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## VALUE-ORIENTED PRINCIPLES UNDERLYING THE INDICES OF GENDER DEVELOPMENT IN THE EDUCATIONAL SPHERE

*This study examines the critical role of value-oriented principles embedded within gender development indices in the educational sector, emphasizing their importance in addressing gender disparities and advancing equitable access to education. Indices such as the Gender Parity Index (GPI), Gender Development Index (GDI), and Gender Inequality Index (GII) are pivotal instruments for assessing progress and guiding strategies toward achieving gender equality in educational contexts.*

*The research highlights the increasing prominence of gender equality in education as a determinant of socio-economic development and a cornerstone for achieving sustainable development goals. The primary objective of the study is to analyze the underlying values of these indices and their influence on fostering equality, inclusivity, and social justice within the educational sphere. The research tasks include identifying the foundational principles of these indices, evaluating their implications for policy formulation and implementation, and exploring their application in overcoming structural barriers to education.*

*A mixed-methods methodology underpins this research. Quantitative analysis evaluates statistical data derived from indices such as GPI, GDI, and GII, focusing on trends in educational participation, gender representation, and equity. Complementary qualitative content analysis of academic literature and policy documents provides a deeper understanding of the value-driven and contextual dimensions of gender equality. Comparative research offers insights into regional disparities and best practices for promoting gender equity in education across diverse contexts.*

*The findings articulate four core principles underpinning gender development indices: equal opportunities, social justice, inclusivity, and sustainable development. These principles advocate for the dismantling of systemic barriers, the elimination of gender stereotypes, and the establishment of inclusive educational environments for marginalized populations. The study concludes that embedding these values into educational systems is imperative for fostering equity and ensuring that education is recognized and realized as a universal right accessible to all individuals.*

**Key words:** Gender equality, education indices, inclusivity, social justice, sustainable development, gender parity, policy recommendations.

**Introduce.** Today, the issue of gender equality in the educational sphere is becoming increasingly relevant, considering its impact on the socio-economic development of society. The indices of gender development used to evaluate progress in ensuring equality between men and women in education are based on specific value-oriented foundations that define both the indicators themselves and the methodology for their calculation.

**Goal.** The goal of this research is to analyze the value-oriented principles underlying gender development indices in the educational sphere, exploring their role in promoting gender equality and sustainable development.

### Tasks:

1. Exploring the Value-Oriented Foundations: Analyze the foundational principles, such as equality, inclusivity, social justice, and sustainable development, that underpin indices like the Gender Parity Index (GPI), Gender Development Index (GDI), and Gender Inequality Index (GII), to understand their alignment with societal and educational values.

2. Investigating the Role of Values in Addressing Gender Disparities: Examine how these indices operationalize core values to measure and address gender disparities in education, highlighting their role in fostering equal opportunities and dismantling systemic barriers.

3. Assessing Policy Implications of Value-Oriented Principles: Evaluate how the integration of these principles into the design and application of indices informs and influences educational policies and practices, ensuring that they promote fairness, empowerment, and inclusive development.

**Research methods.** The study employs a comprehensive mixed-methods approach to explore the principles and applications of gender development indices in education:

**Quantitative Analysis:** Statistical evaluation of indices such as the Gender Parity Index (GPI), Gender Development Index (GDI), and Gender Inequality Index (GII), focusing on education coverage levels, gender representation in leadership roles, and research outputs.

**Qualitative Analysis:** Content analysis of academic literature and policy documents to understand the contextual and value-oriented aspects of gender equality in education.

**Comparative Research:** Cross-regional comparisons to understand effective practices and challenges in advancing gender equality in education.

This mixed-method approach ensures a thorough investigation, integrating numerical data and contextual understanding to analyze gender disparities and propose actionable strategies.

**Research results.** Key Value-Oriented Principles

1. Principle of Equal Opportunities:

The principle of equal opportunities, which aims to provide equal access to quality education for all individuals regardless of gender, is central to the concept of gender development indices. Indicators such as the Gender Parity Index (GPI) and Gender-Related Development Index (GDI) exemplify this principle. The GPI, developed by UNESCO, compares the ratio of female to male enrollment across educational levels, with values between 0.97 and 1.03 indicating gender balance [1]. The GPI reflects the value of gender equality in education. By quantifying disparities between male and female enrollment rates, it underscores the importance of providing equal educational opportunities to all genders. This emphasis on parity aligns with broader societal values that advocate for inclusivity, fairness, and the empowerment of individuals regardless of gender. Achieving a balanced GPI is indicative of a commitment to dismantling systemic barriers and promoting equitable access to education, which is essential for sustainable development and social progress. Similarly, the GDI, developed by the UNDP, assesses disparities in education, health, and income, emphasizing individual autonomy and freedom of choice [2].

The Principle of Equal Opportunities emphasizes the necessity of ensuring equitable access to education for all individuals, regardless of gender. However, an analysis of data from Germany, China, and Ukraine demonstrates the diverse challenges and achievements in implementing this principle across different national contexts. In Germany, women achieve an average of 14.0 years of schooling compared to 14.5 years for men, resulting in a relatively small gender gap of 0.5 years [3]. This indicates substantial progress toward gender equality in education while highlighting the ongoing need to address even minor disparities to fully realize this principle.

In China, the gender gap is more pronounced, with women averaging 7.5 years of schooling compared to 8.7 years for men – a disparity of 1.2 years [3], the largest among the three countries. This suggests persistent inequalities rooted in traditional gender roles, uneven distribution of educational resources between urban and rural areas, and socio-economic factors that limit women's access to education. These findings underscore the critical need for targeted interventions to close this gap and uphold the principle of equal opportunities in education.

Conversely, Ukraine presents a distinct trend where women surpass men in mean years of schooling, with averages of 11.4 years and 10.7 years [3], respectively, resulting in a gender gap of 0.7 years favoring women. This outcome may reflect the country's successful promotion of female education and the broader socio-cultural emphasis on educational attainment for women. It also aligns with the representation of women in professions requiring advanced education.

However, this reverse disparity raises important questions about potential systemic factors affecting male educational outcomes, such as occupational gender segregation or socio-economic barriers.

These patterns across Germany, China, and Ukraine reveal that the realization of the Principle of Equal Opportunities in education is deeply influenced by cultural, economic, and policy-driven factors. While progress has been made, each country faces distinct challenges that require context-specific approaches to fully achieve gender parity in education. This analysis, grounded in empirical data, underscores the critical role of education as a cornerstone for advancing gender equality and promoting equitable development.

Overall, these variations illustrate how the principles of equity and inclusivity manifest differently based on regional priorities and systemic structures. Addressing these gaps requires a commitment to value-driven policies that not only enhance access but also empower individuals to reach their full potential regardless of gender. As emphasized by Joshi et al. (2002), who argue that value-oriented education can help create equitable opportunities and empower individuals, fostering balanced societal development [4].

## 2. Principle of Social Justice:

The principle of Social Justice underscores the importance of addressing gender stereotypes in education and career choices to eliminate discriminatory barriers and promote equality. This principle aims to rectify the underrepresentation of women and men in various educational fields and career paths. Social Institutions and Gender Index (SIGI) and Gender Inequality Index (GII) are instrumental in evaluating these dimensions. “The Social Institutions and Gender Index (SIGI) assesses the discriminatory nature of social institutions that limit or prevent women’s access to opportunities and resources, particularly in education; where social institutions include social norms and practices, including legal norms (official laws) and infra-legal (unofficial) norms [5].” “In countries where the level of discrimination in social institutions is higher, as measured by the SIGI, women’s access to education is lower, reducing, by definition, their skill and their capacity to benefit from digitalisation, notably because the content of information is designed for English-speaking educated individuals [6, p. 63].” GII measures disparities in empowerment, labor market participation, and reproductive health, highlighting the necessity of redistributing resources and ensuring equitable participation. SIGI data exposes enduring issues such as discriminatory family practices and restricted physical integrity for women in several regions. Such data underscore the importance of policies that address systemic barriers and promote gender-neutral access to educational resources. By embedding values of equality, choice, and autonomy into educational frameworks, societies can foster environments where every individual, regardless of gender, can fully realize their potential.

Nancy Fraser (2008) argues that achieving social justice requires transforming the foundational structures that perpetuate inequalities. She highlights the importance of addressing economic redistribution, cultural recognition, and political representation to dismantle entrenched power asymmetries and foster inclusive participation [7, p. 78]. These multidimensional efforts are essential for creating fair and equitable systems that challenge systemic injustices.

## 3. Principle of Inclusivity:

Gender indices play a crucial role in addressing the educational needs of various population groups, including women from rural areas, individuals with disabilities, and ethnic minorities. Indices such as the Gender Social Norms Index (GSNI) and World Inequality Database on Education (WIDE) are pivotal in revealing disparities among rural women, individuals with disabilities, and ethnic minorities. The GSNI highlights how societal biases impede gender equality in education, while WIDE provides granular data on educational access disparities across regions and demographics [8]. WIDE, founded on core values such as equality, equity, and inclusivity, emphasizes ensuring all individuals have equal opportunities for education, regardless of their background. It also recognizes the unique challenges faced by marginalized groups and advocates for addressing them fairly. “Nearly half the world’s people believe that men make better political leaders than women do, and two of five people believe that men make better business executives

than women do [9].” This reflects deeply ingrained biases that affect educational choices and opportunities for women, reinforcing the belief that certain fields are more suited for men. The data reveal stark inequities: entrenched biases limit opportunities for women and marginalized communities in certain regions, underscoring the need for inclusive educational policies. By focusing on inclusivity, these indices emphasize that education is a universal right, one that should be accessible to all individuals, regardless of gender, geographic location, or socio-economic background. The principle of inclusivity in education aims to create learning environments where every student, including those from marginalized groups, can access quality education and participate fully in the educational process.

Colombo (2013) underscores the importance of pluralism in education, which aligns with these inclusive strategies [10, p. 3]. Pluralism recognizes the value of diversity and promotes educational practices that cater to the varied needs of learners from different social, cultural, and economic backgrounds. By integrating pluralism into education systems, countries can ensure that gender equality and inclusivity are not only principles of access but also integral to the overall educational ethos. This approach ultimately supports the belief that education is a universal right, one that should be equally available to all, regardless of gender, disability, or ethnicity.

#### 4. Principle of Sustainable Development:

Education plays a pivotal role in fostering sustainable development by equipping individuals to address global challenges and promoting gender equality as a fundamental enabler of societal progress. As highlighted in the UNESCO Global Education Monitoring Report, “Education is a key driver to achieving sustainable development goals [11]”. Indicators like the Sustainable Development Goal (SDG) Gender Index and the Female Opportunity Index (FOI) underscore this principle. The SDG Gender Index tracks progress on gender equality within the broader context of sustainable development goals, linking education to global societal challenges [2]. FOI evaluates women’s access to education and opportunities in fields like STEM, highlighting advancements in female leadership within government, corporations, STEM, and entrepreneurship, as well as success enablers like access to education and parental leave [12].

This reflects the value of equal access to education as essential for fostering female leadership and participation in traditionally male-dominated fields. By integrating gender equality into educational systems, societies enhance diverse perspectives and solutions to global issues such as climate change and resource management. Values such as ecological awareness, intergenerational equity, and social resilience are vital in this context. Embedding these values into education policies ensures that diverse perspectives and approaches are integrated, expanding opportunities for all individuals to contribute to and benefit from sustainable development efforts. Gender equality in education is not just a moral imperative but also a strategic means to enhance the effectiveness and inclusivity of sustainability initiatives.

The Barro-Lee Educational Attainment Dataset provides detailed data on global educational attainment, categorized by age groups, gender, and educational levels [13]. It reflects the core values of equity, inclusivity, and accountability by emphasizing equal educational opportunities for all individuals and highlighting the need to address disparities across demographic groups. By offering transparent and comparable data, the dataset promotes accountability among governments and institutions to track progress and close educational gaps. Furthermore, it underscores the value of empowerment through education, showcasing its role as a driver of social and economic development. As a critical tool for advancing global initiatives like the Sustainable Development Goals (SDGs), the dataset supports efforts to ensure quality education and lifelong learning opportunities for all [2].

Daun (2002) emphasizes the critical role of globalization and educational restructuring in promoting sustainability and inclusivity, both of which are essential for advancing gender equality [14]. As globalization continues to reshape economies and societies, education systems are increasingly required to adapt and respond to the challenges posed by environmental and social sustainability. This transformation can be achieved by embedding sustainability principles in curricula, which ensures that both women and men are equally equipped to contribute to sustainable

development efforts. In particular, gender-inclusive education in sustainability encourages a broader range of solutions, where both men and women can contribute equally to critical fields like renewable energy, environmental conservation, and climate change mitigation.

**Conclusions.** The analysis of gender development indices in the educational sphere reveals four key value-oriented principles that underpin efforts to promote gender equality and inclusivity: equal opportunities, social justice, inclusivity, and sustainable development. These principles not only shape the indicators themselves but also define the methodologies and strategies used to address gender disparities.

The principle of equal opportunities emphasizes universal access to quality education, regardless of gender. By embedding values such as equality before the law, freedom of choice, and personal autonomy, this principle ensures that all individuals can pursue their educational and professional aspirations without discrimination.

The principle of social justice addresses the pervasive impact of gender stereotypes and systemic inequalities on career choices and opportunities. Values like cultural recognition, economic equity, and political representation form the foundation of this principle, enabling policies and practices that dismantle discriminatory barriers and promote equitable participation in society.

The principle of inclusivity focuses on meeting the diverse needs of marginalized groups, including rural women, individuals with disabilities, and ethnic minorities. This principle upholds education as a universal right and highlights the importance of values like diversity, accessibility, and respect for cultural and social differences in creating inclusive learning environments.

Finally, the principle of sustainable development underscores the critical role of education in fostering a conscientious approach to global challenges. Gender equality within this context enhances diversity in perspectives and solutions, promoting values such as ecological awareness, resource responsibility, and intergenerational equity.

By integrating these value-oriented principles into educational policies and practices, societies can bridge gender gaps, empower underrepresented groups, and contribute to sustainable socio-economic development. Policymakers and institutions are encouraged to adopt these principles as frameworks for action, ensuring that education systems evolve into equitable and inclusive environments for all.

## BIBLIOGRAPHY

1. United Nations Educational, Scientific and Cultural Organization. *Global Education Monitoring Report 2020: Inclusion and education: All means all*. 2020. URL: <https://unesdoc.unesco.org/ark:/48223/pf0000380259>
2. Краснікова К. В., Скорик М. М. Україна в міжнародних системах вимірювання гендерної нерівності // *Статистика України*. 2021. № 2. С. 87–100. URL: <https://su-journal.com.ua/index.php/journal/article/download/337/313>
3. United Nations Development Programme. *Gender Development Index (GDI)*. 2024. URL: <https://hdr.undp.org/gender-development-index>
4. Joshi K., et al. Philosophy of Value-Oriented Education // *Yojana-Delhi*. 2002. 46. P. 12–18.
5. Branisa B., Klasen S., Ziegler M., Drechsler D., Jütting J. The institutional basis of gender inequality: The Social Institutions and Gender Index (SIGI) // *Feminist Economics*. 2014. 20(2). P. 29–64.
6. Social Institutions and Gender Index. *SIGI 2019 Global report: Transforming challenges into opportunities* // OECD Development Centre. 2019. URL: [https://www.oecd.org/content/dam/oecd/en/publications/reports/2019/03/sigi-2019-global-report\\_24db43b0/bc56d212-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2019/03/sigi-2019-global-report_24db43b0/bc56d212-en.pdf)
7. Fraser N. *Scales of Justice: Reimagining Political Space in a Globalizing World*. New York, NY : Columbia University Press, 2008.
8. UNESCO Institute for Statistics. *World Inequality Database on Education (WIDE)*. 2020. URL: <https://www.education-inequalities.org/>
9. United Nations Development Programme. *2023 Gender Social Norms Index (GSNI): Breaking down gender biases – Shifting social norms towards gender equality*. 2023. URL: <https://hdr.undp.org/content/2023-gender-social-norms-index-gsni#/indicies/GSNI>

10. Colombo M. Introduction: Pluralism in education and implications for analysis // *Italian Journal of Sociology of Education*. 2013. 5(2). P. 1–16.
11. UNESCO. *Global Education Monitoring Report 2021/2: Education as a Key Driver to Achieving Sustainable Development Goals*. 2021. URL: <https://gem-report-2021.unesco.org>
12. N26 GmbH. *The Female Opportunity Index 2021*. 2021. URL: <https://n26.com/en-eu/female-opportunity-index>
13. Barro R. J., Lee J. W. A new data set of educational attainment in the world, 1950–2010 // *Journal of Development Economics*. 2013. 104. P. 184–198. URL: <https://doi.org/10.1016/j.jdeveco.2012.10.001>
14. Daun H. Globalization and educational restructuring: Implications for sustainability and inclusivity // *Journal of Educational Policy*. 2002. 34(2). P. 89–102.

## REFERENCES

1. United Nations Educational, Scientific and Cultural Organization. (2020). *Global Education Monitoring Report 2020: Inclusion and education: All means all*. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000380259>
2. Krasnikova, K. V., & Skoryk, M. M. (2021). Ukraine v mizhnarodnykh systemakh vymirivannia hendernoi nerivnosti [Ukraine in international systems for measuring gender inequality]. *Statystyka Ukrainy*, (2), 87–100. Kyiv: Naukova Dumka. Retrieved from <https://su-journal.com.ua/index.php/journal/article/download/337/313> [in Ukrainian].
3. United Nations Development Programme. (2024). *Gender Development Index (GDI)*. Retrieved from <https://hdr.undp.org/gender-development-index>
4. Joshi, K., et al. (2002). Philosophy of Value-Oriented Education. *Yojana-Delhi*, 46, 12–18.
5. Branisa, B., Klasen, S., Ziegler, M., Drechsler, D., & Jütting, J. (2014). The institutional basis of gender inequality: The Social Institutions and Gender Index (SIGI). *Feminist economics*, 20 (2), 29–64.
6. Social Institutions and Gender Index. (2019). *SIGI 2019 Global report: Transforming challenges into opportunities*. OECD Development Centre. Retrieved from [https://www.oecd.org/content/dam/oecd/en/publications/reports/2019/03/sigi-2019-global-report\\_24db43b0/bc56d212-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2019/03/sigi-2019-global-report_24db43b0/bc56d212-en.pdf)
7. Fraser, N. (2008). *Scales of Justice: Reimagining Political Space in a Globalizing World*. New York, NY: Columbia University Press.
8. UNESCO Institute for Statistics. (2020). *World Inequality Database on Education (WIDE)*. Retrieved from <https://www.education-inequalities.org/>
9. United Nations Development Programme. (2023, June 12). *2023 Gender Social Norms Index (GSNI): Breaking down gender biases – Shifting social norms towards gender equality*. Retrieved from <https://hdr.undp.org/content/2023-gender-social-norms-index-gsni#/indicies/GSNI>
10. Colombo, M. (2013). Introduction: Pluralism in education and implications for analysis. *Italian Journal of Sociology of Education*, 5(2), 1–16.
11. UNESCO. (2021). *Global Education Monitoring Report 2021/2: Education as a Key Driver to Achieving Sustainable Development Goals*. Retrieved from <https://gem-report-2021.unesco.org>
12. N26 GmbH. (2021). *The Female Opportunity Index 2021*. Retrieved from <https://n26.com/en-eu/female-opportunity-index>
13. Barro, R. J., & Lee, J. W. (2013). A new data set of educational attainment in the world, 1950–2010. *Journal of Development Economics*, 104, 184–198. <https://doi.org/10.1016/j.jdeveco.2012.10.001>
14. Daun, H. (2002). Globalization and educational restructuring: Implications for sustainability and inclusivity. *Journal of Educational Policy*, 34(2), 89–102.

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## ЦІННІСНО-ОРІЄНТОВАНІ ПРИНЦИПИ, ЩО ЛЕЖАТЬ В ОСНОВІ ІНДЕКСІВ ГЕНДЕРНОГО РОЗВИТКУ ОСВІТНЬОЇ СФЕРИ

*Актуальність проблеми.* Дослідження аналізує ключову роль ціннісно орієнтованих принципів, які лежать в основі індексів гендерного розвитку у сфері освіти, підкреслюючи їх значення у подоланні гендерних нерівностей та забезпеченні справедливого доступу до освіти. Такі індекси, як Індекс гендерного паритету (GPI), Індекс гендерного розвитку (GDI) та Індекс гендерної нерівності (GII), є важливими інструментами для оцінки прогресу та розробки стратегій досягнення гендерної рівності у сфері освіти.

Дослідження наголошує на зростаючій значущості гендерної рівності в освіті як важливого чинника соціально-економічного розвитку та основи для досягнення цілей сталого розвитку. Основною метою роботи є аналіз базових цінностей цих індексів та їхнього впливу на забезпечення рівності, інклюзивності та соціальної справедливості у сфері освіти. Завдання дослідження включають визначення фундаментальних принципів індексів, оцінку їхнього впливу на формування та реалізацію політики, а також вивчення їх застосування для подолання структурних бар'єрів у доступі до освіти.

Дослідження базується на застосуванні змішаної методології. Кількісний аналіз використовується для оцінки статистичних даних, отриманих з індексів, таких як GPI, GDI та GII, з акцентом на тенденціях у рівні участі в освіті, гендерному представництві та справедливості. Додатковий якісний аналіз змісту наукової літератури та політичних документів забезпечує глибше розуміння ціннісних і контекстуальних аспектів гендерної рівності. Порівняльний підхід дозволяє дослідити регіональні відмінності та найкращі практики для сприяння гендерній рівності в освіті.

**Результати** визначають чотири основні принципи, які лежать в основі індексів гендерного розвитку: рівні можливості, соціальна справедливість, інклюзивність та сталий розвиток. Ці принципи спрямовані на подолання системних бар'єрів, усунення гендерних стереотипів та створення інклюзивних освітніх середовищ для маргіналізованих груп. Дослідження робить висновок, що інтеграція цих цінностей в освітні системи є ключовою для досягнення справедливості та забезпечення визнання освіти як універсального права, доступного для всіх.

**Ключові слова:** цінності, принципи, гендерна рівність, індекси гендерного розвитку, освіта, соціальна справедливість, сталий розвиток, гендерний паритет.