

The impact of free SHS on quality education: a cross-sectional study in the SHS in the greater ACCRA region

Ebenezer Rexford Amankwah¹

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ABSTRACT

Every nation's socioeconomic progress is greatly impacted by education. It improves one's quality of life, boosts one's self-confidence, and gives one the tools one needs to make smart decisions in life. This research study seeks to investigate the impact of free Senior High School (SHS) on quality education in the Greater Accra Region of Ghana. The researcher will conduct a cross-sectional survey of 405 teachers and administrators in the institutions.

The use of a simple random sampling method ensures that each participant has an equal chance to participate. Analyses of mixed-method study data were carried out. The socioeconomic and demographic aspects of the participants will be described using descriptive statistics such as frequencies and percentages. Multiple regression will be used to analyze the significant differences in the objectives of the study. The results from the study will provide data for researcher to provide an in-depth understanding of the impact of free senior high schools in Ghana.

Keywords: Sustainability, education, Ghana, FSHS

1. Introductions

In recent years, formal education has begun to receive new attention as it is seen as the foundation of development, poverty alleviation, and the country's human capital (Mohammed & Kuyini, 2020; Takyi et al., 2019) Yang & Guo, 2020.). The United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the Education for All (EFA) initiative, which aims to reduce adult illiteracy and provide primary education to all children (Guilherme, 2016; Onyefulu et al., 2014). Work for all Powers was initiated by the United

¹ Ebenezer Rexford Amankwah, Senior Training Manager, BGE Doctoral School of Business and Economics, Budapest Business University, e-mail: luckytrustman@yahoo.com

Nations. Inequality in access to secondary education is widespread in Sub-Saharan Africa and provides a foundation for young people to acquire the values, attitudes, skills and knowledge they need to be effective.

It is very important because it reduces poverty and increases wealth (Yang and Guo, 2020). UNESCO's 2015 report focuses on eliminating gender inequalities and increasing access to education for at-risk groups by ensuring they have access to education at all levels, including higher education. However, the education targets of the Education for All Goals and the Millennium Development Goals have not yet been achieved and are called “unfinished business” (Eck et al., 2016; UNESCO, 2015; World Bank, 2010)

2. Literature review:

The concept of free senior high school education in Ghana

When Ghana ratified the 1992 Constitution, it was intended to provide secondary and higher education to all citizens through all possible means, especially the teaching of free education (Constitution of the Republic of Ghana, 1992). Article 25(1b) of the 1992 Constitution of the Government of Ghana states that “education shall be free by all reasonable means and in particular through the promotion of free education.” What does the policy cover? According to Hameed (2017), it shows that “there are many days when students interrupt their education or drop out of school due to money” (Hameed, 2017). (FCUBE) to equalize the registration gap that has been widening for many years between rich and poor families in society (Essuman, 2018; Salifu et al., 2018; Takyi et al., 2019).

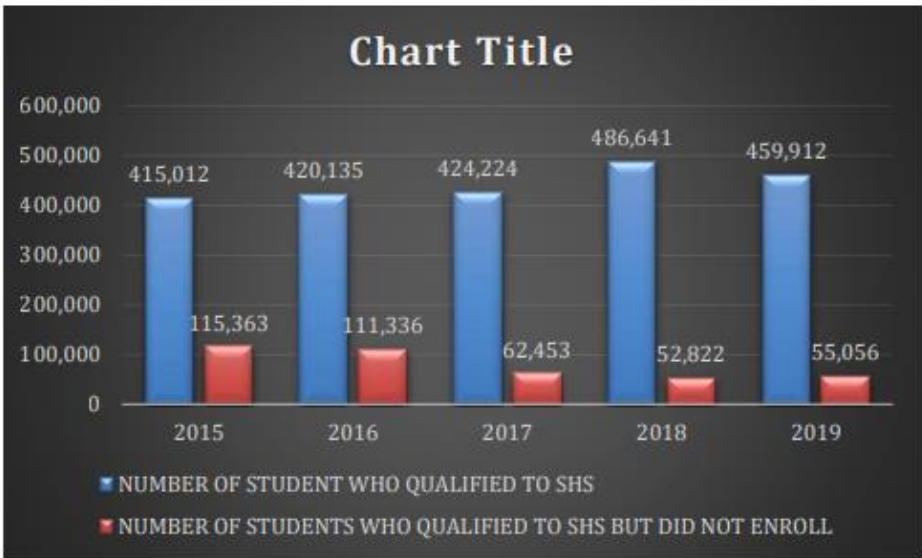
By law, the Free Compulsory Basic Education Programme (FCUBE) scheme can only provide free education to secondary schools and primary schools (primary schools have an enrolment rate of 85% and a graduation rate of 95%, but as of 2017 the enrolment rate is 95%). secondary school and high school is only 45% (Ministry of National Education, 2017b). Universal primary education cannot be achieved without access to quality higher education (Sutherland-Addy, 2008). According to Mohammed and Kuyini (2020), five (5) out of ten (10) children who start school for the first time do not attend senior high school (SHS). This is not due to lack of demand, but because low-income parents cannot afford senior high school education. In addition to the gender gap, data from the Ghana Statistical Service (GSS) shows that 20% of

students were able to successfully transfer to senior high school in 2017-2018 and in addition to the majority of poor students who cannot attend senior high school (SHS)

3. Objective of the study

The purpose of this study is to investigate the impact of the free senior high school program on quality education in the Greater Accra Region of Ghana.

Table 1: *The number of students who qualified for SHS against the number of students who qualified to SHS but did not enrol*



Source: Free SHS Ghana (2020)

The initiative has enabled approximately 1.2 million children to attend high school free of charge since September 2017. According to the above data, in the two years before the government introduced the free SHS programme, 440,469 students had registered for the Secondary Education Certificate Examination (B.E.C.E.). Among them, 415,012 students or 94.2% of the total qualified for SHS; As shown in Table 1 above, only 299,649 students attended SHS that year, and 115,363 students, or 27.8%, did not attend SHS that year. 461,009 Secondary School Students (JHS) enrolled and attended B.E.C.E. Of these, 420,135 students or 91.13% are enrolled in various SHSs in Ghana; of these, only 308,799 students enrolled and 111,336 students, or 26.50%, chose not to participate in SHS, as shown in Table 1. of these, 424,224 or 90.63% have been admitted to various SHSs in Ghana, but only 361,771

of these students are enrolled while the remaining 62,453 or 14.70% are not enrolled in SHS as shown in Table 1. Following the announcement of the programme, 521,811 Secondary School (JHS) students were enrolled in BEC, of which 486,641 students (93.26% of the total) were deemed essential to attend SHS in various forms in Ghana. As of 2019, 433,819 students were enrolled in SHS, while 52,822 students (10.90%) were not enrolled; of which 512,083 Secondary School (JHS) students are enrolled and studying in B.E.C.E. Of these, 459,912 students (89.81%) entered Ghana. SHS), respectively in Table 1, 404,856 students are enrolled and the remaining 55,056 students (11.90%) are not enrolled in SHS. Previous efforts such as FCUBE will exacerbate previous problems (such as finance and infrastructure). International education and free education is still an unrealized privilege for many children in Ghana. Many supported the plan as a way to reduce poverty and increase literacy, but others considered it impractical and unrealistic. Some groups believe that this law promotes education (Gunu, 2019).

Table 2: *Trend of enrolment at secondary Education (2015-2019)*

YEAR	TOTAL REGISTERED BECE CANDIDATES	NUMBER OF STUDENTS WHO QUALIFIED TO SHS	NUMBER OF STUDENTS ENROLLED	NUMBER OF STUDENTS WHO QUALIFIED TO SHS BUT DID NOT ENROLL	% OF UNENROLLED QUALIFIED SHS STUDENTS
2015	440,469	415,012	299,649	115,363	27.80
2016	461,009	420,135	308,799	111,336	26.50
2017	468,060	424,224	361,771	62,453	14.70
2018	521,811	486,641	433,819	52,822	10.90
2019	512,083	459,912	404,856	55,056	11.90

Source: Free SHS Ghana (2020)

From 27 to 28 May 2009, the academic year of SHS was extended from three to four years (World Bank, 2017). At the SHS level, the school year is now three years. 66 The Ghana Education Service (GES) has recruited 357 teachers to work in these schools since 2017 (Bonney, 2019). As of 2017, 95% of the students started primary school 75% started high school, and 75% of them passed the exam. In 2017, the enrolment rate of primary school students was 95 percent and the enrolment rate of high school students was 75 per cent. Of the

75% of students who passed the exam to graduate, 60% passed and 80% of those who passed were accepted into high school (700 SHS nationwide compared to 9000 JHS) (Duflo et al., 2017).

4. The concept of quality assurance in higher education

We cannot ignore the issue of quality assurance in our efforts to improve higher education. According to Okebukola (2010) in Asiyai (2013), quality assurance is considered “an umbrella concept for activities aimed at improving the product quality, processes and outcome impacts of the higher education system.” Asiyai (2013) believes that one of the key elements of quality assurance is the establishment of minimum standards that lead to the establishment of quality management policies and procedures that are carefully written and followed. These minimum requirements include qualified teachers, good teaching in schools, high expectations for student performance, and the establishment of stricter academic management (Asiyai, 2013). The right to education, the continuing number of high school graduates entering university each year, and the quality of university education. To be clear, this will inform stakeholders of university teachers to ensure that university education is good in terms of Ghana's implementation of the white SHS policy.

5. Cost of free senior high school in Ghana

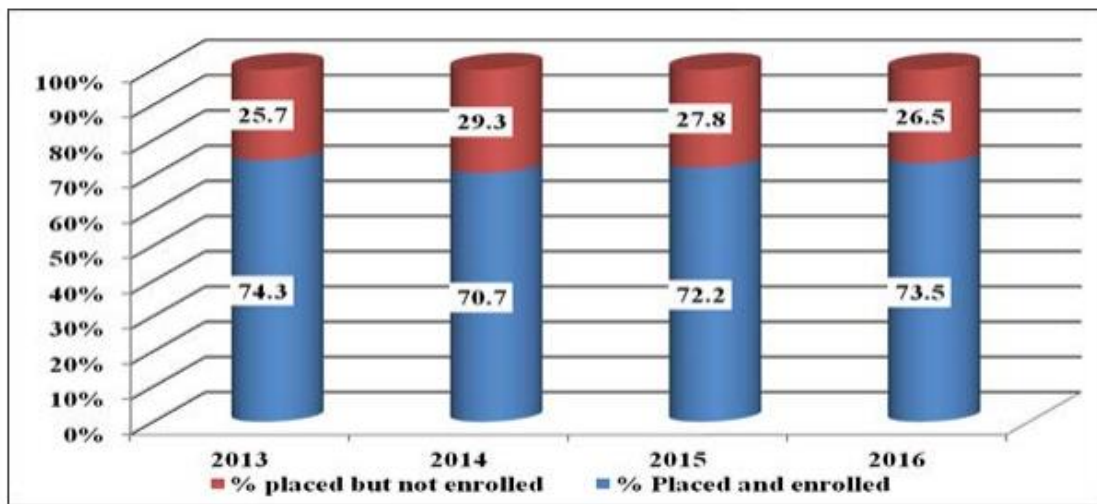
For example, the government's expenditure on education was GHc 9.08 billion in 2016 and GHc 10.5 billion in 2017 (Armah, 2021). In 2018 it was GHc 12.7 billion, in 2019 it was GHc 13.3 billion and in 2020 it was GHc 14.7 billion. Spending continues. The 2021 budget promises to spend more on education to promote secondary education (Armah, 2021) and provide equality and access to free secondary education to all Ghanaians living in Ghana. **GHC15.6 billion needs to be spent on education this fiscal year. (US\$95 million yearly-\$1.2 billion a year)**

The study by Babah, Frimpong, Mensah and Sakyi Darko (2020) revealed that there were many disparities in the enrolment and academic performance of students recognized in the BECE literature from 1998 to 2009. The research found that neighbourhood schools have difficulty attracting students, and some schools have too much money. Well-funded schools accept only the best applicants, making them more competitive than the least-funded schools

6. Benefits of the free senior high school programme (FSHSP)

In public high schools, this starts with fees for student days. Exams, sports, library, Student Representative Council (SRC), sports, culture, science and mathematics exams, media and communications technology (ICT) and additional tuition fees are all covered by the support of 320,488 days of state secondary school students. This includes 120,000 students progressing in the 2015-16 academic year. These actions led to an increase in enrolment from 393,995 in 2007-08 to 787,861 in 2015-16. Despite the increase in enrolment, most eligible and accepted candidates are still unable to enter secondary schools (see Figure 3).

Figure 1: *Enrolment trend in SHS from 2013 to 2016*



Source: MOE (2018)

7. Features Of the Free Senior High School Policy

Six (6) essential components of the Free Senior High School policy emerged from the thorough analysis of the literature (Abdul-Rahaman et al., 2018; Asher, 2018; Asumadu, 2019; Mensah, 2019; Mohammed & Kuyini, 2020; Salifu & Ayamba, 2018; Tamanja & Pajibo, 2019);

- Eligible beneficiaries of the policy are all Ghanaian students who are enrolled in public second-cycle institutions by the Computerized School Selection and Placement System (CSSPS) beginning from the 2017/2018 academic year.
- The Senior High School scholarship is for three (3) years.
- The Government of Ghana (GoG) will cater for all tuition fees of students in the Senior High School.

- Feeding costs for all admitted as boarding students at the Senior High School will be paid for by the Government of Ghana (GoG). Lunch would be provided for “day” students (those not admitted as boarding students) by the Government of Ghana.
- To achieve the goal of ensuring equity, 30% of places in elite schools are allocated to qualified applicants from the public Junior High School (JHS).
- The Government of Ghana will ensure the provision of infrastructure, buildings and furniture

8. Research questions

- What are the effects of Free Senior High School on the academic performance and learning outcomes of students enrolled in secondary schools?
- How has Free Senior High School influenced the quality of teaching and learning in secondary schools, including teacher capacity, curriculum delivery, and classroom dynamics?
- How do stakeholders, including students, parents, teachers, school administrators, and policymakers, perceive the impact of Free Senior High School on quality education, and what are their experiences and perspectives regarding its implementation?

9. Methodology

The methodology is the systems in which the study is used to achieve its objective. The population of the study was selected from the Senior High Schools in the Greater Accra Region of Ghana. A cross-sectional study was used for the research design. A cross-sectional study is observational studies that analyze data from a population at a single point in time. The study is a quantitative type and a simple random sampling technique was used due to the nature of the knowledge collection process, each respondent has an equal chance to participate in the study. This study utilized a self-structure questionnaire tailored to answer the study objective.

The sample size was calculated with the Cochran equation, resulting in a total of 405 respondents (teachers in the senior high schools in the Greater Accra Region of Ghana). Data analysis shall be done with descriptive statistics such as frequency and percentages to display the characteristics of the respondents. The multiple regression will be used to identify whether there's a significance between the independent and the dependent variable or not on the

objectives of the study. The American Psychological Association data collection guidelines were utilized, to protect the identity of each respondent.

10. Results and discussions

Socio-demographic Characteristics of the Respondents

Variable		Frequency	Percentage
Gender	Male	208	51.4
	Female	197	48.6
Age	21-30 years	78	19.3
	31-40 years	92	22.7
	41-50 years	116	28.6
	51-60 years	119	29.4
How long have you been working in the school	Less than 5 years	170	42.0
	6 to 10 years	116	28.6
	11 years and above	119	29.4

Table 1: The socio-demographic characteristics of the teachers indicate that most respondents were male, aged 51-60 years old who have worked in the senior high schools for less than 5 years.

Dependent Variable 1 How has the Free SHS program impacted classroom dynamics and student-teacher ratios?

- Increased student-teacher ratios
- Decreased student-teacher ratios
- No significant change

Model	R	R Square	F	B	T	P
Constant				1.046		
How long have you been working in this school	.855	.731	545.912	1.550	18.814	.000

Table 2: According to the findings, the R-value of 0.855 indicates a strong positive linear relationship. The R^2 of 0.731 means that approximately 73.1% of the variance in the dependent variable can be explained by the independent variable, which is a high value. The F value (545.912) suggests that the model fits the data well. The B value of 1.550 means that for every one-unit increase in the independent variable, the dependent variable increases by 1.550 units. The T value of 1.550 suggests that the independent variable is statistically significant. The P value of 0.000 means that the results are statistically significant. This means that there is an increase in student-teacher ratio due to the impact of the free SHS program in Ghana.

Dependent Variable 2: The Free SHS programme is more likely to fail after some time.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Model	R	R Square	F	B	T	P
Constant				.405		
How long have you been working in this school	.869	.756	1248.590	.474	35.335	.000

Table 3: According to the findings, the R-value 0.869 means that the predictor variables are strongly correlated with the outcome variable. The R^2 (Coefficient of Determination) = 0.756 indicates that approximately 75.6% of the variability in the dependent variable can be explained by the independent variables showing a good fit for the study. The F-value 1248.590, suggests that the model is statistically significant and the independent variables explain a significant portion of the variance in the dependent variable. The B value 0.474 represents the amount of change in the dependent variable for a one-unit increase in the independent variable, the dependent variable is expected to increase by 0.474 units. The T-value (35.335) indicates that the independent variable is a significant predictor of the dependent variable. The P-value of

0.000 indicates that the null hypothesis can be rejected, suggesting that the independent variable has a statistically significant effect on the dependent variable.

This means there is a high chance the free SHS program will likely fail after some time.

Dependent Variable 3: The Government has to be commended for introducing the programme.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Model	R	R Square	F	B	T	P
Constant				1.645		
How long have you been working in this school	.511	.261	142.473	-.241	-11.936	.000

Table 4: According to the findings, the R-value 0.511 indicates a moderate positive correlation. The R² value of 0.261 means that approximately 26.1% of the variability in the dependent variable. The F value of 142.473 suggests that the model is statistically significant. The B value of -0.241 indicates that there is a negative relationship between the independent variable and the dependent variable. The T value of -11.936, which is quite large in absolute terms, indicates that the coefficient is significantly different from zero. The P value of 0.000 suggests that the results are highly statistically significant. This means that although the respondents agree that the government should be commended on the introduction of the free SHS program, there is still room for improvement.

Dependent Variable 4: how would you rate the effectiveness of the Free SHS program in achieving its objectives?

- Very effective
- Somewhat effective
- Not effective
- Not sure

Model	R	R Square	F	B	T	P
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Constant				2.264		
How long have you been working in this school	.555	.308	179.708	.275	13.406	.000

Table 5: According to the findings, the R-value 0.555 indicates a moderate positive correlation. The R² value 0.308 means that approximately 30.8% of the variability in the dependent variable. The F value 179.708 is high, indicating that the model is statistically significant. The B value of 0.275 means that for every one-unit increase in the independent variable. The T value of 13.406 is very high, showing that the coefficient is statistically significant. The P value of 0.000 indicates that the results are highly statistically significant, meaning there is strong evidence against the null hypothesis. This means that the teachers think that the free SHS program is somewhat effective in achieving its objectives of providing quality education under the free SHS program.

Dependent Variable 5: Have you noticed any changes in student enrollment since the implementation of the Free SHS program?

- Yes
- No
- Not sure

Model	R	R Square	F	B	T	P
Constant				1.429		
How long have you been working in this school	.393	.155	73.741	.336	8.587	.000

Table 6: According to the findings, the R-value 0.393 suggests a moderate positive relationship. The R square 0.155 means that approximately 15.5% of the variance in the dependent variable. The F Value F 73.741 suggests that the model provides a better fit to the data. The B value 0.336 means that for each one-unit increase in the independent variable. The T value of 8.587 is high, indicating that the coefficient is significantly different from zero. The p-value of 0.000 shows that the results are statistically significant and the null hypothesis can be rejected. This means that the teachers are not sure whether there has been a change in the increase or decrease of student enrollment after the implementation of the free SHS program.

Access vs. Quality debate:

One of the central debates surrounding Free Senior High School is the balance between increasing access to education and maintaining or improving its quality. According to UNESCO, the implementation of Free Senior High School led to a significant increase in enrolment rates. Between 2017 and 2019, enrolment in Senior High School increased by over 36%.

Infrastructure and resources:

Free Senior High School has highlighted challenges related to inadequate infrastructure and resources in schools, which can impact the quality of education.

As of 2020, only 57% of schools in Ghana had access to electricity, and 32% had functional libraries, according to the Ghana Education Service. Additionally, there is an ongoing need to construct new classrooms to accommodate the increased enrolment.

Teacher capacity and training:

The capacity and training of teachers are critical factors influencing the quality of education. Discussions often revolve around whether teachers are adequately prepared to handle the diverse needs of students. In 2020, only 39% of teachers in Ghana had received in-service training in the past two years, according to the Ghana Statistical Service. This indicates a potential gap in teacher capacity-building efforts.

Curriculum adaptation:

Free Senior High School has prompted discussions about the relevance and adaptability of the curriculum to meet the changing needs of society. According to a study by the World Bank, the current curriculum in Ghana lacks emphasis on skills needed for the job market. Only 15% of students graduate with skills relevant to employers.

Equity concerns:

While Free Senior High School aims to promote equity in education by providing equal opportunities for all students, there are concerns about whether it effectively reaches marginalized populations. A report by the Africa Education Watch found that only 15% of schools in Ghana met the minimum standards for infrastructure and teaching quality, highlighting disparities in educational access and quality.

Monitoring and evaluation:

Effective monitoring and evaluation mechanisms are crucial for assessing the impact of Free Senior High School on quality education. The Ghana Education Service conducts annual school inspections, but challenges remain in ensuring consistent monitoring of educational standards across all schools.

Further research directions

- Conduct longitudinal studies to track the academic performance, graduation rates, and socio-economic outcomes of cohorts of students who benefited from Free Senior High School over an extended period. This could provide insights into the sustainability of the program's impact on educational attainment and socio-economic mobility.
- Investigate the trade-offs between expanding access to Senior High School education through Free Senior High School and maintaining or enhancing the quality of education. Explore how policymakers can balance the goal of increasing enrolment with ensuring that educational standards and learning outcomes are not compromised.
- Examine the extent to which Free Senior High School promotes inclusive education by addressing barriers to access for marginalized groups, including students with disabilities, girls, rural populations, and socio-economically disadvantaged students. Identify strategies to further enhance equity and inclusion in secondary education.

Summary

While Free Senior High School has made significant strides in expanding access to education in Ghana, ensuring quality education for all remains a complex challenge. Addressing infrastructure deficits, promoting equity, enhancing teacher capacity, and adapting the curriculum are key areas that require attention to improve the overall quality of education under the program.

11. Recommendation

recommendations for improving the impact of Free Senior High Schools on quality education in Ghana, along with relevant statistics were available:

1. Investment in Infrastructure:

- Allocate funds for the construction and renovation of school infrastructure to accommodate the increased enrolment.
- According to UNESCO, as of 2019, Ghana needed to construct 14,600 new classrooms to meet the demand for Free Senior High School education.

2. Teacher Training and Capacity Building:

- Provide regular training and professional development opportunities for teachers to enhance their skills in handling diverse classrooms.
- In 2020, only 39% of teachers in Ghana had received in-service training in the past two years, according to the Ghana Statistical Service.

3. Curriculum Review and Enhancement:

- Update the curriculum to include practical skills training and promote critical thinking and problem-solving.
- A study by the World Bank found that the current curriculum in Ghana lacks emphasis on skills needed for the job market, with only 15% of students graduating with skills relevant to employers.

4. Quality Assurance Mechanisms:

- Establish rigorous monitoring and evaluation systems to ensure adherence to educational standards.
- The Ghana Education Service conducts annual school inspections, but a report by the Africa Education Watch found that only 15% of schools in Ghana met the minimum standards for infrastructure and teaching quality.

5. Access to Learning Resources:

- Increase investment in learning resources such as textbooks, libraries, and ICT facilities.

- As of 2020, only 32% of schools in Ghana had functional libraries, according to the Ghana Education Service.

6. Community Engagement and Parental Involvement:

- Encourage parental involvement in school activities and decision-making processes.
- According to a UNICEF report, parental involvement in Ghanaian schools remains low, with only 23% of parents actively participating in parent-teacher associations.

7. Promotion of Excellence and Innovation:

- Recognize and reward excellence in teaching and learning, and encourage innovative approaches to education.
- Ghana's National Education Assessment reports that only 39% of students in Junior High Schools are proficient in English Language, indicating a need for innovative teaching methods to improve literacy rates.

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Faculty of Education, Southwest University, No. 2 Tiansheng Road, Beibei District, 400715, Chongqing, China

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