation scale. The study environment influences the academic motivation of the Congolese students tested.

Concerning indexes, UNILU students have a high Autonomous motivation (Mean:11.47), Controlled motivation (7.18) and Self-Determination Index (-1.17), but ISP/Gombe students have a superior Motivational Index Global (4.71).

**Table 7. Different academic motivations of Congolese students by Academic Fee care**

Academic Fee care Subscale	Fee care (n=65)		Own Fee care (n=11)	
	Mean	SD	Mean	SD
Intrinsic motivation	3.49	0.79	3.40	0.74
External (ExR)	4.27	0.68	4.13	1.04
Introjection (IjR)	3.3	0.91	3.46	0.73
Identification (IdR)	3.58	0.86	3.75	0.86
Amotivation (Amot)	1.62	0.71	1.59	0.55
Autonomous motivation (AM)	11.25	2.26	10.93	2.52
Controlled motivation (CM)	6.68	2.31	6.79	1.90
Motivational Index Global (MIG)	4.57	-0.05	4.15	0.63
Self-Determination Index (SDI)	-1.28	0.17	-1.17	-0.47

Fee care students have more Intrinsic motivation than Own Fee care students (Mean:3.49). Regarding the extrinsic motivation, Fee care students have a high External (4.27), yet in Introjection and Identification, Own Fee care students have a superior Introjection (3.46) and Identification (3.75) and Amotivation (1.62).

The Statistical calculations at T de student reported a False Statistical signification (P=0.7791; Calculated value=0.3068; Critical value=3.1824), and conclusion is that there is no significant difference between the two student averages Fee care and Own Fee care on the academic motivation scale. The Academic Fee care does not influence the academic motivation of the Congolese students tested.

Concerning indexes, Fee care students have a larger Autonomous motivation (Mean:11.25), Controlled motivation (6.68) and Motivational Index Global (4.57), though Own Fee care students have a high Self-Determination Index (-1.17).

## 4. Discussion of the Results

The results finding after data analyse, three of variables, Gender (P=0.7314; Calculated value=0.3768 ; Critical value=3.1824), Age (P=0.0134, Calculated value=5.2549; Critical value=3.1824) and Academic Fee care (P=0.7791, Calculated value=0.3068; Critical value=3.1824) are not influence the academic motivation of Congolese students tested. Only institution or culture variable exposed that the study environment influences the academic motivation of the participants to our study.

Research on academic motivation agrees that construct reflects individual characteristics, but also those of the groups in which students participate, whether in relation to their cultural differences, their socioeconomic differences, their level of abilities or their sex [4].

### 4.1. Cultural Differences and Academic Motivation

Let remember that in the results from subtests of Academic Motivation Scale, Unilu students have a biggest

Intrinsic and extrinsic motivation than Isp/gombe students. Principally, Intrinsic motivation (Mean: 3.57 vs 3.40 for Isp/gombe), External regulation (4.33 vs 4.18), Introjection regulation (3.38 vs 3.29) and Identification regulation (3.73 vs 3.49), Amotivation (1.81 vs 1.44). Concerning indexes, UNILU students have a high Autonomous motivation (Mean: 11.47 vs 10.98), Controlled motivation (7.18 vs 6.27) and Self-Determination Index (-1.17 vs -1.36), but ISP/Gombe students have a superior Motivational Index Global (4.71 vs 4.30).

School learning has also been studied through the concepts of intrinsic and extrinsic motivation. Researchers state that an intrinsically motivated student “is one whose involvement and maintenance in the activity happens as a result of the task itself because it is interesting and creates satisfaction; students with this type of motivation work on activities because they consider them pleasant”. The extrinsically motivated student “is one who performs a task or activity because they are interested in social or external rewards; a student with this type of motivation is more interested in the opinion of the other person, [...] external recognition, praise or just avoiding punishment” [37].

Based on many experience and observations of the students of Kinshasa (ISP/Gombe) and those of Lubumbashi (UNILU), they do not have the same scale of values, and by extension, do not act according to similar motivations. The student from Kinshasa is much more confronted with multiple and rapid changes in living conditions, political, economic and social changes compared to the student from Lubumbashi. Cultural differences influence their behavior and, necessarily, push them to have less academic motivation

According to us, the student from Kinshasa would be dominated by extrinsic academic motivations while the student from Lubumbashi would be more dominated by intrinsic academic motivations. Of course, these hypotheses require other much larger and more in-depth research in both fields in order to confirm or invalidate our impression.

It has also been argued by researchers that motivation (intrinsic or extrinsic) varies in relation to culture. The very notion of self-determination is limited by culture because some cultures are more oriented to the “I” than to the “other”. Moreover, what counts as an extrinsic motivator and the way in which it is used is also culturally variable. As research has evolved on this topic, different degrees of motivation have been mapped, in addition to the cultural [37].

Kinshasa and Lubumbashi are culturally and morally threatened cities due to the cultural and traditional mixing of foreign and neighboring cultures, noted Basile Mulwani Makelele, Patrick Litaléma Libote, and Boniface Aspan A Kasas [33].

The research results do reveal differences between ethnic groups, but these are not easy to interpret, because it is difficult to judge what is essentially the ethnic character of the pupils. One wonders, for example, if it is not the socioeconomic level or the environment in which the student lives that really influences the results rather than whether they are black or of Hispanic origin [38].

In the mastery of transient knowledge or knowledge necessary for academic activities, the educational

psychologist will be attentive to activation and reinforcement of extrinsic academic motivation vectors. In particular, it will recommend to university professors and their collaborators or experts who intervene in each teaching unit, to take into account the potential of the students, to plan and apply strategies for stimulating extrinsic motivation, such as the implementation of programs or reward policies: bonus points policy, endowment of certain privileges to successful students, registration on the table of best of the week, month or semester (motivational strategy that many commercial enterprises already apply).

Below, Skinner's operant conditioning will be the theoretical underpinning that better explains this extrinsic academic motivation. It is a learning method based on rewards and punishments to push the learner to apply himself more. There are several processes that the educational psychologist will advise teachers and experts responsible for supervising students in their quest for know-how and interpersonal skills.

As for intrinsic academic motivation, the educational psychologist will be called upon to design, apply and evaluate the appropriate measures of stimulation, excitement, maintenance and increase of desire, pleasure and satisfaction of students in academic activities, especially, those relating to the development of specific skills in the job-training frameworks. It will help teachers to get to know the students better first before submitting a body of knowledge to them, in particular, through the use of active and group learning methods.

## 4.2. Gender and Academic Motivation

The present study concludes that gender does not influence the academic motivation of Congolese students tested. But Viau [38] insisted that for a long time, researchers have observed that girls differ from boys on several points, including motivation. Like the decline in motivation observed throughout schooling, the differences observed by gender have found a strong consensus among researchers [5]. Leblond [4] reported that the motivational dynamics of girls and boys do not seem to be well understood since a number of results diverge in the work concerning the evolution of these variables according to the sex of the students. Mignon [25] noted that neither the gender of the student nor his performance over the year seems to be able to explain the inter-individual variance in academic motivation.

At the gender level, the analyze carried out enabled Genoud, Ruiz and Gurtner [5] to highlight the differences between girls and boys. Even if these differences are not very marked for certain dimensions, they are nevertheless all significant. Girls indicate a greater willingness to learn and a greater attraction to studying than boys. The latter, on the other hand, feel more competent and, above all, say they experience much less anxiety about evaluations. These different results - the values of which are given here on the average of the two examinations - are found separately in each of them in identical proportions. An interaction effect between gender, degree and sector is also observed on the dimension of the feeling of competence.

So gender can influence the intrinsic academic motivation of female students by the fact that they are

more motivated than their male colleagues. It will therefore be up to the educational psychologist to create optimal scenarios and conditions to stimulate this intrinsic academic motivation in men, and vice versa strategies so that women also have a more developed extrinsic academic motivation.

Staribratov and Babakova [39] reported to us other studies showed that university females' students have expressed more aspects of internal motivation and higher levels of identified control. Comparing achievements by gender for external motivation and amotivation shows different results. In some studies, the authors find that males' university students have a higher degree of external motivation and amotivation. In further studies, however, there are no differences in the types of motivation by gender.

The comparison between genders makes it possible, on the one hand, to confirm the predictive value of index compared to the MIG (Motivation Index global) and, on the other hand, to observe weaker correlations in females' students [6].

The autonomy index (RAI) is positive for girls, which reflects autonomous regulation, and negative for boys, revealing non-autonomous regulation. The difference is significant at  $p < .001$ , but the effect of gender is however weak [24].

### 4.3. Age and Academic Motivation

Age remains an intrinsic academic motivation factor: the younger student has little desire and desire for knowledge, concern to increase his knowledge and scientific discoveries. He is less mature, and displays less responsibility in the performance of academic activities than the older student.

In Maslow's scale of needs, the young student has not yet satisfied his lower needs, and therefore he is often slow to take an interest in the higher needs, in particular those related to the needs for esteem and achievement by the mastery of scientific knowledge.

Leaving aside the early preschool stages during which we usually observe few differences in motivation, in adolescence, girls generally say they devote more effort and persistence than boys [5].

Chouinard's studies on changes and dynamics during the school year in mathematics motivation at high school revealed a general decline in motivation between the beginning of the year and the end of the year [39].

### 4.4. Academic Fee Care and Motivation

Even if the result show that the Academic fee care does not influence the academic motivation of the Congolese students tested. Let discuss about some ideas which oriented the debate in this field. The financial status of the student determines his autonomy or dependence, and this being so, conditions him to develop intrinsic academic motivations for helpless students, while extrinsic academic motivations characterize more financially free students. Indeed, the autonomous student is more ambitious, he participates in academic activities according to a timetable and a schedule well established in advance, he knows what he is looking for in the education system.

Once again, it is up to the educational psychologist to rely on the motivation vectors appropriate to the financial status of each student. It is also up to him to remind the supervisory authorities of the universities to reactivate and generalize the scholarship system to promote more financial autonomy for students and a reduction in their dependence on parents, making them more responsible for their academic and professional future. Grants with new conditions, such as, for example, limited in time and according to a percentage to achieve the subsidized year.

Still within the framework of stimulating extrinsic academic motivations, other rewards and benefits may be offered and granted to high-performing students in accordance with criteria adapted to the realities of each university. Even the endowment of documentation necessary for training, or hi-tech equipment to facilitate the mastery of knowledge, a preferential subscription to scientific journals and magazines both local and international online much more, a quota of accommodation for high-performance students, further training in prestigious and better equipped centers and laboratories in their field of training.

Given that many of the educational activities prescribed in schools are not designed to be intrinsically interesting, a central question concerns how to motivate students to value and self-regulate such activities, and without external pressure, to carry them out on their own [13].

Also the government can resort to a public-private partnership and organize a scholarship credit program (with banks and institutions that wish it) for poor students, but highly motivated for university studies, and demonstrating the necessary skills to study in the chosen sector.

## 5. Conclusion

Focused on Measure of Academic Motivations at universities, the aims of this paper were intended (i) measure the Congolese's Students motivations at universities, and (ii) determine the influence of gender, age, academic fee care and institution (culture) on it.

As cross-sectional research design, we used the survey method and questionnaire technique, precisely the Academic Motivation Scale (AMS-28) of Vallerand, Blais, Brière, & Pelletier and testing 76 students, Females and males aged 18 to 48 years old, attending the University of Lubumbashi and ISP/Gombe, either educational fee care or Own Fee care.

The results finding after data analysis and processing elucidated that three of four variables, *Gender* ( $P=0.7314$ , Calculated value=0.3768; Critical value=3.1824), *Age* ( $P=0.0134$ , Calculated value=5.2549; Critical value=3.1824) and *Academic Fee care* ( $P=0.7791$ , Calculated value=0.3068; Critical value=3.1824) are not influence the academic motivation of Congolese students tested. Only *institution or culture* variable exposed that the study environment influences the academic motivation of the participants to this study.

In view of the results, to stimulate intrinsic and extrinsic academic motivation, we suggest:

- To use educational psychologist in creating optimal scenarios and conditions for students self-determination learning;

- The interpellation of supervisory authorities of the universities to reactivate and generalize the scholarship system to promote more financial autonomy for students in the line of stimulation and to the growth of intrinsic and extrinsic motivations of LMD students.

In a context of reform of objectives, curricula, teaching methods, techniques and procedures, as well as, assessments, it is imperative to already think about the major challenges relating to the implementation of this LMD reform in higher education and Congolese university, especially the stimulation and development of self-determination in all Congolese LMD students, even trainers and various experts, in order to better prepare for any eventuality relating to intrinsic and extrinsic motivations.

To achieve this, it will be necessary to create units for monitoring the implementation of this reform within each institution, which will be responsible for collecting, processing and proposing solutions to material, psycho-pedagogical and financial problems, or even resistance, capable of substantially slowing down the smooth running of the LMD in DR-Congo.

In short, there are a multitude of models, programs and services for experimenting and/or applying extrinsic and intrinsic academic motivation scenarios. It is therefore up to the planners and managers of university education programs to take this into account.

Our wish is to see the school psychologist as a resource person for each of these LMD monitoring units. In particular, he will be able to evaluate the academic motivations of the students and make concrete proposals on the mechanisms for satisfying needs, restarting and sanctions useful for the stimulation and growth of the intrinsic and extrinsic motivations of LMD students.

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