

[Home](#) > [Journal](#) > [Social Sciences & Humanities](#) > [CE](#)[Indexing](#) [View Papers](#) [Aims & Scope](#) [Editorial Board](#) [Guideline](#) [Article Processing Charges](#)

CE > Vol.2 No.4, October 2011

OPEN ACCESS

Teaching Sustainability: A Multidisciplinary Approach

PDF (Size: 75KB) PP. 388-392 DOI: 10.4236/ce.2011.24055

Author(s)

Yosef Jabareen

ABSTRACT

Sustainable development is multidisciplinary concept in its nature and is covered by various bodies of sciences. Yet, its literature is fragmented and each specific discipline of knowledge analyzes it and teaches it from its narrow perspective. Therefore, this paper suggests a new conceptual framework for teaching sustainability that assumes the multidisciplinary nature of sustainability. This framework consists of ten concepts, a distinctive theme, and each one represents a specific domain or field that is related to sustainability. The themes represent the ethical, social, economic, ecological, spatial, design, and political aspects of sustainability. The ten concepts are intertwined and interconnected and together they construct the holistic scene of understanding and teaching sustainability. These concepts are very useful for teaching sustainability. Moreover, each concept could be in-depth discussed individually in a specific class session. Each discipline could take advantage of this framework and may emphasize various aspects accordingly.

KEYWORDS

Sustainable Development, Pedagogy, Teaching, Theory, Holistic

Cite this paper

Jabareen, Y. (2011). Teaching Sustainability: A Multidisciplinary Approach. *Creative Education*, 2, 388-392. doi: 10.4236/ce.2011.24055.

References

- [1] Abbott, J. (2009). Planning for complex metropolitan regions: A better future or a more certain one? *Journal of Planning Education and Research*, 28, 503-517. doi:10.1177/0739456X08330976
- [2] Adger, W. N., Agrawala, S., Mirza, M. M. Q., Conde, C., O'Brien, K., Pulhin, J., Pulwarty, R., Smit, B., & Takahashi, K. (2007). Assessment of adaptation practices, options, constraints and capacity. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden and C. E. Hanson (Eds.), *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 717-743). Cambridge, UK: Cambridge University
- [3] Adger, W. N. (2001). Scales of governance and environmental justice for adaptation and mitigation of climate change. *Journal of International Development*, 13, 921-931. doi:10.1002/jid.833
- [4] Agyeman, J., Bullard, R. D., & Evans, B. (2002). Exploring the nexus: Bringing together sustainability, environmental justice and equity. *Space & Polity*, 6, 77-90. doi:10.1080/13562570220137907
- [5] Alberti, M. (2000). Urban form and ecosystem dynamics: Empirical evidence and practical implications. In K. Williams, E. Burton, and M. Jenks (Eds.) *Achieving Sustainable Urban Form* (pp. 84-96). London: E & FN Spon.
- [6] Alberti, M., Booth, D., Hill, K., Coburn, B., Avolio, C., Coe, S., & Spirandelli, D. (2003). The impacts of urban patterns on aquatic ecosystems: An empirical analysis in Puget Lowland Sub-Basins. Seattle: Department of Urban Design and Planning, University of Washington. http://www.cfr.washington.edu/research.urbaneco/student_info/classes/Aut2003/Fall_2003_readings/alberti_et_alI03_LE.pdf
- [7] Beatley, T., & Manning, K. (1998). *The ecology of place: planning for environment, economy and community*. Washington, DC: Island Press.
- [8] Beer, A., Delshamar, T., & Schildwacht, P. (2003). A changing understanding of the role of greenspace in high-density

- [9] Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, 26, 611-639. doi:10.1146/annurev.soc.26.1.611
- [10] Boyce, J. K., Klemer, A. R., Templet, P. H. & Willis, C. E. (1999). Power distribution, the environment, and public health: A state-level analysis. *Ecological Economics*, 29, 127-140. doi:10.1016/S0921-8009(98)00056-1
- [11] Cervero, R. (2003). Coping with complexity in America's urban transport sector. The 2nd International Conference on the Future of Urban Transport. Göteborg, Sweden.
- [12] Clercq, F., & Bertolini, L. (2003). Achieving sustainable accessibility: An evaluation of policy measures in the Amsterdam area. *Built Environment*, 29, 36-47. doi:10.2148/benv.29.1.36.53949
- [13] Cortese, A. (2003). Higher education and sustainability. In W. M. Timpson, B. Dunbar, G. Kimmel, B. Bruyere, P. I. Vewman and H. Mizia (Eds.), *147 Practical Tips for Teaching Sustainability: Connecting the Environment, the Economy, and Society* (p. 5). Madison, Wisconsin: Atwood Publishing.
- [14] Costanza, R., D' Arge, R., De Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O' Neill, R. V., Paruelo, J., Raskin, R. G., Sutton, P., & Van den Belt, M. (1997). The value of the world's ecosystem services and natural capital. *Nature*, 387, 253-260. doi:10.1038/387253a0
- [15] Dumreicher, H., Levine, R. S., & Yanarella, E. J. (2000). The appropriate scale for " low energy" : Theory and practice at the Westbahnhof. In S. Koen and S. Yannas (Eds.), *Architecture, City, Environment. Proceedings of PLEA 2000* (pp. 359-363). London: James & James.
- [16] Duncan, B., & John, H. (1996). Sustainable urban transportation initiatives in Canada. Paper submitted to the APEC Forum on Urban Transportation. Seoul, Korea.
- [17] Elkin, T., McLaren, D., & Hillman, M. (1991). *Reviving the city: Towards sustainable urban development*. London: Friends of the Earth.
- [18] England, R. (1998). Should we pursue measurement of the natural capital stock? *Ecological Economics*, 27, 257-266. doi:10.1016/S0921-8009(98)00026-3
- [19] EPA—United States Environmental Protection Agency (2001). *Our built and natural environments: A technical review of the interactions between land use, transportation, and environmental quality*. EPA 231-R-01-002. <http://www.smartgrowth.org>
- [20] Forman, R. T. (2002). The missing catalyst: Design and planning with ecology. In B. T. Johnson and K. Hill (Eds.), *Ecology and Design: Frameworks for Learning*. Washington, DC: Island Press.
- [21] Geldrop, J., & Withagen, C. (2000). Natural capital and sustainability. *Ecological Economics*, 32, 445-455.
- [22] Geus, M. (1999). *Ecological utopias: Envisioning the sustainable society*. International Books. Utrecht, The Netherlands.
- [23] Heltberg, R., Paul, B. S., & Steen L. J. (2009). Addressing human vulnerability to climate change: Toward a ' no-regrets' approach. *Global Environmental Change*, 19, 89-99.
- [24] IPCC, Schneider, S. H., Semenov, S., Patwardhan, A., Burton, I., Magadza, C. H. D., Oppenheimer, M., Pittock, A. B., Rahman, A., Smith, J. B., Suarez, A., & Yamin, F. (2007). Assessing key vulnerabilities and the risk from climate change. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden and C. E. Hanson (Eds.), *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 1-100).
- [25] Jabareen, Y. (2004). A knowledge map for describing variegated and conflict domains of sustainable development. *Journal of Environmental Planning and Management*, 47, 623-642.
- [26] Jabareen, Y. (2004). Building conceptual framework: Philosophy, definitions and procedure. *International Journal of Qualitative Methods*, 8, 49-62.
- [27] Jabareen, Y. (2006). Sustainable urban forms: Their typologies, models, and concepts. *Journal of Planning Education and Research*, 26, 38-52.
- [28] Jenks, M. (2000). The acceptability of urban intensification. In K. Williams, E. Burton and M. Jenks (Eds.), *Achieving Sustainable Urban Form*. London: E & FN SPON.
- [29] Johnson, J. (2009) Buying a sustainable economy: The record recovery act energy spending may trigger a new clean-energy industry. *Chemical & Engineering News*, 87, 17-22.
- [30] Mirfenderesk, H., & Corkill, D. (2009). Sustainable management of risks associated with climate change. *International Journal of Climate Change Strategies and Management*, 1, 146-159.

- [31]Neumayer, E. (2001). The human development index and sustainability. A constructive proposal. *Ecological Economics*, 39, 101-114.
- [32]Newman, P., & Kenworthy, J. (1989). Gasoline consumption and cities: A comparison of US cities with a global survey. *Journal of the American Planning Association*, 55, 23-37.
- [33]O' Brien, K., Leichenko, R., et al. (2004). Mapping vulnerability to multiple stressors: Climate change and globalization in India. *Global Environmental Change*, 14, 303-313.
- [34]Owens, S. (1992). Energy, environmental sustainability and land-use planning. In M. Breheny (Ed.), *Sustainable Development and Urban Form* (pp. 79-105). London: Pion.
- [35]Paavola, J., & Adger, W. N. (2006). Fair adaptation to climate change. *Ecological Economics*, 56, 594-609.
- [36]Parker, T. (1994). *The land use—air quality linkage: How land use and transportation affect air quality*. Sacramento: California AirResources Board.
- [37]Pearce, D., Barbier, E., & Markandya, A. (1990). *Sustainable development: Economics and environment in the third world*. London: Earth- scan Publications.
- [38]Pearce, D., & Turner, R. K. (1990). *Economics of natural resources and the environment*. Baltimore: Johns Hopkins University Press.
- [39]Solow, R. (1991). *Sustainability: An Economist' s perspective*. The eighteenth J. Seward Johnson lecture. Woods Hole, MA: Woods Hole Oceanographic Institution.
- [40]Stern, N. (2006). *The stern review on the Economics of Climate Change*. HM Treasury, UK: Cambridge University Press.
- [41]Stymne, S., & Jackson, T. (2000). Intra-generational equity and sustainable welfare: A time series analysis for the UK and Sweden. *Ecological Economics*, 33, 219-236.
- [42]Swanwick, C., Nigel, D., & Woolley, H. (2003). Nature, role and value of green space in towns and cities: An overview. *Built Environment*, 29, 94-106. doi:10.2148/benv.29.2.94.54467
- [43]Turner, S. R. S., & Murray, M. S. (2001). Managing growth in a climate of urban diversity: South Florida' s Eastward ho! Initiative. *Journal of Planning Education and Research*, 20, 308-328. doi:10.1177/0739456X0102000304
- [44]Thomas, R. (2003). Building design. In R. Thomas and M. Fordham (Eds.), *Sustainable Urban Design: An Environmental Approach* (pp. 46-88). London: Spon Press.
- [45]Ulrich, R. S. (1999). Effects of gardens on health outcomes: Theory and research. In C. C. Marcus, And M. Barnes (Eds.), *Healing Gardens: Therapeutic Benefits and Design Recommendations*. New York: Wiley.
- [46]UNDP—United Nations Development Programme (2002). *Human development report 2002: Deepening democracy in a fragmented world*. New York: Oxford University Press.
- [47]UNFCCC—United Nations Framework Convention on Climate Change (2007). *Climate Change: Impacts, Vulnerability and Adaptation in Developing Countries*. <http://unfccc.int>
- [48]Walker, L., & Rees, W. (1997). Urban density and ecological footprints —An analysis of Canadian households. In R. Mark (Ed.), *Eco-City Dimensions: Healthy Communities, Healthy Planet*. Gabriola Island: New Society Publishers.
- [49]Wheeler, S. M. (2002). Constructing sustainable development/safeguarding our common future: Rethinking sustainable development. *Journal of the American Planning Association*, 68, 110- 111.
- [50]Yannas, S. (1998). Living with the city: Urban design and environmental sustainability. In M. Eduardo and S. Yannas (Eds.), *Environmentally Friendly Cities* (pp. 41-48). London: James & James.

- [Open Special Issues](#)
- [Published Special Issues](#)
- [Special Issues Guideline](#)

[CE Subscription](#)

[Most popular papers in CE](#)

[About CE News](#)

[Frequently Asked Questions](#)

[Recommend to Peers](#)

[Recommend to Library](#)

[Contact Us](#)

Downloads:	166,678
------------	---------

Visits:	373,113
---------	---------

Sponsors >>

[The Conference on Information
Technology in Education \(CITE
2012\)](#)