

## Sustainable Development Goals (SDGs) and Local Self-Government: Approaches and Strategies for Sustainable Education

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**Abstract** Sustainable development is a hot topic of current research, but there are deficiencies in sustainable development measures and need to be further studied. This study explores the approaches and strategies of sustainable development goals and local autonomy in realizing sustainable education. Through questionnaire survey and regression analysis, two hypotheses were proposed. Hypothesis 1: There is a correlation between the ability of local autonomy to contribute to the achievement of the SDGs; Hypothesis 2: There is a positive correlation between sustainable education approaches that contribute to the achievement of the SDGs; Hypothesis 3: Sustainable education methods and strategies are mediating factors for sustainable development, and the relationship between local autonomy and sustainable development is enhanced. The results show that SDG and local autonomy have a significant positive impact on sustainable development, and the control variables such as education investment, local economic development, educated population, and teachers are the main influencing factors. Among them, assumptions 1 and 2 have a greater degree of impact, and hypothesis 3 has the least degree of impact. Therefore, local governments should strengthen self-governance and propose sustainable education strategies to promote sustainable development.

**Keywords:** • sustainable development • goals • local self-government • sustainable education • pathways • strategies

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## **1 Introduction**

### **1.1 Questions**

The remarkable progress of sustainable development in education highlights the importance of sustainable education. This concept gives a new era mission to education, emphasizing that education should be committed to the sustainable development of people and society and continue to carry out reforms. First, SDG provides a critical means of addressing global barriers and dilemmas. Currently, countries face many challenges in sustainable development, such as environmental problems, social inequality, and economic instability. By introducing the concept of sustainable development, education becomes an important tool to address these challenges, developing talents with a global perspective and problem-solving skills. Second, education throughout the life cycle is recognized as a key means of driving global sustainable development. Sustainable education is a one-time training and learning process throughout the life cycle. This learning model helps cultivate people's habit of continuous learning, so that they can adapt to the continuous changes in society and environment, and better participate in sustainable development. The highlights in Agenda 21 of the 1992 World Conference on Environment and Development and the United Nations Educational, Scientific and Cultural Organization's (UNESCO) Rethinking Education in 2017 demonstrate education's important role in promoting global sustainable development. This responsibility is not limited to providing education for the current society but also includes taking more responsibility for the sustainable development of the future society. The future of education should evolve in the direction of promoting social equity, justice, mutual respect, and other sustainable development goals. Finally, more and more countries recognize the urgency of developing sustainable education and are actively undertaking a series of educational reforms guided by this philosophy. These reforms aim to create a more comprehensive education system that enables individuals and societies to achieve sustainable economic, social, and environmental development. Therefore, sustainable development has become a key value in promoting the reform and development of education, laying a sustainable foundation for the future of the global society (Alam & Forhad, 2023). Local autonomy can more accurately reflect the educational needs of the region, can more flexibly adjust education plans to meet local needs, and can promote community participation and democratization of education management in the region to promote a more comprehensive and participatory sustainable education. In this context, this paper researches the sustainable development goals and the ways and strategies of local self-government to achieve sustainable education, with a view to contributing to the sustainable development of education.

## 1.2 Implications of the study

It is of great theoretical and practical significance to the research on sustainable development goals and local autonomy to achieve sustainable education. Theoretically, the study of the SDG and local autonomy to achieve sustainable education requires the integration of knowledge from multiple disciplines such as education, sociology, political science, economics, etc., which not only helps to establish a comprehensive theoretical framework and promotes interdisciplinary and knowledge sharing between different fields, but also helps to promote the evolution of educational theories to make them more in line with the requirements of sustainable development. In a practical sense, in-depth research can guide governments and local governments in formulating and adapting education policies, understanding how the SDGs are interrelated with local autonomy, and formulating more realistic and sustainable policies for development needs. At the same time, studying the relationship between the SDG and local autonomy can provide practical strategies for local self-government institutions to implement sustainable education, improve the implementation capacity of local self-government, and better meet the needs of local communities.

## 1.3 Sustainable development goals and strategies

Sustainable development is to ensure the sustainability of education, optimize and education structure to play its role in education, to achieve the expected goals of education, the development strategy is combined with the development goals to formulate long-term pricing, the main thing is to improve the level of education, for the sustainable development of education to point out the direction, faster to achieve the expected goals of education, the expected goal of education is to improve the social and economic level, optimize the social structure, and cultivate comprehensive talents, so it is necessary to combine the sustainable strategy for the formulation of methods and measures, and better realize the steps of education and sustainable development, mainly to conduct a survey without problems, understand the shortcomings in development, and combine educational resources for the implementation of educational measures, and the implementation of educational measures should have a high degree of rationality ensures the expected achievement of educational goals.

In view of the above analysis, the following hypotheses are proposed, which are as follows:

Hypothesis 1: There is a correlation between the ability of local autonomy to contribute to the achievement of the SDGs;

Hypothesis 2: There is a positive correlation between sustainable education approaches that contribute to the achievement of the SDGs;

Hypothesis 3: Sustainable education methods and strategies are mediating factors for sustainable development, and the relationship between local autonomy and sustainable development is enhanced.

## **2 Related concepts**

### **2.1 Sustainable education**

Sustainable education is a lifelong learning that aims to adapt to rapid social, economic, and technological changes by continuously updating and upgrading individuals' knowledge, skills, and professionalism. This philosophy emphasizes that learning is not just confined to the early stages of education but should be carried out throughout life. Through lifelong learning, individuals can continuously adapt to new information, technology, and development trends at different stages of their careers to stay competitive. Sustainable education emphasizes practicality and flexibility, and moves away from traditional education's rigid segregation of subjects and time constraints. It encourages learners to according to their own needs and interests to meet the different needs of individuals at both professional and personal levels. This philosophy holds that education should be relevant to real life and can be directly applied to work and society so that it can better solve practical problems and meet challenges. On the other hand, sustainable education emphasizes the holistic development of society, believing that a society full of lifelong learning opportunities can better cope with a rapidly changing environment (Aldhafeeri & Alotaibi, 2023). By providing opportunities for all groups in society, SED helps to reduce the knowledge gap and promote the holistic development and inclusive growth of society. This philosophy holds that education is an essential driving force for social progress and sustainable development (Babou, Selmaoui, Alami, Benjelloun, & Zaki, 2023), not only for the development of the individual but also for the prosperity of the whole society. SED sees education as a continuous adaptation and innovation process, providing individuals and societies a way to remain competitive and promote holistic development in a changing world (Baltador & Grecu, 2023).

### **2.2 Sustainable development goals and sustainable education**

There is a strong link between SDG and sustainable education. First, the SDG are 17 goals proposed by the United Nations to address global social, economic and environmental challenges, including poverty eradication (Boehnert, Sinclair, & Dewberry, 2022), zero hunger, and quality education. Among these goals, quality education is considered the cornerstone of sustainable development and is directly related to sustainable education. Specifically (Burow, 2023), the fourth SDG is to "ensure access to inclusive, equitable and quality education for all and promote lifelong learning opportunities". This goal clarifies the critical role of education in achieving sustainable development. As a means to achieve this goal, SED

contributes to universal access to education and improving the quality worldwide by providing adults with flexible learning and opportunities to enhance their knowledge and professional development. SED contributes to achieving SDG (Campbell & Speldewinde., 2022) and is closely linked to other goals. For example, by providing knowledge and skills related to sustainable development, SED can contribute to sustainable urban and community development, sustainable economic growth, and social equity and inclusion. Education for sustainability plays a vital role in achieving the Sustainable Development Goals. By fostering a lifelong sense of learning and upgrading people's skills, SED provides substantial support for building more equitable, inclusive and sustainable societies. This strong connection reflects the centrality of education in driving the global sustainable development agenda (Cappelletti, Grilli, & Santoro, 2023).

### **2.3 Local self-government and sustainable education**

There is also a strong link between local autonomy and sustainable education. Local governments play a key role in formulating and implementing education policies, managing and supervising the education system at the local level, and ensuring the rational allocation of educational resources and the effective provision of educational services. In this process, local governments can support and promote sustainable education development by formulating targeted policies to meet the needs of local residents. The relationship between local self-government and sustainable education is also reflected in the provision and support of local governments for lifelong learning opportunities (Colás-Bravo & Quintero-Rodríguez, 2023). Local governments can provide more opportunities for residents to study by setting up community learning centers, vocational training institutions, etc. This helps upskill residents and make them more competitive in the job market while contributing to the community's overall development (Corpuz, San Andres, & Lagasca, 2022). Overall, the link between local autonomy and sustainable education is reflected in the management and leadership role of local governments in the field of education. Local governments directly influence and promote the implementation of SED by formulating policies, providing resources, and promoting cooperation. This close cooperation will help to promote the concept of lifelong learning at the local level, improve the comprehensive literacy of residents, and thus promote the sustainable development of society (Gayatri, Sit, Chen, & Li, 2023).

### 3 Research methodology

#### 3.1 Variable selection

It is essential to understand the role of the SDG and local self-government in achieving SED. Studying the SDG's and local autonomy's role in achieving sustainable education requires a deep understanding of their specific impacts on education systems and society (Guberman, 2022). The questionnaire survey was used to gain insight into participants' perceptions and expectations of the SDG and local self-government about sustainable education by collecting a wide range of opinions and perspectives. After obtaining the corresponding measurement data, the regression equation was used for analysis. Table 1 below shows the acquisition of questionnaire variables.

**Table 1:** Variables of the questionnaire were obtained

Variable	Symbol	Variable data measurements
Sustainable education achievement	Be	The questionnaire is scored on a scale of 1 to 5, with 1 being the lowest and 5 being the highest
Sustainable Development Goals	Sdg	The questionnaire is scored on a scale of 1 to 5, with 1 being the lowest and 5 being the highest
Local self-government	Loa	The questionnaire is scored on a scale of 1 to 5, with 1 being the lowest and 5 being the highest
Invest in education	lnEdi	Education points out that logarithmic calculations are taken
Local economic development	Lngdp	Calculated as the logarithm of Gross Domestic Product (GDP) .
Educated population	Lnedp	The local educated population is calculated logarithmically
Faculty	Lnfac	The number of locally registered teachers is calculated as logarithmic

#### 3.2 Research models

Among the variables, the achievement of sustainable education is the dependent variable. SDG and local autonomy are independent variables. The controlling variables are education investment, local economic development, educated population, and teacher capacity. As a result, the research model is as follows:

$$Ser = \beta_0 + \beta_1 \times Sdg + \beta_2 \times Loa + \beta_3 \times lnEdi + \beta_4 \times Lngdp + \beta_5 \times Lnedp + \beta_6 \times Lnfac + \epsilon \quad (1)$$

Ser is the dependent variable for realizing sustainable education, Sdg Loa is the independent variable, and lnEdi, Lngdp, Lnedp, and Lnfac are the control variables.  $\beta_0$  is the intercept term.  $\beta_1$  to  $\beta_6$  are the regression coefficients of the respective independent variable, indicating its effect on the dependent variable.  $\epsilon$  is an error term representing the part of the model that cannot be interpreted.

### 3.3 Sample collection

In the course of the survey, a total of 300 questionnaires were distributed targeting civil servants and education practitioners. In the process, 280 valid questionnaires were successfully recovered, which provided a sufficient database. Among them, 2 samples were lost, mainly due to incomplete data or garbled electronic information. The questionnaire is divided into 3 dimensions and 7 indicators, and the score of each indicator is 1–5 points, the higher the score, the more serious the problem. The questions in the questionnaire were reviewed by more than 2 experts, and the validity and reliability were 0.73 and 0.79, which were higher than the standard of 0.7, and subsequent data analysis could be carried out. The descriptive statistics of the variables are shown in Table 2 below.

**Table 2:** Descriptive statistics

Hypothesis	Variable	N	Mean	Standard deviation	Maximum	Minimum
Hypothesis 1	Be	280	3.2	0.8	5	1
	Sdg	280	3.0	1.0	4.5	1.5
	Loa	280	3.5	0.7	5	2
Hypothesis 2	InEdi	280	4.8	0.4	3	1.2
	Lngdp	280	4.0	0.6	3.2	1.3
Hypothesis 3	Lnedp	280	3.5	0.9	3.8	1.2
	Lnfac	280	3.2	0.5	5	1.5

From the data analysis in Table 2, it can be seen that the score is between 1–5 points, and the overall score is greater than 3 points, indicating that the score is better, and the variance between the maximum score and the minimum score is smaller, indicating that the whole data is reasonable.

## 4 Analysis and results

The correlation analysis of the data in Table 2 is as follows.

### 4.1 Benchmark regression analysis

**Table 3:** Regression analysis

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Be	0.623*** (2.38)	0.548** (3.059)	0.501*** (3.220)	0.394*** (4.286)	0.307*** (3.214)
Sdg	0.321* (1.843)	0.315* * (1.102)	0.242** (0.178)	0.203 ** (0.952)	0.118* * (1.192)
Loa	-	0.356* (1.523)	0.021* (0.105)	0.452** (2.134)	0.297** (2.967)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
lnEdi	-	-	0.189 (0.916)	0.045 * (0.341)	0.510** (2.487)
Lngdp	-	-	-	0.394* (1.652)	0.260 * (1.287)
Lnedp	-	-	-	-	0.185* (0.987)
Lnfac					0.251*(0.852)
constant	2.105*** (1.251)	1.908 *** (0.862)	0.732*** (0.445)	1.523 *** (1.098)	0.976*** (0.641)
N	280	280	280	280	280
R2	0.482	0.357	0.295	0.213	0.178
Adj-R2	0.465	0.331	0.267	0.182	0.148
F	30.412***	20.176***	15.921***	11.342***	9.512***
Carbon copy	1.983	2.065	2.147	2.292	2.351

In the regression analysis in Table 3, in model 1, the SDG and local autonomy were taken as independent variables, and it was found that the SDG were positively correlated with the achievement of SED (coefficient 0.623, t-value 2.38, p-value <0.001). At the same time, there was a positive correlation with local autonomy, but the significance was slightly lower (coefficient was 0.321, t-value was 1.843, p-value was <0.05). This suggests that the SDG still significantly impact the achievement of SED when local autonomy is taken into account. In Model 2, educational input is gradually introduced as an additional independent variable. The results showed that education investment was positively correlated with the realization of sustainable education to a certain extent (coefficient 0.356, t-value 1.523, p-value <0.05). This suggests that educational inputs explain the variability in achieving sustainable education. In models 3 to 5, local economic development, educated population, and teacher capacity continue to be added as independent variables. The model's explanatory power gradually increases with the increase of independent variables. Local economic development and educated population showed a positive correlation in the model, while the influence of teachers was relatively small.

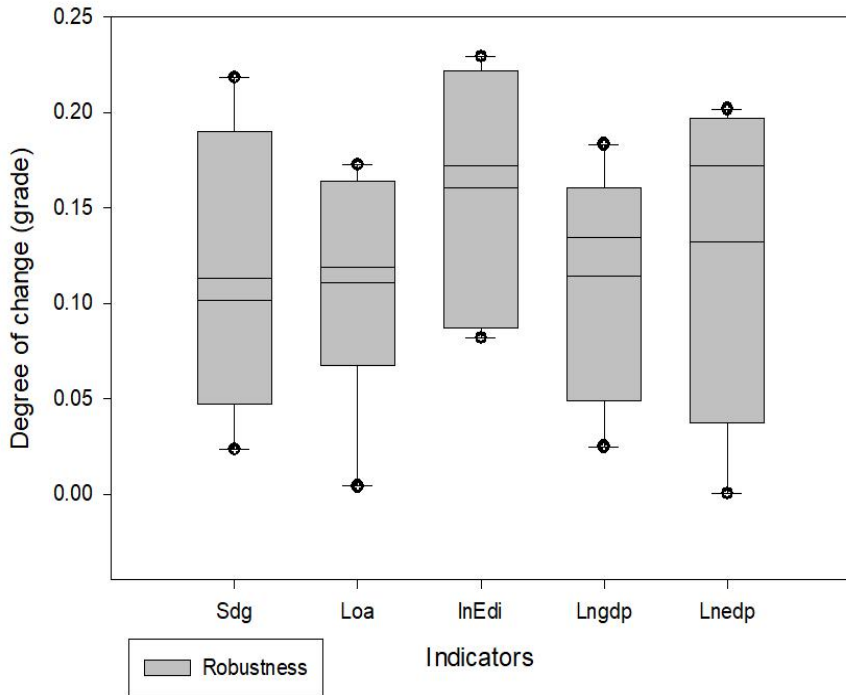
## 4.2 Robustness analysis

In order to verify the validity of the results, it is necessary to analyze the robustness of each indicator. Robustness analysis is performed to verify that the study's results still hold in the face of deviations or anomalies assumed by the model. Here, the robustness analysis of the independent variables of the SDG and local autonomy is performed by ordinary least squares (OLS) to ensure the robustness of the model. The results show that the regression coefficient and significance test calculated by selecting the independent variables of sustainable development goals\* local autonomy are in good agreement with the results of the original model, indicating that the model still maintains robustness in the face of



heteroskedasticity. The robustness of the model was verified, and confidence was raised in interpreting the impact of the SDG and local autonomy on achieving sustainable education. The specific results are shown in Figure 1

**Figure 1:** Changes in the robustness of each indicator



As can be seen from the contents of Figure 1, the amplitude of the change of each value is small, within 0.25, indicating that the integrity of the value is good and reasonable, and the analysis results have high accuracy.

### 4.3 Summary of analysis results

Based on the regression analysis results, it can be concluded that the SDG and local autonomy (Loa) have a significant positive impact on achieving sustainable education. In the baseline regression analysis, Model 1 showed a significant positive correlation between the SDG and local autonomy on the achievement of SED, and the SDG still have a significant impact on the achievement of SED even when local autonomy is considered. Subsequent model analyses included control variables such as education input, local economic development, educated

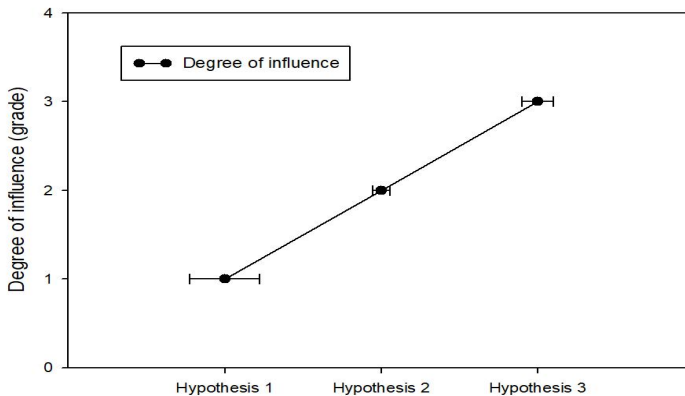
population, and teacher strength. The results show a positive correlation between education investment and the realization of sustainable education to a certain extent, indicating that increasing education investment can provide additional support for realizing sustainable education. In addition, local economic development and educated population also show a positive correlation in the model, suggesting that sustainable education will likely be more successful in regions with more developed economies and higher educated populations. However, teachers' impact on SED achievement is relatively tiny. Therefore, the overall results of the analysis are summarized as shown in Table 4.

**Table 4:** Summary of study results

Hypothesis	Variable	Whether it is true or not
Hypothesis 1	Be	Significant impact, established
	Sdg	Significant impact, established
	Loa	Significant impact, established
Hypothesis 2	lnEdi	Significant impact, established
	Lngdp	Significant impact, established
Hypothesis 3	Lnedp	Significant impact, established
	Lnfac	Significant impact, established

As can be seen from Table 4, all assumptions are true, and the variables have a significant impact on the SDGs, as shown in Figure 2.

**Figure 2:** Assumptions are established



As can be seen from the contents of Figure 2, hypothesis 1 has a large degree of validity, followed by hypothesis 3, and hypothesis 2 has the least establishment, indicating that the degree of influence of local autonomy and sustainable education strategy is the largest, followed by sustainable education methods. Therefore, local governments should strengthen self-governance and come up with more feasible strategies to support it.

## **5 Discussion of approaches and strategies for achieving sustainable education for the sustainable development goals and local self-government**

Empirical research shows that the SDG and local autonomy are essential factors for achieving sustainable education. Therefore, discussing ways and strategies to achieve sustainable education in the context of achieving the SDG and local autonomy is possible.

### **5.1 Approaches and strategies to achieve SED in the context of the sustainable development goals**

#### **5.1.1 Integrate education with the sustainable development goals**

Integrating education with the SDG is one of the ways to achieve sustainable education. Integrating SDG into curriculum design allows educational institutions to review and update curricula to ensure that SDG concepts and principles are permeated across the entire subject spectrum. All levels, from early education to higher education, should reflect the core values of sustainable development.

Secondly, the adoption of interdisciplinary pedagogical approaches also contributes to the achievement of sustainable education. The SDG cover many environmental, social, economic, and more areas. By adopting an interdisciplinary approach to teaching and learning, educators can help students make connections between different disciplines and develop a comprehensive understanding of sustainable development, leading to their sustainable educational development. Through the integrated application of these strategies, the education system can ensure that students are closely integrated with the SDG in their educational curricula and activities, thereby providing a comprehensive SED that equips them to understand and practice the core principles of sustainable development.

#### **5.1.2 Ensure inclusiveness and equity in education**

The SDG concept of "no one left behind" can be achieved by ensuring inclusiveness and equity in education. The key is to build inclusive education systems that enable all students, regardless of socioeconomic background, gender,

ethnicity, disability status, or other characteristics, to have equal access to quality education. education policymakers need to ensure that the needs of different groups are taken into account in the policymaking process and that measures are developed to promote inclusion and equity. This includes ensuring equitable distribution of educational resources, providing facilities specifically to support students with disabilities, and developing gender equality policies to eliminate gender disparities(Lohmann & Goller, 2023).In addition, the provision of differentiated support can also help to further sustainable education. Schools and educational institutions should adopt individualized and differentiated teaching methods to meet the needs of different students. This includes tutoring, special education services, language support, or other adaptive measures to ensure that each student can achieve their maximum potential(López, 2022).

## **5.2 Approaches and strategies for achieving sustainable education in the direction of local self-government**

### **5.2.1 Promote localized education policies**

To achieve sustainable education, local self-government institutions can better tailor their education programs to local realities through localized education policies. Through an in-depth understanding of local social, cultural, and economic characteristics, local self-government institutions can develop more practical education policies. This localized approach makes education programs more targeted and responsive to local needs. The adoption of localized education policies should take complete account of local diversity. There are differences in culture, language etc. in different regions, and through localization, local self-government institutions can tailor educational content to ensure that students better understand and accept what they are learning. Improve access to education and reduce barriers to learning through cultural differences.

In addition, localized education policies can better respond to local social issues and challenges. Local self-government bodies can develop educational programs based on local realities, aligning the SDG with local social development needs. For example, in response to the environmental problems or economic challenges of a certain region, the development of educational programs to develop students' ability to solve local problems.

Through localized education policies, local self-government institutions can better adapt to local needs, improve the effectiveness of education, and promote the comprehensive development of sustainable education at the local level. This localized approach to education contributes to achieving the Sustainable Development Goals and creates a more conducive and impactful educational environment for local communities.

### **5.2.2 Increase community participation**

The local self-government bodies can promote the participation of families and communities in education by establishing close partnerships with communities. Community participation can be achieved through the establishment of regular home-school linkages. Parent conferences, parent seminars, and school open days provide a platform for families to learn about their students' learning and participate in educational decision-making. This can help to establish close communication between the family and the school, and form a common understanding of the development of the student. At the same time, local self-government bodies can provide information on ESE goals and implementation programmes by establishing community educational information centres or advisory centres. This makes it easier for community residents to learn about educational policies and goals and provides them with opportunities to participate in educational decision-making. Community residents can better integrate into the decision-making process by expressing their views and expectations about education through participation in focus groups, soliciting opinions, and community voting (Hencke & Silva, 2022).

The active participation of families and communities promotes the holistic development of students in school and society. This partnership helps to build trust between schools and communities and creates synergies to work together to achieve the goals of sustainable education (Hofman-Bergholm, 2022). With the community's support and participation, local self-government bodies can more effectively promote educational reform, make it more relevant to local realities, and provide students with a more productive experience (Ilie & Quintana, 2023).

### **5.2.3 More flexible resource allocation model**

To achieve sustainable education, local self-government institutions can start with a more flexible resource allocation model. With more flexible allocation of resources, local self-government bodies can respond more precisely to local educational needs. This means that the construction and improvement plans of educational facilities can be flexibly adjusted according to the actual situation, ensuring that the resources are genuinely in line with the local development direction and the learning needs of students (Kiraz Albakoush & Köprülü, 2023). Adopting a more flexible resource allocation model allows local self-government institutions to better plan their education investments. With a deep understanding of local economic conditions, social needs, and demographics, local self-government bodies can develop targeted education budgets and investment plans. This individualized planning ensures the maximum use of resources and increases the effectiveness of sustainable education (Leone, 2022). In addition, a more flexible resource allocation model allows local self-government institutions to respond flexibly to emergencies and changes. In the face of natural disasters,

social changes or other emergencies, educational resources can be mobilized more quickly through flexible resource allocation to protect students' educational rights and ensure the continuity and sustainability of education. A more flexible resource allocation model provides more opportunities for local self-government bodies to tailor their needs to local education. By gaining an in-depth understanding of the local situation and flexibly adjusting the allocation of resources, local self-government institutions can better promote sustainable education and provide more relevant and targeted education services to local communities.

## **6 Conclusions and shortcomings**

### **6.1 Conclusion**

Based on the empirical conclusions of the study, the study concludes as follows: The SDG and local autonomy are key factors in promoting SED, and governments and local governments should increase their support and investment in these two areas. Second, increased investment in education is critical to the success of sustainable education, especially in disadvantaged groups and areas. Therefore, policymakers should develop measures to ensure the rational allocation of resources and that education is inclusive and equitable. Finally, the study proposes specific ways and strategies to achieve sustainable education from the two directions of sustainable development goals and local autonomy. First, governments should increase their support and investment in the SDG and local autonomy to ensure they play a vital role in the education system. At the same time, it is necessary to strengthen investment in education and ensure the rational distribution of financial resources, especially for disadvantaged groups and poor areas. In addition, the inclusion and equity of education can be emphasized by integrating education with the SDG to ensure that all students have access to educational opportunities. Local self-government institutions should formulate policies that align with local needs and cultural characteristics in promoting localized education policies. Increasing community involvement is also key to encouraging active participation in education to meet local needs better. It is recommended to adopt scientific and technological means to promote the intelligent allocation of educational resources and ensure that resources are more accurately allocated to the places where they are needed. There are still some shortcomings in this study, which are mainly reflected in several aspects: 1) Although the study has yielded some useful empirical conclusions, there are still some gaps in understanding the detailed role of the SDG and local autonomy in SED, more effective management of education inputs, and the feasibility of specific strategies, and further research is needed to refine and enrich the knowledge base in this area. 2) In subsequent studies, further research on the relationship between these factors will need to be further strengthened to understand their specific impact on achieving SED more fully.

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**Conflict of interest:**

The authors declare no conflicts of interest.

**References:**

- Alam, G. M., & Forhad, M. A. R. (2023). The impact of accessing education via smartphone technology on education disparity-A sustainable education perspective. *Sustainability*, 15(14), 10979.
- Aldhafeeri, F. M., & Alotaibi, A. A. (2023). Re-imagining education for successful and sustainable digital shifting. *Sage Open*, 13(1). doi: 10.1177/21582440231154474
- Babou, A. I., Selmaoui, S., Alami, A., Benjelloun, N., & Zaki, M. (2023). Teaching biodiversity: Towards a sustainable and engaged education. *Education Sciences*, 13(9), 931.
- Baltador, L. A. & Grecu, V. (2023). Developing sustainable entrepreneurs through social entrepreneurship education. *Studies in Business and Economics*, 18(2), 37-47.
- Boehnert, J., Sinclair, M., & Dewberry, E. (2022). Sustainable and responsible design education: Tensions in transitions. *Sustainability*, 14(11), 6397.
- Burow, O. A. (2023). Education after corona seven steps to sustainable school and teacher education. *Padiatrie Und Padologie*, 58(SUPPL 1), 78-80.
- Campbell, C., & Speldewinde, C. (2022). Early childhood STEM education for sustainable development. *Sustainability*, 14(6).
- Cappelletti, G. M., Grilli, L., Russo, C., & Santoro, D. (2023). Benchmarking sustainable mobility in higher education. *Sustainability*, 15(6), 5190.
- Colás-Bravo, P., & Quintero-Rodríguez, I. (2023). YouTube as a digital resource for sustainable education. *Sustainability*, 15(7), 5687.
- Corpuz, A. M., San Andres, T. C., & Lagasca, J. M. (2022). Integration of environmental education (EE) in teacher education programs: Toward sustainable curriculum greening. *Problems of Education in the 21st Century*, 80(1), 119-143.
- Gayatri, P., Sit, H., Chen, S., & Li, H. (2023). Sustainable EFL blended education in Indonesia: Practical recommendations. *Sustainability*, 15(3), 2254.
- Guberman, M. (2022). The Amazon: Thinking, education and sustainable land use. *Disparidades-Revista De Antropologia*, 77(2).
- Hencke, J., & Silva, G. R. (2022). Education for sustainable development x environmental education: Crossings from "major science" perspective. *Remea-Revista Eletronica Do Mestrado Em Educacao Ambiental*, 39(1), 73-93.
- Hofman-Bergholm, M. (2022). Storytelling as an educational tool in sustainable education. *Sustainability*, 14(5), 2946.
- Ilie, C., & Quintana, J. C. M. (2023). Is sustainable management education contributing to gender equality?. *International Journal of Management Education*, 21(3), 100886.

- Kiraz, A., Albakoush, I. A. A., & Köprülü, F. (2023). Perceptions of lecturers on sustainable environmental education. *Synesis*, 15(4), 124-140.
- Leone, C. (2022). A private law theory for sustainable legal education?. *German Law Journal*, 23(6), 881-890.
- Lohmann, J., & Goller, A. (2023). Physical education teacher educators' subjective theories about sustainability and education for sustainable development. *International Journal of Sustainability in Higher Education*, 24(4), 877-894.
- López, L. T. B. (2022). Education, globalization innovation, quality and sustainable development. The role of higher education. *Estudios Del Desarrollo Social-Cuba Y America Latina*, 10(2), 342-348.