



# **Average Class Size Distribution Effects on Students' Social Well-Being in University Teacher Education Programmes in Cross River State, Nigeria**

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## **ABSTRACT**

Class size as a public good has its roots from socio-economic factors requiring effective management for the alienation of learners' ill-being. Hence, this research aimed at examining the Average Class Size (ACS) distribution effects on students' social well-being in university teacher education programmes in Cross River State, Nigeria. Descriptive survey research design conducted ex-post facto was used with one research question and two hypotheses to guide the study. The population comprised of 5,492 students in university teacher education programmes from two universities in the research area. Purposive sampling technique was applied to draw the entire subjects as sample size. A researcher designed inventory instrument, faced-validated by two experts was used to collect data. Tables, chart and independent t-test were applied to statistically analyze the data collected. Results obtained indicated that ACS distribution produced negative externalities on the university students' social well-being. Female students possessed more healthy social well-being than their male counterparts in the various programmes. ACS distribution could determine students' well-being in terms of concentration, sadness and anxiety; while it was not significantly dependent on dizziness. Therefore, effective management of the classroom situation value-chain could sustain healthy social well-being and equity in education opportunity among the students. Recommendations made included teachers' effectiveness and active students' engagement in optimum class-size distribution in order to internalize healthy values among students in their teacher education programmes.

**Keywords:** Well-being, social, class, university, programmes.

## **INTRODUCTION**

University education is viewed as the key to economic development. However, university education programmes in Nigeria tend to imprison the minds of learners' instead of liberating them to discover, build and produce. This is why youth social well-being has been identified as key to solving most fundamental problems of productive living in Nigeria (Ekanem, 2015). Average Class Size (ACS) distribution may play critical roles not only in teaching-learning pedagogy, but also as an indicator of internal efficiency and equity in education. The interactive process between teachers and the learners in classroom situation may give rise to the spurious linkage between ACS norms and social well-being challenges among the learners.

The university teacher education programmes are concern about curriculum relevancy, adequate students' support and value programmes. The programmes are to ensure collective welfare and basic needs of students for active engagement with others. It is in this understanding that UNESCO source has gingered Nigerian universities to initiate far-reaching actions to sustain healthy social well-being of students vis-à-vis teachers' workload (Ajayi, 2004). Therefore, the researcher sets out to investigate ACS distribution

effects on students' social well-being in university education teacher programmes in Cross River State, Nigeria.

ACS distribution effects on cognitive and non-cognitive outcomes persisted throughout the academic life of students. ACS connotes the size and composition of each class in the programmes which can support constant system improvement. Mathematically, it is obtained by dividing students' enrolment with the number of classrooms available in the universities studied (Ayodele, 2000). This made it one of the most contentious areas of educational management debate since class size has its roots from socio-economic factors. As such, in bad economic times, universities tend to be under financial pressure which may lead to a reduction of teaching force or increasing class size. In Nikks (2013), United States relaxes class size limits in order to manage the situation during economic down turn in 2006-2011. Also, Sweden reduces her annual hiring of new teachers as much as 1,300 teachers in 2009 which lead to larger class size (Omwirnirem, 2014). Nevertheless, in good economic times, more teachers may be hired with popular policy of decreasing class size. Hence, socio-economic considerations could ensure productive mode of learning and improvement of university social climate. The climate is to target the training of students in the service of humanity, full development of human personality and social inclusion (Ajekigbe, 2005 and Ekanem, 2015).

The university classroom situation (educational and social learning) tend to be a public good that produces externalities. The negative externalities in the form of unhealthy social well-being is the focus of this study. This may occur when some students disturb or disrupt others. Well-being in this study is define as involvement with students' life and other students. Thus, male and female students should not just being happy but also actively engaged with life and with others. This non-cognitive experience involves variables such as concentration, anxiety, sadness and dizziness in classroom situation (Lazear, 2013 and Omwirnirem, 2014). Concentration is the ability to focus on one's mind on one subject. Anxiety is an essential human behaviour which results in pains. Sadness is a condition of being unhappy or defected that made individuals to be withdrawn. Dizziness is an impairment in spatial stability or perception. These four variables are considered in this study as bad behaviours. It is the view of the researcher that basic needs and peaceful co-existence should ensure students' opportunity for advancement in a desirable class size norm.

In Nigeria, universities are yet to conform with ACS norm of 40 students per class as prescribed in the National Policy on Education (FRN, 2004). According to Isuku (2012), large classes are prevalent in most higher education programmes especially in urban areas in Nigeria. No doubt educational administrators have different views on how male and female students can attain desirable sense of belonging in order to be actively engaged with life and with others (Gasteffsson et al, 2011 and Ekanem, 2014). This is in view of the observable increase demand for teacher education among the university students. Fundamentally, economics of education is focusing on the improvement of the students well-being.

The Theory of Reason Action (TRA) postulated by Fishbien in (1967) can be adopted in this research. The theory states that human beings are reasonable creatures who systematically use information available to them to decide what action to take. Ekanem (2014), reports that the theory establish the relationships of belief, attitude, value and behaviour. The application of the theory to this study is that the social well-being of the university students depend on their basic need services in classroom situation. The ACS distribution can measure the non-cognitive degree of emotions of the students towards the attitude objects. The cognitive components of the university teacher education programmes account for the beliefs about the characteristics of the attitude objects. The degree of emotional attraction, beliefs based on students' attitude and values in their academic programmes may determine students' involvement with other students and with universities' communities.

A plethora of researches suggest that ACS indices are based on cognitive outcome variables (Isuku, 2012; Amori, 2004 and Hanuschek, 2012). Limited or no study is made in contemporary times on non-cognitive outcome variables in classroom situations in Cross River State, Nigeria. Hence, this study contributes to the filling of the gap and bring up added knowledge to the literature.

The significance of the study may serve as a means of formulating plans and policies to improve ACS indices of universities in Nigeria by the policy makers in education. Also, ACS distribution may achieve university education objectives of producing graduates to conform with both academic and non-academic professional setting in the service of humanity. Most importantly, if this research on social well-being of students could not find out from institutions about their experience in eking out a living, then economics theory, no matter how elegantly constructed, is meaningless.

This study was conducted in 2015 and covered two universities, (a federal and a state university) in Cross River State of Nigeria. The study made use of 207 university teacher education programme coordinators to assess ACS distribution effects on social well-being of their students. The research has two major limitations. Firstly, the average class size distribution is considered in groupings of 100 students per class ( $\leq 100$  and  $> 100$ ) against the government prescribed class size norm of 40 students per class. Further research can examine this issue in terms of the differential effects on learning and other non-cognitive outcome. Finally, self-reported measures are applied in assessing the social well-being of students. There is a believe that some potential bias are reduced guaranteeing the anonymity of the study participants and not allowing them to communicate before the completion of the inventory questionnaire.

### **Statement of the problem**

The unhealthy social life of the adolescence undergoing university education programme in Cross River State, Nigeria; is a problem to education stakeholders. This has made it difficult to bridge the gap between the right to equal educational opportunities and quality of education at this level. Thus, constituting a serious challenge to government educational change mantra. The university education managers fail to apply the Average Class-Size (ACS) distribution which can drive the right policy in improving the university academic service delivery with students' opportunities for advancement and efficiency of the system. The learning and social well-being of the university students tend to be associated with unhealthy university climate and poor social inclusion of the students. The students' non-cognitive domain seems not alert to surmount their challenges in university academic life.

The poor peaceful coexistence of students in the university programme may have serious implications for gender disparities and unhealthy social complexities in both the federal and state owned universities. University programmes with variations in students per class may face the challenges of increased cost per student and limited social interactions. This is obvious in small class size which can result in high cost through hiring more teachers who may likely be less qualified teachers. Hence, creating unhealthy university climate with culcumitant negative effects such as anxiety, dizziness, sadness and concentration to learn by the university students.

The above observation prompted the researcher to carry out this study. The question remains: what are the ACS distribution effects on students' social well-being in the university teacher education programmes in Cross River State, Nigeria? This study is to find an answer to this poser.

### **Research Question**

*What is the level of average class size distribution in university teacher education programmes for the students' social well-being?*

### **Research Hypotheses**

1. There is no significant difference in ACS distribution in university teacher education programmes between the social well-being of male and female students.
2. The social well-being of students in university teacher education programmes do not significantly depend on the ACS distribution.

### **RESEARCH METHODOLOGY**

This study adopted the descriptive survey design conducted ex-post facto. It was most appropriate design for this study because the members of the population were collected in order to determine the current status of the population with regards to one or more variables. The study area was Cross River State of Nigeria which covered two Universities (Federal and State Universities) located therein. Increased

university enrolment may have consequences on average class size vis-à-vis the social wellbeing of the students.

The population of the study consisted of 5492 students in the university teacher education programme which were spread across the two universities studied. A purposive sampling technique was used to study the entire population as the sample. The university teacher education programmes coordinators responded to the researcher designed inventory formats. An individual University Teacher Education Inventory Instrument (UTEII) was designed to collect data on the individual university teacher education class enrolments and the Average Class Size (ACS) indices. The instrument was face validated by two experts in Educational Administration and Educational Measurement Departments of the University of Calabar.

The administration of the instrument was carried out by the researcher and one trained research assistant. The inventory instrument response were returned without any mortality rate. Data collected were analysed using descriptive statistical techniques of tables and chart to answer the research question and independent t - test on the research hypotheses.

### DATA ANALYSIS AND RESULTS

The information gathered from the inventory formats were subjected to descriptive statistics using tables, chart and independent t – test statistics. Data were analyzed according to the research question and hypotheses as shown in table 1, 2, 3 and figure 1.

#### Research Question 1

*What is the level of average class size distribution in university teacher education programmes for students' social well-being?*

The data for answering this research question were presented in table 1 below:

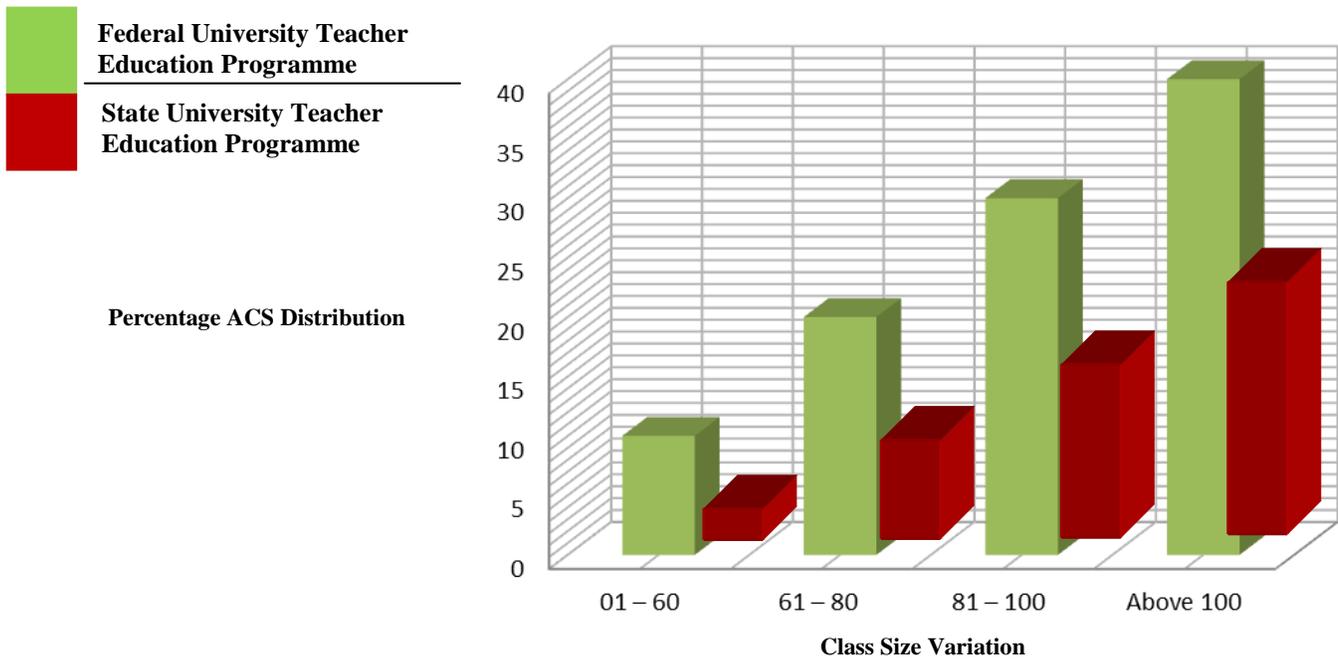
**Table 1. Sample distribution of ACS distribution in University teacher education programmes in Cross River State, Nigeria**

Average Class Size (ACS)	Federal University Teacher Education Programme		State University Teacher Education Programme	
	N	%	N	%
01 – 60	22	11	11	5
61 – 80	12	6	8	4
81 – 100	34	16	21	10
Above 100	61	30	38	18
All	129	63	78	37

$$ACS = \frac{TNS}{TNC}$$

Where:

- ACS = Average Class Size
- TNS = Total Number of Students (enrolment)
- TNC = Total Number of Classes



**Figure 1: Multiple bar chart showing percentage ACS distribution of University teacher education programmes in Cross River State, Nigeria**

The data in table 1 represented in a multiple bar chart in figure 1 revealed the relative percentage increase in ACS distribution for federal and state universities in the teacher education programmes with variations in students per class. The federal universities (which ranged from 11 – 30 percent) were not in tandem with its state counterpart (5-18 percent) in teacher education programmes studied. By implication, the percentage increase in ACS distribution agreed with the direct proportional relationship of access to university education in the various programmes in view of increase demand for university education in Nigeria. The resultant high class size disengaged students in goal pursuit as a critical factor to well-being following the flow of students through the system on an increasing pattern.

**Hypothesis one**

There is no significant difference in ACS distribution in university teacher education programmes between the social well-being of male and female students.

The hypothesis was analyzed with the data presented in table 2.

**Table 2. Independent t – test analysis of difference in ACS distribution in university teacher education programmes between the social well being of male and female students.**

Average class size	Group	N	$\bar{X}$	SD	t – cal
≤ 100	Male	2032	76.27	24.89	9.77*
	Female	3462	78.88	24.21	
> 100	Male	3020	87.24	25.28	8.39*
	Female	2472	85.06	23.96	

\*significant at 0.05 df = 205 critical t = 1.99

Table 2 revealed that the mean for male students (76.27) with ACS of  $\leq 100$  was less than that of the female students (78.88). This indicated that the female students possessed healthy social well-being than that of male counterparts. Moreso, the mean for male students (87.24) with ACS of  $> 100$  was higher than that of the female students (85.06). This showed that the male students social well being was greater than their female counterparts. The result also revealed the calculated t – values of 9.77 and 8.39 for  $\leq 100$  and  $> 100$  variations in students per class respectively as significant with the critical t – values of 1.99 at 0.05 alpha levels of 205 degree of freedom. The null hypothesis was rejected while the alternate hypothesis was accepted. The finding was that, there was a significant difference in ACS distribution in the university teacher education programmes between the social well being of male and female students. This implied a significant source of human distress among students’ gender. This was indicated in the upward trend in the ACS which varied with programmes, University type, and academic years.

**Hypothesis Two**

The social well-being of students in university teacher education programme do not significantly depend on the ACS distribution.

The hypothesis was analyzed with the data presented a table 3.

**Table 3. Independent t – test analysis of ACS distribution on the social well being of students in university teacher education programmes.**

S/N	Social well-being variables	Groups	N	$\bar{X}$	SD	t - value
1.	Concentration	$\leq 100$	1690	77.29	24.97	8.73*
		$> 100$	3902	75.72	24.32	
2.	Sadness	$\leq 100$	1070	74.27	24.67	9.02*
		$> 100$	4422	78.34	24.73	
3.	Anxiety	$\leq 100$	1001	79.47	24.78	9.74*
		$> 100$	4491	76.39	25.26	
4.	Dizziness	$\leq 100$	1386	86.73	22.78	0.98
		$> 100$	4106	81.96	19.26	

\*significant at 0.05, df = 205; critical t – 1.99

The ACS distribution was significant towards the three variables and not significant in one variable. The results presented in table 3 indicated that ACS distribution significantly depended on students well-being in terms of concentration (t = 8.73; p < 0.05), sadness (t = 9.02; p < 0.98); anxiety (t = 9.74; P < 0.05) and dizziness (t = 0.98; p > 0.05). The finding was that ACS distribution could determine the social well being of students in university teacher education programmes in terms of concentration, sadness, anxiety and not in terms of dizziness. By implication, the variables of concentration, sadness and anxiety could affect the vitality and happiness of the students while dizziness resulted in unhealthy value depending on the value-chain management of the classroom situation.

**DISCUSSION**

Research question showed that the ACS distribution level in federal university teacher education programmes was higher that of the state university teacher education programmes in Cross River State, Nigeria. This could be attributed to the fact that the Federal University had a higher rate of enrolment as a measure of educational access to teacher education programmes than its state counterpart. Hence, the ACS distribution which is a function of the enrolment rate could provide an insight into the perception of the social climate in the institutions studied. It is against this fact that the National Policy on Education (2004) at this level prescribed a maximum of 40 students per class as a norm but was hardly upheld. The fact that ACS distribution increased up to 100 students per class variation in the programmes was a

serious concern on attaining desirable behaviour and enforcement in classroom situation. Active interaction between students and teachers was reported as students engagements were in smaller classes of 1-80 students. This finding was in consonance with Iman (2005) that increase school enrolment caused teachers to teach large classes as there were more students to cope with. This resulted in unhealthy social well-being on students which seemed to be a good reason for parents' choice of universities for their wards.

Hypothesis one revealed that ACS distribution depended on gender social well-being. This means that proper class size distribution in the university teacher education programmes were required by sexes to ensure a healthy social state of the students. The implication was that the right caliber of teachers were required to deliberately plan and organize classroom situation and context for a desirable social climate and good health for the university students. This study was in agreement with Situation Assessment and Analysis (2001) that identified teacher supply as a single most important education inputs (among others such as infrastructure and curriculum) within the educational system which affected access and quality of education. This is also in consonance with Adeyemi (2014) that social demand approach examined educational needs in terms of the current demand for education at different levels and projects than on the basis of population increase and age distribution. The non-compliance to the ACS distribution norm at this level could result in inadequate and unqualified engagement of teachers as a serious defect in the system. The number of students were not affected by the quality of teaching and learning. This aggravated the issue of sound mental health of students vis-à-vis the quality of education (EFA, 2004). The high ACS existed with possible reasons of increase school age enrolment and attractiveness of teacher education in the labour market.

Hypothesis two revealed ACS distribution significantly depended on three behaviour variables not depended on one variable studied. The ACS distribution determined the behaviours and attainment as the rising enrolment in the university teacher education programmes were examined under class sizes of  $\leq 100$  and  $> 100$  with teacher effectiveness for students' social wellbeing. In Ekanem (2015) and Onocha (2012) it was noted that adequate capacity of teachers in social networking and proper classroom management were essential factors for a healthy social climate in institutions of learning. The implication for this finding was that social well-being was attained considering class-size where teachers and their quality played critical roles for greater value of money in the teacher education programmes. This negated the intentions of the university education in its bid to enhance quality and equity in their programmes.

Students with concentration problem were faced with plan of attack in order to remain focused on their schoolwork. This included the task of setting learning goals and active learning mentality and rewarding engagement in reading and practices (Isuku, 2011). Therefore, students with strongly internalized materialistic values were reported as lowered self-actualization, vitality and happiness. The instrumental survival value of anxiety was acknowledge in this study as an essential element in human experience but with pains. Increase anxiety and physical symptomatology suggested that some values were unhealthy in the students (Ajekigbe, 2005). The sadness by the students implied the feelings of loss, disadvantage, helplessness and sorrow. This showed that students themselves could contribute to alienation of ill-being. The students were deprived of the psychological needs being the basic source of human distress.

The students were not significant to dizziness while there were significant to concentration, anxiety and sadness. They were engaged in disorientating activities in their various classes (Nikks, 2013). In other words, they could not subscribe to self-assessments of life purpose and life satisfaction with dizziness. Unlike the variables of concentration, anxiety and sadness; the students cannot enjoy existential (spiritual) well-being and personal development with dizziness.

## **CONCLUSION**

The results of this investigation did not support the claim that smaller classes were beneficial for students' social well-being. ACS distribution for federal and state universities varied in the teacher education programmes with direct proportional relationship of access to university education for goal pursuit and students' social well-being. Though there was a significant different in ACS distribution between the

social well-being of male and female students, there were conflicting causal mechanisms that worked against class-size and the outcome variables.

The potential negative consequences of large classes with social well-being problem in large groups indicated the likelihood of peer matching interest and attitude with possibilities for greater sense of belonging and social inclusion. Smaller classes required more teachers with high tendency for university management to hire less qualified and motivated teachers in order to be cost-effective. Also, higher qualified and motivated teachers could be assigned to larger classes to handle classroom misbehaviour. These challenges were endemic since course allocation to the university teachers in the programmes studied assumed individual teachers' classroom management skills.

ACS distribution significantly depended on the social well-being of students in terms of concentration, sadness, anxiety but did not significantly depend on dizziness. Effective classroom management by the university teachers were essential to ensure effective interaction and healthy social well-being of the students. Therefore, ACS distribution did not only consider teaching and learning pedagogy, but also a critical factor for the system internal efficiency and students' social well-being. This enables the university management to confront the problem of access and equity in education.

### **RECOMMENDATIONS**

1. University management should ensure equity access to relevant quality and conflict-sensitive learning. This is because ACS can impact significantly on students' attainment and behaviour for system-wide development and reforms.
2. University management should prioritize in service delivery needs of vulnerable students. This is necessary since social well-being of students was difficult to achieve even in the best of circumstances and class size.
3. University teacher effectiveness in recognizing interdependence should be encouraged. A broken social fabric in the teacher education programmes will undermine progress made in economic and management arenas while ACS is critical for broader recovery efforts.
4. Policy makers in university education should advocate for teachers' understanding of the local context of the abused and their capacity to deliver the basic service delivery in classroom situation. This is because ACS determines student-teacher interactions in order to foster advancement and sustainable peaceful existence among the students.
5. Policy makers in university education should advocate the need to redirect energy of university students in classroom situation towards alternative goal achievement as an important contribution to students' social well-being. This enhances the well-being of male students in tandem with their female students counterparts vis-à-vis ACS distribution.

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