

# Factbook Education Systems: Ghana

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CES Factbook Education Systems, No. 1, 2020



## Editing and Acknowledgement

This Factbook was edited by Aranya Sritharan. We want to thank Jonas Kobelt for the elaboration of the contents.

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## List of Abbreviations

AGI	Association of Ghana Industries
BECE	Basic Education Certification Examination
BTECH	Bachelor of Technology
COTVET	Council for Technical and Vocational Educational Training
DA	District Assembly
DACF	District Assembly Common Fund
EMIS	Education Management Information System
GCI	Global Competitiveness Index
GEA	Ghana Employers' Association
GER	Gross Enrolment Rate
GES	Ghana Education Service
GII	Global Innovation Index
GDP	Gross Domestic Product
GSDI	Ghana Skills Development Initiative
HND	Higher National Diploma
ICCES	Integrated Community Centres for Employable Skills
IMF	International Monetary Fund
ISCED	International Standard Classification of Education
JICA	Japan International Cooperation Association
KOF	Swiss Economic Institute
LI	Legislative Instrument
MCF	Master Craftsperson
MELR	Ministry of Employment and Labour Relations
MoE	Ministry of Education
NAB	National Accreditation Board
NABPTEX	National Board for Professional and Technician Examination
NAPC	National Apprenticeship Programme Committee
NCTE	National Council for Tertiary Education

NDC	National Democratic Congress
NER	Net Enrolment Rate
NFED	Non-Formal Education Division
NIB	National Inspectorate Board
NPP	New Patriotic Party
NTC	National Teaching Council
NTVETQC	National TVET Qualifications Committee
NVTI	National Vocational Training Institutes
OECD	Organisation for Economic Co-operation and Development
PET	Professional Education and Training
SITAC	Standards Validation Sub-Committee
SITACOS	Occupational Standards Validation Sub-Committee
TQAC	Training Quality Assurance Committee
TTI	Technical Training Institutes
UNESCO	United Nations Educational, Scientific and Cultural Organization
UTDBE	Untrained Teachers Diploma in Basic Education Program
VAT	Value-added Tax
VET	Vocational Education and Training
VPET	Vocational Professional Education and Training
VPETA	Vocational and Professional Education and Training Act
WAEC	West African Examination Council
WASSCE	West African Senior School Certificate Examination
WEF	World Economic Forum
YLMI	Youth Labour Market Index

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# Foreword

The increasing competitiveness of the world economy as well as the high youth unemployment rates after the worldwide economic crises have put pressure on countries to upgrade the skills of their workforces. Consequently, vocational education and training (VET) has received growing attention in recent years, especially amongst policy-makers. For example, the European Commission defined common objectives and an action plan for the development of VET systems in European countries in the Bruges Communiqué on Enhanced European Cooperation in Vocational Education and Training for 2011-2020 (European Commission, 2010). In addition, a growing number of US states and other industrialized, transition, and developing countries (for example Hong Kong, Singapore, Chile, Costa Rica, Benin and Nepal) are interested in either implementing VET systems or making their VET system more labour-market oriented.

The appealing outcome of the VET system is that it improves the transition of young people into the labour market by simultaneously providing work experience, remuneration and formal education degrees at the secondary education level. If the VET system is optimally designed, VET providers are in constant dialogue with the demand-side of the labour market, i.e. the companies. This close relationship guarantees that the learned skills are in demand on the labour market. Besides practical skills, VET systems also foster soft-skills such as emotional intelligence, reliability, accuracy, precision, and responsibility, which are important attributes for success in the labour market. Depending on the design and permeability of the education system, VET may also provide access to tertiary level education (according to the ISCED classification): either general education at the tertiary A level or professional education and training (PET) at the tertiary B level. PET provides occupation-specific qualifications that prepare students for highly technical and managerial positions. VET and PET systems are often referred to together as “vocational and professional education training (VPET)” systems.

Few countries have elaborate and efficient VPET systems. Among these is the Swiss VPET system, which is an example of an education system that successfully matches market supply and demand. The Swiss VPET system efficiently introduces adolescents to the labour market, as shown by Switzerland’s 2007-2017 average youth unemployment rate of 8.1 percent compared to 14.8 percent for the OECD average (OECD, 2017).

Though not many countries have VPET systems that are comparable to Switzerland’s in terms of quality, efficiency and permeability, many have education pathways that involve some kind of practical or school-based vocational education. The purpose of the CES Education System Factbook Series<sup>1</sup> is to provide information about the education systems of countries across the world, with a special focus on vocational and professional education and training.

In the CES Factbook Education Systems: Ghana, we describe Ghana’s vocational system and discuss the characteristics that are crucial to the functioning of the system. Essential components comprise the regulatory framework and the governance of the VPET system, the involved actors, and their competencies and duties. The Factbook also provides information regarding the financing of the system and describes the process of curriculum development and the involved actors.

The Factbook is structured as follows: First, we provide an overview of Ghana’s economy, labour market, and political system. The second part is dedicated to the description of the formal education system.

<sup>1</sup> From 2013 to 2019, the Factbooks were produced within the framework of the Education Systems research division at the KOF Swiss Economic Institute. From 2020 they will be produced by the Chair of Education Systems (CES) group.

The third section explains Ghana's vocational education system. The last section offers a perspective on Ghana's recent education reforms and challenges to be faced in the future.

**Suggested citation:**

CES Chair of Education Systems (2020). CES Factbook Education Systems: Ghana. CES Factbook Education Systems, ed. 1. ETH Zurich.

The Factbook Education Systems series have to be regarded as work in progress. The authors do not claim completeness of the information which has been collected carefully and in all conscience. Any suggestions for improvement are highly welcome!

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# 1. Ghana's Economy and Political System

One of the main purposes of an education system is to provide the future workforce with the skills needed in the labour market. The particularities of a country's economy and labour market are important factors determining the current and future demand for skills. Therefore, these are briefly described in the first part of this Factbook. In addition, this part provides an overview of Ghana's political system with an emphasis on the description of the education politics.

## 1.1 Ghana's Economy

Ghana is a mixed economy that has one of the highest gross domestic products (GDPs) per capita in West Africa (Int\$ 4,212 versus Int\$ 3,733 for Ivory Coast, Int\$ 5,316 for Nigeria, and Int\$ 3,528 for all of sub-Saharan Africa; all numbers refer to 2018) (World Bank, 2019). From 1980 to 2018, Ghana's economy grew at an annual rate of 4.6%. For 2019, Ghana is expected to be among the five fastest growing economies in the world (IMF, 2019).

In 2008, Ghana reached middle-income status as defined by the World Bank. The World Bank uses gross national income (GNI) per capita as the measure for this classification since it is considered a useful and easily available indicator of a country's level of development (The World Bank, 2019).

Ghana's economic structure is slightly skewed towards the tertiary sector. As shown in Table 1, the tertiary sector accounts for approximately 45% of the total value added, while the secondary sector accounts for 33% and the primary sector for 21%. Furthermore, the tertiary sector accounts for 49% of total employment, the secondary sector for 23% and the primary sector for 28%.

**Table 1: Value added and employment by sector, 2018**

Sector	Ghana: value added (%)	EU-28: value added <sup>2</sup> (%)	Ghana: employment (%)	EU-28: employment (%)
<b>Primary sector</b>	<b>21.3</b>	<b>1.6</b>	<b>28.1</b>	<b>4.2</b>
Agriculture, hunting and forestry, fishing	21.3	1.6	28.1	4.2
<b>Secondary sector</b>	<b>33.3</b>	<b>24.6</b>	<b>22.8</b>	<b>21.8</b>
Manufacturing, mining and quarrying, other industrial activities	23.2	19.1	n/a	15.5
Of which: manufacturing	11.8	16.0	n/a	13.9
Construction	10.1	5.5	n/a	6.3
<b>Tertiary sector</b>	<b>45.3</b>	<b>73.8</b>	<b>49.0</b>	<b>73.4</b>
Wholesale and retail trade, repairs; hotels and restaurants; transport; information and communication	n/a	24.2	n/a	27.6
Financial intermediation; real estate, renting & business activities	n/a	27.6	n/a	16.1
Public administration, defence, education, health, other service activities	n/a	22.0	n/a	29.7

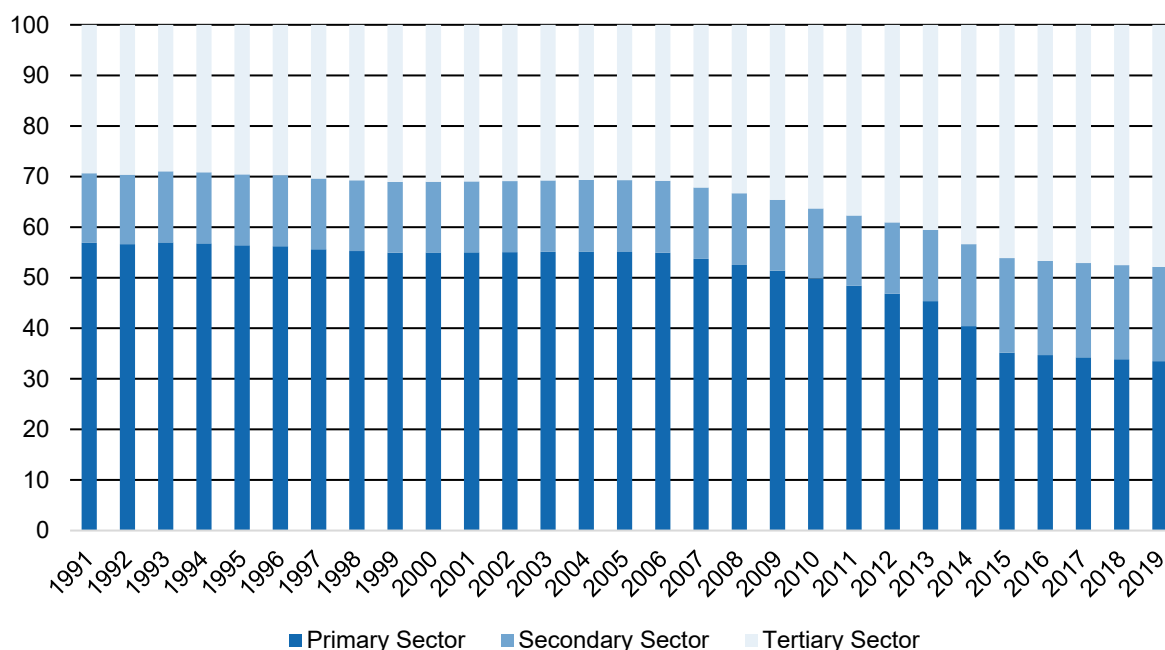
Source: Own table based on Eurostat (2019a; 2019b), World Bank (2019) and Ghana Statistical Service (2019).

The economies of Ghana and the EU differ considerably in the relative importance of the three sectors. Ghana's primary sector is more important in terms of both value added and employment than is the EU-28's. In 2018, almost a third of Ghana's workforce was employed in the primary sector, producing over a fifth of the total value added. The secondary sector is slightly more important in terms of value added and employment in Ghana than in the EU-28, whereas the tertiary sector is much less important in Ghana compared to the EU-28 in terms of value added and employment.

Table 1 shows the development of Ghana's employment share by sector from 1991 to 2019. From 1991 to 2005, the distribution of employment in Ghana remained stable. In the period between 2006 and 2019, the tertiary and secondary sectors became increasingly important, which was in keeping with the decreasing importance of the primary sector.

<sup>2</sup> Due to rounding differences, the sum of all sectors falls below 100 percent.

**Figure 1: Employment by sector (as % of total employment), 1991–2019**



Source: Own figure based on World Bank (2019).

In the 2019 Global Competitiveness Index (GCI) rankings, Ghana ranks 111th out of 141 countries. This classifies the Ghanaian economy as poorly competitive worldwide but highly competitive among other sub-Saharan African countries. According to the 2019 World Economic Forum (WEF) Global Competitiveness Report, Ghana's institutions are the main strength of its political and economic system, whereas the lack of financial and macroeconomic stability weakens the competitiveness of the Ghanaian economy in the world market (WEF, 2019).

The 2019 Global Innovation Index (GII) ranks Ghana 106th out of 129 countries. According to the index, Ghana's innovation performance is below expectations for its level of development (Cornell University, INSEAD, and WIPO, 2019).

## 1.2 The Labour Market

In the first part of this section, we describe the general situation of Ghana's labour market. In the second part, we focus on the youth labour market in particular.

### 1.2.1 Overview of the Ghanaian Labour Market

The general performance of the Ghanaian labour market is difficult to determine since an approximate 90% of the population is employed in the informal sector. In rural areas, almost the entire population aged 15 years and older is employed in the informal sector (Ghana Statistical Service, 2016). Ghana's labour laws do not make a distinction between formally and informally employed workers. Ghana's 1992 constitution and the Ghana Labour Act of 2003 form the legal basis for labour rights and responsibilities of both employers and employees. The most important elements include equal pay for equal work without discrimination, the right of workers to form or join a trade union and a maximum of eight working hours per day. Other important labour acts are the National Pensions Act of 2008 and the Children's Act of 1998, which prohibits exploitative child labour (Osei-Boateng & Ampratwum, 2011).

Although there is no legal distinction between formally and informally employed workers, evidence suggests that the vast majority of workers employed in the informal sector are unable or unwilling to make use of their labour rights. According to a study by the Friedrich Ebert Stiftung (Anuwa-Amarh, 2015), approximately 75.6% of employer and employee respondents earn below the minimum wage. Furthermore, the vast majority of employers do not provide written labour contracts and do not contribute to any pension scheme (Anuwa-Amarh, 2015).

As of 1 January 2018, the National Tripartite Committee of Ghana raised the daily minimum wage by 10% from GH¢ 8.80 to GH¢ 9.68 (MELR, 2017).

Table 2 shows the labour force participation and unemployment rates for Ghana along with the corresponding OECD averages for 2018. In 2018, 69% of the total workforce (15-64 years) in Ghana participated in the labour market, which was slightly less than in OECD countries. The youth labour force participation rate is considerably lower in Ghana than in OECD countries (31.9% as opposed to 47.5%). There is no data available regarding Ghana's adult labour force participation (ages 25-64). In 2018, Ghana's overall unemployment rate was slightly higher than the OECD average (6.7% as opposed to 5.5%). The same is true of the Ghanaian youth unemployment rate.

**Table 2: Labour force participation rate and unemployment rate by age in 2018**

Age group	Labour participation rate		Unemployment rate	
	Ghana	OECD average	Ghana	OECD average
Total (15-64 years)	69.0	72.4	6.7	5.5
Youth (15-24 years)	31.9	47.5	13.7	11.1
Adults (25-64 years)	n/a	78.1	n/a	4.7

Source: Own table based on OECD (2019) and World Bank (2019).

Table 3 shows the labour force participation rate and unemployment rate for Ghana along with the corresponding OECD averages by educational attainment for 2017. Ghana's labour force participation rate for persons with an education level below upper secondary is rather high (62.3%) and just slightly below the OECD average (64%). This is not the case for better-educated population groups. Ghanaians with either upper secondary or tertiary education are considerably less well integrated into the labour market than the average person with a similar educational background from an OECD country. The unemployment rates for the upper secondary education level and higher are slightly higher in Ghana than the OECD average rates. Surprisingly, only 3.1% of the Ghanaian population with less than upper secondary education are unemployed as opposed to 10.6% for the OECD average.

**Table 3: Labour force participation rate and unemployment rate by educational attainment in 2017 (persons aged 25–64)**

Education level	Labour force participation rate		Unemployment rate	
	Ghana	OECD average	Ghana	OECD average
Less than upper secondary education	62.3	64.0	3.1	10.6
Upper secondary education	53.8	80.2	7.5	6.3
Tertiary education	66.1	88.3	5	4.2

Source: Own table based on OECD (2019) and International Labour Organization (ILO) (2020).

## 1.2.2 The Youth Labour Market

The KOF Swiss Economic Institute developed the KOF Youth Labour Market Index (KOF YLMI) to compare how adolescents participate in the labour market across countries (Renold et al., 2014). The foundation for this index is the critique that a single indicator, such as the unemployment rate, does not suffice to describe the youth labour market adequately nor provide enough information for a comprehensive cross-country analysis. To increase the amount of information analysed and to foster a multi-dimensional approach, the KOF YLMI consists of twelve labour market indicators<sup>8</sup> that are grouped into four categories.

The first category describes the activity state of youth (ages 15-24

years old) in the labour market. Adolescents are classified according to whether they are employed, in education, or neither (unemployed, discouraged and neither in employment nor in education or training; see info box to the right). The category working conditions and the corresponding indicators reflect the type and quality of jobs the working youth have. The education category accounts for the share of adolescents in education and training and for the relevance of their skills on the labour market. The fourth category, transition smoothness, connects the other three categories by capturing the school-to-work transition phase of the youth. Each country obtains a score of 1 to 7 on each particular indicator of the KOF YLMI. A higher score reflects a more favourable situation regarding the youth labour market and a more efficient integration of the youth into the labour market.

One of the major drawbacks of the KOF YLMI is data availability. When data is lacking, a category can occasionally be based on a single indicator or must be omitted entirely when not a single indicator for that category exists in a given country. A lack of indicators can make comparisons across certain countries or groups of countries problematic and sometimes even impossible.

### Dimensions of the KOF YLMI

#### Activity state

- Unemployment rate
- Relaxed unemployment rate<sup>3</sup>
- Neither in employment nor in education or training rate (NEET rate)

#### Working conditions

- Rate of adolescents:
- with a temporary contract
  - in involuntary part-time work
  - in jobs with atypical working hours
  - in work at risk of poverty<sup>4</sup>
  - vulnerable unemployment rate<sup>5</sup>

#### Education

- Rate of adolescents in formal education and training
- Skills mismatch rate

#### Transition smoothness

- Relative unemployment ratio<sup>6</sup>
- Long-term unemployment rate<sup>7</sup>

Source: Renold et al. (2014).

<sup>3</sup> It is calculated as the number of unemployed and discouraged workers as a share of the entire labour force. Discouraged workers have given up the search for work (not actively seeking), although they have no job and are currently available for work (also: "involuntary inactive").

<sup>4</sup> Those who cannot make a decent living out of their earnings, being at risk of poverty as a percentage of the working population.

<sup>5</sup> Share of the employed population working on their own account or those working in their family business and thus contributing to the entire family income. Both are less likely to have formal work arrangements and are therefore less protected by labour laws and more exposed to economic risk.

<sup>6</sup> Is defined as the youth unemployment rate (15-24 years) as a share of the adult unemployment rate (25+). If the youth cohort is affected in the same way as the adult group with respect to unemployment, then the relative unemployment ratio will be equal to one. If the youth are relatively more affected, then the ratio will be bigger than one.

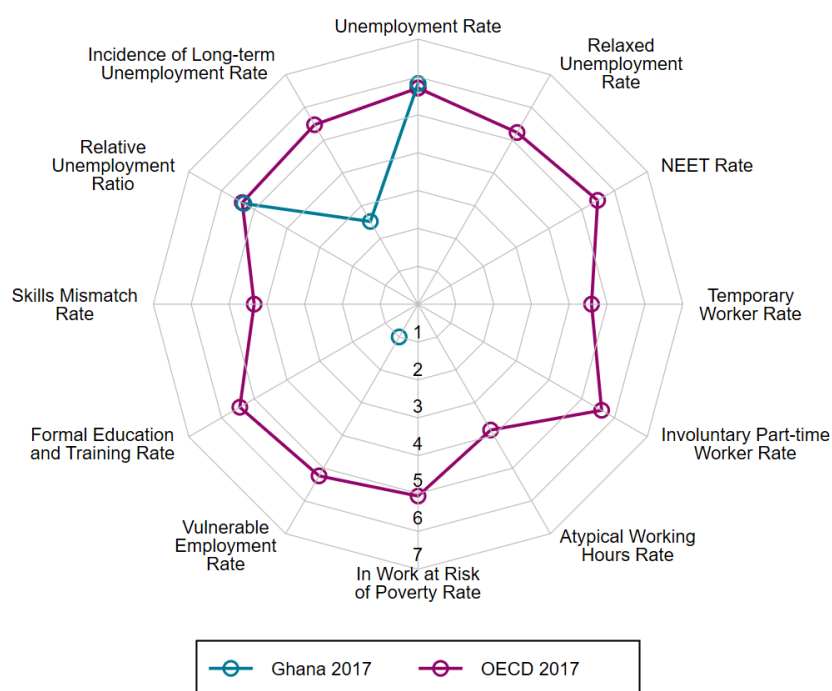
<sup>7</sup> Those unemployed for more than one year (52 weeks) in the total number of unemployed (according to the ILO definition).

<sup>8</sup> The data for these indicators are collected from different international institutions and cover up to 178 countries for the time period between 2005 and 2016.

### 1.2.3 The KOF Youth Labour Market Index (KOF YLMI) for Ghana

Figure 2 shows the different dimensions of the KOF YLMI for Ghana and the OECD average for 2020 in a spider diagram. Unfortunately, there are only four indicators available for Ghana for 2017. This makes a comparison between Ghana's labour market and that of OECD countries difficult. However, there are still a few conclusions that can be drawn. The relative unemployment ratio and the unemployment rate of both comparison groups (Ghana and the OECD average) are in line with each other and rather favourable. The indicators vulnerable employment rate and incidence of long-term unemployment ratio are both considerably less favourable for Ghana than for OECD countries. Long-term unemployment is partially driven by a lack of job growth in the formal sector and a rising number of educated jobseekers who attended at least primary and lower secondary education. More highly educated individuals tend to decline available jobs in agriculture or the informal sector (Baah-Boateng, 2013, S. 397). Moreover, socioeconomic factors like the relatively high rural-urban migration lead to a further deterioration of the long-term unemployment ratio, which is reflected in considerably higher rates of unemployment in urban areas (Baah-Boateng, 2015, S. 3). Ghana's vulnerable employment rate scores as the country's least favourable indicator in the KOF YLMI. The minimum score (1) reflects the aforementioned high percentage of Ghana's workforce employed in the informal sector.

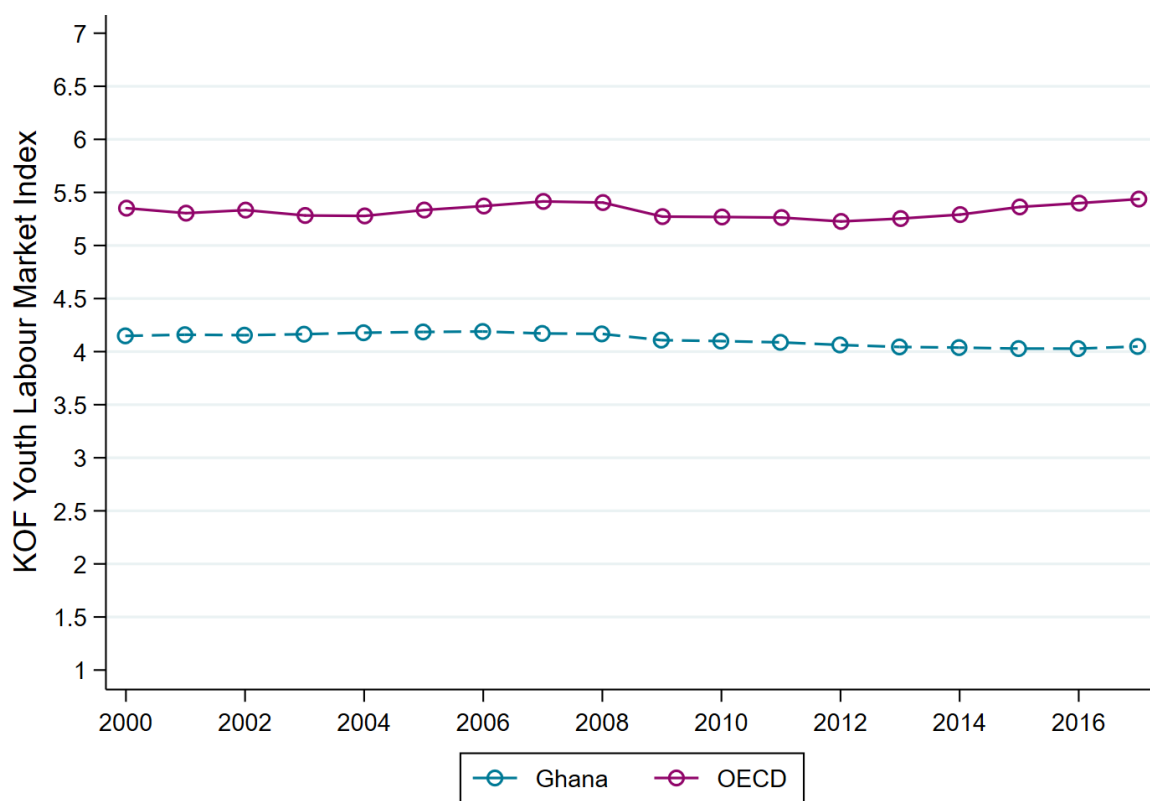
**Figure 1: YLM Scoreboard: Ghana versus the OECD average, 2017**



Source: Own figure based on the KOF Swiss Economic Institute (2020).

Figure 3 shows the evolution of the aggregated YLMI for Ghana and the OECD average over time (2000–2017). An insightful cross-country comparison is nearly impossible due to the lack of indicators that describe the Ghanaian youth labour market. However, when comparing the two indexes computed only based on the three indicators available for both the OECD as a whole and Ghana for the entire period, this analysis shows that in aggregate, the Ghanaian youth labour market lags far behind the average situation in OECD countries. Furthermore, the figure indicates that the aggregate situation of adolescents participating in the labour market in both comparison groups has scarcely improved over the last two decades.

Figure 2: YLM-Index Ghana versus OECD, 2000-2017



Note: index based on common indicators available for the whole period considered.

Source: own figure based on the KOF Swiss Economic Institute (2020).

## 1.3 Ghana's Political System

Understanding the basics of a country's political system and getting to know the political goals with respect to its education system are crucial points for the understanding of the education system in a broader sense. In the first part, we explain Ghana's political system in general. The politics and goals regarding the education system are referred to in the second part.

### 1.3.1 Overview of the Ghanaian Political System

In 1957, Ghana, a former British colony, became the first sub-Saharan African country to become independent. After independence, the country entered a long-lasting period of transition which ended in 1993 when the Ghanaian constitution became effective. Since the establishment of the constitution, Ghana has been a multiparty presidential democracy. However, only two parties dominate the country's political system, namely the National Democratic Congress (NDC) and the New Patriotic Party (NPP). The existence of a strong opposition plays a decisive role in political deliberations, because the political actions of the ruling party are closely examined and investigated (Gyimah-Boadi & Kwasi Prempeh, 2012, S. 96).

The government is divided into three branches: the legislature, the executive and the judiciary. The legislative branch is organised as a one-chamber system which consists of a parliament of 275 representatives. Members of the parliament and the president of the country are elected for terms of four years by universal suffrage. The constitution limits the president's tenure to two terms (Republic of Ghana, 1992).



According to *The Economist's* 2019 Democracy Index, Ghana is classified as a flawed democracy and ranked 55<sup>th</sup> out of 167 investigated countries. Furthermore, the Index shows steady improvements towards full democracy between 2006 and 2015 when a peak was reached. Since then, the rating has decreased slightly (Economist, 2020, S. 21).

Ghana is ranked 80<sup>th</sup> in the 2019 Corruption Perception Index. The country's score shows a similar development as the democracy index published by *The Economist*. After reaching a peak in 2014, the rating declined from 48 points to 41 in 2019 (Transparency International, 2019). The sharp decline is mainly attributable to a severe bribery scandal in Ghana's government in 2015, which led to the suspension of various high court judges (Reuters, 2015). Furthermore, in early 2019, the investigative journalist Ahmed Hussein-Suale was shot dead, which raised concerns about the country's efforts in fighting corruption (Ghana Integrity Initiative, 2019).

### 1.3.2 Politics and Goals of the Education System

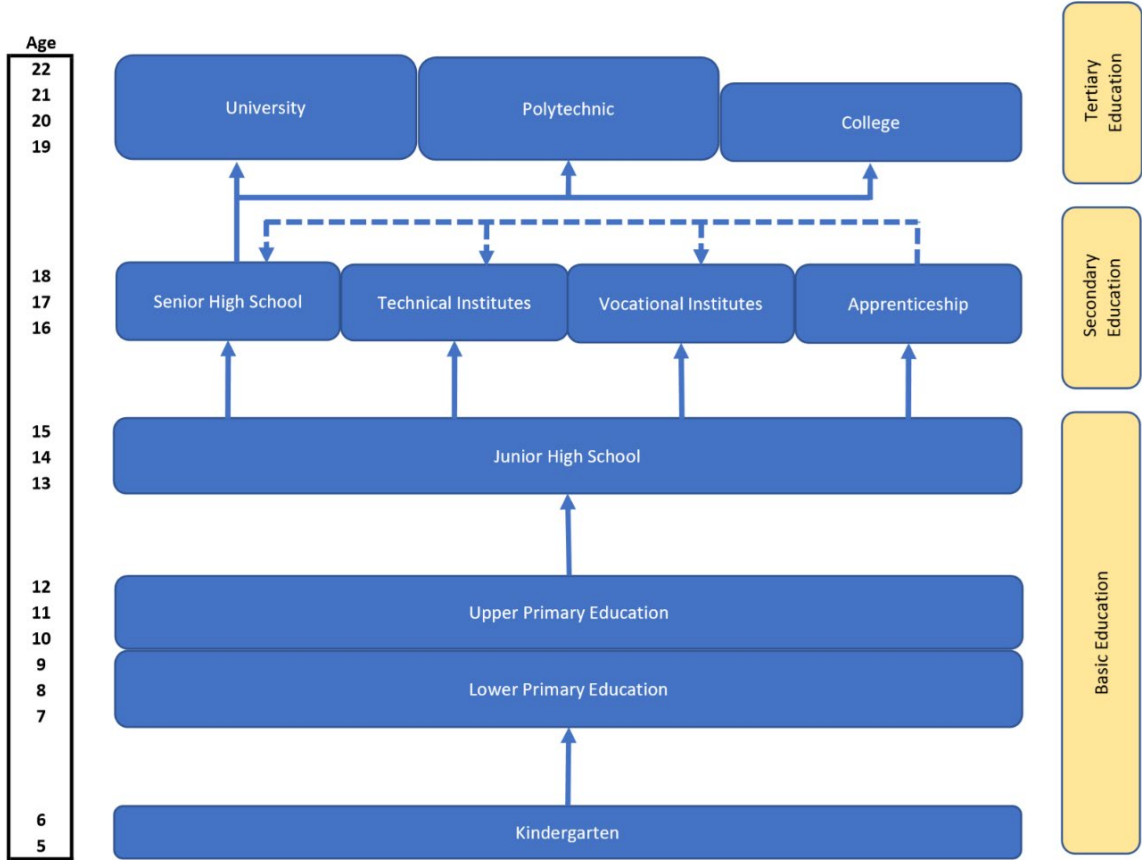
The Ministry of Education is the responsible authority for the Ghanaian education system. As the highest body of the education system, the Ministry is in charge of formulating policies and implementing them (Ministry of Education, 2020). Nevertheless, the Ghanaian government is in the process of decentralising its education system and consequently giving more power to local authorities, which have better oversight of schools in their respective areas. A milestone of decentralisation is the 1995 Ghana Education Service Act according to which decision-making power was handed over to the District Assembly (DA). This reform was followed by another education act in 2008, which targeted the empowering of schools, circuits, districts and regions in playing a more active role regarding the management of education delivery services. This led to further decentralisation of the education system (Ampratwum, Awal, & Oduro, 2018). Therefore, a four-stage concept of accountability is applied with the Ministry of Education as the highest body and the regional, district and school authorities as the subordinated executive bodies.

The Ghanaian education system faces several challenges including a low enrolment of girls, insufficient quality of education and a shortage of qualified teachers. Among other measures, the government tackles these challenges by providing selective scholarships for girls from low-income households, removing gender-stereotyping textbooks, providing incentives for teachers encouraging them to work in rural areas and improving the infrastructure of schools (Aheto-Tsegah, 2011).

# 2. Formal System of Education

As defined by the Education Act 2008, the Ghanaian education system is divided into three levels—basic education, second-cycle education and tertiary education—as shown in Figure 4 Primary education occurs in three stages with two years of kindergarten education, six years of primary school and three years of junior high school. The second-cycle education consists of three years of senior high school education. Furthermore, this stage of education comprises vocational, technical, business and agricultural education as well as apprenticeships of at least one year. Tertiary education includes all education provided by universities, polytechnics or colleges which are accredited by the National Accreditation Board (NAB) or established by a parliamentary act (Aziabah, 2018, S. 35).

**Figure 3: The Ghanaian education system**



Source: Own illustration.

Following compulsory education, students can choose between different institutions in the upper secondary education level. This chapter outlines the different levels of the education system. The vocational educational pathway and its institutions are discussed in more detail in Chapter 3.

**Table 4: Net enrolment rate (NER) and gross enrolment ratio (GER)**

Education level	ISCED 2011	Net Enrolment Ratio	Gross Enrolment Ratio
Early childhood education development programmes	010	n/a	19.33*
Pre-primary education	020	73.50*	114.55*
Primary education	1	86.16	104.84
Secondary education	2–3	57.24	75.561
<i>Lower secondary education</i>	2	47.98	85.42
<i>Upper secondary education</i>	3	34.68	47.86
<i>Percentage enrolled in vocational secondary education</i>	2–3	1.31	n/a
Compulsory education age group	1–3	89.27	n/a
Post-secondary non-tertiary education	4	n/a	n/a
Tertiary education	5–8	n/a	15.69*
<i>Short-cycle tertiary education</i>	5	n/a	n/a
<i>Bachelor or equivalent level</i>	6	n/a	n/a
<i>Master or equivalent level</i>	7	n/a	n/a
<i>Doctoral or equivalent level</i>	8	n/a	n/a

Source: UNESCO (2020); data is based on 2019 survey if nothing else mentioned; \* figures from 2018.

Table 4 shows the GER<sup>9</sup> and NER<sup>10</sup> by education level for 2019. The NER quantifies the total number of students in the theoretical age group for a given education level enrolled at that level expressed as a percentage of the total population of that age group. The GER quantifies the number of students enrolled at a given education level—irrespective of their age—as a percentage of the official school-age population corresponding to the same level of education. For example, for the primary education level, the NER indicates how many students of the typical primary school age are actually enrolled in primary school, while the GER sets the actual number of students in primary education—irrespective of their age—in relation to those who are in the official age to attend primary education.<sup>11</sup>

<sup>9</sup> The UNESCO Institute for Statistics (UIS) (2017) defines the gross enrolment ratio as the “number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education.”

<sup>10</sup> The UIS (2017) defines the net enrolment ratio as the “Total number of students in the theoretical age group for a given level of education enrolled in that level, expressed as a percentage of the total population in that age group.”

<sup>11</sup> A gross enrollment ratio of 100 corresponds to a situation where each child in a given country is enrolled in the corresponding education level. A value above 100 could occur due to students who are older than the typical enrolment age for primary education (e.g. have to repeat grade, adult learners). A value below 100 implies that not everyone who is in the typical age for primary education is actually enrolled.

# 2.1 Pre-Primary Education

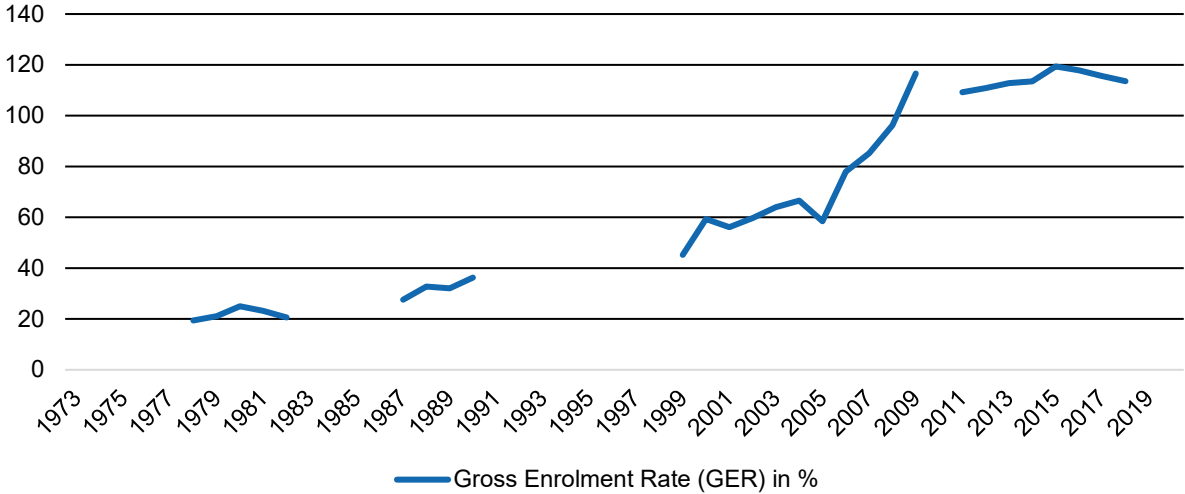
Ghana was the first sub-Saharan country to implement universal access to early childhood education by national legislation. Children normally start attending kindergarten at the age of four. The Ghana Education Service aims to provide a child-centred and play-based education to all kindergarteners. Moreover, the following competency objectives are defined on a pre-primary education level (Ghana Education Service, 2020):

- Language and literacy (language development)
- Creative activities (drawing and writing)
- Mathematics (number work)
- Environmental studies
- Movement and drama (music and dance)
- Physical development (physical education)

The National Early Childhood Care and Development Policy issued in 2004 represents a milestone because it defined early childhood education as central in order to avoid development delays and foster early education. In 2007, the government counteracted low enrolment rates and attempted to boost quality in pre-primary education by adding two years of kindergarten education to the compulsory basic education. This reform led to free-of-cost early childhood education for all Ghanaian children. Nevertheless, associated costs like school uniforms still constitute a financial hurdle for low-income families.

**Figure 5** shows that the reforms in 2004 and 2007 led to a significant increase in the GER. Due to the reform of making kindergarten free of cost, the GER was increased from approximately 78% in 2007 to 129% in 2018. According to the Ministry of Education, the enrolment rate of above 100% is mainly attributable to late enrolment to kindergarten and repeating children who are not yet ready for primary school (Ministry of Education Ghana, 2019).

**Figure 4: Gross enrolment ratio (GER) for pre-primary education**



Source: own illustration based on UNESCO (2020).

# 2.2 Primary and Lower Secondary Education

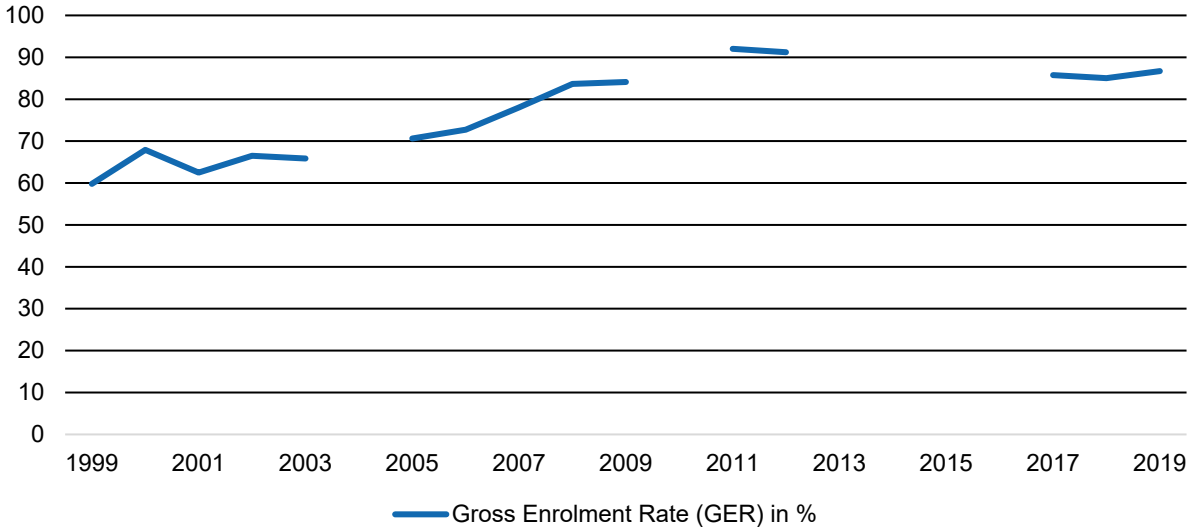
In Ghana, six years of primary school and three years of junior high school constitute primary and lower secondary education. Children typically enter primary school at the age of six and stay there until they are 12. Afterwards, junior high school follows as the next level of education, which normally lasts until the age of 15. Like pre-primary education, primary school and junior high school are part of the basic

education, which is constitutionally mandatory and free of cost. Besides having attended the compulsory kindergarten education, there are no further requirements for admission to primary school. Likewise, there are no further admission criteria for moving up to junior high school other than the successful completion of the sixth grade of primary school.

The Ministry of Education holds the ultimate responsibility for primary and junior high school. Since the ministry’s establishment, the Ghana Education Service (GES) has been in charge of implementing pre-tertiary policies on behalf of the Ministry of Education. To do so, several levels of accountability are applied which include regional and district authorities (Nudzor, 2014, S. 6). Like the implementation of policies, funds are also allocated through the GES while the Ministry of Education sets the budget. Moreover, additional significant funds are provided by the Ghana Education Trust (GETFund) and the District Assemblies Common Fund (DACF). These non-governmental funds are mainly sourced from value-added tax (VAT) (Thompson & Casely-Hayford, 2008).

In Ghana, the private school sector makes up over 20% of school enrolments (Ministry of Education Ghana, 2019, S. 6). Nevertheless, the share of private school enrolments varies greatly across regions and has increased during the last two decades. This is mainly seen as a problem of poor provision or a lack of quality in public schools (Ministry of Education Ghana, 2019). Overall, the enrolment rate in primary and lower secondary school has increased significantly in the last two decades. In 1999, Ghana’s enrolment rate in this education level was almost 60%, whereas in 2019, this figure was above 86%. **Figure 6** illustrates the substantial gap between the enrolment rates in primary school compared to junior high school. In 2019, the GER for primary school reached more than 104%. The enrolment rate for junior high school was 85%, which reflects a significant decrease compared to primary school figures.

**Figure 5: Primary and lower secondary gross enrolment ratio (GER)**



Source: own illustration based on (UNESCO, 2020).

The learning content consists of topics like Ghanaian language, English language, mathematics, IT knowledge, religious and moral education, citizenship education, integrated science and creative arts (Adu-Gyamfi, Donkoh, & Addo, 2016). At the end of basic education, which comprises kindergarten, primary and junior high school, each pupil aiming for a senior high school or technical education must take the nationally standardised Basic Education Certification Examination (BECE). Whether a student is allowed to progress to the next education level is decided based on the results of this exam (Ampiah, 2009, S. 32).

## 2.3 Upper Secondary Education

Upper secondary education in Ghana marks the end of basic education, meaning that this stage of education is no longer compulsory. Pupils normally leave basic education by the age of 15 and can then continue their educational path at a senior high school, technical institute or vocational institute or by doing an informal apprenticeship (Aziabah, 2018, S. 36).

Admission to senior high school is highly competitive. As mentioned in Subchapter 2.2, Ghanaian students who want to progress to senior high school or technical education must take the BECE. Prior to the BECE, students must select their desired school in a computerised tool. Based on the results in the BECE and the preferred senior high school, GES carries out the placement. Until 2017, senior high schools were not free of cost for attendees and were therefore difficult for students from low-income families to attend. Through the policy of free senior high schools issued in September 2017, more Ghanaian students are able to gain admission to this level of education. Before the issuance of the free senior high school policy, the transition rate from junior high school to senior high school was 68% (Ministry of Education Ghana, 2019, S. 7), which increased to 87.7% in 2018 according to the Ministry of Education (Kpogli, 2019). This development is an indicator that financial constraints played a decisive role for students who did not move up to senior high school.

The sources of funds deployed for senior high school are similar to those of basic education. Statistics from 2014 show that governmental funds are the most significant source of funds. Another important source was the constantly growing internally generated funds (IGFs), which consist of fees paid by students (Abdul-Rahaman, Abdul Rahaman, Ming, Ahmed, & Salma, 2018). With the implementation of free senior high schools, it is to be expected that these funds will decline significantly as less revenue is generated from fees. Therefore, education financing will rely even more on governmental grants.

Upper secondary education is concluded with the West African Senior School Certificate Examination (WASSCE), which is conducted by the multinational West African Examination Council (WAEC). The exam contains several compulsory subjects like English, mathematics, integrated science and social studies. Furthermore, some electives chosen by the students are part of the exam. Students normally finish their secondary education by the age of 18 (Nuffic, 2015, S. 7).

## 2.4 Postsecondary and Higher Education

After successfully completing secondary education, there are basically three higher education options for students in Ghana: university education, polytechnic education and college education.

The admission to most higher education programmes is competitive due to the lack of sufficient capacity at tertiary institutes. Admission is granted based on WASSCE results. Criteria regarding the minimum grade vary depending on the institution but are normally higher for universities.

There are two governing bodies implemented for tertiary institutions in Ghana, namely the National Council for Tertiary Education (NCTE) and the NAB. The NCTE has the general oversight responsibility for tertiary institutions, whereas the NAB is responsible for quality assurance.

In university education, it normally takes four years to attain a bachelor's degree. Additionally, universities offer master's and PhD programmes. As of 2020, the NAB has accredited 10 public universities and 91 degree-offering private tertiary institutes (NAB, 2020). In Ghana, education provided by private tertiary institutions is a fairly new development, because tertiary education institutions used to be exclusively public. This changed when the NAB was established in 1993 and set up new regulations for

tertiary institutions which allowed private universities to open. Today, privately owned and profit-oriented tertiary education institutions outnumber public institutions (Afeti, 2017, p. 41).

Other higher education institutions are the polytechnic schools which are located all over Ghana. This type of education is explained in Subchapter 3.1.

Besides polytechnics and universities, there are several colleges which offer programmes with a specific focus. One of them, the college of education, is described in Subchapter 2.6. Additionally, there are accredited colleges for nursing and agriculture (NAB, 2020).

Funding of public tertiary institutions is mainly provided by the government, the GETFund and internally generated funds, which subsume all generated fees from students attending the respective institution. The governmental oversight body NCTE allocates the funds (Newman & Duwiejua, 2015, S. 3).

## 2.5 Continuing Education (Adult Education)

Like for other types of education, the fourth Ghanaian constitution from 1992 marked a significant improvement for adult education. Even though the constitution does not name adult education as such, it mentions the provision of lifelong and free adult literacy education as a right of every Ghanaian (Republic of Ghana, 1992). However, unlike on other education levels, there are no policies which directly address adult education. Furthermore, there is no strong adult education movement in Ghana (Tagoe, 2018, S. 551).

As data from the World Bank indicate, illiteracy is still a problem among adults in Ghana. Nevertheless, the country has steadily improved in this area during the past two decades. With an illiteracy rate of almost 58% among adults in 2000, the situation improved significantly until 2018 when a rate of close to 80% was reached (The World Bank, 2020). However, there are still inequalities regarding gender and regions. Female illiteracy is much higher than male illiteracy. Additionally, illiteracy is widespread in rural communities (Tagoe, 2018, S. 550).

Due to the illiteracy problems in Ghana, adult education mainly focuses on this subject (Tagoe, 2018, S. 562). The government established the Non-Formal Education Division (NFED) to abolish illiteracy, especially in northern regions of Ghana where this issue is more evident. The NFED also provides non-formal education on topics like family planning, environment and sanitation, health, income-generating activities, tree planting and livestock rearing (The Ministry of Education, 2008, S. 6).

## 2.6 Teacher Education

Ghana has made many structural reforms in the area of teacher education. This has led to the existence of various different types of degrees, diplomas and certificates. Today, teacher education is mainly provided by colleges of education and universities.

Colleges of education prepare future teachers for teaching at the basic education level, which comprises kindergarten, primary and junior high school levels. According to the NAB, there are currently 43 public and four private colleges of education in Ghana (NAB, 2020). Students complete their studies in three years at the college to earn a Diploma in Basic Education (DBE). Besides the normal three-year route,

there are two other ways to obtain the relevant diploma for basic education. Since the 2004/2005 academic year, untrained teachers who already teach at the basic education level have the opportunity to obtain a diploma through the Untrained Teachers Diploma in Basic Education Program (UTDBE). This programme normally takes four years and is provided through distance learning and face-to-face interactions during holidays. Admission is granted to all untrained teachers with at least a secondary high school or middle school education. Furthermore, for all teachers in possession of the 'Certificate A', which was formerly the minimum education for basic education teachers, a two-year programme is available. This allows them to upgrade their certification. The programme is structured similarly to the UTDBE programme (Asare & Nti, 2014, S. 3).

The education programmes for untrained teachers are a substantial success regarding quality improvements at the basic education level. Between 2012 and 2016, the percentage of trained teachers in primary schools increased from 77% to 85% in urban regions and from 50% to 70% in rural areas. Similar developments also occurred at the junior high school level. This led to a lower student-to-trained-teacher ratio and a significantly higher completion rate of students at the junior high school level (Namir, 2017).

Teachers at the senior high school level must complete a bachelor's programme at a specific education university. There are currently two universities offering these kinds of programmes. The bachelor's programme normally takes four years to complete (Kwaah & Palojoki, 2019). Additionally, DBE holders are able to obtain a university degree by attending a two-year programme at one of the universities of education (University of Ghana, 2020).



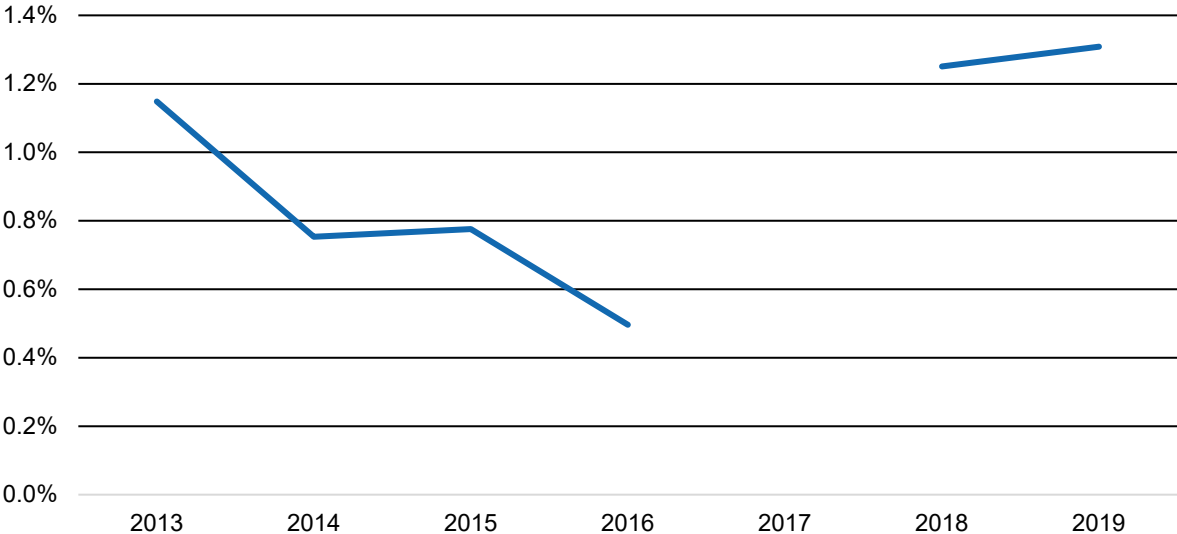
# 3. The System of Vocational and Professional Education and Training

This section of the Factbook describes the vocational education and training (VET) system at the upper secondary level and the professional education and training (PET) system at the tertiary level in more detail. Thereby, the term vocational and professional education and training (VPET) refers to both the VET and PET systems.

After leaving lower secondary education, pupils can attend a senior high school or a technical or vocational institute to pursue vocational training.

Vocational education is still not very common in Ghana as figures from UNESCO show. As of 2019, only 1.31% of Ghanaians between 15 and 24 were enrolled in a vocational education programme. Nevertheless, Figure 7 shows a positive trend in the direction of higher enrolment rates in vocational education.

**Figure 6: Net enrolment rate for vocational education**



Source: own illustration based on UNESCO (2020).

Until recently, vocational education did not play a significant role in Ghanaian politics. This is reflected in figures like the number of schools dedicated to different education pathways. Whereas the number of senior high schools increased between 2008 and 2013, the number of purely vocational schools declined (Aziabah, 2018). This is mainly attributable to the government’s spending in senior high schools, which led to an enhanced promotion of this type of education. In contrast, vocational education accounted for only 1.2% of the government’s education budget in 2012 (Aziabah, 2018, p. 6).

After leaving lower secondary education, students can either attend a senior high school or a technical or vocational institute to pursue vocational training. The following sections explain the different types of vocational education.

## Senior High Schools

Senior high schools are not predominantly vocational institutes, but they mostly offer job-focused electives. Students can choose from a wide range of different vocational elective subjects like agriculture, construction, mechanics, accounting, et cetera. Besides these subjects, students must attend core courses, namely English language, mathematics, integrated science, social studies, and computer science. After completion of three years of senior high school, they are allowed to sit the WASSCE and are consequently entitled to register for courses at universities if they pass the final examination (NAB, 2013, p. 1).

## Formal Technical vocational education and training (TVET) Providers

Beyond vocational education electives at senior high schools, students can also enrol in schools fully dedicated to technical and vocational education. There is a broad range of different providers. There are currently approximately 300 schools offering technical and vocational education in Ghana (News Ghana, 2019). The main providers of these schools are governmental ministries. The large number of schools is mainly due to the different target groups of students. While some institutes were established for students to continue the formal education pathway, others target the formalisation of skills obtained in the informal sector or offer specific subjects in the ministries' areas of interest. The Ministry of Employment and Labour Relations provides the majority of vocational and technical training institutions. Other providers include the Ministry of Education, the Ministry of Trade and Industry and the Ministry of Local Government (Baffour & Thompson, 2011, p. 26).

Due to the large number of different suppliers, the certification process was vastly uncontrolled for a long period of time. This led to a wide spectrum of qualifications and certifications. The Council of Technical and Vocational Education and Training (COTVET) identified this issue and hence established the Training Quality Assurance Committee (TQAC). This committee is in charge of ensuring that training providers maintain an appropriate level of quality. Additionally, the National TVET Qualifications Committee (NTVETQC) was established to coordinate qualifications. The NTVETQC created a framework that targets the streamlining of the qualification landscape. The various qualifications on the secondary and tertiary levels are presented in Table 5.

**Table 5: Ghanaian qualifications framework**

Level	Qualification	Admission Requirements	Certifying Institutes
8	Doctor of Technology	Master of Technology	
7	Master of Technology	Bachelor of Technology	
6	Bachelor of Technology	WASSCE or HND	Polytechnics
5	Higher National Diploma	WASSCE or National Certificate II	Polytechnics
4	National Certificate II	WASSCE or National Certificate I	GES TVET Institutes
3	National Certificate I	BECE or Proficiency II	GES TVET Institutes
2	Proficiency II	Proficiency I	NVTI / Informal Trade Associations
1	Proficiency I	-	NVTI / Informal Trade Associations

Source: own illustration based on Palmer & Darvas (2014, p. 69).

As shown in the table, TVET institutions provide qualification levels 1 to 4. Qualification levels 3 and 4 offer formal education, while qualification levels 1 and 2 are of an informal or non-formal nature. The most common schools for obtaining these qualifications are the technical training institutes (TTIs), the

NVTIs and the integrated community centres for employable skills (ICCESs) (Palmer & Darvas, Demand and supply of skills in Ghana, 2014, S. 5). The duration of TVET programmes varies, but they normally last three to four years for a student to obtain a Certificate II. Proficiency I and II were established for students who complete an apprenticeship in the informal sector. This type of education is explained later in this subchapter.

The admission requirements vary widely across the different types of vocational institutes. For their certificate programmes, most formal public and private institutes target graduates from junior high school who obtained the Basic Education Certificate or possess at least Proficiency II. Additionally, some institutes set requirements regarding the minimum score in the Basic Education Certificate Examination (BECE). Nevertheless, some institutes such as the ICCESs are particularly devoted to early school dropouts. The mission of the ICCESs is *'to equip and empower the unemployed, especially the youth, with employable skills through vocational skills training at the community level throughout Ghana'* (Ministry of Employment and Labour Relations, 2020). The ICCESs are predominantly active in rural communities.

Unfortunately, there is no current detailed enrolment data available. Data from 2012 indicate that based on enrolment, TTIs are the largest providers of TVET with approximately 29,000 students (Palmer & Darvas, 2014, p. 109). They are followed by NVTIs and ICCESs with approximately 7,000 and 3,500 students, respectively (Palmer & Darvas, 2014, p. 109).

The curricula at most TVET institutes in Ghana are school based. Compared to other TVET institutes, TTIs offer the most significant industry connections, but the majority of graduates still do not have any workplace experience when they graduate (Palmer & Darvas, 2014, S. 113). This implies that most TVET institutes in Ghana have a pre-employment character. Competency training courses are almost absent. Furthermore, the lack of up-to-date equipment and trained instructors are major constraints (Kwame Ansah & Kissi, 2013). Most equipment at TVET institutes dates back to Soviet support (Palmer & Darvas, 2014, p. 54). This leads to a rather poor quality of education and low labour market relevance. Additionally, the connection between TVET institutions and the industry is poor (Saskatchewan Polytechnic, 2016, S. 3). This results in a mismatch between skills taught at schools and skills needed by the industry.

A further problem of TVET in Ghana is the low level of female enrolment. Even though the Ghanaian constitution ensures a policy of gender equality in education, women are not prevalent in jobs requiring a highly skilled workforce. In this area, women make up a share of approximately 2% (Saskatchewan Polytechnic, 2016, S. 6). This is very low, because women constitute approximately 53% of the workforce entering Ghana's economy every year (Saskatchewan Polytechnic, 2016, S. 6).

### **Informal TVET Providers**

Informal apprenticeships are by far the most common type of vocational education among young Ghanaians. It is estimated that 80 to 90% of all basic skills training is provided by informal apprenticeships (Palmer, 2009, S. 1).

The traditional apprenticeship system relies on so-called master craftspersons (MCPs). These qualified persons have obtained a certificate from an NVTI and train their apprentices for an average of three years (Ghana Skills Development Initiative, 2020). Nevertheless, the duration of the apprenticeship and further details vary depending on the industry and the contract. There are no admission criteria. At the end of the apprenticeship, students are normally assessed and certified by their MCP (Ghana Skills Development Initiative, 2020). Additionally, they could take a final non-written competence-based skills test at an NVTI to obtain the nationally known and accepted proficiency certificate (Ghana Skills Development Initiative, 2020). Nevertheless, many apprentices do not register for the exam because they are either not aware of its existence or regard it as unimportant (Afoblikame, 2018, S. 15). Due to the large

number of students in informal apprenticeships, the government set its focus on formalising this education path to increase graduates' quality and employability.

Most recently, the Ghana Skills Development Initiative (GSDI), a cooperation between the German government and Ghanaian COTVET, propelled a project aiming to modernise the Ghanaian apprenticeship system. So far, the program is available in sectors like automotive, electronics, furniture works, garment making, welding, block laying and tiling and cosmetology (Ghana Skills Development Initiative, 2020). During the currently running pilot phase, 80% of apprentices' time is allocated to on-the-job training and 20% to training at a dedicated training institute (Ghana Skills Development Initiative, 2020). Students can obtain the Proficiency I certificate after 1.5 years and Proficiency II after three years (Ghana Skills Development Initiative, 2020).

## 3.1 Professional Education and Training (PET; Post-Secondary Level)

As mentioned in Subchapter 2.4, students completing the admission criteria are able to apply for a program at a polytechnic institution.

In Ghana, 10 public polytechnics exist and are located strategically all over the country as a measure to facilitate geographical access to this type of education. There are currently no private polytechnics. The polytechnics were created to equip Ghanaian students with skills needed by the industry and therefore support the country's rapidly growing economy. These institutes have a clear mandate to provide tertiary education in subjects like technology, commerce, science and manufacturing (Nyarko, 2011). The education at a polytechnic normally takes three years to earn the Higher National Diploma (HND). Polytechnics were upgraded from post-secondary to tertiary institutions in 1992 and received another upgrade in 2007 when the government issued the Polytechnic Act. This act enabled polytechnics to run Bachelor of Technology (BTech) programmes (Atherton, 2017). Through these adjustments, polytechnics gained popularity. While in 1992 a total of 1,385 students were enrolled, this number surged to 47,294 in 2012. Despite this enormous growth, gender inequalities still persist since just over 30% of the students enrolled are female (Kofi Acquah & Budu, 2017).

Besides the PET programmes at polytechnics, healthcare and agricultural colleges provide courses leading to a higher diploma. They mostly offer various types of programmes that range from running for just a couple of days to several years. An HND programme in general agriculture, for example, lasts three years (Kita College, 2020). This is the most comprehensive course of study that can be taken at a college. The admission requirements depend on the programme. An HND programme normally requires a WASSCE pass with further criteria regarding the score reached (Kita College, 2020). Other lower diploma courses are open to Certificate II graduates (Kita College, 2020).

## 3.2 Regulatory and Institutional Framework of the VPET System

### 3.2.1 Central Elements of VPET Legislation

The following elements are the main pillars of legislation in the context of the Ghanaian VPET system:

- The National Board for Professional and Technician Examination Act 492 became effective in 1994 and established the National Board of Professional and Technician Examination (NABPTEX) (Ng'ethe, Subotzky, & Afeti, 2008, p. 65). The board is in charge of assessing syllabi of non-university tertiary institutions and aligning them with the industry's needs. Furthermore, the board formulates and administers schemes of exams and ensures that certificates and diplomas are awarded on merit (NABPTEX, 2020).
- The National Accreditation Board Act 744 was instituted in 2007 and redefined the mandates of the National Accreditation Board, which was established in 1993 (Republic of Ghana, 2007). This board is legally mandated to accredit private and public educational institutions (Republic of Ghana, 2007, p. 2).
- The Polytechnic Act 745 replaced the Polytechnic Law (Provisional National Defence Council Law 321) in 2007. This act was primarily established to grant more academic competencies to polytechnics (Nyarko, 2011, p. 1). Since then, besides their ordinary HND programmes, polytechnics can offer degree programmes in manufacturing, commerce, science and technology (Nyarko, 2011, p. 1).
- The Education Act 778 became effective in 2008 and regulates the fundamental principles of the Ghanaian education system (Republic of Ghana, 2008). It is therefore not primarily focused on VPET but covers a few cornerstones such as institutional quality assurance. With the establishment of the Education Act 778, governing bodies like the National Inspectorate Board (NIB), the National Teaching Council (NTC) and the National Council for Curriculum and Assessment were established (Republic of Ghana, 2008). Each of these boards and councils include representatives of the COTVET.
- The COTVET Legislative Instrument LI 2195 came into force in 2012 and targets the regulation of TVET providers in Ghana (COTVET, 2014, p. 10). The legislation indicates that TVET providers such as institutional training providers, workplace training providers and informal sector training providers are not allowed to operate unless they are not registered by the COTVET (Palmer & Darvas, 2014, p. 68). The COTVET is described in the following subchapter.

## 3.2.2 Key Actors

### a) Vocational Education and Training

#### Government

The number of ministries offering TVET in Ghana is relatively high. Currently, the following nine ministries provide VPET (Baffour & Thompson, 2011, p. 26):

- Ministry of Education
- Ministry of Employment and Social Welfare
- Ministry of Trade and Industry
- Ministry of Agriculture
- Ministry of Road and Transport
- Ministry of Local Government
- Ministry of Tourism
- Ministry of Communications
- Ministry of Youth and Sports

The competencies of the ministries are diverse. Some take a more active role and are in charge of coordination, governance and management (Baffour & Thompson, 2011, p. 24). Others have more limited competencies and mainly play certification, supervisory and regulatory roles (Baffour & Thompson, 2011, p. 24).

## **Representation and Advisory Bodies**

As mentioned in Subchapter 3.3.1, the parliament of Ghana established a council which is specifically dedicated to vocational and technical education and training. The COTVET is mandated to coordinate, harmonise and supervise the activities of pre-tertiary technical and vocational education and training (Republic of Ghana, 2006, p. 3). Furthermore, the COTVET applies quality measures. This includes the promotion of co-operations with international agencies and acting as an intermediary between education providers and the industry (COTVET, 2020). Since its establishment, the Council has promoted a more demand-driven curriculum development (Republic of Ghana, 2006, p. 3). This goal is pursued by integrating industry groups like the Association of Ghana Industries (AGI) and the Ghana Employers' Association (GEA) into the curriculum design process (COTVET, 2020).

The COTVET contains 15 members from various relevant backgrounds (Republic of Ghana, 2006, p. 4). Besides representatives of several ministries, members from the industry, a recognised employer's association, a recognised labour union and an exponent with expertise in TVET each have at least one seat in the Council (Republic of Ghana, 2006, p. 4). Even though COTVET is subordinated to the Ministry of Education, the Council is mandated to coordinate all TVET institutes.

The Council itself established the following committees:

### National TVET Qualification Committee (NTVETQC)

The NTVETQC was established in 2010/2011. This committee is mandated to coordinate the certifications and qualifications offered by TVET institutions (Palmer & Darvas, 2014, p. 69). Shortly after its establishment, the NTVETQC replaced existing qualifications frameworks with the newly designed National TVET Qualification Framework (NTVETQF) (Palmer & Darvas, 2014, p. 69).

### National Apprenticeship Programme Committee

The National Apprenticeship Programme Committee (NAPC) oversees all activities related to the apprenticeship programme (Baffour & Thompson, 2011). The programme was introduced by the government of Ghana and targets a standardisation of the mostly privately initiated apprenticeship sector (Palmer & Darvas, 2014, p. 148). As mentioned in Subchapter **Error! Reference source not found.**, the industry-driven apprenticeship system is the largest provider of TVET in Ghana.

### Training Quality Assurance Committee

A general approach regarding quality assurance in TVET was absent for many years. After the establishment of the TQAC in 2010/2011, the committee set up a coordinated approach to streamline and set standards in training delivery and qualification awarding (Baffour & Thompson, 2011, p. 22).

### Industry Training Advisory Committee

The Industry Training Advisory Committee reflects the link between the industry and TVET (Palmer & Darvas, 2014, p. 65). It is therefore responsible to ensure that the delivered education in the TVET sector meets the industries' needs (Palmer & Darvas, 2014, p. 65). The committee is further divided into subcommittees. One of them, the Standards Validation Sub-Committee (SITAC), is in charge of generating occupational standards (Baffour-Awuah, Ghana's Input to the Policy Dialogue on Technical and Vocational Education and Training Project of South Africa, 2012, p. 32). The other subcommittee, the

Occupational Standards Validation Sub-Committee (SITACOS), validates whether the generated standards meet the demands of the relevant industries (Baffour-Awuah, Ghana's Input to the Policy Dialogue on Technical and Vocational Education and Training Project of South Africa, 2012, p. 32).

#### Skills Development Fund Committee

The Skills Development Fund was one of the mechanisms implemented after the establishment of COTVET. The Fund was created to ensure sustainable finance sources for TVET (COTVET, 2011, p. 17). The Skills Development Fund Committee is mandated to advise the COTVET board regarding the allocation of funds. This is done based on assessment of employment and income prospects (COTVET, 2011, p. 10).

### **b) Professional Education and Training**

#### **Government**

Polytechnics in Ghana are under supervised by the Ministry of Education. The other PET institutes like the colleges of nurses and midwives, the colleges of education and the colleges of agriculture are under the jurisdiction of the topic-related ministry. Therefore, the Ministry of Health supervises the colleges of nurses and midwives (Ministry of Health, 2020). The Ministry of Food and Agriculture oversees the colleges of agriculture, and the Ministry of Education is responsible for the colleges of education (Owahu Agricultural College, 2020; Ministry of Education Ghana, 2019, p. 54).

#### **Representation and Advisory Bodies**

Since polytechnics have been tertiary institutions since the establishment of the Polytechnic Act (Act 725) in 2007, the advisory bodies are the same as for universities. This means that the NCTE is mandated to advise the Ministry of Education regarding educational development matters (Gaulee, 2019, p. 157). Further advising bodies represent the NAB, which is in charge of the program and institutional accreditation, as well as the NABPTEX, which oversees the examinations, assessments and certifications (Gaulee, 2019, p. 158).

Other providers of professional education such as colleges have their own advisory bodies. For example, the Nursing and Midwifery Council of Ghana advises the Ministry of Health (Nursing and Midwifery Council of Ghana, 2020). This council is mandated to ensure that the education and training in the professions under its influence meet the highest standards (Nursing and Midwifery Council of Ghana, 2020).

## **3.3 Educational Finance of the VPET System**

The Ghanaian TVET system tends to be severely underfunded (Saskatchewan Polytechnic, 2016). Governmental investments in this type of education have fluctuated substantially in the last decade. As figures from 2009 to 2014 show, the expenditures as a percentage of the entire education sector budget fluctuated between 1.8 and 4.7% (Aziabah, 2018, p. 131). These numbers are comparatively low since in the same period spending in senior high school moved within a bandwidth of 14.8 to 22.4% related to total education expenditure (Aziabah, 2018, p. 131).

The recent improvements in Ghanaian TVET were mainly driven by privately sponsored projects. As an example, the project which ultimately led to the creation of the COTVET was under the patronage of the Japan International Cooperation Association (JICA) (Aziabah, 2018).

Since there are various types of technical and vocational institutes, there is not a single financing scheme which is applied universally. According to the World Bank, types of financing include funding of school-based TVE, public vocational training institutes, private vocational training institutes and informal apprenticeship training.

School-based TVE under the patronage of the Ministry of Education like the TTIs and the technical secondary schools largely source their funds from the government (Palmer & Darvas, 2014, p. 79). These funds are mainly used to cover expenditures for staff, investment activities, service activities and administrative activities (Palmer & Darvas, 2014, p. 79). Other funding sources represent the training fees charged or grants from non-governmental organizations (Palmer & Darvas, 2014, p. 79).

Financing of public vocational training providers outside of the sphere of influence of the Ministry of Education is less homogenous (Palmer & Darvas, 2014, p. 80). For institutes under the jurisdiction of the Ministry of Education, staff salaries are mostly covered by government grants (Palmer & Darvas, 2014, p. 81). Nevertheless, institutes like the NVTI generate a significant share of their revenue from trade-testing fees or the training of MCPs. These income sources account for approximately 25% of NVTIs' total budgets (Palmer & Darvas, 2014, p. 80).

Unsurprisingly, private vocational training institutes are mainly funded through school fees. The unpredictability of fees generated is a major constraint for most private institutes, because it affects planning capability and operation (Palmer & Darvas, 2014, p. 82). Some of these institutes receive additional funds from international organisations (Palmer & Darvas, 2014, p. 82). In most cases, the funds generated are insufficient to cover all expenses for instructors and training materials. Therefore, most institutes charge these costs to their students (Palmer & Darvas, 2014, p. 82).

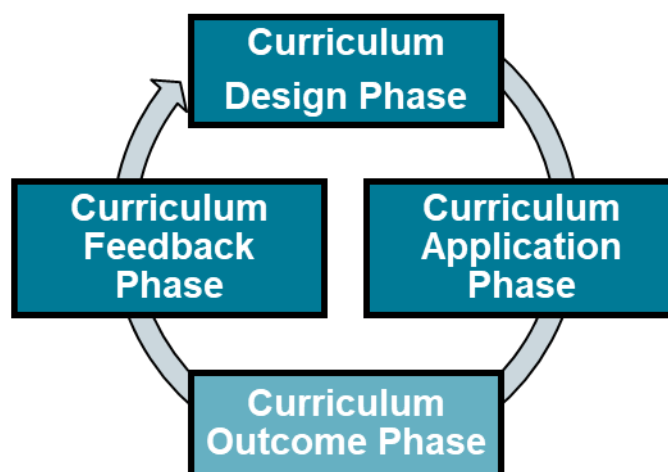
The traditional system of informal apprenticeship does not earmark any financial support from the government (Palmer & Darvas, 2014, p. 82). To start or finish the apprenticeship, students mostly have to pay fees to their MCPs (Palmer & Darvas, 2014, p. 82). Other fees depend on the craftspeople and can include cigarettes, soft drinks or a goat (Palmer & Darvas, 2014, p. 83). In 2007, the average starting and finishing fees were approximately \$85 and \$93, respectively (Palmer & Darvas, 2014, p. 83). The other fees charged individually were approximately \$160 on average. The amounts paid vary widely and are dependent on the region (Palmer & Darvas, 2014, p. 83). Furthermore, the apprentice typically contributes the tools needed for the apprenticeship (Palmer & Darvas, 2014, p. 83).

## 3.4 Curriculum Development

The curriculum is a central element for the functioning of a VPET system because it defines the framework and the (quality) standards for the education system. The development of a curriculum can be decomposed into a three-step process with a curriculum design, a curriculum application and a curriculum feedback phase. This theoretical concept is called the curriculum value chain (CVC) and is depicted in Figure 6 (for more details, see Renold et al. 2015; Rabeth & Renold, 2019).



**Figure 7: Curriculum Value Chain**



Source: Renold et al. (2015) and Rageth & Renold (2019).

In the curriculum design phase, the relevant actors decide upon VET curriculum content and qualification standards. Therefore, the discussion in the respective subchapter below focuses on the degree and the amount of stakeholder participation concerning curriculum design in Ghana. The curriculum application phase revolves around the implementation of the curriculum. Because learning environments differ substantially across countries, especially with respect to the prevalence of workplace learning, the curriculum application phase subchapter in this factbook focuses on those learning environments. Specifically, it addresses where learning takes place and whether the curriculum dictates both school and workplace learning or only one of the two. Finally, curriculum outcomes can be collected and analysed in the curriculum feedback phase. This evaluation process is important because it may render a more refined curriculum design than was possible in the first place.

### 3.4.1 Curriculum Design Phase

The design phase is crucial for the whole curriculum process. To ensure that the skills taught in the VPET programmes correspond to the needs of the labour market, experts from companies should be involved in defining the qualification standards and learning content of the curricula.

With the implementation of the COTVET, the curriculum design shifted from a vastly supply-driven to a demand-driven approach (Kwame Ansah & Kissi, 2013, p. 177). Therefore, the Industry Training Advisory Committee was introduced to ensure a direct link between the COTVET and the industry. The Industry Training Advisory is mandated to set and validate occupational standards for every trade and occupation. This is done by a regular interaction with industry experts. Based on these standards, the COTVET decides whether the curriculum of a specific TVET institute meets the requirements of the NTVETQF and whether it provides competency-based training (GIZ, 2016, S. 2). If so, the institute is officially accredited.

### 3.4.2 Curriculum Application Phase

The way in which a curriculum is implemented, especially with respect to learning environments, is important to achieve the intended learning outcome.

The implementation of TVET programmes reflects a major constraint in Ghana. A clear national framework regarding the implementation and management of curricula is absent, which often leads to an uncoordinated application (Kwame Ansah & Kissi, 2013, p. 177).

Additionally, after many years of poor allocation of resources, most TVET institutes lack proper equipment, training material and qualified instructors (Kwame Ansah & Kissi, 2013, p. 177). This leads to the acquisition of practical workplace skills being rather negligible while greater emphasis is placed on theoretical classroom training (Kwame Ansah & Kissi, 2013, p. 177). The focus of the training is mainly on passing examinations instead of obtaining competencies needed in the industry (Kwame Ansah & Kissi, 2013, p. 177). Therefore, graduates are normally theoretically well qualified but lack the necessary practical skills (Kwame Ansah & Kissi, 2013, p. 177).

### 3.4.3 Curriculum Feedback Phase

The curriculum feedback phase deals with the questions of whether and how educational outcomes are analysed. Based on this, the curriculum could be reworked and improved.

The Ministry of Education maintains an education management information system (EMIS) which some experts regard as advanced (infoDev, 2006, S. 4). The system contains data from the whole education sector. Data is collected through questionnaires which are sent to schools based on a sample (Palmer & Darvas, 2014, p. 95). Through this system, the Ministry of Education produces a report on a yearly basis which focuses on the TVET sector (Palmer & Darvas, 2014, p. 94). Nevertheless, the integration of TVET data within the EMIS seems to be in need of improvement. This is outlined in the newest Education Strategic Plan 2018–2030 in which the improved integration of TVET data in the EMIS database is declared as a measurement to enhance TVET governance (Ministry of Education, 2018, p. 42). Until now, EMIS has contained TVET figures like the number of TVET institutions, enrolment data, the percentage of junior high school graduates selecting TVET, the quality of equipment and the number of disability-friendly institutes (Ministry of Education, 2018, p. 96ff). Furthermore, other detailed data on TVET in Ghana is gathered by COTVET. These include the percentage of instructors undergoing annual internships in industry and the percentage of graduates in productive employment two years after graduation (Ministry of Education, 2018, p. 97).

## 3.5 Supplying Personnel for the VPET System (Teacher Education)

For TVET institutions under the supervision of the Ministry of Education, the GES is in charge of drawing up policies, strategies and guidelines regarding TVET teacher education (Grijpstra, 2015, p. 37). According to the Ghanaian Education Act 2008 and the COTVET Act 2012, the NTC is mandated to licence and register all TVET teachers in Ghana (Grijpstra, 2015, p. 37).

As described in Subchapter 0, there are colleges of education, which are dedicated to providing teacher education. Some of these colleges were given the additional function of training TVET teachers (Grijpstra, 2015, p. 38). Currently, only one college of education provides TVET teacher education to graduates from purely technical schools (Amedorme & Fiagbe, 2013, S. 254). All the other colleges prepare and train senior high school or secondary technical institute graduates (Amedorme & Fiagbe, 2013, S. 254). Further requirements for students from senior high schools to gain admission to a TVET teacher education are passing grades in English language, integrated science, mathematics and two electives, often in science or technical education areas. Additionally, applicants must obtain a sponsorship from a district director of education and show evidence that they have at least three years of post-qualification experience (Grijpstra, 2015, p. 51).

Colleges of education are not the only pathways to qualify for employment as a TVET instructor. The requirement depends on the TVET institute and especially the Ministry, which supervises the TVET

institute. Even though the Ministry of Education sets college of education completion as a requirement, other ministries also accept polytechnic graduates to their schools (Grijpstra, 2015, p. 47).

## 4. Major Reforms in the Past and Challenges for the Future

### 4.1 Major Reforms

Ghana has a long history of educational reforms under democratic as well as military governments (Aziabah, 2018, p. 45). Under Prime Minister Dr Kwame Nkrumah, the government passed the Accelerated Development Plan in 1951 (Adu-Gyamfi, Donkoh, & Addo, 2016, S. 166). The plan predominantly focused on the expansion of access provision on the secondary school level. This included the establishment of technical institutes in various areas of Ghana with the aim to increase the productivity of the economy (Adu-Gyamfi, Donkoh, & Addo, 2016, S. 167). After independence in 1957, the Education Act of 1961 represented the first comprehensive reform of the educational system taken over by the British colonialists. This reform was implemented to unite the country and enhance the relatively poor provision of education in northern Ghana (Aziabah, 2018, p. 46). Further reforms were subsequently introduced, but most of them mainly focused on primary schools, junior high schools and senior high schools (Akyeampong, 2005, S. 166). A significant reform of vocational education took place in 1987. The Education Reform Programme led to the inclusion of vocational and technical subjects at secondary schools (Akyeampong, 2005, S. 166). At junior secondary schools, students were to study pre-technical and pre-vocational subjects. Among others, these include subjects like metalwork, woodwork, sewing and papercraft (Akyeampong, 2005, S. 166). After the millennium, the Ghanaian government issued the first Education Strategic Plan, which set targets for the period between 2003 and 2015. The plan comprised objectives for every level of education and therefore included TVET. The first goal regarding TVET was to increase graduates' employability (Ministry of Education, 2003, p. 32). To accomplish this goal, the plan included the implementation of several measures in the field of quality assurance like the establishment of a national TVET council, the construction of new technical institutes and the enhancement of industry connection (Ministry of Education, 2003, p. 32). The diversification of technical and vocational curricula reflects the second goal of the plan (Ministry of Education, 2003, p. 32). This goal should be reached by implementing strategies like the review of TVET curricula and supporting a demand-driven approach in creating them (Ministry of Education, 2003, p. 32). In 2009, the plan was revised, and a new Education Strategic Plan was published with a timeframe from 2010 until 2015. The revised plan again contained strategies and work programmes for every cycle of education. Nevertheless, the plan mainly focused on TVET institutes in the realm of the Ministry of Education and therefore did not consider the various institutes, which are under the supervision of other ministries. For example, the plan was intended to update teaching and training material and therefore increase education quality at TVET institutes (Ministry of Education, 2012, S. 20). Furthermore, the access should be enhanced through the construction of new institutes (Ministry of Education, 2012, S. 16). In 2017, the Ministry of Education published another Education Strategic Plan, which set objectives for the period from 2018 to 2030 (Ministry of Education, 2018). The targets regarding TVET were similar to those of prior plans, but the most recent one is more comprehensive and focuses more on TVET. Again, the plan set various targets such as the increase of quality, the inclusion of minorities, an improved perception of TVET within Ghanaian society, a strong regulatory body and framework as well as improved financing (Ministry of Education, 2018, p. 41ff). These targets should be reached through the following measures (Ministry of Education, 2018, p. 41ff):

- Establish new TVET centres and upgraded facilities
- Introduce a demand-driven curriculum
- Increase female enrolment numbers
- Rebrand the TVET institutions and promote their importance
- Strengthen teachers' skills
- Promote competency-based training
- Strengthen the TVET management information system
- Develop curriculum based on occupational standards and identified gaps

## 4.2 Major Challenges

The VPET system in Ghana faces several challenges. One of the severest problems is the lack of funding. Ghana spends a relatively low share of its total governmental budget on education. In 2018, the percentage of governmental expenditure on education was 4% of the country's GDP, which is below the sub-Saharan African average of 4.6% (The World Bank, 2020). Approximately 3% of the governmental education budget is spent on TVET (Ministry of Education, 2018, p. 57). The insufficient funding has led to outdated facilities and training materials at most TVET institutes (Fu & Tu, 2013, p. 14). Private TVET institutes normally face even more problems in generating sufficient funds. Even though they have access to some governmental funding, most institutes face problems in meeting the requirements (Fu & Tu, 2013, p. 15). The lack of updated training materials and facilities has a negative impact on the prospects of TVET graduates. They face difficulties in finding formal employment and normally earn less than their academic counterparts due to the poor industry connection of their education (Aziabah, 2018, p. 87).

Another problem with the VPET system in Ghana is its poor perception within Ghanaian society. Most students and their parents regard the academic stream as superior, because so-called white-collar jobs are associated with prestige (Aziabah, 2018, p. 87). This leads to many pupils preferring to attend a senior high school even though the VPET stream would better suit their abilities (Fu & Tu, 2013, p. 16). Additionally, VPET students often face the stigma that they are junior high school dropouts and therefore were not eligible to attend a senior high school (Fu & Tu, 2013, p. 16).

As previously outlined, Ghanaian VPET institutes tend to be primarily school-based and therefore rather theoretical. The curricula at most VPET institutes do not meet the industry's needs (Saskatchewan Polytechnic, 2016, p. 3). This leads to the problem that most graduates do not possess the skills employers require (Fu & Tu, 2013, p. 15). This issue is currently being addressed through the focus on a more demand-driven curriculum design, which is one of the targets of the COTVET.

Another issue within the Ghanaian VPET system reflects the inability to hire skilled instructors (Saskatchewan Polytechnic, 2016, p. 3). VPET institutes are not able to compete with industry wages and therefore struggle to attract the right individuals for their education programmes (Saskatchewan Polytechnic, 2016, p. 3). Once such an individual is hired by a VPET institute, a further problem arises with keeping the instructor's knowledge updated and relevant to the industry (Saskatchewan Polytechnic, 2016, p. 3).

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**Herausgeber:** Chair of Education Systems CES  
**Gestaltung:** ETH Zürich  
**Fotos:** Photo by Jeremy Bishop on Unsplash

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