探討環境教育與永續發展教育的發展脈絡

葉欣誠

國立臺灣師範大學環境教育研究所教授

摘要

從 1977 年的伯利西宣言至今,環境教育已經發展超過 40 年;從 1992 年的「二十一世紀議程」至今,永續發展教育在聯合國推動的脈絡中也已經二十餘年。在這段時間中,環境教育與永續發展教育的發展有密切的關聯,但各有其特性,國際上也有相當豐富的討論。此外,聯合國於 2015 年發佈「2030 永續發展議程」與永續發展目標,並且結合永續發展教育向各國、各領域推動。在我國環境教育法實施超過五年的今日,搭配國際上環境教育、永續發展教育、永續發展目標的發展趨勢,本文探討相關議題與論述的脈絡,並且以框架的角度看待環境教育與永續發展教育的議題,並就未來的推動提出建議。

關鍵字: 永續發展目標、永續發展教育、框架、脈絡

投稿日期: 2017年11月06日;接受日期: 2017年12月16日

UNESCO 推動的各種主題教育活動,融入到 ESDG 之中,讓經濟、社會、環境、 文化等與 ESD 的相關主題以各領域熟悉的語言與方式融入,並強調多樣化即為 ESD 本身的基因。

五、檢視環境教育法的架構、內容與執行

我國環境教育法執行至今已經五年多,整個社會經歷了不少的改變,且法律的設計與實施也牽動了許多公營與民營場所的經營模式,本文多次討論了環境教育法的潛在問題,建議可以搭配對於實施 ESD、推廣 SDGs 的討論,併同檢視,甚至檢討環境教育法本體、施行細則、子法與相關計畫與方案的適宜性、可執行性、國際接軌與前瞻程度。討論的議題至少可以包括「公務人員與高中以下學校教職員生強制接受四小時的規範」、「違反環保法規強制接受環境教育的操作方式」、「是否由政府辦理認證」、「認證作業簡化與品質控制」、「環境教育基金的設置與使用」,甚至「法律名稱」等。

本文整理與 EE 和 ESD 有關的各種討論,也根據文獻回顧、觀察、訪談與調查等方法,整理不同角度的議題,希望能夠讓我國在相關領域的討論更深化。 EE 與 ESD 都強調多樣化、多角度的討論,甚至論戰,對於永續發展與環境保護都具有正面的幫助。畢竟,我們在地球村中,必須知道世界的脈動;我們在商業驅動的經濟社會中,需要瞭解運作的機制與營運的模式;我們在地球生態系中,也應瞭解支持我們的地球生態的狀況與挑戰。透過各種不同的取徑,形成個人與集體的行為改變,讓世界發展的方向更可持續下去,則是所有人的共同責任。

伍、參考文獻

王俊秀(2002)。壹、通識教育脈絡下的永續發展教育:共鳴的創作。**全球變遷通 訊雜誌,34**,1-11。doi: 10.6539/GCC.200206 (34).0001

- 王順美(2016)。臺灣永續發展教育現況探討及行動策略之芻議。**環境教育研究, 12**(1),111-139。doi: 10.6555/JEER.12.1.111
- 林東泰(1997)。**閱聽人生活方式與其使用大眾傳播媒介之關連性**。未出版之碩士 論文,國立政治大學,臺北市。
- 吳鈴筑、張子超(2017)。探討公私部門環境教育設施場所認證之發展概況:以 100 至 104 年間資料為例。環境教育研究,13(1),99-136。doi: 10.6555/JEER.13.1.099
- 李靜瀅(譯)(2015)。沙郡年紀:像山一樣思考,荒野詩人寫給我們的自然之歌(原作者 Aldo Leopold)。果力文化。(原著出版年 2013)
- 林政逸(2012)。臺北創意城市之策略規劃:對永續發展教育之意涵。**國民教育**, **52**(6), 20-28。
- 張珍悅、徐勝一(2010a)。永續發展教育脈絡探討:「聯合國永續發展教育十年計畫」之回顧。**地理研究,52**,1-26。doi: 10.6234/JGR.2010.52.01
- 張珍悅、徐勝一(2010b)。永續發展教育之研究—以台灣國中生對地理教育與永續發展教育間相關性分析為例。**華岡地理學報,26**,17-30。
- 郭金水(2012)。社會與區域取向的永續發展教育之道。國民教育,52(6),5-19。
- 彭宣雅(2017 年 12 月 4 日)。**不能假借「環境教育」去郊遊!環保署修法通過**。 取自 https://udn.com/news/story/7314/2854900
- 黃玫玲(2012)。永續發展教育下,國小教師應有的國際教育素養。**國民教育,52**(6),75-79。
- 黃清孝(2011)。臺灣品質與永續發展教育課程—國際留學生積極參與之報導。品 質月刊,47(9),48-49。
- 楊冠政(1997)。環境教育。臺北市:明文書局。
- 楊意菁(2017)。風險溝通,媒體關注與框架分析:以新聞再現企業環境相關議題 為例。**傳播研究與實踐,7**(1), 71-106。doi: 10.6123/JCRP.2017.004
- 葉欣誠(2006)。環境教育之宗旨與策略。發表於水環境教育師資研習計畫暨水環境教育資源網站建置計畫論文集。臺北市:財團法人臺灣水利環境科技研究發展教育基金會。
- 葉國樑、唐孝蘭、黃禎貞、陳佩君、陳美如(2006)。國中階段健康與體育學習領

- 域之環境永續發展教育內涵與教學效果之研究。**健康促進暨衛生教育雜誌**, 26,53-83。
- 賴品瑀(2017 年 10 月 23 日)。**環教法修法 参訪、員工旅遊不能充作環境教育了**。 取自 http://e-info.org.tw/node/208035
- 環境品質文教基金會(2017)。**環報改版特刊(一):《環境教育法》實施五年回顧**。 取自 http://www.eqpf.org/envinews/epContent.aspx?dsn=245&cId=2
- 鍾清雲(2008)。**大專院校工程科系永續發展教育課程之規劃**。未出版之碩士論文, 國立臺北科技大學,臺北市。
- Addling, W. & Ditch, E. (2015). Environmental education and the health professions: framing climate change as a health issue. *Environmental Education Research*, 21(5), 687-709. doi: 10.1080/13504622.2014.930727
- Ardoin, N. M., Clark, C., & Kelsey, E. (2013). An exploration of future trends in environmental education research. *Environmental Education Research*, 19(4), 499-520. doi: 10.1080/13504622.2012.709823
- Beckerman, W. (1994). 'Sustainable development': Is it a useful concept? Environmental Values, 3(3), 191-209. doi: 10.3197/096327194776679700
- Berryman, T., & Sauvé, L. (2016). Ruling relationships in sustainable development and education for sustainable development. *The Journal of Environmental Education*, 47(2), 104-117. doi: 10.1080/00958964.2015.1092934
- Blackmore, C., Chabay, I., Collins, K., Gutscher, H., Lotz-Sisitka, H., McCauley, S., Niles, D., Pfeiffer, E., Ritz, C., Schmidt, F., Schreurs, M., Siebenhuner, B., David Tabara, J., & Van Eijndhoven, J. (2011). *Knowledge, learning, and societal change: Finding paths to a sustainable future*. Science plan for a cross-cutting core project of the International Human Dimensions Programme on Global Environmental Change (IHDP) (pp.1-123), Bonn, Germany.
- Bonnett, M. (2002). Education for sustainability as a frame of mind. *Environmental Education Research*, 8(1), 9-20. doi: 10.1080/13504620120109619
- Bonnett, M. (2013). Sustainable development, environmental education, and the

- significance of being in place. *Curriculum Journal*, 24(2), 250-271. doi: 10.1080/09585176.2013.792672
- Breiting, S. (2009). Issues for environmental education and ESD research development: looking ahead from WEEC 2007 in Durban. *Environmental Education Research*, 15(2), 199-207. doi: 10.1080/13504620902807584
- Brundtland, G. H. (1987). Report of the World Commission on environment and development: 'our common future'. United Nations.
- Caeiro, S., Leal Filho, W., Jabbour, C., & Azeiteiro, U. (2013). Sustainability assessment tools in higher education institutions: mapping trends and good practices around the world. Switzerland: Springer International Publishing.
- Cartea, P. á. M. (2005). In praise of environmental education. *Policy Futures in Education*, 3(3), 284-295.
- Carter, R. L., & Simmons, B. (2010). The history and philosophy of environmental education. In A. Bodzin, B. Shiner Klein, S. Weaver (Eds.), *The inclusion of environmental education in science teacher education* (pp. 3-16). Netherlands: Springer.
- Eilam, E., & Trop, T. (2010). ESD pedagogy: A guide for the perplexed. *The Journal of Environmental Education*, 42(1), 43-64. doi: 10.1080/00958961003674665
- Gifford, R., & Comeau, L. A. (2011). Message framing influences perceived climate change competence, engagement, and behavioral intentions. *Global Environmental Change*, 21(4), 1301-1307. doi: 10.1016/j.gloenvcha.2011.06.004
- Goffman, E. (1974). Framing analysis: An essay on the organization of experience. Cambridge, MA: Harvard University Press.
- Gough, A., & Gough, N. (2016). The denaturation of environmental education: exploring the role of ecotechnologies. *Australian Journal of Environmental Education*, 32(1), 30-41.
- Gutscher, H. (2016, May). *More than change—Pathways to scale up transformation*.

 Paper presented at the International Workshop on Islands and Our Future Earth:

- Bridging Local and Global Knowledge on Transformative Pathways to Sustainable Futures, Taipei.
- Hackman, H., & St. Clair, A. L. (2012). Transformative cornerstones of social science research for global change. *Mundo Amazónico*, 4, 117-152.
- Hasslöf, H., Lundegård, I., & Malmberg, C. (2016). Students' qualification in environmental and sustainability education—epistemic gaps or composites of critical thinking? *International Journal of Science Education*, 38(2), 259-275. doi: 10.1080/09500693.2016.1139756
- Hopkins, C. (2015). Beyond the decade: the global action program for education for sustainable development. *Applied Environmental Education and Communication*, 14(2), 132-136.
- Huckle, J. (2006). Education for sustainable development: A briefing paper for the training and development agency for schools. London: Training and Development Agency for Schools.
- Hungerford, H. R. (2009). Environmental education (EE) for the 21st century: where have we been? where are we now? where are we headed?. *The Journal of Environmental Education*, 41(1), 1-6. doi: 10.1080/00958960903206773
- Hursh, D., Henderson, J., & Greenwood, D. (2015). Environmental education in a neoliberal climate. *Environmental Education Research*, 21(3), 299-318. doi:10.1080/13504622.2015.1018141
- Jickling, B. (1992). Why I don't want my children to be educated for sustainable development. *The Journal of Environmental Education*, 23(4), 5-8.
- Jickling, B., & Wals, A. E. (2012). Debating education for sustainable development 20 years after Rio: A conversation between Bob Jickling and Arjen Wals. *Journal* of Education for Sustainable Development, 6(1), 49-57.
- Jucker, R. (2011). ESD between systemic change and bureaucratic obfuscation: Some reflections on environmental education and education for sustainable development in Switzerland. *Journal of Education for Sustainable Development*,

- *5*(1), 39-60. doi: 10.1177/097340821000500109
- Kopnina, H. (2015). Sustainability in environmental education: new strategic thinking. *Environment, Development and Sustainability, 17*(5), 987-1002. doi: 10.1007/s10668-014-9584-z
- Læssøe, J., Feinstein, N. W., & Blum, N. (2013). Environmental education policy research—challenges and ways research might cope with them. *Environmental Education Research*, 19(2), 231-242. doi: 10.1080/13504622.2013.778230
- Læssøe, J., & Öhman, J. (2010). Learning as democratic action and communication: Framing Danish and Swedish environmental and sustainability education. *Environmental Education Research*, 16(1), 1-7. doi: 10.1080/13504620903504008
- Lindstrom, M. J. (Ed.). (2010). Encyclopedia of the US government and the environment: history, policy, and politics (p.326). Santa Babara, CA: ABC-CLIO, LLC.
- Mancebo, F. (2013). The pitfalls of sustainability policies: Insights into plural sustainabilities. *Challenges in Sustainability, 1*(1), 29-40. doi: 10.12924/cis2013.01010029
- Marx, G. T. (2012). Looking at Smelser's theory of collective behavior after almost 50 years: a review and appreciation. *The American Sociologist*, 43(2), 135-152.
- McKeown, R., & Hopkins, C. (2003). EE ≠ ESD: Defusing the worry. *Environmental Education Research*, 9(1), 117-128.
- McKeown, R., & Hopkins, C. (2005). EE and ESD: Two paradigms, one crucial goal.

 Applied Environmental Education and Communication, 4(3), 221-224.
- McKeown, R., & Hopkins, C. (2007). Moving beyond the EE and ESD disciplinary debate in formal education. *Journal of Education for Sustainable Development, 1*(1), 17-26.
- Muller, B., & Flohr, T. (2016). A Geodesign approach to environmental design education: Framing the pedagogy, evaluating the results. *Landscape and Urban Planning*, 156, 101-117. doi: 10.1016/j.landurbplan.2016.05.010

- Neumayer, E. (2003). Weak versus strong sustainability: exploring the limits of two opposing paradigms. Cheltenham, UK: Edward Elgar Publishing.
- Orr, D. W. (2004). Earth in mind: On education, environment, and the human prospect. Washinton D.C.: Island Press.
- Pavlova, M. (2013). Towards using transformative education as a benchmark for clarifying differences and similarities between environmental education and education for sustainable development. *Environmental Education Research*, 19(5), 656-672. doi: 10.1080/13504622.2012.736476
- PwC (2017, November). SDG selector. Retrieved from https://dm.pwc.com/SDGSelector/
- Rowe, D., Gentile, S. J., & Clevely, L. (2015). The US partnership for education for sustainable development: progress and challenges ahead. *Applied Environmental Education and Communication*, 14(2), 112-120.
- Saylor, G. (1949). Front lines in education. *Educational Leadership*, 6(7), 485-488.
- Schlichting, I. (2013). Strategic framing of climate change by industry actors: A metaanalysis. *Environmental Communication*, 7(4), 493-511.
- Sector, U. E. (2005). United Nations decade of education for sustainable development (2005-2014): International implementation scheme. Paris, France: UNESCO.
- Short, P. C. (2009). Responsible environmental action: Its role and status in environmental education and environmental quality. *The Journal of Environmental Education*, 41(1), 7-21. doi: 10.1080/00958960903206781
- Smyth, J. C. (1995). Environment and education: A view of a changing scene. Environmental Education Research, 1(1), 3-120. doi: 10.1080/1350462950010101
- Smyth, J. C. (2006). Environment and education: a view of a changing scene, Reprinted from *Environmental Education on Research* (2005) 1 (1), pp. 3-20. *Environmental Education Research*, 12(3-4), 247-264. doi: 10.1080/13504620600942642
- Spence, A., & Pidgeon, N. (2010). Framing and communicating climate change: The effects of distance and outcome frame manipulations. *Global Environmental*

- Change, 20(4), 656-667. doi: 10.1016/j.gloenvcha.2010.07.002
- Stevenson, R. (1987). Schooling and environmental education: contradictions in purpose and practice. In I. Robottom (Ed.), *Environmental education: practice and possibility* (pp.69-81). Geelong, Victoria: Deakin University Press.
- Stevenson, R. B. (2006). Tensions and transitions in policy discourse: Recontextualizing a decontextualized EE/ESD debate. *Environmental Education Research*, 12(3-4), 277-290. doi: 10.1080/13504620600799026
- Stevenson, R. B., Ferreira, J. A., & Emery, S. (2016). Environmental and sustainability education research, past and future: three perspectives from late, mid, and early career researchers. *Australian Journal of Environmental Education*, 32(1), 1-10.
- UNESCO. (2014). *Shaping the future we want.* Retrieved from http://unesdoc.unesco.org/images/0023/002303/230302e.pdf
- UNESCO. (2017). *Education for sustainable development goals*. Retrieved from http://unesdoc.unesco.org/images/0024/002474/247444e.pdf
- United Nations (1992). *The Agenda 21*. Retrieved from https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf
- United Nations (2015). *Transforming our world: the 2030 agenda for sustainable development*. Retrieved from https://sustainabledevelopment.un.org/content/documents/21252030 Agenda for Sustainable Development web.pdf
- Wals, A. E. (2012a). Shaping the education of tomorrow: 2012 full-length report on the UN decade of education for sustainable development. Paris, France: UNESCO.
- Wals, A. E. (2012b). Learning our way out of unsustainability: The role of environmental education. In S. D. Clayton (ed.), *The Oxford handbook of* environmental and conservation psychology (pp. 328-663). New York, NY: Oxford University Press. doi: 10.1093/oxfordhb/9780199733026.013.0032
- Wals, A. E., Weakland, J., & Corcoran, P. B. (2017). Preparing for the Ecocene:

- Envisioning futures for environmental and sustainability education. *Japanese Journal of Environmental Education*, 26(4), 71-76.
- Yeh, S. C. (2014, November). *Perspectives of ESD in Taiwan: environmental education for every citizen*. Paper presented in World Conference on Education for Sustainable Development, Aichi-Nagoya, Japan.
- Yeh, S. C. (2016, November). *Collective behaviour change towards sustainable futures* a Taiwanese perspective. Paper presented in Conference on Collective Behavior Change towards Sustainable Futures in Asian and Pacific Island and Isolated Communities, Taipei, Taiwan.

作者簡介:

葉欣誠 國立臺灣師範大學環境教育研究所教授

電話: 02-7734-6563

電子郵件: scyeh@ntnu.edu.tw

通訊處:11677 臺北市文山區汀州路四段88號

Yeh, Shin-Cheng

Professor, Graduate Institute of Environmental Education, National Taiwan Normal University.

Tel: 886-2-7734-6563

Email: scyeh@ntnu.edu.tw

Address: No.88, Sec. 4, Tingzhou Rd., Wenshan Dist., Taipei City 116, Taiwan

(R.O.C.)

Exploring the Developmental Discourse of Environmental Education and Education for Sustainable Development

Shin-Cheng Yeh

Professor, Graduate Institute of Environmental Education, National Taiwan Normal University

Abstract

Since the Tbilisi Declaration was approved in 1977, environmental education

(EE) has been developed for over 40 years. Similarly, education for sustainable

development (ESD) has also been promoted by the UN for over 20 years since

"Agenda 21" was drafted in 1992. During this period of time, EE and ESD have been

highly linked and interrelated, nevertheless they both kept respective uniqueness.

Abundant discussions can be found in the literature. Moreover, the "2030 Agenda for

Sustainable Development" and Sustainable Development Goals (SDGs) were passed

by the UN Assembly in 2015. They are currently being promoted, accompanying with

ESD, in diversified fields and countries. With the background that the Environmental

Education Act of Taiwan has been promulgated for over five years and the developing

trends of EE, ESD, and SDGs, this paper examined the development discourse of

related issues and contexts. Framings of EE and ESD were also analyzed and some

suggestions were then given.

Keywords: sustainable development goals (SDGs), education for sustainable

development, framing, discourse

109