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Parallel Session 4C

Transition Between Upper Secondary and Higher Education: Policy and Governance

The Articulation between Upper-secondary and Higher Education in a war-torn society: The Mozambican case study

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Working Document
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Acronyms and Abbreviations

ACP	Partial Control Activity
ACS	Systematic Control Activity
CAT	Credit Accumulation and Transfer
CEA	Commission for Admission Examinations
CFPP	Teacher Training Center
CNAQ	National Council for Qualifications
EP1	Lower Primary Education (1st - 5th grades)
EP2	Upper Primary Education (6th - 7th grades)
ES2	Second Cycle of General Secondary Education (11th to 12th grades)
ESG1	First Cycle of General Secondary Education (8th to 10th grades)
HEI	Higher Education Institution
IMAP	Teacher Training Institute
ISCTEM	Higher Institute of Science and Technology of Mozambique
ISPU	Higher Polytechnic Institute
MEC	Ministry of Education and Culture
NACC	National Assessment and Certification Commission
TT	Teachers Training
TVET	Technical and Vocational Education
UEM	University Eduardo Mondlane
UP	Pedagogic University

Executive Summary

Education in Mozambique has always been a priority of the governments of the country since the Independence.

At the time of Independence, in 1975, the country had a very high illiteracy rate of about 93%, there was a lack of qualified personnel and particularly teachers, health care personnel and other specialized people.

The country launched massive literacy campaigns and special training programs particularly for social areas. The government created the National System of Education which was followed by a comprehensive curriculum reform.

The war in Mozambique affected the whole country and more so the education system, where educational infrastructures were the most affected, which reduced the capacity of the government to provide education mainly in the countryside with the necessary quality.

In 1992 the peace agreement was signed. The investments in education were increased, the schools were rebuilt and the educational system was very rapidly expanded with the emphasis to primary education at the beginning.

The paper describes the Mozambican educational system and its evolution since the independence. Details are cast on the situation of secondary education and on the transition mechanisms from upper secondary education into higher education. It also pays a special attention to quality assurance mechanisms, regional and gender disparities in the access to higher education, the expansion of higher education institutions to the provinces, and other issues that can undermine the possibility of the different groups of students to enter higher education.

The education system in Mozambique

The 1992 law determines that all six-year-old children shall enter the first grade of primary education. Primary Education in Mozambique comprises 2 levels: EP1, lower level of primary education with 5 years of study, from 1st to 5th grade and EP2, upper level of primary education with 2 years of schooling, from 6th to 7th grade. Secondary Education is divided into two cycles. The first cycle of 3 years is from 8th to 10th grade (lower secondary education) and second cycle is from 11th to 12th grade (upper secondary education).

The technical and vocational education and training (TVET) under the Ministry of Education comprises three levels (i) elementary; (ii) basic; and (iii) middle level. The basic and middle level cover three areas of training: agriculture, industrial and commercial. The elementary level has a duration of two/three years and it is equivalent to upper primary (EP2); Basic and middle levels undertaken in three and four years respectively, are equivalent to ESG1 and ESG2 respectively.

The various levels of education require different levels of teacher training. The basic level of teacher training, which is for primary school education, is provided by the Teacher's Training Centers (*Centros de Formação de Professores Primários - CFPPs*) to Grade 7 graduates who successfully complete three-years of training. The Teacher's Training Institutes (*Institutos do Magistério Primário - IMAPs*) provide a two-year middle level training program for students with 10 years of general education. Secondary school teachers and TVET teachers (basic and medium levels) are trained at higher education, mostly at the Pedagogic University.

The 1992 law defines higher education as the level of education that trains high qualified technicians and specialists in the most diverse domains of scientific knowledge, for the needs of the country development. Higher education is also defined as intrinsically linked to scientific research. Prospective students are required to complete upper secondary school (12^{th} grade) or middle TVET and pass an admission examination in order to access higher education courses. Higher education consists of public and private institutions.

Progress of the system of education

Since 1992, enrolment in EP1 and EP2 has rapidly increased to reach more than 3.6 million in 2006. The number of schools increased from 2.8 thousand to more than 9.1 thousand schools. Despite the considerable effort to rebuild and expand access to schools, it was estimated that 475 thousand children at the school age (6-12) remained out of schools in 2006.

The number of girls enrolled in primary schools continues lagging behind that of the boys. In 2006, 46% of enrolment in primary EP1 and EP2 were girls. The northern and central regions of the country are the most affected by the gender disparity.

In 2004 the Ministry of Education and Culture approved a new curriculum that introduces new subjects, bilingual education and a new assessment system which privileges automatic promotion leading to increase the rates of primary completion.

The ESG1 grew 14 times, from 27,000, in 1992, to 385,000 in 2006. In 2006, there were 241 ESG1 public schools. The enrolments of ESG2 are also increasing from 3,500 students in 1992, to 71,400 students in 2006.

The girls are still the most disadvantaged group as their proportion related to those of boys is of 40% in ESG1 and 36% in the ESG2. In ESG2 there were 49 schools in 2006. It is important to note that 17% of all students of this level are enrolled in private schools.

TVET had fewer students than General Education, because of its historical evolution and the costs of this subsystem. The Government is now trying to improve this system of Education because of its importance in the training of professionals to different areas.

In 2006, the country had 23 HEIs (11 public and 12 private), with 43 thousand students enrolled. Higher education subsystem has grown more than eleven-fold over the past 16 years in terms of student numbers, from about 3,750 students in 1989 to more than 43,000 in 2006, almost half of the students enrolled in the upper secondary education.

Notwithstanding this rapid expansion on the supply side of the higher education sector in Mozambique, the demand side is still very high. All secondary education schools (public and private) graduated 7.600 in 2004. However in 2005, there were 8.750 new entrants enrolled in all higher education institutions. In these enrollments there are workers and secondary education graduates from previous years. In 2005, the HEI graduated 3.615 higher education specialists, most of them from Eduardo Mondlane University.

By gender the number of girls enrolling in Higher Education is almost one half of the overall enrollments. Out of 43,000 students enrolled in all HEI 14,700 are girls.

Articulation between upper Secondary and Higher Education

According to the law 5/2003 of higher education, only students that have completed 12th grade of education or the equivalent (TVET, or TT) can attend university. Apart from this general criterium, each university is allowed to define its own criteria on a basis of professional experience of the candidate. These criteria have to be approved by the Ministry of Education and Culture.

Universities also regulate the conditions for a student to be admitted and study according to the national policies, preferences of the candidates and capacity of the institution.

In the Catholic University there are no admission examinations and students have to complete 12th grade to be admitted. To enter to the Faculty of Medicine 12th grade graduates have to complete a one year preparation course.

Almost all HEIs have in place a system of Admission Examinations that students have to pass in order to be admitted into the institution. UEM and UP have established Commissions for Admission Examinations (CEA). The purpose of these commissions is to deal with all the process of these examinations from the announcement of the conditions and definition of the timetable to the preparation of exams and publication of the results.

UEM, for the sake of regional equity, reserves 5% of enrolments places per course/program for students of each province. For this quota are only eligible students who are younger than 20 years old and must have been amongst the best in their provinces to be admitted. In cities where the UEM has campuses (Inhambane, Beira and Zambézia) there are places available for residents of that province.

UEM also provides places for workers in programs like law and journalism. For the Law in Maputo (10 places) and Beira (5 places), the Ministry of Justice, of Interior and other related institutions decide the criteria for the workers they want them to be admitted. In the case of journalism, the candidates have to be approved by the journalists Union. All these candidates have to pass the admission examination.

Pedagogic University has signed convenes with some ministries in order to admit workers of these institutions, without having to pass an examination. These are the Ministries of Education and Culture, Ministry of Defense and Ministry for Combatants of Liberation Struggle. Since 2002, 40% of the UP vacancies are assigned to teachers and other MEC workers.

Each year, as the graduation from ESG2 increases, more and more students demand places in the Universities. The places to accommodate these students are shrinking. In 2006, the number of candidates increased for the two major public universities. In UP for instance, there were 13,333 candidates for only 2,408 places, meaning that there were 5.5 candidates for each place. The situation in UEM is not different, as there were 15.197 candidates for only 2.338 places, which means that there 6 candidates for one single place.

Regrettably in programs such as Chemistry, Geology, Physics and Meteorology and Mechanics there were fewer candidates than the actual vacancies in the University. This shows also that most of the students seek to enter in social sciences and humanities, which may reflect poor performance in science subjects in the secondary education due the insufficiency of well trained teachers.

In a UEM report there is an analysis of the candidates per place where they completed their secondary school. 63% of all candidates to the admission examinations to the UEM are from Maputo. This corroborates with the information from the UP, and shows that Maputo has the biggest number of candidates to attend higher education.

There is a relative balance of gender in private institutions, contrary of what is happening in the government institutions where female students represent 1/3 of all students of these HEIs. The data collected in ISPU shows that the number of female students in all courses, with exception to Civil Engineering (98 male to 34 female students), in Maputo, female are the major group of students. The same does not apply to Quelimane. Male students are in majority in all courses with exception to Psychology (40 female to 30 male students).

An evaluation based on the admission examinations shows that, although from year to year there are more candidates, the scores the students get in these examinations are not increasing in both universities. Throughout the universities there is a sense that quality of education is decreasing in secondary schools. New secondary schools are opened without all teachers. Particularly in science subjects like Physics and Chemistry there is lack of teachers. This is also true regarding teachers of Drawing and in some schools there are no qualified teachers in secondary schools beginning from the 1st cycle.

The most critical subjects are science, mathematics and drawing. The graph below compares the scores from 2004 to 2006 in all subjects the UEM have admission examinations. The graph shows that students get very low scores. The best subjects are Portuguese and French. In 2004 and 2005 Biology had positive scores (average of more than 10 scores). In 2005, English had also positive average score. In subjects like History, Physics, Chemistry the average scores are decreasing year after year, and for those the average is less than 8 scores. In Mathematics the scores are also low and do not go beyond 10 scores. The only subject that is increasing the scores is Drawing where the students come from less than 8 degrees to almost 10 in the fore mentioned period.

It is also important to bear in mind that many students entering UEM do not attain minimum scores in the admission examinations. The proportion of students in this situation is higher in subjects like Chemistry, History, Mathematics and Physics and Biology. Apart from History, where the situation is also critical, the worst subjects in terms of scores are the science and Mathematic subjects.

With the establishment of the National Commission for Quality (CNAQ), the Government wants to control the quality of education provided by HEIs. The Credit Accumulation and Transfer (CAT) was designed with the aim of addressing a number of problems within Higher Education Subsystem and also in the articulation with mainly technical and vocational pre-university education.

To expand access opportunities to Higher Education the Government established three Polytechnics in the same number of provinces. These institutions were created with the objective of producing highly qualified professionals who are more oriented to practical approaches, i.e. graduates who know how to do things, who can become easily entrepreneurs.

In Mozambique, the issue of social equity in access to higher education is mainly addressed through the provision of scholarships for students from disadvantaged families or most of the students from the provinces. Apart from donors support of the scholarship scheme, the Government is one of the main providers of scholarships.

Because of the variety of scholarships providers, the government decided to create a new funding model proposed by Mozambique's Commission for the Reform of Higher Education Finance, with the purpose of allocating financial resources to higher education institutions (HEIs). This model consists of three financing mechanisms:

- base funding – financing intended to *ensure stability* from one year to the next, which HEIs need for planning purposes, and (b) *reward "performance,"* as measured (in the current design) by the number of programs and the number of graduates,

- institutional funding – financing designed, in the first instance, to *improve governance and build capacity* at the institutional level, which HEIs must have in order to operate efficiently and effectively under the new financing regime, and then to *encourage quality and innovation* in teaching, learning and research, and
- student funding– money that will *follow students*, who are assumed capable of making informed choices among competing HEIs and study programs, basing their decisions on reliable market signals and personal preferences.

Conclusion and recommendations

The educational system at all levels is rapidly expanding, especially in secondary and higher education, which raises new concerns about quality on the supply side. The lack of teachers, school materials particularly in rural areas exacerbates the regional disparities in the access to higher education.

Although positive discrimination to accommodate students from some provinces is helping to reduce the disparities among provinces, it can not be taken as a long term strategy.

During the last 10 years or so many HEIs were established in regions of the country, which helped somehow to reduce regional inequities, and thus it reduced the pressure on Maputo. This rapid expansion is though raising the issue of quality, which is systematically being dealt with by the government.

There is a good system of data collection for Higher Education, with very detailed information on the courses, students per province, etc. there is a need to link this system with the one of general education. A good analysis of this information can inform better the policy makers to improve both secondary and higher education.

The government is considering policies to increase private participation to finance secondary and higher education. The new strategy may mean the increase of tuition and fees, along side with a good scholarship system to finance poor and talented students.

The Ministry is developing the strategy for the secondary education that shall provide the guidelines to address the quality issues at this level. Some issues like the increase in the teaching hours, provision of school textbooks, revision of the assessment system in the training of teachers are some of the issues to be considered in order to improve quality of education. Distance learning, for upper secondary education is being considered as one of the means to increase access.

It is highly recommended to introduce one type of upper-secondary culmination exam that can serve simultaneously to fulfill the admission requirement for higher education institutions.

In addition to saving human and financial resources as well as time for the schools and universities, that exam would also for those who want to apply for scholarship would also help reducing possible abuses of the system by private higher education institutions.

Part I - INTRODUCTION

Education in Mozambique has always been a priority of the governments of the country since the Independence.

At the time of independence, in 1975, the country had high illiteracy rate of about 93%, it faced the insufficiency of qualified personnel and particularly of teachers, health care personnel and other specialized people. Faced with situation professional training of people became an imperative.

As part of the strategy to tackle this problem, the country launched massive literacy campaigns, training courses particularly for the social areas. Subsequently, the government approved a National System of Education which was followed by a profound curriculum, marking a radical umbilical cut-off from the colonial heritage.

During the colonial time, education was a privilege of a small group of people, particularly the Portuguese and the number of schools was too small to attend all Mozambican citizens. After the independence the country expanded education opportunities to all citizens of the country regardless of their region of origin. The expansion was made using all the resources available, to accelerate the progress in this area. Many of the teachers in that period lacked proper psycho-pedagogical training, but they new enough to address the national emergency situation. For instance those with grade 4, would teach grade 3. Simultaneously the government did not save efforts to introduce a comprehensive teachers' training program.

The war in Mozambique affected the whole country and particularly the educational infrastructures, teachers and children, which reduced the capacity of the government to provide education everywhere and with the necessary quality.

In 1992, the peace agreement was signed. The investments in education increased, schools were rebuilt and the education system was rapidly expanded at all levels. From 2000 onwards, because of the successes of primary education the demand for post-primary education grew and the government was called to increase the investments and to put in place reforms in order to develop post-primary education.

The massification of education which was translated in the increase of student numbers in post-primary as well as in the secondary and higher education has risen concerns about the quality of offered education.

The main object of this paper is the articulation between the upper secondary and higher education in Mozambique. It describes the education system and its evolution since the independence. More emphasis is cast on the situation of secondary education, on the assessment and the transition mechanisms into higher education. Quality assurance policies and practices, regional and gender disparities in the access to higher education, availability of institutions in the provinces, and other issues that can undermine the possibility of the different groups of students to enter higher education are also a matter of concern in this paper.

All these issues will be studied in the context of a rapid growth of secondary education and the increasing demand for higher education institutions on the wake of peace agreements which terminated the war and ushered in hopes for a better and brighter future.

It is a candid belief of the authors that the study can also bring some practical suggestions to inform the strategy and curriculum reform in secondary education whose process is in its final stage. We truly hope that this paper may also constitute a modest contribution to understanding possible barriers to access higher education especially for the disadvantaged groups of population, particularly girls and remote regions and shed some light on how the government can tackle these problems.

Methodology

For this study we relied mainly on the desk analysis of secondary materials as well as of data generated by the Ministry of Education and Culture and other educational institutions. Information gathered from public universities was a good quality, however similar data from private HEIs had some gaps, which, were covered by interviews and visits to some of these institutions.

Both quantitative and qualitative data have been invaluable for this study, as they helped comprehend the dynamics of the process of articulation between secondary and higher education.

The methodological techniques in this study consisted of collection of data through different institutions, namely Ministry of Education and Culture, universities, secondary schools, vocational and professional schools, public and private higher schools, etc. and other institutions that function as repository of documents.

The authors visited some secondary schools as well as higher education institutions; observed the conditions in which the institutions work, interviewed teachers, headmasters, and other education authorities in order to understand their perceptions about this process.

The study faced some curtailing constraints mainly represented by the shortage of financial resources which hindered researchers to visit provinces which could have helped to obtain a better insight of the issues which are the object of this study.

Part 2 - BACKGROUND

A. THE EDUCATION SYSTEM IN MOZAMBIQUE

1. Evolution of the education system since the independence

During the colonial times the education in Mozambique was a privilege of a few. In fact, quite exclusively the Portuguese had access to the education. Schools for Mozambicans were mainly administered by the Catholic Church and other churches.

The educational system during the colonial period was divided into Pre-School (from 5 to 6 years old children), primary education (4 years); the secondary education had two paths: (i) one started with preparatory phase of 2 years, which paved the way to technical and vocational training (3 years) and later of technical medium level (3 years), (ii) the other was lyceum (7 years), and university (5 or more years depending on the courses).

Access to secondary education was a privilege of mostly colonial children and of a few assimilated Mozambicans.

In 1975, soon after independence, the educational system in Mozambique has undergone significant transformations and as a consequence expanded very fast at all levels. In 1975, it is estimated that 93% of the Mozambican were illiterate, there were only 1.330 upper secondary school students in 5 schools concentrated in Maputo (2), Beira, Quelimane and Nampula.

Soon after the independence in 1975 a new system of education was introduced. All education institutions were nationalized and education became an exclusive task of the government[1]. Education was free and compulsory. At the same time, student population in primary and adult education experienced an enormous growth due to people's enthusiasm, the abolition of school fees and also as a reflection of the government policy which gave priority given to education.

Paradoxically, as the new government massified access to educational opportunities, many qualified Portuguese fled the country, a situation that created a daunting shortage of teachers, engineers and doctors and other specialists. This explains the sharp decline in the number of students in higher education, from 2.4 thousand, in 1975, to less than a thousand in 1977.

Faced with these challenges, the new government decided to close all upper secondary schools in 1977 (on the 8th March, 1978). On the wake of this decision, many students were either send to the Faculty of Education at the University to be trained as teachers, other for the propaedeuticus for an intensive preparation for them to engage in University training, others to the various fronts of the struggling young nation for survival. Still others were sent to socialist countries in order to continue their studies. As a result of that, an important number of teachers where trained and the government began expanding education to all parts of the country. There was also a decline in upper secondary school students.

In 1983 the Government promoted profound changes in the curriculum, culminating in the introduction of the National Education System (SNE). The New curriculum was gradually introduced, i.e., year by year beginning from grade one, being the last grade the 12th, which was introduced in 1995.[2]

[1] Decree 12/75, 6/11/75 - Forbidden the private education activities in Mozambique and defines them as an exclusive task of the State
[2] Law 4/83, 23/03/1983, approves the National System of Education and defines the principles of its application.

In 1986 the government reintroduced fees in post-primary education and for boarding, because the "human, material and financial resources available in the country do not allow all Mozambicans to enroll in schools, in adult education and professional training."[3]. In primary schools, the government introduced symbolic contributions to be used by schools to help poor students, so called "Social School Action".

In 1990, the government opened the education sector to private initiatives as part of the market liberalization, started in 1987, when the country joined the Bretton Woods institutions. This measure had a positive impact for all the system. Since then new private schools and HEIs have been established.

2. The system of education from 1992

In 1992 the government revised the National Education System. Since then the Education System comprises pre-school education, in-school education (*Ensino Escolar*) that comprises, primary, secondary, technical and professional training and higher education. Finally, the System includes special modalities of school education, which encompasses special, vocational, adult and distance education and teacher training[4].

From the 1992 law, all six-year-old children shall enter the first grade of primary education. Primary Education in Mozambique comprises 2 levels: EP1, lower level of primary education with 5 years of study, from 1st to 5th grade and EP2, upper level of primary education with 2 years of schooling, from 6th to 7th grade. Secondary Education is divided into two cycles. The first cycle of 3 years is from 8th to 10th grade (lower secondary education) and second cycle is from 11th to 12th grade (upper secondary education).

The technical education and vocational training (TVET) under the Ministry of Education comprises three levels (i) elementary; (ii) basic; and (iii) middle level. The basic and middle level covers three areas of specialization: agriculture, industrial and commercial. The elementary level last for two/three years and is equivalent to upper primary (EP2); Basic and middle levels, which last for three and four years respectively, are equivalent to ESG1 and ESG2 respectively.

The various levels of education require different levels of teacher training. The basic level of teacher training, which is for primary school education, is provided by the Teacher's Training Centers (*Centros de Formação de Professores Primários - CFPPs*) to Grade 7 graduates who successfully complete three-years of training. The Teacher's Training Institutes (*Institutos do Magistério Primário - IMAPs*) provides a two-year middle level training program for students with 10 years of general education. Secondary school teachers and TVET teachers (basic and medium levels) are trained at higher education, mostly at the Pedagogic University.

The 1992 law defines higher education as the level of education that trains high qualified technicians and specialists in the most diverse domains of scientific knowledge, for the needs of the country development. Higher education is also defined as intrinsically linked to scientific research. Prospective students are required to complete upper secondary school (12th grade) or middle TVET and pass an admission examination in order to access higher education courses. Higher education consists of public and private institutions.

[3] Diploma Ministerial n 6/86 of January 22nd, "Approves the Regulation for fees and taxes for boarding in the National Education System", translation made by the authors.
[4] Law nº 6/92, 6th May, 1992 – Adjusts the National System of Education

In 2007, the Ministry of Education and Culture introduced new modalities of Teacher Training for primary and for the first cycle of secondary education. As a result of this process the CFPP and IMAP were fased out and in their place appeared new institutions of Teacher Training, the IFP.

3. Primary Education

Since the independence Mozambique has made significant progress towards increasing access to primary education. In 1975, there were only 671 thousand pupils in primary schools (EP1). The government policy which cast priority to education, the political enthusiasm accompanied by the financing of this sector contributed to the increase in the number of enrolments in primary education. As a result of the combination of these factors, in 1983 the enrolments in the primary schools increased to more than 1.2 million pupils.

With the deterioration of the political and military situation in the country, and the spread of the war, the number of children in schools reduced. Consequently, in 1992, by the time of the peace agreement the number of pupils in primary schools was less than 1.2 million.

Since 1992, enrolment in EP1 and EP2 quickly increased to reach more than 3.6 million in 2006. The number of schools increased from 2.8 thousand to more than 9.1 thousand schools. Despite this considerable effort to rebuild and expand access to schools, it was estimated that 475 thousand children at the school age (6-12) remained out of schools in 2006.

The number of girls enrolled in primary schools continues lagging behind that of the boys. In 2006, 46% of enrolment in primary EP1 and EP2 were girls. The northern and central regions of the country are the most affected by the gender disparity. The Mozambique FTI document states that girls drop out more than boys in the northern and central regions of the country because of distances to schools, incomplete schools and family obligations. In EP2 the gender gap is 42%.

This situation affects the number of girls that reach secondary education.

In 2004, the Ministry of Education and Culture introduced the new curriculum that introduces new subjects, bilingual education and a new assessment system which privileges automatic promotion. As a result the number of graduates has increased thus bringing more pressure in secondary education.

4. Secondary and Technical and Vocational Education

As the completion in EP is growing the demand for ESG1 is also increasing at impressive rates. This level of education grew 14 times, from 27 thousand, in 1992, to 385 thousand in 2006. In 2006, there were 241 ESG1 public schools. The enrolments of ESG2 are also increasing from 3.5 thousand students in 1992, to 71.4 thousand students in 2006.

The proportion of girls, still the most disadvantaged group, in relation to boys is 40% in ESG1 and 36% in the ESG2.

In 2006, there were ESG2 49 schools. It is important to note that 17% of all students at this level are enrolled in private schools. Secondary education begins from 8^{th} grade. This level of general education is divided in two cycles: lower secondary (1^{st} cycle of secondary) and upper secondary (2^{nd} cycle).

For the purposes of this work, upper secondary education includes 11^{th} to 12 grade (general upper

secondary education), 1st to 3rd year of middle technical and vocational education and teacher training courses of 10th grade plus 2 years of training. All these courses give the graduates the possibility of accessing university courses.

Technical and Vocational Education is a subsystem with 3 levels: elementary, basic and medium level. The students who want to enrol in each of the levels TVET need different levels of training. Students have to complete EP1, EP2 or to enrol in the elementary or basic levels respectively. In order to enrol in medium level, students need to complete basic TVET or 10th grade of General Education. In all levels of TVET there are three areas of study: Agriculture, Industry and Business.

TVET had fewer students than General Education, because of its historical evolution and the costs of this subsystem. The Government is now trying to improve this system of Education because of its importance in the training of professionals to different areas.

a. Access to secondary education

The new curriculum of primary education introduced in 2004, brought important changes in the configuration of the primary education. The whole primary level was divided into three cycles, where within the cycles students pass automatically, and in between them, they are tested to pass to the next cycle. This evaluation system raised quickly the pass rates in EP putting pressure in the transition to secondary education. In 2006 completion rate at EP2 was of 38%, against the 7% in 1992.

Secondary education has evolved from a very small and elitist level of general education and is quickly moving into a mass system. In fact, looking at the access to this level of education we can find that only 15 years ago, in 1992, the year of the Peace Agreement, Mozambique had only 27 thousand students in the first cycle (ES1) and 3,5 thousand in the second cycle (ES2). In 2006, the ESG1 grew 16 times and had more than 430 thousand students, while in the ESG2, growth was 20 times the numbers of 1992, and the ES2 level registered more than 71 thousand students. The impressive rate of secondary enrollments growth is raising concerns about the quality of education. In fact, the repetition and drop out rates in ESG1 is more than 30% , whilst in ESG2 more than 25%, one of the highest in Africa.

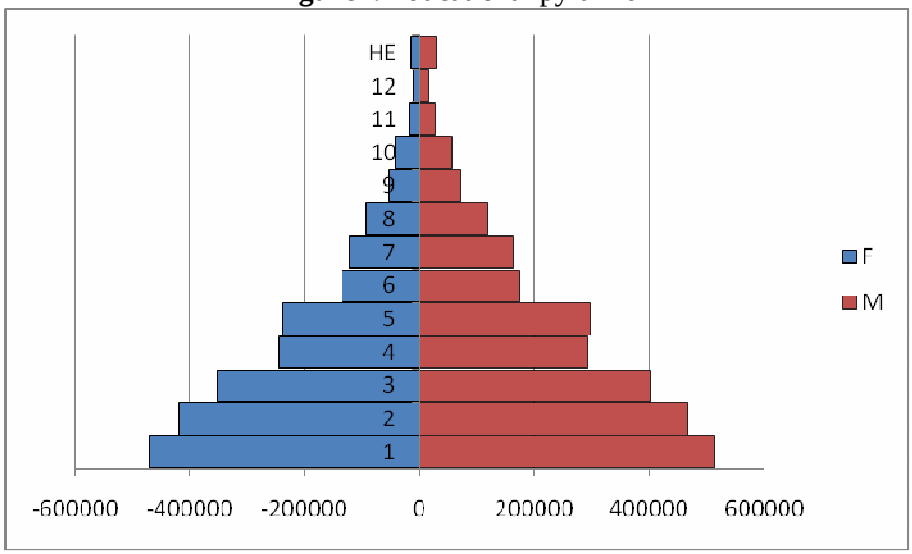
Table 1 - Student population in Education system (excluding higher education)

Source: Produced by the author with data from MEC statistics (1975, 1983, 1992, 2000 and 2006)

This table shows the increased demand for upper secondary education, as a result of the success in primary and lower secondary education. It is also true that the total (including the night courses) enrollment rates in Mozambican upper secondary school (7,8%) are still one of the lowest in Africa (23%). This growth in upper secondary schools is putting pressure on to higher education.

Despite all the efforts to develop a holistic education system, the educational pyramid clearly shows that the system has more students in the 5 grades of primary, reducing sharply the number of students enrolled in the subsequent levels.

Figure1: Educational pyramid



Source: Produced by the authors with data from MEC statistics of 2006

There were 49 public ESG2 schools in the country, in 2006. 83% of all ESG2 students (71.thousand students) were enrolled in public schools. Most of ESG2 schools are located in urban areas. For students from rural areas the government provides some boarding where there are ESG2 schools. But the spaces are scarce and the conditions of leaving are not the best. That creates additional difficulties for rural students and even more for girls to access second cycle of secondary education.

b. Access to non government schools

There are two types of non government schools: community schools that belong to NGO's, religious or other non profit organizations. Usually these schools are not lucrative and children in them pay very low fees. In some of these schools the government pays teachers salaries. These schools do not pay taxes to the government, many of them are established in rural areas where there is no access to a government school and they are very helpful to poor children.

There are also private schools in which the students pay higher fees. The government does not support these schools in any way. They have to pay for all their expenses and pay also for their taxes to the government.

Non government schools can be recognized by MEC for assessment purposes. In these cases the schools can do all the process of evaluation, including national examinations at their own.

Students of those schools that are not recognized for assessment purposes have to pass examination as external students. As all external students of these schools have to attain at least 50% of the total score (10 marks/20) to pass in the subject.

c. Private upper secondary schools that belong to the private universities

Two higher education institutions have their own private schools that prepare students for the University. Students that finish these schools do not need to pass admission examinations to access the university owner of the school.

Two higher education institutions have their own private schools that prepare students for the University. These preparatory courses were designed to provide the students with an opportunity to develop competencies and overcome the problems students have in secondary schools. Students that finish these schools do not need to pass admission examinations to access the university owner of the school. In ISPU the students that fail to complete successfully the preparatory course have to present the admission examination, but have 50% of the scores of their preparatory course.

From the beginning of the Catholic University, to be admitted in the University, upper secondary graduates had to successfully complete a course of one year and pay the fees of this course. In 2007 the University abolished the one year preparatory course for all the courses. Now the students enter the University without presenting any admission examination, except for the medicine faculty where the preparatory course still mandatory.

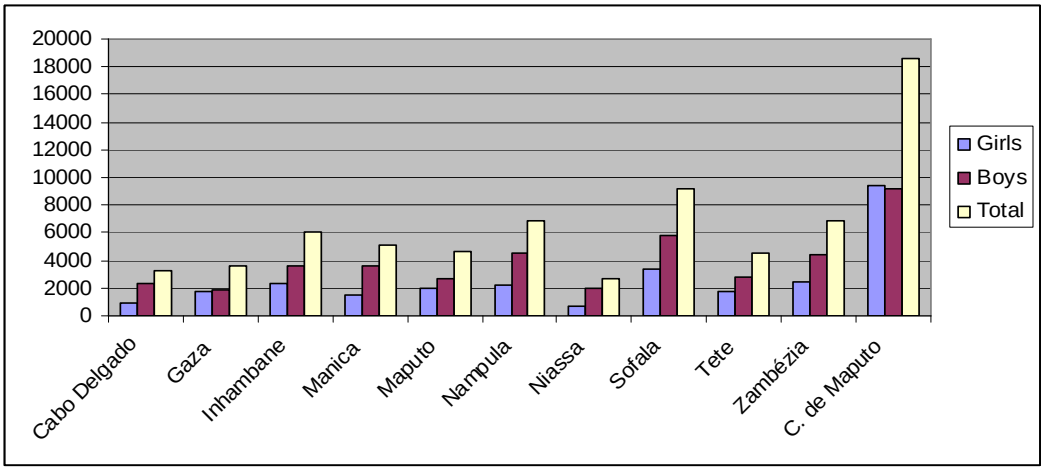
d. Regional disparities

Access to education in Mozambique is not equitable. To be a girl or to belong to a rural area has big importance when it comes to have access to secondary education, particularly to the second cycle.

Due to historic development of the country and the system of education, big cities like Maputo, Beira and Nampula are the most benefited areas in terms of access to secondary education. Of these, Maputo is the place where education has been most developed since.. Although in the recent years, other places in the country increased very rapidly the provision of ESG2 places, the city of Maputo continues to dominate in terms of number of students. Only the city alone has in 2006, accounted for 24% of all students in ESG2 in the country.

Maputo was the city where the first university of the country was established in 1962, and remained the sole university of the country up until 1985, when the Pedagogic Institute was established.

Graph 1 - Students of ESG2 schools (all shifts and schools) per province in 2006



Source: Produced by the authors with MEC statistics, 2006

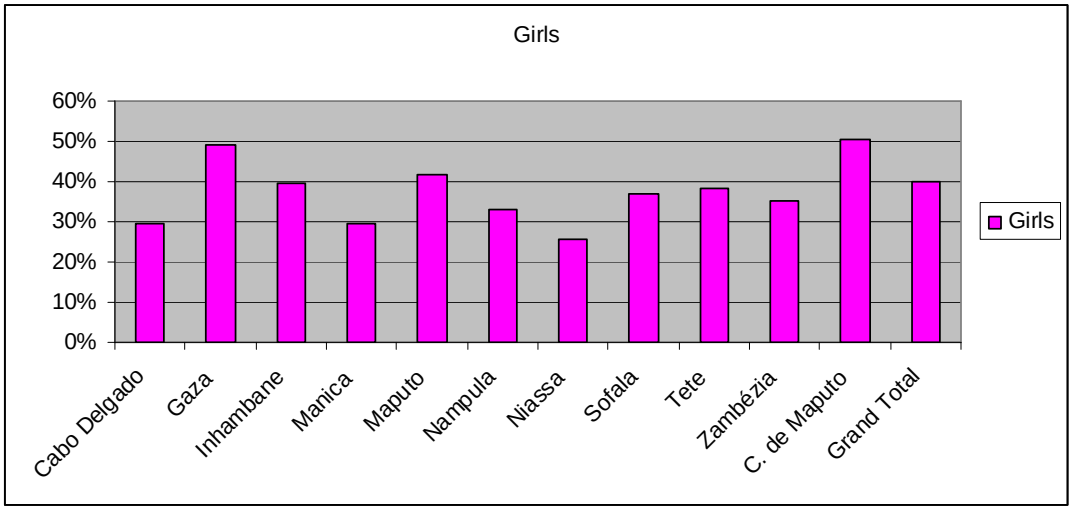
e. Gender disparities

There are some barriers for girls to access ESG2. First is the trend of girls in all levels of education. Beginning from primary education, girls are in less numbers in schools than boys, due to factors that include poverty, cultural factors and rites. In secondary education many girls leave schools because they get pregnant or marry. In many families boys have more rights while girls are relegated to domestic activities. Other barriers are the fact that many secondary schools are located mostly in urban areas and there are little spaces for boarding. But even in schools with boarding the conditions are not the best for girls to attend the schools, and parents fear to send their daughters to these schools.

The graph below shows the proportion of girls in the 2nd cycle of secondary education. Central provinces (Niassa, Manica, Cabo Delgado, Nampula, Sofala, Zambézia and Tete) are the ones where girls are in less proportion in relation to boys in secondary schools.

Maputo city, Gaza, and Maputo Province have more girls in ESG2 schools. In Maputo city the proportion of girls in all secondary schools was 50% in all schools and shifts. In Inhambane province the situation is similar to the national average. But the situation of girls in this province is the worst of all the southern provinces. The national average proportion of girls in upper secondary schools is 40%. Northern provinces are the worst in this indicator. In provinces like Niassa and Cabo Delgado less than 30% of all upper secondary students are girls.

Graph 2 - Proportion of girls in ESG2 schools per province in 2006



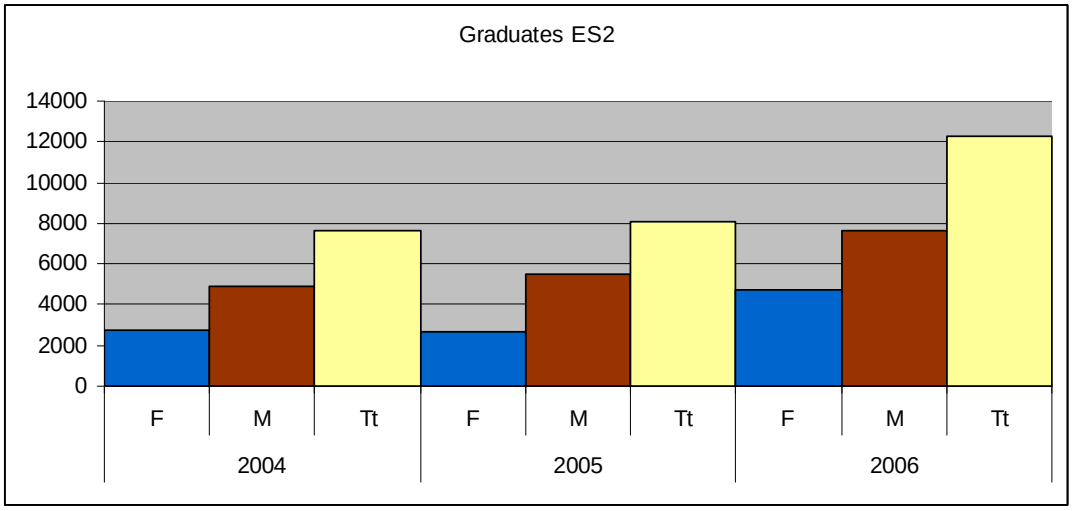
Source: Produced by authors with MEC statistics 2006

The proportion of girls in schools has consequences for the number of the population that graduates from upper secondary level of education. The same applies for the proportion of graduates per province. The graph 3 below shows the situation of the graduates by gender. There is an increase in the proportion of girls that is completing the ESG2 in relation to boys. However, the situation continues to be critical. In 2006, there where more than 162 male graduates for 100 girls that graduate from ESG2.

In Mozambique there were 12.300 graduates of ESG2 in 2006. This number represents 2,7% of the population of the relevant age (17 years old youngsters). Of the total of graduates 38% are female. The northern and central provinces contribute to this total with 50% of the graduates, while the south provinces of Maputo City, Maputo province, Gaza and Inhambane contribute with 50%. Maputo City alone graduates 29% of all graduates of the country.

The situation per province is shown in the table below. Provinces like Niassa, Manica, Tete and Cabo Delgado had less than 500 graduates in total 2006.

Graph 3 - Graduates of ESG2 by gender (all schools and shifts) 2004-2006



Source: Produced by the authors with MEC statistics (2004, 2005, 2006)

The number of graduates is increasing year by year and this explains the pressure to higher education.

Girls in rural areas have less possibility to complete higher education and to access higher education in the country.

5. Quality of secondary education

The rapid expansion at this level of education was not accompanied by teacher training and school construction to fulfill the needs, as well as, the growth in financing of education. This explains the fact that many new secondary schools are using the facilities and teachers of primary schools. It has to be reminded that teachers of primary education have 10 or 12 years of education and are less expensive as teachers of secondary that need more 15 to 18 years of training[5]. That is way, 45% of ESG1 and 25% of ESG2 teachers do not fulfill the requisites to teach in this level of education, as it was recommend by the previous regulations. The pupil/teacher ratio is increasing fast, particularly for the ESG1 where this ratio increased in the last five years from 27 to 70. In ESG2 the increase was not so sharp, but from 18 to 24. This is due to the capacity of the government to pay for more teachers.

To accommodate the increased demand for places in the secondary education and taking in to account that the Ministry is not building enough classrooms almost all schools operate in a three shift system, with two day shifts and one night. Night classes where introduced in most schools and serve more than 30% of the students, most of them youngsters who could not find places in day classes. These classes are shorter than day ones by an hour a day[6]. In these courses, repetition is even higher of what is observed in day courses.

The pupil class ratio is also increasing fast. Since 2000, the pupil class ratio increased from 47 to 59 in ESG1 and from 42 to 56 in ESG2. All these situations have a negative impact in the quality of training.

[5] Before the teachers training reform primary school teacher needed 7th grade of general education plus 3 years of professional (teacher's) training, or 10th grade of general education plus 2 years of training. Teachers in secondary needed 12 years of general education plus 3 or 5 years of teacher training, before the reform. The new reform that entered into effect in 2007 changed these requisites. Now to be a teacher in primary all candidates need to finish 10th grade and have 1 year TT course. In ES1 teachers need to complete 12 years of general education and finish a professional course of 1 year.

[6] Each hour in all courses is of 45 minutes.

a. Curriculum

In 1983, the new education system was introduced in Mozambique to substitute the one from the colonial period. Ministry of Education introduced the first curriculum grade by grade so that 12th was introduced only in 1995.

In 1996, the curriculum of upper secondary education was changed to include the following subjects:

Table 2 – Subject hours per week in secondary schools

Subjects and hours per week					
Nur	**Subject**	**Week hours**	**Nur**	**Subject**	**Week hours**
1	Portuguese	4	6	Biology	4
2	French	4	7	Physics	4
3	English	3/5	8	Chemistry	4
4	Geography	4	9	Mathematics	5
5	History	4	10	Drawing	3
6	Philosophy	4		Physical Education	2

Source: Orientações e Tarefas Obrigatórias 2007-2009, November 2006

Mandatory subjects: Portuguese English;
General subjects: subjects that appear in all courses;
Specific Subjects: Specific for some courses.

To the changes in the curriculum of this level we have to include the creation of 3 groups of subjects that lead the students to particular courses in higher education. The table below shows the system as it is now organized:

Table 3 - Curriculum framework of Upper Secondary Education

Group	General Subjects	Courses	Specific Subjects
A	Portuguese, English, French, History, Geography	Linguistics, Portuguese, Law, History, Diplomacy, French	
		English	English (5 hours)
		Geography, History/Geography, Psychology, Pedagogy	Biology
		Economics	Mathematics
B	Portuguese, English, Mathematics, Chemist Physics	Geology	Geography
		Agronomy, Health, Veterinary, Biology, Chemistry/Biology	Biology
C	Portuguese, English, Mathematics, Physics, Drawing	Engineering, Architecture, Physics and Chemistry, Mathematics and Physics, Physics, Mathematics	Chemistry

Source: Diploma Ministerial nr.68/96, of August 7th 1996

There is flexibility in terms of changing courses, meaning that all students that decided to follow a specific course can change it by doing the specific subjects of the different group if they decide to change the courses.

In 2000, the Ministry conducted a curriculum reform for primary education. Following the revision of the primary curriculum that was introduced in 2004, the Ministry is now working in the reform of secondary education curriculum in order to accommodate the changes done in primary education.

b. Time on task

The school year in Mozambique is 35 weeks for general education. 10th and 12th grades students have examinations at the end of the year. For these grades the school year is reduced in two weeks, meaning that they have 33 weeks of study. Students have 4 hours of teaching per day (6 periods of 45 minutes).

This is considered to be a very short time to deliver the curriculum and usually teachers claim that they have no time to complete the programs that are very long.

c. Textbooks and school materials

There is no explicit policy on text books. No specific policies that state clearly who publish the books and whose responsibility for their approval. Printing and distribution responsibilities and partition of costs are essential in the process of providing books for secondary education, and there is no policy on these important issues. In contrast to what occurs on primary education, there are no secondary books approved by the Ministry. In this situation, some publishers and companies took in their hands the responsibility and the risk of producing the books for this level.

The only company that holds all books from 8th to 11th grade and provides them for secondary education is "*DINAME*". There are new publishers that are beginning to work on textbooks for these classes. One of them is *Texto Editores* that has the books for classes 10th to 12th. Other publishers such as

LONGMAN, MACMILLAN and *PORTO EDITORES* have books for different subjects in secondary education.

The costs of the books vary from 6 to 8 dollars per unit. And a set of 9 books for ESG1 rounds approximately 60 dollars. With these prices only a very small part of the children in the cities can afford to buy all books in secondary schools. In the districts this situation is even worse and the classes are run without textbooks and teachers without appropriate training. This may explain, in part the poor performance of the students in secondary schools. Children in schools are not obliged to have books in secondary schools.

Science in schools is other area of concern in terms of quality. Many schools have no laboratories or equipment to teach science, and even in schools that have this kind of equipment not all the teachers can use the material. Most of teachers where not trained (particularly those with 10 +2 teacher training courses) to teach science and so can not teach properly these subjects. An interview with some provincial directors reveled that there are no sufficient drawing and science teachers in schools and this lack of teachers is even more acute in rural areas.

d. Teachers

In 2007, a new strategy of teacher training for secondary education teachers was put in place. The strategy states that teachers for lower secondary education shall have at least 13 years of training, i.e. 12 grades of general education plus 1 year of teacher training. This new strategy envisages accelerating the training of teachers to avoid taking teachers from primary schools in responding to the rapid growth in the demand for secondary education in the country. For upper secondary level of secondary education the level of training will continue to be 15 or more years of training.

The strategy will also prepare distance programs for teachers without training in order to transfer capacity for them to be more prepared to teach.

New Teacher training courses began this year and the first graduates are expected to teach from 2008. It is expected that with this kind of teachers the system will be able to contract all teachers needed in the next years.

The Ministry is now working in a strategy that will deal with all the issues in secondary education in order to control the entrances in the system, improve the efficiency and the quality of education at this level of general education.

e. The assessment system

The assessment system in Mozambican schools is divided into two levels: School based assessment and national assessment. The following part the two levels of the assessment system will be described in some detail.

i. School based assessment

The evaluation is defined as a systematic, continuous and dynamic instrument of the process of the learning system that allows confronting the accomplishment of the objectives, improving the strategies of learning and certifying the acquired knowledge by the children.

The assessment system in Mozambican schools comprises 3 types of evaluation tests: systematic tests to confront the accomplishment of parts of thematic units of the syllabus (ACS). These tests can be oral or written and its duration is no more than 45 minutes. Partial tests are used to confront the accomplishment of a unit of the program. These are written and its duration can be of 90 minutes. Schools have to prepare an assessment program by each of the 3 terms of the school year.

By the end of the year the schools calculate the annual final score that is obtained as an average of the assessments taken over the three years in grade 10 and two in grade 12. The Hamlet Report[7] refers that most schools have little or no practical assessment in the sciences due to the fact that there are no laboratories or they did not function, there was no equipment and no materials, for science. The report also informs that the teachers did not receive or receive too little training on school-based assessment at the Teachers' Training College, but the school based assessment weighs 2/3 of the final mark. All this factors may explain the massive failure in secondary schools.

ii. National examinations

The objective of the examination is to evaluate the knowledge and skills acquired by the students by the end of each cycle of learning. The examination in secondary education can be oral or written and are applied in 10th and 12th grades.

In the 12th grade, students pass by subject. All students that attain an annual average score of 14 (of 20) or more per subject are exempt of the examination at that subject. In the subjects that the students do not fulfill the previous condition, and have no less than 10 (of 20) in the final annual average score, they are admitted to the examination.

To pass in each subject of 12th grade the students have to obtain a **final** score[8] of 10 and can not have less than 8 scores (of 20) in the final written examination. Final score is calculated as two times the annual average score of the subject, plus the score of the written examination (can not be less than 8), divided by 3. In order to pass the subject, the student can not have less than 10 scores in 20 per subject (50% of the total score per subject). To complete 12th grade, students have to pass in all subjects of the course.

Schools are responsible for the evaluation of the students during the school year and for administering and correcting the exams. All the results, including the examination results are kept in the school.

Final examinations are prepared by the National Assessment and Certification Commission (NACC) whose mission is to coordinate all the examination process from its elaboration, registration of the candidates, printing of examinations of 10th and 12th grade (examinations for grades 5th and 7th and those for Literacy and Non Formal Education programs are prepared by the NACC and printed by local authorities), and prepare the final report of the examination process. The commission is also responsible for issuing all certificates and for checking up the equivalence of foreign qualifications with those of Mozambique.

[7] "A diagnostic Study to supply action plans for the Reform and improvements to Examinations in Mozambique", Mr John Sadler, HAMLET COMPUTER GROUP LTD, March 2005

[8] Final score is a weighed average of 2/3 of the final annual score plus 1/3 of the examination score.

The results of grade 12 examinations are not used to enter University, as they do not recognize these results for that effect. There is a work of the NACC and the public Universities to study this possibility.

iii. Examination for external students

External students are those who do not attend school but, instead prepare themselves, at their own, in order to attain certain degree. Each year the Ministry of Education and Culture prepares examination for these students. For each subject the examinations cover all syllabus of the cycle (11^{th} and 12^{th} grades).

In order to participate in these exams, students have to prove that they completed the previous cycle (10^{th} grade). To pass the external exam students must attain at least, 10/20 scores in each subject. These examinations are part of the national assessment system.

Students who attend schools can also pass the examination as external students, as long as they resign to attend school until April of the year in which they write their exams.

6. Higher Education

The law 5/2003 does not provide a definition of higher education. However, higher education is broadly described as including all post secondary education (after successfully concluding grade 12 or equivalent), including universities, polytechnics, teacher training institutions, institutes for medical training and agriculture (and other fields), distance education centres, and research centres and institutes. The law regulates the opening and the operation of HEIs, and defines the requisites for these institutions to work. The Council of Ministers authorizes the opening of HEI, after hearing the National Council of Higher Education.

HEI are competent to create courses, to define their areas of research and define their methods of teaching.

a. Development of Higher Education

Higher education in Mozambique began in 1962 with the creation of the first university in the country. The University *Eduardo Mondlane* located in Maputo, opened in 1962 and was established by the Portuguese and, until 1987 was the only university in Mozambique.

Soon after the Independence, many Portuguese people fled the country and the number of students and teachers in this subsystem decreased sharply. The number of students decreased from 2.433 in 1975 to 750 in 1978. After 1978, the number of students began to grow with small changes until 1984.

Table 4 - Higher education students 1974-1984

	1974/5	1976	1977	1978	1979	1980	1981	1982	1983	1984
University										
Preparation to university		374	317	427	891	530	94	99	146	138
Total										

Source: Statistics of Ministry of Education and Culture 1974-1984

In 1985 the government created the Higher Pedagogic Institute (HPI) and in 1986 the Institute for International Relations. HPI was later was transformed into a University. The institutes were created to train teachers for secondary education and diplomats in Mozambique. Pedagogic University was then expanded to 4 provinces and there are plans to continue the expansion for the rest of the provinces.

In 1990, the government opened the education sector to the private investment. But it was not until 1995 that the first private university, ISPU, was opened.

Now the country has 23 HEIs (11 public and 12 private), with 43 thousand students enrolled in 2006. Higher education subsystem has grown more than eleven-fold over the past 16 years in terms of student numbers, from about 3,750 students in 1989 to more than 43,000 in 2006, almost half of the students enrolled in upper secondary education.

Notwithstanding, this rapid expansion on the supply side of the higher education sector in Mozambique, the demand side is still very high. All secondary education schools (public and private) graduated 7.600 in 2004. However in 2005, there were 8.750 new entrants enrolled into all higher education institutions. In these enrollments there are workers, and secondary education graduates from previous years. In 2005,

the HEI graduated 3.615 higher education specialists, most of them from the University Eduardo Mondlane.

By gender the number of girls enrolling in Higher Education is almost a half of the overall enrollments. Out of the 43 thousand students enrolled in all HEIs 14.7 thousand are girls.

As we can see from the numbers the demand for Higher Education is growing too fast in Mozambique. Only in the last 4 years (2002 to 2006) the number of students in higher education more than tripled from 13.752 in 8 HEIs in 2001-2002 to more than 43 thousand students in 23 HEIs in 2006.

With rapid expansion on the supply side, quality assurance has become even more a pressing issue. The preoccupation of the Government is to safeguard and improve equity of access, aiming at a regional and gender balance across the country. At the same time the Government is committed to ensure that quality standards are even across institutions and regions.

Since then more and more Universities were created to respond to the demand for higher education in the country. In 2006, there were 23 Higher Education Institutions, and 12 of them were private.

In 2006, the government created three Polytechnics in three provinces and a year later a public university in the northern province of Nampula. Now all provinces in the country have at least one HEI. The opening of this HEI will contribute to reducing the provincial disparities in access and allow space for students to have access to this level of education in their provinces.

Part 3 ARTICULATION BETWEEN THE UPPER SECONDARY AND HIGHER EDUCATION

According to the higher education law 5/2003 only students that have completed 12th grade of education or the equivalent (TVET, or TT) can attend university. Apart from this general criteria, each university is allowed to define own criteria in a basis of professional experience of the candidate. These criteria have to be approved by the Ministry of Education and Culture.

Universities also regulate the conditions for a student to be admitted and study according to the national policies, preferences of the candidates and capacity of the institution.

The government established a system of scholarships to private an public HEIs and quotas for public HEIs for students with low income in each region, in order allow good students do attend university and to reduce social, economic and regional discrepancies among students.

In the Catholic University there are no admission examinations and students have to complete 12th grade to be admitted. To enter the Faculty of Medicine 12th grade graduates have to complete a one year preparation course.

1. Admission examinations

Students have to pass an examination to be admitted into the university. Some HEI like ISCTEM and ISPU have organized pre-university courses in their schools to prepare students to enter the University. For these students there is no need to pass an examination to be admitted into the Institution owner of the school.

Each year universities publish the conditions for admission, the existing courses and the number of places per course. HEI organize exams of admission for the main subjects of the course. The main condition to be admitted into the public universities (UEM and UP) is to perform the best scores in these exams.

UEM and UP established Commissions for Admission Examinations (CEA). The purpose of these commissions is to deal with all the process of these examinations from the announcement of the conditions and definition of the timetable to the preparation of exams and publication of the results.

UEM, for the sake of regional equity, reserves 5% of enrolments places per course/program for students of each province. For this quota are only eligible students who are younger than 20 years old and must have been amongst the best in their provinces to be admitted. In cities where the UEM has campuses (Inhambane, Beira and Zambézia) there are places available for residents of that province.

UEM also provides places for workers in programs like law and journalism. For the Law in Maputo (10 places) and Beira (5 places), the Ministry of Justice, of Interior and other related institutions decide the criteria for the workers they want them to be admitted. In the case of journalism, the candidates have to be approved by the journalists Union. All these candidates have to pass the admission examination.

Pedagogic University has signed convenes with some ministries in order to admit workers of these institutions, without having to pass an examination. These are the Ministries of Education and Culture, Ministry of Defense and Ministry for Combatants of Liberation Struggle. Since 2002, 40% of the UP vacancies are assigned to teachers and other MEC workers.

Each year, as the graduation from ESG2 increases, more and more students demand places in the Universities. The places to accommodate these students are shrinking.

In 1999, there were 4.232 candidates of 1st period [9] of examinations (2733 males and 1.499 female), for 921 places in all courses of the oldest university of the country (Eduardo Mondlane University). In that year, only 572 were admitted after passing the examination. Another 17 were admitted without exams. The courses with more candidates were those of Law, 1062, (100 places) Social Sciences, 967 (75 places) and Economics and Administration with 486 candidates for 75 places. Only 86 students were admitted to Law and 57 for social Sciences. The course of Economics and Administration was the only one where all candidates were admitted.

In courses such as Chemistry, Geology, Physics and Meteorology and Mechanics there were fewer candidates than places in the University.

Na 2nd period exams, there were 2957 candidates. From those, 359 were admitted. The university had a shortage of 14 candidates to cover the total number of places available for that year. The average scores of the admitted varied from 10.5 to 14.7.

In 2004, there were more than 10.000 candidates for 1.000 places in UEM. In UP there where 9.556 candidates, for 2.014 places (for the 2 periods), which means 47 candidates for each 10 places. Of these, there were 799 places for teachers and professionals from the Ministry of Education. By gender the candidates of UP were distributed as: 64% male and 36% female candidates. Of these in UP where admitted 1215, of which 19% where female. This excludes the 799 candidates from the MEC.

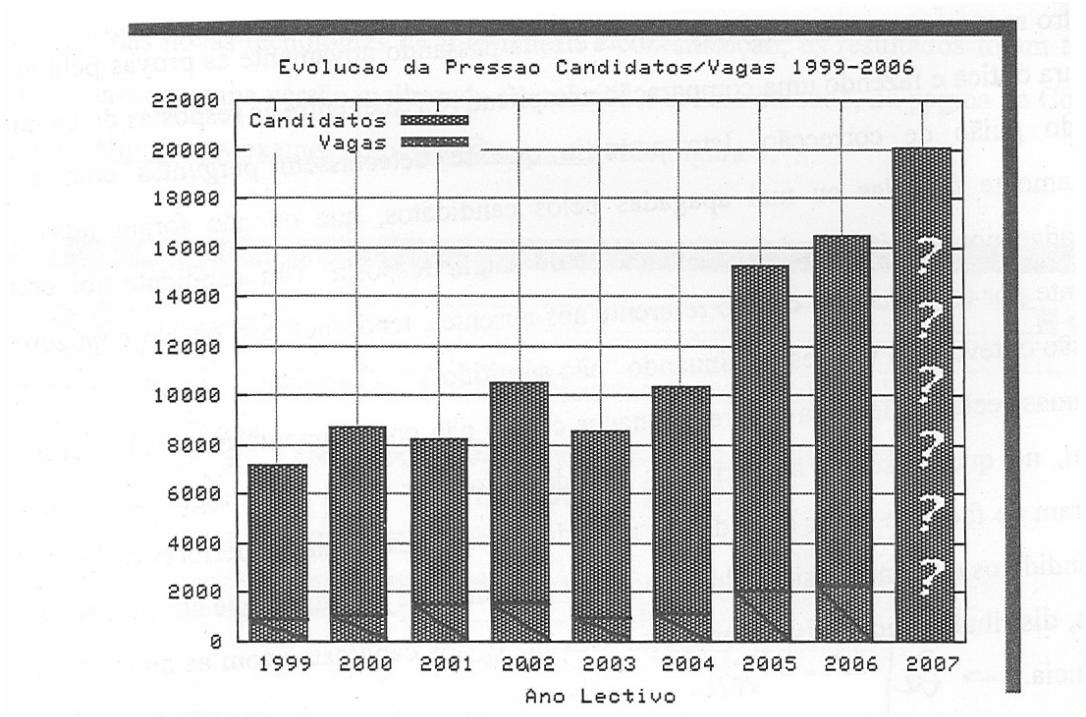
Out of the four delegations of the UP, Maputo and Beira received the 77% of the students admitted.

In 2006 the number of candidates increased for the two universities, 13.333 for UP, for 2408 meaning 55 candidates for each 10 places. UEM presented also an increase in the number of candidates per place.

There is difficult to obtain data on the candidates for admission in all HEI. The information of private institutions is more difficult to gather. Thus is difficult to have the real transition rates from secondary to higher education.

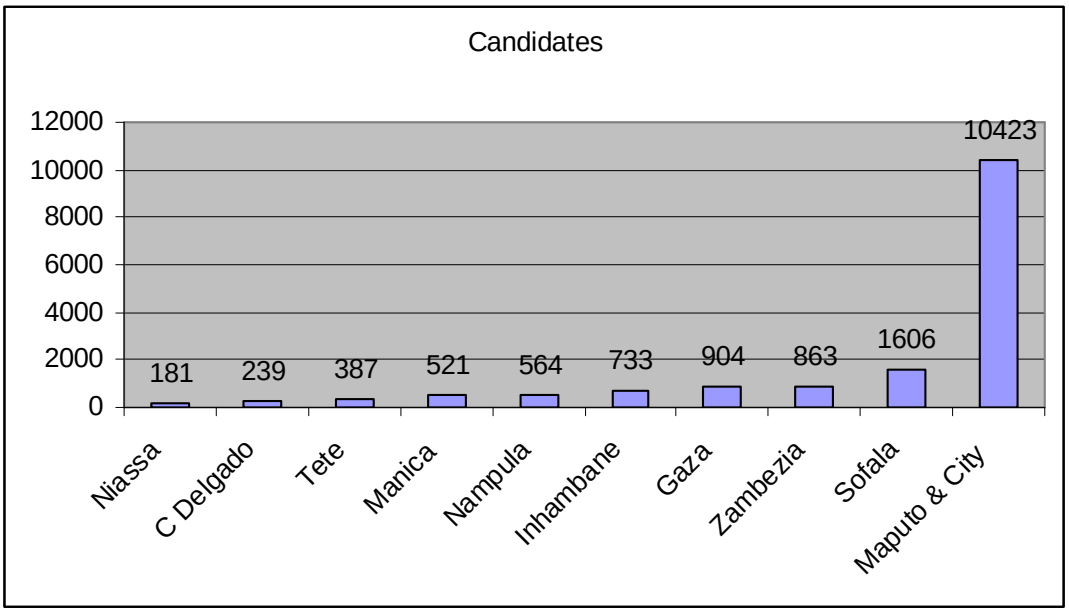
Graph 4: Candidates and places in UEM per year

[9] Until 2004 admission examinations were made in two periods, so called *épocas.* Usually all students have to pass examination in the first period. But if for a good reason the student can no attend the first period of examinations he can enroll in the second so called *2ª period*



Source: University Eduardo Mondlane, CEA, Report on the Admission Examination of the UEM for the year 2006, Maputo, July 2006

Graph 5: Number of candidates per province



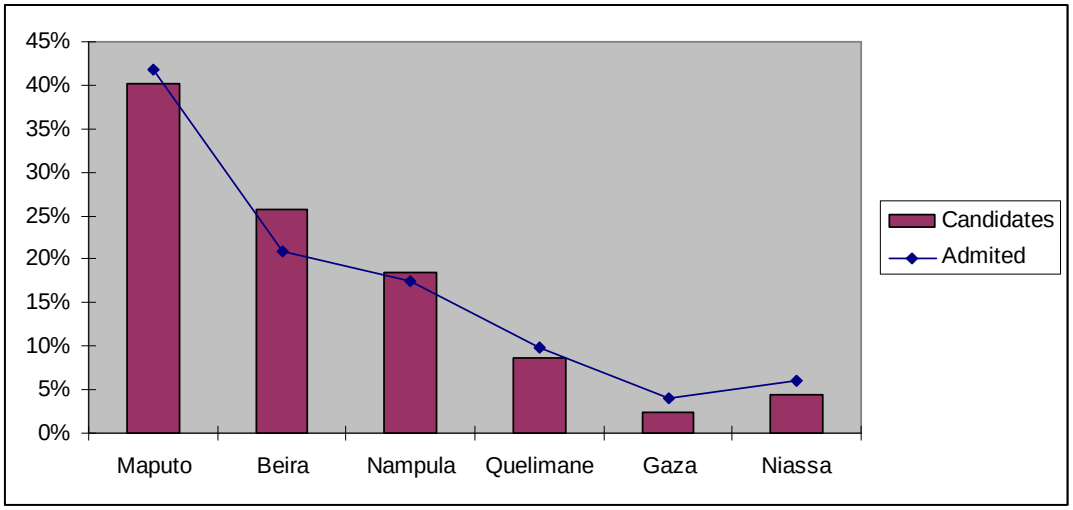
Source: University Eduardo Mondlane, CEA, Report on the Admission Examination of the UEM for the year 2006, Maputo, July 2006

In UP the analysis can not be made as in the UEM. UP has delegations in some provinces in which the admission examinations are conducted. This does not mean that candidates are necessarily from the province where the delegation is located.

The UP in Maputo received 40% of the candidates to the examination in 2006 and more than 42% made in to the University. Beira has the second large proportion of candidates and admitted students. As we move north, the proportion of the candidates and admitted students reduces, due to the number of courses that offered by the delegations in the northern provinces. The exception is Gaza with less than 5% of candidates and admitted students in 2006. This delegation was opened in 2006 with 2 courses (Portuguese and Physics).

The graph below is not sufficient to understand the place the students completed their courses, as many students from Maputo and other cities move to the provinces to present their examinations.

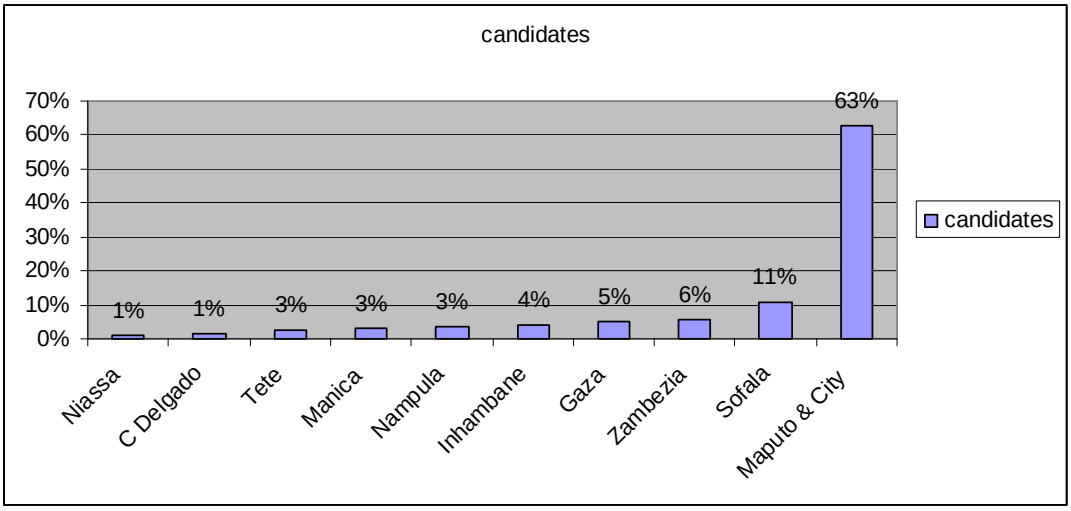
Graph 6 – Proportion of candidates and admitted students per delegation in UP



Source: Report of the Admission Examinations Process from the Pedagogic University, 2006

In a UEM report there is an analysis of the candidates per place where they completed their secondary school. 63% of all candidates to the admission examinations at the UEM are from Maputo. This corroborates with the information from the UP, and shows that Maputo has the biggest number of candidates seeking to access higher education.

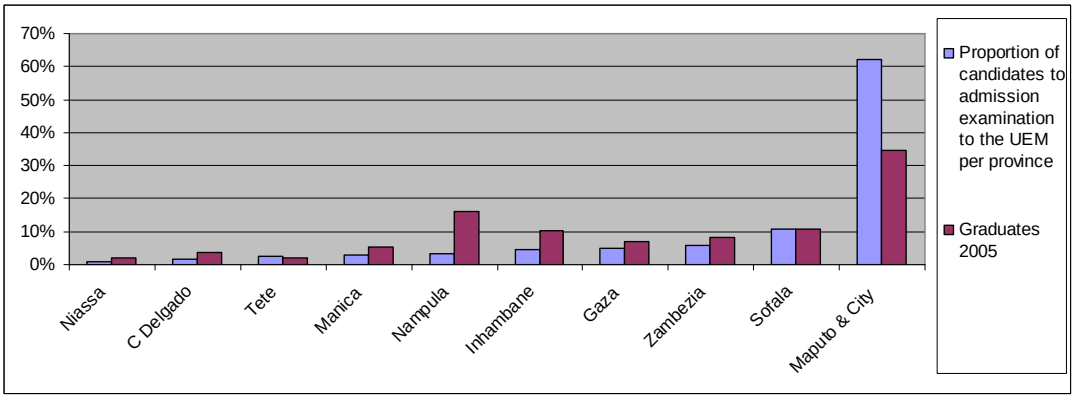
Graph 7: Proportion of 2006 candidates' of UEM province where they complete ESG2



Source: Elaborated by the authors based on the information of the: Report of the Admission Examinations of the UEM of 2006, Maputo, July 2006.

The graph below reflects the proportion of candidates to the admission examinations to UEM in 2006 by province compared with the proportion of graduates of ESG2 per province in 2005. The candidates to the admission examinations, in general, reflect the proportion of graduates. Maputo and Nampula have more candidates and this may be due to the fact that every year in these provinces there are too many students that finish ESG2 and do not find places in Universities, particularly government where the fee are less expensive. The number of candidates of Maputo is 3.7 times more than the number of graduates. This may reflect the number of candidates that do not find places in the universities in the previous years.

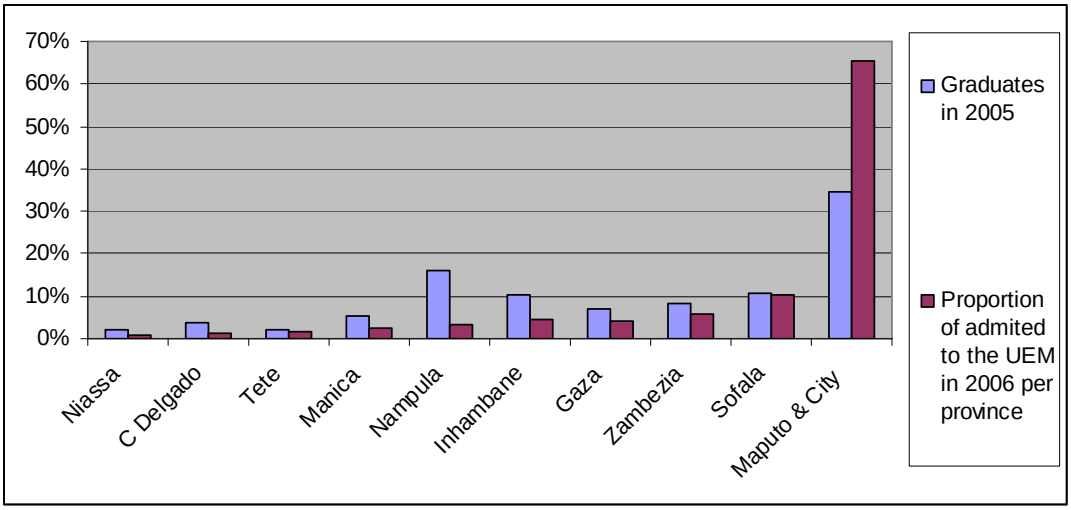
Graph 8 – Proportion of candidates to admission examination to the UEM by province compared with the proportion of graduates of 12th grade per province



Source: Prepared by the authors with information from MEC statistics 2005, and UEM Report on Admission Examinations of UEM of 2006, Maputo, July 2006.

This graph shows the proportion of graduates admitted in the University per province. In Nampula and Inhambane there are more candidates than students admitted to the University. The proportion of candidates admitted to the UEM from Maputo is 66%, which is equivalent to 1.499 students in absolute numbers. It is important though to stress that the number of candidates from Maputo is more than 10 thousand.

Graph 9- Graduates of ESG2, per province in 2006, compared with admitted to the UEM in 2006



Source: Prepared by the authors with information from MEC statistics 2006, and UEM Report on Admission Examinations of 2006, Maputo, July 2006.

2. Gender and regional disparities in access to higher education

Higher education is growing very fast. From 2005 to 2006 the number of students in higher education has increased by more than 1/3, from 28.298 students to 43.233. Public HEIs contribute with 32 thousand students, while the others attend private institutions. In 2006 there were more than 8.7 thousand new entrants into the system.

Table 5– Number of students from 2005-2006

	Students 2005					Students 2006				
	Female	% Female	Male	% Male	Total	Female	% Female	Male	% Male	Total
Public	4,935	26%	13,928	74%	18,863	9,043	28%	22,725	72%	31,768
Private	4,441	47%	4,994	53%	9,435	5,175	46%	5,977	54%	11,152
Total	9,376	33%	18,922	67%	28,298	14,218	33%	28,702	67%	42,920

Source: Prepared by the authors with data from statistics of the Ministry of Education and Culture, 2005, 2006

The table above shows the impressive growth in the number of students in higher education form 2005 to 2006. This growth is a result of the pressure HEI institutions are facing from all parts of the society. The analysis shows that each year the number of candidates seeking to enter higher education is much more that the number of students the universities can enroll.

In 2006, there were 18.3 thousand new admissions to higher education institutions. 13 thousand were enrolled in public HEIs. At the same time, all HEIs graduated 4.580 students. The number of graduates from ESG2 was 12.3 thousand. These numbers show that some students that are entering HEI are workers or people who finished secondary education before 2006 or are external graduates.

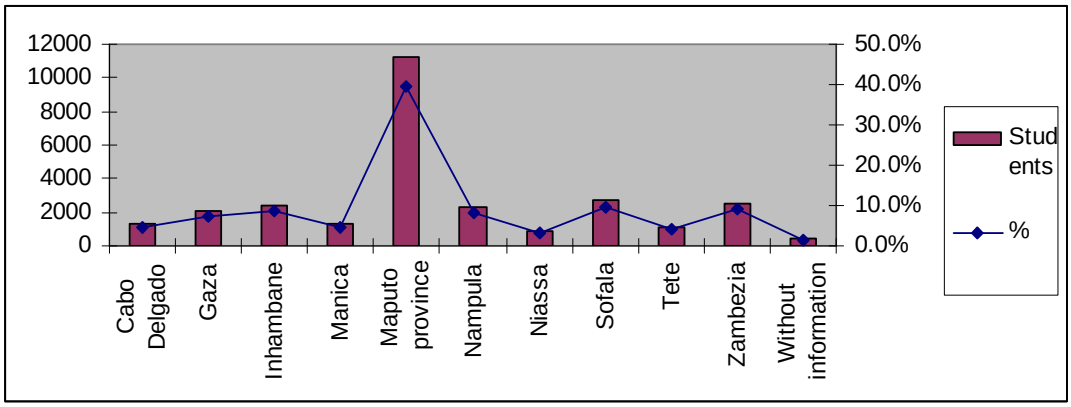
The high growth rates in higher education student population is raising some concerns about quality. The Ministry of Education and Culture is trying to address this issue by creating an independent structure to assure quality of training in HEIs.

In terms of gender there is a relative balance in private HEIs, contrary to what is happening in the public HEIs where female students represent only 1/3 of all students enrolled in public HEIs. The data collected from ISPU shows that female students in all courses, with exception to Civil Engineering (98

male to 34 female students), in Maputo, outnumbers male students. The same does not apply to Quelimane, where with exception of Psychology (40 female to 30 male students), male students outnumbers female students.

The graph below shows the distribution of the UP students by province of birth. This graph does not reflect the real situation as many students study in different areas of the country. But it gives an idea of the distribution of students in HEI per province. Young people born in Maputo (province and City) have more perspectives to enter higher education than those born in provinces like Niassa, Tete, Manica or Cabo Delgado.

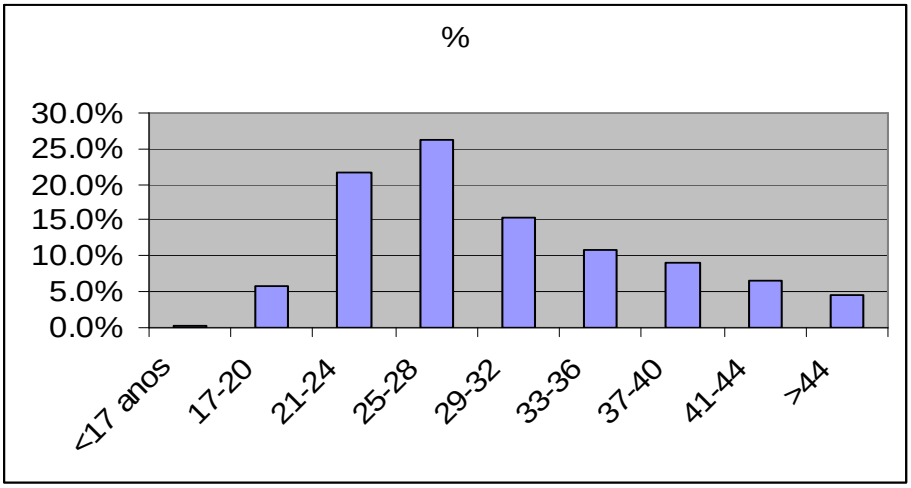
Graph 10- Students by place of birth



Source: Report of the admission Examinations 2004, Commission for the Admission Examinations of the Pedagogic University, June 2004

The information on the age of the students is also important to show the access of young people to higher education. In 2005, more than 68% of students in HEIs where older than 25 years. Most of students enter late to higher education due to the high rates of repetition in low levels of the system. Repetition in HEIs is also high what in part can explain why students stay too long in HEIs.

Graph 11- Age distribution of students in HEI (public and private 2005)



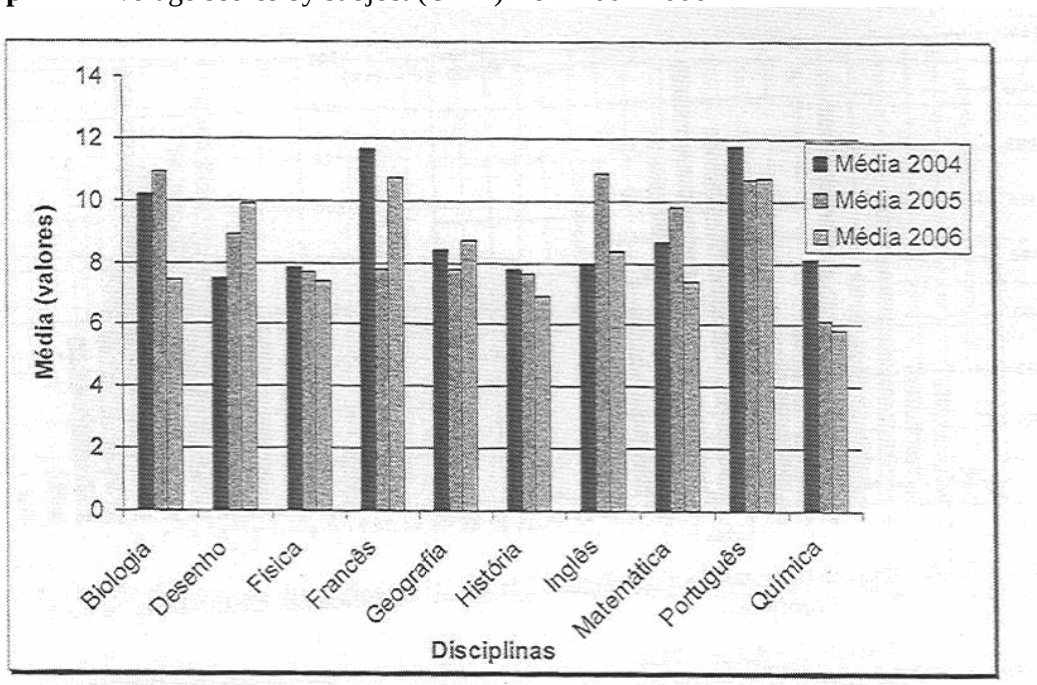
Source: Report of the admission Examinations 2004, Commission for the Admission Examinations of the Pedagogic University, June 2004

3. Preparation of upper secondary school students

Evaluating by the admission examinations we came to the conclusion that, although from year to year there are more candidates, the scores the students get in these examinations are not increasing in both universities. Throughout the universities there is a sense that quality of education is decreasing in secondary schools. New secondary schools are opened without all teachers. Particularly in science subjects like Physics and Chemistry there is lack of teachers. This is also true regarding teachers of Drawing and in some schools there are no qualified teachers in secondary schools beginning from the 1st cycle.

The most critical subjects are science, mathematics and drawing. The graph below compares the scores from 2004 to 2006 in all subjects the UEM have admission examinations. The graph shows that students get very low scores. The best subjects are Portuguese and French. In 2004 and 2005 Biology had positive scores (average of more than 10 scores). In 2005, English had also positive average score. In subjects like History, Physics, Chemistry the average scores are decreasing year after year, and for those the average is less than 8 scores. In Mathematics the scores are also low and do not go beyond 10 scores. The only subject where students have been improving their scores is Drawing, where the students come from less than 8 degrees to almost 10 in the fore mentioned period.

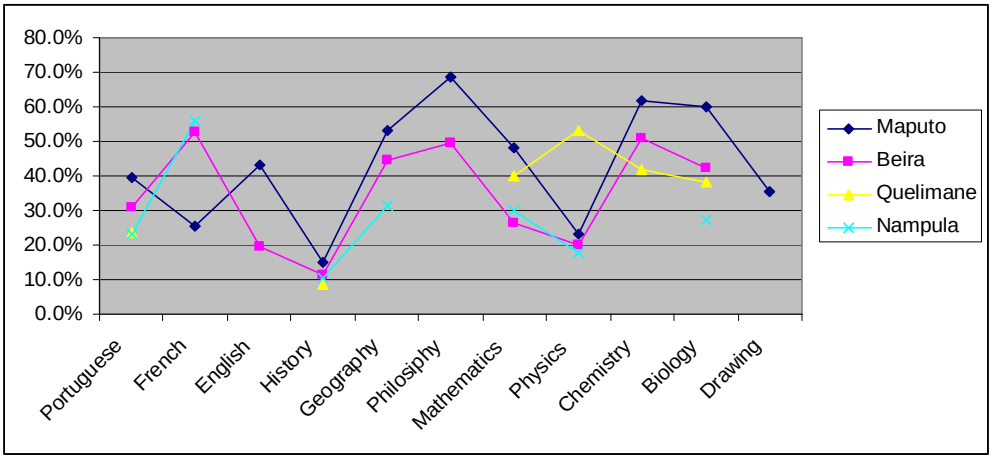
Graph 12- Average scores by subject (UEM) from 2004-2006



Source: University Eduardo Mondlane, CEA, Report on the Admission Examination of the UEM for the year 2006, Maputo, July 2006

The situation in Pedagogic University is not different from that shown by University Eduardo Mondlane. In general, the percentage of positive scores, per subject in 2004, is less than 50% in most subjects. The exception is to be found in Philosophy, Chemistry and Biology. Subjects with less positive scores are History and Physics, with less than 30% of positive scores.

Graph 13 - Percentage of positive scores (≥10 scores) by subject by province 2006 (UP)



Source: Report of the admission Examinations 2004, Commission for the Admission Examinations of the Pedagogic University, June 2004

The average scores per subject in UP admission examinations in 2004 were very low. In fact only in sports the average scores were more than 14.5/20. In all other subjects the average scores never reached 12/20 scores (60%), and in some cases where less than 5 (History, Quelimane and Nampula; Mathematics – Quelimane). In Drawing the scores in both épocas (call) of examinations where less than 8 scores. These scores reflect the concern about quality of secondary education students.

Table 6 – Average scores per subject in the admission examinations in UP, 2004

Subjects	Maputo		Beira		Quelimane		Nampula	
	1a época	2a época	1a época	2a época	1a época	2a época	1a época	2a época
Portuguese	7.5	10.9	6.7	8.6	6.5	9.0	6.3	8.1
French	9.5	8.7	3.1	11.7	Na	Na	8.4	10.6
English	7.7	11.8	7.0	7.6	Na	Na	Na	Na
History	5.7	7.8	4.1	7.8	4.9	7.1	4.7	7.5
Geography	10.0	9.2	8.9	9.1	Na	Na	8.1	8.7
Philosophy	7.5	10.1	9.5	8.9	Na	Na	Na	Na
Mathematics	7.4	9.4	6.9	8.1	4.5	9.4	5.5	8.9
Physics	7.5	8.8	6.1	7.7	5.4	10.3	5.0	7.6
Chemistry	9.1	11.4	7.9	10.3	7.5	10.1	Na	Na
Biology	8.9	9.5	7.5	8.0	8.5	9.4	6.9	7.9
Drawing	6.9	7.6	Na	Na	Na	Na	Na	Na
Sports	7.9	14.5	Na	Na	Na	Na	Na	Na

Source: Report of the admission Examinations 2004, Commission for the Admission Examinations of the Pedagogic University, June 2004

It is important also to understand that many students entering UEM do not have the minimum scores required in the admission examinations. The proportion of students in this situation is higher in subjects like Chemistry, History, Mathematics and Physics and Biology. Apart from History, where the situation is also critical, the worst subjects in terms of scores are the science and Mathematic subjects.

Table 7: Admitted Candidates by score in 2006, University Eduardo Mondlane

Subject	Positive scores > 10 scores	Negative scores < 10 scores	Total	% of admitted with negative scores
Biology	182	48	230	20.9%
Drawing	24	1	25	4.0%
Physics	380	223	603	**37.0%**
French	74	13	87	14.9%
Geography	92	38	130	29.2%
History	471	524	995	**52.7%**
English	107	33	140	23.6%
Mathematics	662	456	1118	**40.8%**
Portuguese	901	31	932	3.3%
Chemistry	74	266	340	**78.2%**
Total	2967	1633	4600	**35.5%**

Source: Report of Admission examination to the University Eduardo Mondlane 2006, University Eduardo Mondlane, Examination Commission, Maputo, July 2006

The subjects where there are more students with positive scores are Portuguese and Drawing.

4. The concern about quality

The demand for Higher Education in the country is growing. So is the response from the government and from the private sector to accommodate thousands of individuals that seek HEI in order to improve their qualifications. In this regard, concerns about the quality of education in HEIs have been increasing. During the last 4 years the Government of Mozambique has been busy trying to develop a credible Quality Assurance and Accreditation System (CNAQ). The proposal of such a system was widely debated by various stakeholders in the whole country before being submitted to the Government Cabinet for approval, which is expected to occur still before the end of 2007.

The main objective of CNAQ is to monitor and help increase quality of education. The proposed system derives from studies conducted on the systems of several countries and it considers the context of Mozambique. It comprises two subsystems: the self-evaluation and the external evaluation. The external evaluation is then linked to the accreditation process of both institutions at the act of their creation and of programs of the existing institutions[10].

[10] **Self-Evaluation**

A set of different mechanisms operated by different actors from inside an IES aiming to compare and evaluate the quality of services rendered with the objective of ensuring and increasing the quality.

Thus, self-evaluation is based on the existence of a permanent and coherent practice of institutional management at all levels, based on the principle of guarantee and continuous elevation of quality, characterized by including, among other mechanisms, regular planning cycles, execution, monitoring, control and implementation of correction measures. For this reason, self-evaluation emphasizes the processes that ensure a continuous improvement of quality.

Self-evaluation is also based on accountability and individual attitude towards self-reflection and criticism, sharing knowledge and experiences with partners, will to be sell-evaluated and learn.

External Evaluation

Process (or set of mechanisms) used for comparing the quality status in an IES, leading to accreditation. It is distinguished from "self-evaluation" (or internal evaluation) in the sense that it is implemented periodically[10] by an entity from outside an ES. It is a complex process that can have several dimensions, as there are also different dimensions of quality (scientific, pedagogical, cultural, etc.). In this concrete case, it is intended to support the process of Accreditation/ Certification. Transparency of the process is essential, that is, the evaluation criteria must be clearly defined from the beginning, must be known by the IES's evaluated, and the results must be disseminated.

5. Articulation within Higher Education and with other subsystems

The Credit Accumulation and Transfer (CAT) was designed with the aim of addressing a number of problems within Higher Education Subsystem and also in the articulation with mainly technical and vocational pre-university education. Amongst the envisaged objectives it is worth highlighting the following:

- Transform the current rigid program structure into a more flexible one allowing both horizontal and vertical mobility of students;
- Articulate transitions between Secondary Education and Higher Education and between different Higher Education levels;
- Mobility between private and public Higher Education Institutions (HEI);
- Allow regional mobility within the country;
- Allow regional mobility with neighbouring countries as well as wider international mobility;
- Increase transparency, and more flexible responses to labour market demands;
- Improve quality through competition amongst various HEIs to enhance the acceptance of their students by other HEIs or by the labour market.

6. Dealing with access to higher education

In this study some barriers have been identified as important factors that hamper young people of entering the Higher Education Institutions after they finish their secondary or TVET studies.

One of them is the distortion in the development of the system per province, which means that young people in some provinces like Niassa or Cabo Delgado have fewer possibilities to finish secondary education than in the big cities, like Nampula, Beira or Maputo. These provinces present the fewer number of candidates to higher education. This situation is aggravated for female students that have less access to secondary education particularly in the northern and central parts of the country. The exception goes to the city of Beira and surroundings where despite its geographical position there is considerable concentration of secondary education schools.

The quality of secondary education in remote schools is affected by the lack of qualified teachers, on one side, and on the other school facilities are in a poor condition, they suffer form the lack of libraries and books. Students from these schools have more difficulties to compete with students from other parts of the country.

On the other side there are fewer Higher Education Institutions in that part of the country, in part due to the low demand, which make the situation for students from these parts of the country even more difficult. Most students from northern and central regions of the country, when admitted to HEIs, have to travel to other regions and find accommodation and finance their studies what makes their conditions to study even difficult. This creates even more complications for girls from these areas to access HEIs.

Poverty is another barrier as Higher Education in the country is not free. Students have to pay fees to enroll to the admission examination and to attend the University. The issue of equity in access can only be addressed by the scholarship scheme.

a. Scholarships

In Mozambique there are different kinds of scholarships for students from the provinces. Government is one of the main providers of scholarships. Apart from the Government, international partners like

Australia, Sweden, Spain, just to cite some, have been supporting this scholarship scheme in the provinces

Because of the variety of scholarships providers, the government decided to create the Instituto de Bolsas de Estudo (IBE) which stands for Scholarship Institute, an entity that is aimed at coordinating and channeling all scholarships in the country. At the same token, the Government is looking for a new model of financing higher education. For that purpose a Finance Reform Commission for Higher Education was established with the purpose of designing a new way of channeling financial resources to higher education institutions. The model devised consists of three financing mechanisms:

- base funding – financing intended to *ensure stability* from one year to the next, which HEIs need for planning purposes, and (b) *reward "performance,"* as measured (in the current design) by the number of programs and the number of graduates,
- institutional funding – financing designed, in the first instance, to *improve governance and build capacity* at the institutional level, which HEIs must have in order to operate efficiently and effectively under the new financing regime, and then to *encourage quality and innovation* in teaching, learning and research, and
- student funding– money that will *follow students*, who are assumed capable of making informed choices among competing HEIs and study programs, basing their decisions on reliable market signals and personal preferences.

Although the precise allocations across funding windows may change over time to take into account lessons learned from experience and changing national priorities for the higher education sub-sector, indicative proportions have been set at 30 percent for base funding, 10 percent for institutional funding and 60 percent for student funding. This suggests that the *demand side (student choices)* will be the principal driver of funding allocations under the new model. This is a significant departure from the pattern of *supply-side financing* that has characterized the budgeting process for higher education (in Mozambique, and in most other countries) historically. The Base Fund and the Institutional Fund are examples of *direct funding*, in that money from the budget is allocated to HEIs by the Government directly, whereas the Student Fund is an example of *indirect funding*, whereby public money flows to HEIs via students.

The second big change brought about by the new funding model will be the introduction of *cost sharing* in public HEIs. This means that university students will be expected to contribute at least some part of the full institutional costs of their studies. Tuition fees have long been in place in secondary education, and many families must now sacrifice significantly to see their children through secondary school. In contrast, any student who passes the university entrance examination and gains a place in a public HEI today expects that his or her education costs will be subsidized in full by the Government.

The current pattern is patently unfair, of course, given that participation in higher education is still quite limited in Mozambique. The students who score highest on the entrance examinations (though with notable exceptions) *tend* to come from wealthier than average homes and to have grown up and attended school in Maputo, and not in rural areas outside the capital. Other students who struggle to complete 12 years of pre-university education (a significant accomplishment in and of itself) but end up doing slightly less well on the entrance examinations fail to gain places in public universities and must then choose between dropping out of school at this point or paying the full-cost tuition fees that private universities need to charge in order to remain solvent. This implies that the opportunity for the second rank of high school graduates to continue with their education to the next level are less certain and cost them more, even though these individuals are, on average, poorer than those who gain admission to the prestigious public universities, which lead (or have led historically) to the best-paying jobs in the economy.

Based on current information about "unit costs" (expenditure per student) in Mozambique's public and private HEIs and also on comparative experience in other countries, the *new funding model* will determine the "prices" that public universities will receive for the students they enroll.[11] Study programs will be grouped into *three broad cost bands* – high-cost (such as medicine), medium-cost (engineering) and low-cost (economics), and the HEIs will be paid accordingly.

b. The Polytechnics initiative in Mozambique

One way to cope with the problem of places in HEIs is to expand with equity the opportunities for Higher Education. In this regard the strategy of Higher Education identified the creation of Polytechnics in provinces where heretofore there is not any form of higher education institutions.

The objective of the Polytechnics is to produce highly qualified professionals who are more oriented to practical approaches, i.e. graduates who know how to do things, who can become easily entrepreneurs. The new Higher education Law allows for the creation of this type of Higher Education Institutions as part of the HE sub-system in Mozambique.

The scarcity of professional and vocational technical schools of tertiary education is one of a number of problems challenging labor market in Mozambique. These problems were identified and thoroughly discussed in the process of development of the strategic plan for the higher education sub-subsystem. These problems range from non-existence of professional vocational high education institutions, to the length of degree programs offered by the current institution at this level of education.

The Polytechnics will be linked in one hand to the technical and professional schools (medium level institutes) and on the other to the Higher education institutes and Universities. They are also very much linked to the local economy and need to be design in such a way that they will bust the local growth.

In 2006, the Government established the first polytechnics in three provinces (Tete, Manica and Gaza). These polytechnics are intended to offer new programs in the areas of Agriculture, Animal Production, Geology and Mining Engineering in a short term (3 years for BSc) courses. The basic idea is to transform these polytechnics into business incubators, where students learn not only skills, but also how to become entrepreneurs and how to run their own small business. We basically expect the graduates to become job creators, not job seekers.

The main beneficiaries of the polytechnics will be the youths who completed the upper secondary or medium TVET schools, small and medium enterprises and professionals that need refreshment courses. Also professionals with some experience accumulated along the years without a formal training degree programs.

The challenges to implement this program is technical assistance for the first years (experienced lecturers in polytechnic education), resources to install the necessary infra-structure and equipment, training of Mozambican lecturers to create sustainability in a medium term and support to start the incubators in terms of expertise and micro-finance resources.

[11] For the time being, the Student Fund will channel funds to the public institutions only, although the model could be extended in the future to benefit students attending private HEIs as well.

Part 4: CONCLUSIONS AND RECOMENDATIONS

1. Conclusion and recommendations

The education system in the country is growing very fast in all levels of education. This is particularly visible in secondary and higher education, where demand for places is increasing very fast, and the capacity to provide sufficient places and qualified teachers for schools and HEIs is not keeping the pace. Below are some statements and recommendations that are thought they will help improve the articulation between the secondary and higher education in Mozambique:

1. Notwithstanding visible efforts aimed at expanding access to education, serious problems have been raised about the quality in secondary and in higher education. **The lack of qualified teachers, particularly for science subjects in the provinces and remote areas, are part of the problem that increases the regional disparities in the access to higher education.**
2. Positive discrimination to accommodate places for students of some provinces helps to reduce the disparities among provinces, but it can not be taken as a long term strategy. **The analysis of the results of admission examinations is a good starting point to try to understand the problems of secondary education, which may inform policymakers to address problems of poor performance in science subjects.**

3. There is a urgent need to accelerate the implementation of quality assurance mechanisms that have been thoroughly discussed and debated in the country. **An authority to deal with quality issues in higher education must be created and supported in order to avert the declining trend of quality.**

4. In the last years more and more HEI were open in other regions of the country, whish helped to reduce the pressure in Maputo, and opened new opportunities for students of other parts of the country. Nevertheless, Maputo is still the biggest center for HEI, with more than half of the students, teachers and infrastructure. The demand for higher education comes also from the distribution of the network of secondary schools. **To fully address regional disparities there is a need improve the distribution of ESG2 along the country. In parallel, there is a need to also increase the number of HEIs in the provinces.**

5. UEM, and Pedagogic University produce very good reports with very well structured information about the admission examinations. **This experience should be expanded to other HEIs. Organized data are an important planning tool especially to help design and implement informed policies which may concur to improving the quality and relevance from the supply side.**

6. The government may want to consider policies to increase private participation to finance secondary and higher education, **which may include the tuition and fees hike for those who can pay, and the consolidation of the looming scholarship scheme to finance poor and talented students.**

7. The Mozambican Ministry of Education and Cultures is currently developing a strategy for secondary education. It is highly recommended that this strategy should consider the need to expand access through the opening of new secondary schools. **First all the government may want to expand ESG1 in all districts. The second area is to increase the number of ESG2 schools, in order to reduce the pressure in the existing schools. This implies also the need to provide qualified teachers, textbooks and other science materials to all secondary schools.**

8. **To address the quality issues in secondary education, the government may want to consider the need to increase the teaching hours, through the extension of the school year, and revise the assessment system, particularly the final examinations in Mozambican secondary schools as they are very time consuming and contribute to reducing the time on task.**

9. The government shall also consider new ways of delivering the education such as distance learning for upper secondary education. Private investment may be a sound alternative to continue developing secondary education in the country, especially in urban areas where citizens have the ability to pay. For this to happen the government needs to review the regulations on private investment in education, creating incentives to facilitate interested stakeholders secondary schools particularly for remote areas and poor areas

10. Different private HEIs have different approaches to the admission criteria. Some do not have admission examinations. There is a need to reduce disparities in the admission criteria in order to reduce differences in the treatment of the students. There is a need to evaluate and decide on the idea of having one exam that can serve the secondary education and admission for HEIs. This could save human and financial resources as well as time for the schools and universities.

11. It was difficult to obtain information on the admission examinations and students per course in private institutions. This is mostly because most of these institutions are new and have not good systems of information. There is a need for the Ministry of Education and Culture to define some indicators that will establish an obligation for all HEI to release data and statistics for planning purposes of the government.

Part 5: ANNEXES AND BIBLIOGRAPHY

1. Annexes

a. **Annex 1:** List of the Universities in 2006

Higher Education Students 2006						
Universities	Students			Graduates		
	MH	% F	% F	MH	% F	% F
Public Institutions						
Universidade Eduardo Mondlane	14					
Universidade Pedagógica	15					
Instituto Superior de Relações Internacionais						
Academia de Ciências Políciais						
Academia Militar						
Escola Superior de Ciências Náuticas						
Instituto Superior de Ciências de Saúde						
Private Institutions						
Instituto Superior de Ciência e Tecnologia de Moçambique	1					
Instituto Superior Politécnico e Universitário	2					
Instituto Superior de Transportes e Comunicações						
Universidade Jean Peaget de Moçambique						
Universidade Católica de Moçambique	2					
Instituto Superior de Educação Tecnológica						
Universidade Mussa Bin Bique						
Universidade São-Tomás de Moçambique	1					
Universidade Técnica de Moçambique	1					
Instituto Superior Cristão						
Escola Superior de Economia e Gestão						
Public Institutions	32			2		
Private Institutions	11			1		
Total	43			4		

Source: Statistics of Higher Education, MEC, 2006

b. List of people interviewed

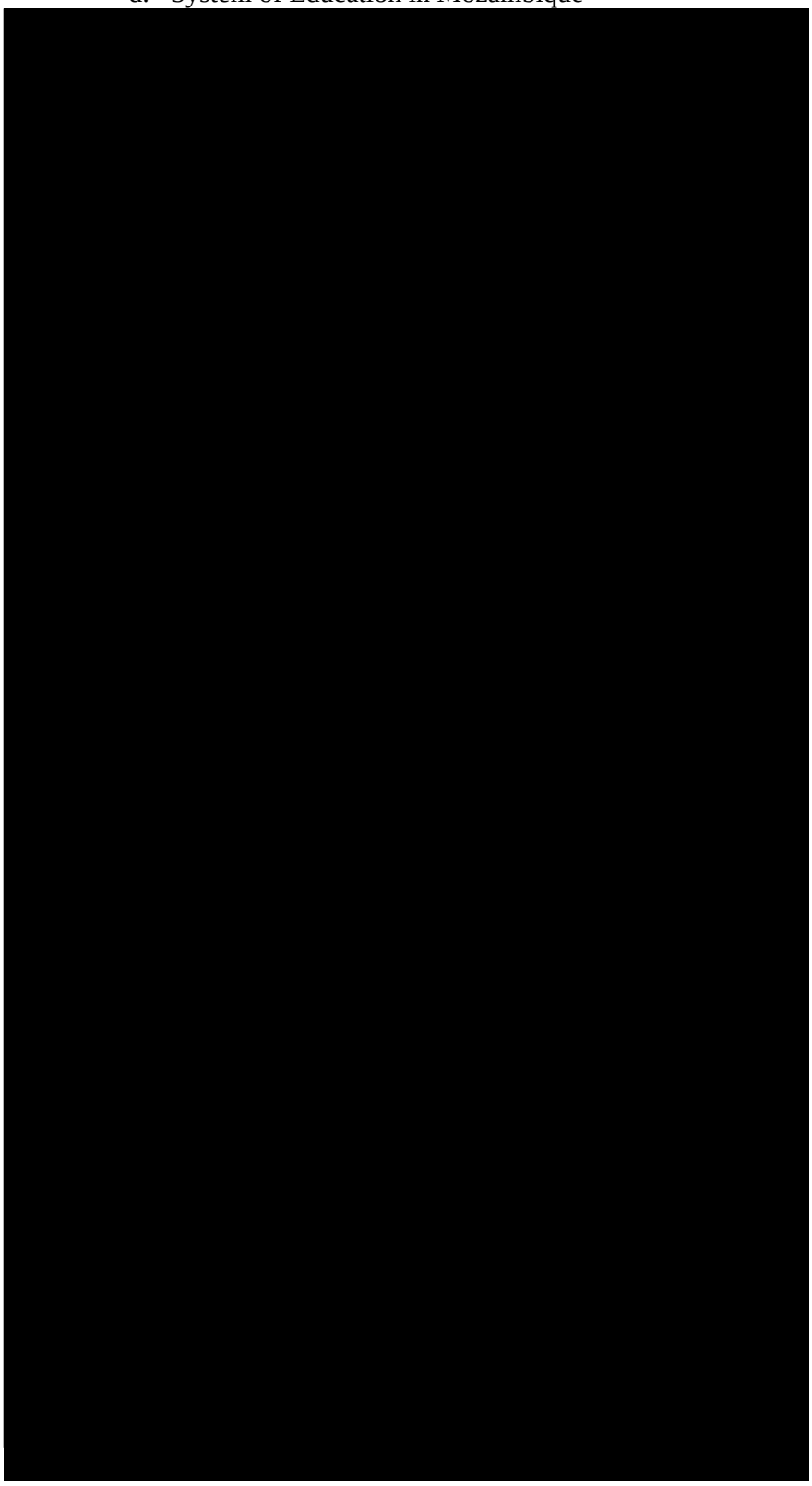
Nr	Names	Institutions
1	Dra. Isabel Maria Nogueira	ISPU
2	Dra. Rosânia da Silva	ISPU
3	Dra. Glória Sumbana	ISPU
4	Dr. Genito Maure	UEM
5	Sr. Jacinto	UEM
6	Elias Matos	Vice Director of the Examination Commission UP
7	José Monjane	Pedagogic Director
8	Dalila Machado	Student of Social Sciences
9	Gil Mavanga	Director of Examination Commission UP
10	Márcio Tembe	Student ISCTEM
11	Leszie Oliveira	Student ISCTEM

c. Students by sex per course

Universidade/*University*	2006			
Área cientifica/Area of study	Mulh *Fe*	Homens /		Proportion of Fe
Públicas/*Public*				
Educação/*Education*		1	1	
Letras e Humanidades/*Arts and Humanities*				
Ciências sociais, gestão, direito/ *Social sciences, management, law*				
Ciências naturais/*Natural sciences*				
Engenharias, Indústrias e Construção/ *Engineering, Industry and Construction*				
Agricultura/*Agriculture*				
Saúde e bem-estar/*Health and welfare*				
Serviços/*Services*				
Áreas não especificadas/*Unspecified areas*				
Sub-total		**2**	**3**	
Privadas/Private				
Educação/*Education*				
Letras e Humanidades/*Arts and Humanities*				
Ciências sociais, gestão, direito/ *Social sciences, management, law*				
Ciências naturais/*Natural sciences*				
Engenharias, Indústrias e Construção/ *Engineering, Industry and Construction*				
Agricultura/*Agriculture*				
Saúde e bem-estar/*Health and welfare*				
Serviços/*Services*				
Áreas não especificadas/*Unspecified areas*				
Sub-total			**1**	
Total/*Total*	**1**	**2**	**4**	

Source: Statistics of Higher Education, MEC, 2006

d. System of Education in Mozambique



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