

# Influence Of Sex On Academic Outcomes: Case Of Students Of The Department Of Science And Technique Of Socio-Educational Activities (STASE/INJEPS/UAC)

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**Abstract:** The present research relative to the influence of sex on the academic results of the students of Department of Sciences and Techniques of Socio-Educational Activities (STASE/ INJEPS/ UAC) took into account 468 students. Three hundred and fifty-eight (358) of them are male and one hundred and ten (110) are female. They are all regularly registered for the 2015-2016 and 2016-2017 academic years. Data was analysed using Wilcoxon test in the R (3.5.1) statistical analysis software. Results showed that Female students obtained a significantly higher ( $p < 0.05$ ) average marks ( $13.64 \pm 0.72$ ) than male students ( $13.19 \pm 0.98$ ). Based on those results, we can therefore state that female students of the STASE department normally do better than their counterpart male. These results are congruent with previous findings which showed that in higher education entities, women have better results than men.

**Keywords:** Academic results, Cultures, Gender, Student(s), University.

## 1. Introduction

The National Institute of Youth, Physical Education and Sport (INJEPS) of the University of Abomey Calavi (UAC), has two departments. The first, that of the Sciences and Techniques of Physical and Sports Activities (STAPS), exists since the creation of the said institute under the name of (National Institute for the Teaching of Physical and Sports Education (INEEPS) [1]. Its primary purpose was the training of teachers of Physical Education and Sport (EPS). The second department, relative to the Sciences and Techniques of Socio-Educational Activities (STASE) was created recently [2]. In this latter department, the percentage of female students is higher than in the first department. That why this study first naturally focused on the STASE department were female students are more representative, about 23.50% against 18% for the STAPS department. Numerous studies have reported the influence of the environment, culture [3]-[4], the socio-professional level of parents [5]-[6]-[7], the practice of physical and sports activities or not [8]-[9]-[10]-[11] as well as that of the sex of learners on the academic results of students [12]. The same tendency have been observed as far as the type, the structure and the level of the educational entity is concerned (private or public, mixed or not, primary, secondary or higher) [13]-[14]-[15]-[16]-[17]. Among Chinese, males generally perform better than females at school [18]. It is also the same situation prevailing in Africa in the south of Sahara due to the great primacy accorded to the male sex at the expense of the female sex in the cultures of this part of the African continent. Indeed, this is manifested when the subjects live in their cultural environment. But when they (Sub-Saharan boys and girls) are born and / or grew up out of their native environment (in Europe or North America for example), girls

have academic performances equivalent to those of boys or even tend to outclass them (Mutombo et al, 2004). Still according to the study of [18], unlike what is observed among Africans in the south of the Sahara and also among Chinese, Bumiputeras women in Malaysia get better results than men especially when the task to be performed opposed the two sexes. As in sub-Saharan Africa, Chinese cultures value the male sex whereas, on the contrary, in Malaysia and particularly among the Bumiputeras, it is the female sex which is more considered. Culture has an influence on the motivations of learners and consequently on their academic results [4]. In the Republic of Benin, out of the 11 million of inhabitants, nearly 52% are female compared to about 48% who are male [19]. Out of the 33 permanent teachers working at INJEPS, there are only 3 women. This low representation of women in this institute is similar to that prevailing in the country's other national universities, in public administration in general, and even more so in political spheres (6 female members of parliament out of 83, 1 lady Mayor out of 77 and 4 women are ministers out of 22, etc.). But, the trend is being corrected thanks to the measures taken in favour of women by successive governments over the past 25 years. Failing to reach the percentage of boys, the rate of girls in primary and secondary school is today closer to that of boys than it was, just a few years ago. At the university, and especially in some schools and institutes of higher education, the percentage of women's enrollment begins to approach that of men. This is the case in the STASE department of INJEPS. A comparative study based on the gender differences in this department may help to better appreciate the academic behaviour of female students relatively to their counterpart male. It will also be an opportunity to make a projection on the conditions of women

in schools in general and to have a more explicit look at the situation of girls or women in the education system in order to better understand the reasons leading female students to be especially interested in some courses of study than others. This study will finally assess the benefits of female students to say if they are still up to their enthusiasm for training offers for which they are more attracted to.

## 2. Reasons for gender differences in academic and professional fields

A study conducted by Adigun and his colleagues in 2015 with 275 students including 159 (53 boys and 106 girls) from public schools and 116 (65 boys and 51 girls) enrolled in private school in Niger State in Nigeria, showed no significant difference between academic performance of female and male students in public schools ( $p = 0.08 > 0.05$ ) [4]. On the other hand, in private schools, male students significantly did better ( $p = 0.01 < 0.05$ ). When public and private schools results are considered together, the difference between the two sexes becomes once again non-significant ( $p = 0.07 > 0.05$ ). The authors of this study attribute the tendency of the poor academic result of the girls, to her socio-educational attributes. In families, girl are confined to housework tasks as contrary to the boy who is already better valued at this level. The latter, although he is also assigned to work that is predestined to him because of his sex (such as bringing animals to pasture, accompanying elders to hunting, etc.) is entitled to more distractions and favours that girl is excluded to. Beyond the family, [4] think that it is the entire human environment (the teachers, the school as an institution, the society, the rulers, etc.) that by its behaviour negatively influences the female sex [20]. Daily tasks such as washing up, cooking, washing, cleaning the house, etc., are primarily intended for the girl. Once in the school context, she internalizes this situation and predestines herself like its socio-cultural environment to studies that lead to occupations that maintain her in a status that is close to the one that is already breast in her community. She therefore tends to turn herself away from training that leads to functions such as engineer, senior technician, lecturer, etc. which are reserved in priority to the boy. Finally at school, the girl plans in the best cases, to move to the functions of midwife, teacher, office worker, secretary, and rarely liberal high standing functions. While at the same time, the boy displays more ambitious perspectives, as a reflection of what is prescribed to him in his community. The girl who finds herself in school with these stereotypes, is consciously or not consciously handicapped [21]-[22]. The teacher himself, in accordance with the beliefs circulating in his social environment, has negative expectations of the girl and as a result is influenced in the interactions he develops with her. Definitively, differences in academic performances between girls and the boys, where it exists, can be explained by differences that have been socio-culturally shaped. But how does the woman behave in this situation today?

## 3. The woman's reactions to her academic backwardness

Notwithstanding the foregoing, some research in Africa and developing countries on other continents has shown a lack of significant difference between the sexes (male & female) in higher education. Other studies have resulted in increasingly good academic outcomes for women at that level of

education [23]. Actually [23] found that the gender gap in mathematics is closing progressively. Therefore the socio-cultural barriers in the academic field seem to have a negative impact on female, especially at the level of primary and secondary education. From high school to university, the girl or woman tends to reverse the situation [24]. In a study conducted at the University of Nnamdi Azikiwe in Nigeria on 168 students (80 women and 88 male students in statistics and mathematics) [24], showed that women have not only been more effective but they have also been more numerous to obtain the best grade points (First class, Second class upper and lower) with the highest marks in mathematics, physics and chemistry. Initially, the socio-cultural situation of African countries and that of countries in other developing countries is a major handicap for the girl at school. It prevents her from concentrating to motivate herself at work and to demonstrate the fullness of her intellectual potentialities. But as soon as she manages to overcome these difficulties by moving from primary to secondary, and by obtaining the Ordinary level and especially the Advanced level, she becomes aware of her ability to compete with her counterpart male. The factors that used to be the object of blockage and therefore factors of lack of motivation become, on the contrary, an important source of motivation for woman at university. She finds all of her intellectual abilities and deploys all her academic know-how. Henceforth, things tend to happen as if the woman wants to show to the man that he is not more talented and with her diligence at work, she is able to achieve higher performance since they (male and female) all have the same intellectual potentials [18]. Progressively, the gap is narrowing between the sexes in academic performance. The number of women graduating from universities is increasing year by year. Unlike the beliefs that circulated in a sustained way in some academic circles until the 80s and still today, we are less and less surprised that in many disciplines or specialties, women compete with men or sometimes outclass them [24]. This conclusion was draw from findings of several research work on the gender differences regarding academic performances. Some of this research has suggested to review the education of children at the grassroots so that boys and girls will have the same opportunities for success at school and office and generally in society [4].

## 4. Hypothesis

Referring to the work of [23] who has shown that women are catching up their delays on men in terms of academic performance and to [24] who indicated that, that gap has long been closed and that it is now women who outclass men; we assume that in the STASE department, women's academic achievements are better than those of men.

## 5. Objective

The objective of this work is to see the effect of sex on the academic performance of students in the STASE department.

## 6. Methodological approach

Four hundred and sixty-eight (468) students including 110 female students (23.50%) and 358 male students (76.50%) enrolled in the STASE department at INJEPS for the academic years of 2015-2016 and 2016-2017, were taken into account in this study. This represent the total number of students regularly enrolled in the department during that

period. The annual academic results of those students was analysed on the basis of their gender in order to determine the influence of the factor “sex” on the academic performance of STASE students in the University of Abomey-Calavi.

## 7. Statistical Analysis

Data on the annual average mark of the students are computed using R (3.5.1) statistical analysis software. Data were first subjected to the normality test of shapiro-wilk which revealed no normal distribution. Then the non-parametric test of Wilcoxon was run. The average mark of the data and their standard deviation are calculated using 2013 Microsoft excel spread sheet. The effect of the factor “sex” is significant if  $p < 0.05$ .

## 8. Results and discussion

Analysis of annual mark of the STASE students showed that female students obtained a significantly higher ( $p < 0.05$ ) academic results than male students (Table1).

**Table1:** Annual average mark of male and female students

	Female Students	Male Students	P-value
Annual average Mark (over 20)	13.64 ± 0.72	13.19 ± 0.98	0.0000031

*The effect of the factor “sex” is significant if p-value < 0.05; p = probability*

These results are congruent with other findings that showed that female students perform better than male students [23]-[24]. Indeed girls and boys have the same intellectual potential [18]. But given that societies around the world and African societies in particular live in a patriarchal regime, socio-cultural realities are organized in such a way that in certain areas and at certain levels, such as in communities and in primary and junior secondary schools, the female is disadvantaged compared to the male [4] [20]. This means that at this level (primary and secondary), the girl cannot concentrate to express herself properly. The consequence is that its performances are lower than that of boys [4]. But as soon as she goes through certain stages, the woman becomes aware of her assets and demonstrates her abilities. This explains the improvement of her academic performances in higher education, where she gets rid of the strains inherited from home and community education to gain confidence [23]. Whether male or female, today, parents of school children and students are aware of the influence of community (traditional) realities on the education of their children. Some of these parents (especially the female ones) have been victims. Hence, they strive to ensure that their children do not experience the difficulties they (parents) have experienced in the past. In doing so, the education of the children at the base is now more equitable between the sexes than at the time of their parents. Under these conditions, the same chances are increasingly granted to both sexes. Better still, to make up for their delays, girls enjoy more benefits than their male brothers in primary and junior secondary public schools where they are exempted from school fees. All of this combined, the female students find conditions of better motivation and consequently results follow [23] [24].

If the woman manages to assert herself at school (university) and consequently at the professional level, what can then explain her under-representation in the political spheres and particularly at the level of the elective positions? Before the 1990s, there were no woman in the successive governments in Benin and in most of Sub-Saharan Africa since the independence period in 1960. If women are able to assert themselves individually at University and in administrations where they accurately occupy various responsibilities positions, the problems still remain as to the possibility for them to come together to promote themselves in certain sectors such as politics. Those who try to take the initiative in this direction, do not enjoy a good look, even from other women. For elective posts, the bulk of the electorate is still constituted of the grassroots communities, moulded in beliefs and traditions on which the socio-cultural realities rely. The chiefs, guarantors of the tradition make offices of great voters. In these societies, it is always the man who comes first. The woman does not dare to face this reality. Those who undertake to embark on the path of politics, despite having intellectual and professional capacities and references to be promoted at the level of the civil society, they fail to be illustrated at the national level. A certain number of women have run for the last four (4) presidential elections held in Benin over the last 20 years, but none of them has really crossed the threshold of 1%, even though there are more female voters than male voters (52% of women against 48% of men). The vast majority of women have not yet realized their potentialities and accept the limited part of heritage their socio-cultural environment allotted them. In more than 50 independent African countries more than 50 years ago, only one woman was elected President in the Republic of Liberia under rather special conditions. In Europe and France, countries of democracy and human rights per excellence, women were granted the right to vote only after the Second World War. Even in the United States, the conditions of women are not always equal to those of men in reality, although the texts exist and go in this direction. Only Germany, Croatia and Estonia in Europe; Brazil and India, respectively in South America and Asia, were exceptions to the rule by electing a woman to head their respective countries. Women of great values have given up positions of command, simply because of the look of their entourage. Many people, especially in developing countries (both men and women) are still reluctant to see women in politics because it is for them, a matter of man. These are briefly some of the reasons that explain the woman's delay in social spheres despite her academic and professional performances.

## 9. Conclusion

The socio-cultural realities of a country are of great importance because it can impact (positively or negatively) its education policy and hence its economic development. Unfortunately, they are very much rooted in many developing countries, where they constitute a major handicap for many sectors of life. They are at the root of the gaps between communities and sexes and lead to the emergence of racial minorities who spend their time fighting each other or defending themselves against the dominant majority that oppresses them rather than engaging itself in development tasks. They have since ancient times relegated the woman to the second rank in most societies where she (the woman) struggles to rise to the same rank as the man. This gender gap exists in almost all areas of life (family, school, office,

army, politics, etc.). Solutions such as parity between men and women at some decision-making centers (government, National Assembly) are proposed. At the same time other specialists are trying what they call "positive discrimination" for women. Concept by which quotas are granted automatically to the woman to balance the representativeness between man and woman. These measures are proposed and tested with rather good results. The progress made by women academically and professionally did not have a corresponding influence in the social field. The reason is that the majority of women are not yet aware of their potential. Women's rights organizations and other institutions exist and work for their emancipation. But as long as the women will not commit themselves to collectively take control of their destiny and confront the retrograde cultures that still exist, to strip them from the flaws they entail, they will take time to rise socially and politically at the level of men despite their proven academic and professional performances.

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