

# Developed Training Design with NGECE as a Platform Responsive to SDG 4-Quality Education

Ruby Ann L. Ayo\*

BU College of Social Sciences and Philosophy

\*Corresponding Author

Ruby Ann L. Ayo, BU College of Social Sciences and Philosophy

Submitted: 2024, Jan 06; Accepted: 2024, Jan 22; Published: 2024, Feb 28

**Citation:** Ayo, R. A. L. (2024). Developed Training Design with NGECE as a Platform Responsive to SDG 4-Quality Education. *J Huma Soci Scie*, 7(2), 1-5.

## Abstract

*The Higher Education Institutions, through their curricula offerings, extend opportunities to attain the targets of the Sustainable Development Goals. The SDG 4-Quality education as a framework in the analysis of goals and expected outcomes of the new General Education Curriculum core Social Science subjects served as the basis for the development of Training Design to better prepare the faculty teaching General Education Curriculum core subjects. The validated Training Design using a one-group pretest-posttest design analyzed through a paired-sample t-test affirmed the role of the New General Education Curriculum as a platform responsive to the achievement of the specific targets of the Sustainable Development Goal 4- Quality Education.*

**Keywords:** New General Education Curriculum (NGECE), Sustainable Development Goals, Training Design, Higher Education Institutions.

## 1. Introduction

Varied ways to achieve the targets of the Sustainable Development Goals (SDGs) are explored. The Sustainable Development Goals (SDGs) progressed from a series of conferences as a response to the pressing issues in the 21st century directly or indirectly affecting humankind [1]. In 2015, the member states of the United Nations agreed to work together to meet the 2030 Agenda for Sustainable Development targets. These are SDG 1- No poverty, SDG 2- Zero hunger, SDG 3-Good health and well-being, SDG 4- Quality education, SDG 5-Gender equality, SDG 6-Clean water and sanitation, SDG 7-Affordable and clean energy, SDG 8-Decent work and economic growth, SDG 9- Industry, innovation and infrastructure, SDG 10- Reduced inequalities, SDG 11- Sustainable cities and communities, SDG 12- Responsible consumption and protection, SDG 13- Climate action, SDG 14- Life below water, SDG 15- Life on land, SDG 16- Peace, justice and strong institutions, and SDG 17- Partnership for the goals [2,3].

Diverse mechanisms, approaches, and strategies, including institutions and agencies, were identified to attain the targets set. This includes identifying the role of the Higher Education Institutions (HEIs). As components of the HEIs, the Universities perform varied roles and set innovative standards responsive to

unrelenting global issues [4]. The inclusion of HEIs as one of the partners in the achievement of the targets of the SDGs is a welcome improvement in responding to the challenges of the 21st century [5].

The role of HEIs concerning SDGs is viewed as a latent provision to global, national, and local development [4]. Taking part in this development also means performing a role in the progress of human capital and the transformation of societies that respond to some of the targets of SDGs [6].

Of the 17 Sustainable Development Goals, SDG 4- Quality Education is the most appropriate for Higher Education Institutions to respond to [7]. Active involvement on the part of the HEIs through formative and meaningful actions is essential.

Among the Higher Education Institutions, the Commission on Higher Education (CHED) oversees the policies, guidelines, programs, and activities in the Philippines. Its functions include the regulation of curricula to be relevant and responsive. Among the innovations to maintain the significance of the curricula offering is the issuance of CHED Memorandum, No. 20, series 2013- General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies [8].

The study anchored on the Implementation Theory in Education recognized the importance of educational approaches in improving the performance of the students [9]. Ably performing students are due to well-prepared teachers. The NGEC, as a currently implemented curriculum, provides evidence-based practices congruent to real-world settings that aptly capture the targets of Sustainable Development Goals.

This paper acknowledges the importance of an interdisciplinary approach in the achievement of the SDG targets entailing cooperation between and among stakeholders [10]. The paper however focuses on the targets of SDG 4-Quality education. It answered the central question of what intervention can be developed structurally responding to the targets of SDG 4-Quality education. The central question is thus supported by the essence question of what instructional material may be developed as an intervention systematically deepening the understanding of the targets of SDG 4- Quality education among the faculty teaching General Education Courses (GEC). The central and essence questions dealt with affirm the significant role of the HEIs in attaining the targets of SDGs, specifically SDG 4-Quality education. The existing General Education Curriculum among the HEIs in the Philippines was rolled out in 2018 thus in the fifth year of implementation. Considering the aim to holistically develop the learners, the GEC is recognized as a platform responsive to SDGs hence, the significance of this paper.

## 2. Materials and Methods

The paper used a pre-experimental one-group, pretest, and posttest design for the development and validation of training design [11]. Further, a paired-sample t-test was used in the analysis. The Bicol University College of Social Sciences and Philosophy through the General Education Department as a service college is the locale of the study. A total of 15 participants joined in the implementation of the training design as a form of validation. The participants were chosen based on the following criteria: (1) full or part-time faculty, (2) teaching the same core Social Science GEC (the Contemporary World, Ethics, Readings in Philippine History and Understanding the Self) for at least six consecutive semesters; (3) attended training on teaching the new General Education Curriculum, and (4) with Social Science as a field of specialization. A structured Content Review Guide (CRG) was used in the analysis of goals and expected outcomes of the new General Education Curriculum with SDG 4-Quality education as a framework. The results of the analysis served as the basis for the development of training design. A 40-item parallel pretest and posttest was administered among the participants as a form of validation. The participants freely joined in the implementation of the training design and voluntarily signed an informed consent as part of the ethical consideration of the study.

## 3. Results

*The General Education Curriculum Goals and expected outcomes in the Context of SDG 4-Quality education*

The New General Education Curriculum (NGEC) is designed to produce holistically developed individuals. These individuals are prepared for lifelong learning, eager to learn and grow eventually be equipped with 21st-century skills.

The well-rounded development achieved among the learners prepares them to navigate well in life [12]. Furthermore, this is addressed by the goals and expected outcomes of NGEC. The overall goal of General Education is to improve the quality of life of Filipinos. Thus, graduates must possess comprehensive and analytic skills [13].

The goal of General Education captures the first mission of the Commission on Higher Education, which is to produce thoughtful graduates who are imbued with (1) values reflective of humanist orientation (e.g., fundamental respect for others as human beings with intrinsic rights, cultural rootedness, an avocation to serve), (2) analytical and problem-solving skills, (3) the ability to think through the ethical and social implications of a given course of action, and (4) the competency to learn continuously throughout life [14].

The above-enumerated goals enable graduates to live meaningfully in a complex, rapidly changing, and globalized world while engaging in their community and the nation's development issues and concerns.

Meanwhile, the Sustainable Development Goals (SDG) 4- Quality Education has the following targets: 4.1- Free primary and secondary education, 4.2- Equal access to quality free primary education, 4.3- Equal access to affordable technical, vocational, and higher education, 4.4- Increase the number of people with relevant skills for financial success, 4.5- Eliminate all forms of discrimination in education, 4.6- Universal literacy and numeracy, 4.7- Education for sustainable development and global citizenship, 4.8- Build and upgrade inclusive and safe schools, 4.9- Expand higher education scholarships for developing countries, 4. A- Increase the supply of qualified teachers in developing countries [15].

Among the targets of SDG 4- Quality and Inclusive Education, targets 4.4, 4.5, 4.6, and 4.7 are directly responsive to the New General Education Curriculum. These are Target 4.4- Increase the number of people with relevant skills for financial success, Target 4.5- Eliminate all forms of discrimination in education, Target 4.6- Universal literacy and numeracy, and Target 4.7- Education for sustainable development and global citizenship. These are aligned with NGEC's goal to develop competency to learn continuously throughout life.

The outcomes of General Education are categorized into (1) Intellectual competencies, (2) Personal and civic competencies, and (3) Practical responsibilities. Each competency has its specific competencies. The Intellectual competencies have the following competencies: (1.1) higher levels of comprehension (textual,

visual, etc.), (1.2) Proficient and effective communication (writing, speaking, and use of new technologies), (1.3) Understanding of basic concepts across the domains of knowledge, (1.4) Critical, analytical and creative thinking, and (1.5) Application of different analytical modes (quantitative and Target 4.4- Increase the number of people with relevant skills for financial success is captured.

Based on the review of the literature along with the analysis of the goals and expected outcomes of the New General Education Curriculum, it implies that NGEC offers opportunities for the attainment of the targets 4.4, 4.5, 4.6, and 4.7 of SDG 4. This is justified by the three categories of NGEC competencies, such as intellectual, personal and civic, and practical responsibilities, which are responsive to the quest of achieving quality education.

*Developed and validated Training Design with NGEC as a platform responsive to SDG 4-Quality education*

The analyzed goals and expected outcomes of the New General Education Curriculum (NGEC) concerning the targets of Sustainable Development Goal 4- Quality Education served as the basis for developing a Training Design (TD). The TD highlights the significance of the NGEC as a platform responsive to the SDGs.

The TD has five modules, namely; Module No. 1: The New

General Education Curriculum, Module No. 2: The Sustainable Development Goals, Module No. 3: Relevance of SDGs in the Academe, Module No. 4: A Walk Through on the content topics of (a) Contemporary World, (b) Ethics, (c) Readings in Philippine History, and (d) Understanding the Self and, Module No. 5: Plotting of content topics vis-à-vis relevant SDG targets.

Module 1 gives an overview and salient features of the New General Education Curriculum. Module 2 highlights the Sustainable Development Goals, its history, and progress in the implementation, including the challenges encountered in the advancement towards the achievement of targets and opportunities for improvement on the strategies implemented. Module 3 explores the role of the academe in the achievement of the targets of SDG. Module 4 analyzes the content topics of the core Social Science NGEC subjects, specifically the Contemporary World, Ethics, Readings in Philippine History, and the Understanding of the Self. Finally, Module 5 matches the content topics of the core Social Science NGEC subjects with the relevant Sustainable Development Goals targets.

Table 1 outlines the comparison of the pretest and posttest results of 15 faculty participants during the validation of the developed Training Design.

**Table 1. Comparison of the pretest and posttest scores paired-samples t-test (dependent-samples t-test)**

t-values	Df	p-value	95% confidence interval		Mean
			lower	upper	
6.450	14	0.98	3.916	7.817	5.867

The results show a significant difference in the mean of the pretest and the posttest scores of the 15 faculty participants [16]. The knowledge test scores were found to increase to a significant and large extent from before to after the completion of the training. This suggests the effectiveness of the developed Training Design and an affirmation of the New General Education Curriculum as a platform for attaining relevant Sustainable Development Goals.

**4. Discussion**

The paper focuses on the identification of a specific intervention that can be developed responsive to specific targets of SDG 4-Quality education. Moreover, the paper aims to explicitly identify the instructional material that may be developed systematically deepening the understanding of the targets of SDG 4-Quality education among the faculty teaching the core Social Science General Education Curriculum subjects.

About the analysis of goals and expected outcomes of the new General Education Curriculum with SDG 4-Quality education as milieu, the alignment in the goals and expected outcomes of the NGEC and the targets 4.4-increase the number of people with relevant skills for financial success, 4.5-elimination of all forms of

discrimination in education, 4.6- universal literacy and numeracy and 4.7 education for sustainable development and global citizenship of SDG 4- Quality education upholds the relevance of the academe in responding to the challenges experienced by the present society [17]. Moreover, the aligned NGEC goals and expected outcomes and the SDG 4 targets support the usefulness of the curriculum in the preparation of learners as demanded by the various societal issues [18]. However, in this study, the preparation of the learners starts with the readiness of the faculty teaching General Education Courses core subjects.

Moreover, the alignment in the NGEC goals and expected outcomes with SDG targets 4.4 to 4.7 affirm the validity of SDG 4 as a framework for the improvement of curricula offerings towards the promotion of enhanced curriculum [19,20]. In addition, this supports the claims of Alcántara-Rubio and associates (2022) that SDG 4-Quality education is the most recurrently referenced among the SDGs in Higher Education Institution curricula [21]. The same finding was shared by Chang and Lien (2020) but explained that alongside SDG 4-Quality education are SDG 3- Good health and well-being, SDG 8-Decent work and economic growth, SDG 9-Industry innovation and infrastructure and SDG

16-Peace, justice and strong institutions [22].

Meanwhile, the results of the validation support the important role of the academe in the attainment of the SDG targets through the academe's instructional and research functions [23]. This includes the identification of strategies for integration adopted by the HEIs which vary from training, workshops, and course lectures with workshops as the most frequently used strategy [24]. In contrast, Leal Filho and company (2023) claimed the inadequacy of training opportunities which may better equip the members of the university community to respond to the focuses of the SDGs. This likewise suggests the need to continuously provide the necessary training for the faculty to effectively contribute to providing appropriate responses to contemporary issues.

The results of the validation similarly highlight the opportunity of developing research-based interventions as Higher Education Institutions' response to the pressing needs of society as captured by the challenges of the 21st century [25]. A related observation was mentioned by Chang and Lien (2020) where gaps in the integration responsive to the attainment of SDGs were identified [22]. The gaps include the shallow understanding and implementation of global citizenship education in the Asia-Pacific Region in the context of SDG 4.7- education for sustainable development and global citizenship [26]. This is further supported by the analysis of the efforts exerted by the universities reflecting a more symbolic adaptation style characterized by highlighting the SDGs as important, yet, vaguely specifying the actions to be taken by the institutions [27].

## 5. Conclusions

The goals and expected outcomes of the New General Education Curriculum are aligned with the targets of Sustainable Development Goals 4-Quality Education. The competencies and the SDG 4 targets are congruent with education for lifelong learning. The developed Training Design as intervention affirms that the New General Education Curriculum offers opportunities to realize the appropriate Sustainable Development Goals.

## 6. Recommendations

Based on the results of the study, the following recommendations are offered: To (1) implement the developed and validated Training Design, (2) consider replicating the study but not limited to matching the content topics of the NGE core subjects to Social Sciences but include the four remaining core subjects- Art Appreciation, Mathematics in the Modern World, Purposive Sampling, and Science, Technology, and Society, (3) consider the results as basis for policy formulation.

## References

1. Paul, B. D. (2008). A history of the concept of sustainable development: literature review. *The Annals of the University of Oradea, Economic Sciences Series*, 17(2), 576-580.
2. Fritz, S., See, L., Carlson, T., Haklay, M., Oliver, J. L., Fraisl, D., ... & West, S. (2019). Citizen science and the United

Nations sustainable development goals. *Nature Sustainability*, 2(10), 922-930.

3. Robert, K. W., Parris, T. M., & Leiserowitz, A. A. (2005). What is sustainable development? Goals, indicators, values, and practice. *Environment: science and policy for sustainable development*, 47(3), 8-21.
4. Chankseliani, M., Qoraboyev, I., & Gimranova, D. (2021). Higher education contributing to local, national, and global development: new empirical and conceptual insights. *Higher Education*, 81, 109-127.
5. Mochizuki, Y. (2019). Rethinking Schooling for the 21st Century: UNESCO-MGIEP's Contribution to SDG 4.7. *Sustainability: The Journal of Record*, 12(2), 88-92.
6. Chankseliani, M. (2022). International development higher education: Looking from the past, looking to the future. *Oxford Review of Education*, 48(4), 457-473.
7. Ferguson, T., & Roofe, C. G. (2020). SDG 4 in higher education: Challenges and opportunities. *International Journal of Sustainability in Higher Education*, 21(5), 959-975.
8. Hermosa, J. (2022). Non-specialized general education instructors' confidence and self-efficacy in teaching general education subjects. *Available at SSRN 4214225*.
9. Mitchell, P. F. (2011). Evidence-based practice in real-world services for young people with complex needs: New opportunities suggested by recent implementation science. *Children and Youth Services Review*, 33(2), 207-216.
10. Boeren, E. (2019). Understanding Sustainable Development Goal (SDG) 4 on "quality education" from micro, meso and macro perspectives. *International review of education*, 65, 277-294.
11. Knapp, T. R. (2016). Why is the one-group pretest-posttest design still used?. *Clinical Nursing Research*, 25(5), 467-472.
12. Mohammadkhani, S., & Hahtami, M. (2011). The effectiveness of life skills training on happiness, quality of life and emotion regulation. *Procedia-Social and Behavioral Sciences*, 30, 407-411.
13. Hardina, D. (2002). *Analytical skills for community organization practice*. Columbia University Press.
14. Alcala, A. C. (1999). Higher education in the Philippines. *Philippine studies*, 47(1), 114-128.
15. Unterhalter, E. (2019). The many meanings of quality education: Politics of targets and indicators in SDG 4. *Global Policy*, 10, 39-51.
16. Ventura, M., Moadebi, S., & Damian, D. (2021). Impact of motivational interviewing training on emergency department nurses' skills: A one-group pretest-posttest pilot study. *International Emergency Nursing*, 56, 100980.
17. Sharma, S., & Madeshia, P. K. (2022). Teacher Perception on SDG Goalsamalgamation in Hybrid Classrooms Curricular Transactions. *International Journal of Early Childhood Special Education*, 14(5).
18. Offorma, G.C., & Obiefuna, C.A. (2017). Curriculum implementation in teacher education institutions for attainment of 2030 Sustainable Development Goals. *African Journal of*

---

*Sustainable Development*, 9(3), pp. 73-88.

19. Hoang, A. D., Pham, H. H., Nguyen, Y. C., Nguyen, L. K. N., Vuong, Q. H., Dam, M. Q., ... & Nguyen, T. T. (2020). Introducing a tool to gauge curriculum quality under Sustainable Development Goal 4: The case of primary schools in Vietnam. *International Review of Education*, 66(4), 457-485.
20. Pálsdóttir, A., & Jóhannsdóttir, L. (2021). Signs of the United Nations SDGs in University Curriculum: The Case of the University of Iceland. *Sustainability*, 13(16), 8958.
21. Alcántara-Rubio, L., Valderrama-Hernández, R., Solís-Espallargas, C., & Ruiz-Morales, J. (2022). The implementation of the SDGs in universities: A systematic review. *Environmental Education Research*, 28(11), 1585-1615.
22. Chang, Y. C., & Lien, H. L. (2020). Mapping course sustainability by embedding the SDGS inventory into the university curriculum: a case study from national university of Kaohsiung in Taiwan. *Sustainability*, 12(10), 4274.
23. El-Jardali, F., Ataya, N., & Fadlallah, R. (2018). Changing roles of universities in the era of SDGs: rising up to the global challenge through institutionalising partnerships with governments and communities. *Health research policy and systems*, 16, 1-5.
24. Amorós Molina, Á., Helldén, D., Alfvén, T., Niemi, M., Leander, K., Nordenstedt, H., ... & Biermann, O. (2023). Integrating the United Nations sustainable development goals into higher education globally: a scoping review. *Global Health Action*, 16(1), 2190649.
25. Leal Filho, W., Azeiteiro, U., Alves, F., Pace, P., Mifsud, M., Brandli, L., ... & Disterheft, A. (2018). Reinvigorating the sustainable development research agenda: the role of the sustainable development goals (SDG). *International Journal of Sustainable Development & World Ecology*, 25(2), 131-142.
26. Parker, R., Chainey, J., Goundar, P., Richardson, S., Dabrowski, A., Berry, A., & Scoular, C. (2023). Being and becoming global citizens: Measuring progress toward SDG 4.7. Phase I: Monitoring teacher and school readiness to enact global citizenship in the Asia-Pacific region.
27. Stensaker, B., & Hermansen, H. (2023). Global, Nordic, or institutional visions? An investigation into how Nordic universities are adapting to the SDGs. *Higher Education*, 1-17.
28. Chankseliani, M., & McCowan, T. (2021). Higher education and the sustainable development goals. *Higher Education*, 81(1), 1-8.
29. Leal Filho, W., Simaens, A., Paço, A., Hernandez-Diaz, P. M., Vasconcelos, C. R., Fritzen, B., & Mac-Lean, C. (2023). Integrating the Sustainable Development Goals into the strategy of higher education institutions. *International Journal of Sustainable Development & World Ecology*, 1-12.

**Copyright:** ©2024 Ruby Ann L. Ayo. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.