Surfing Global Change (SGC)

(Resource ID: 505)

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This teaching resource is allocated to following University:
KFUG - Karl-Franzens-University Graz

Institution:
Wegener Center for Climate and Global Change

http://www.sustainicum.at/en/modules/view/505.Surfing-Global-Change-SGC

Internet connection necessary

English, German

Please note: module with excess length - more than 7 lecture units required! ⊗

"Surfing Global Change" (SGC) is a didactically sound and innovative online-based course in 5 levels for variable interdisciplinary courses. SGC's appeal is based on the didactic approach ("ethics of discourse"), which was endorsed by the British academic publisher Emerald who awarded the "Outstanding Paper Award 2005". SGC's special feature is the abandonment of "absolute truths" (which would have to be learned) in favour of achieving negotiated solutions with the objective of sustainable and lasting consensus solutions between the role-playing participants. SGC is process-

oriented training for the intricacies of professional careers because it focuses on structural conflicts of interest. SGC's emphasis is on gradual complex rhythmic social processes among the participants who in changing team compositions research specialised foundations from the perspectives of different stakeholders. Participants intellectually understand, describe in writing, review each other, engage in controversial debates, try to find consensus solutions and finally put into the wider context of global megatrends. The usability of SGC was improved substantially. Based on "blended learning", it is not about virtual gimmicks, but addresses the needs of well cooperating students (often> 1000 hits / semester per student), who find course materials and express their expectations in surveys, discuss to achieve points, perform tests and engage in review processes.

Learning scenario: The emerging social dynamics is generated by a detailed set of rules (see bibliography), which is available online in the "game rules" (shown on 1 page each per level).

Method: The five-step negotiation "Surfing Global Change" **trains the competence for achieving sustainable consensus solutions**. Along a series of game processes in five levels (Fig. 1, right) the share of social skills increases as compared to classical professional skills:

Level 1: acquire knowledge and pass a web based quiz
Level 2: establish a sound technical point of view and comment on others' views
Level 3: win a controversial discussion in the team in the view of observers
Level 4: reach consensus with the same discussion partners
Level 5: integrate the envisaged case study in the context of global long-term trends.

The objective of Surfing Global Change is to **construct one's own learning targets**, to increase the game players' **transdisciplinary competence to act** and to **generate** long-lasting (= sustainable) **solutions** given conflicting patterns of interest. Technical, economic, social and other impacts of large-scale projects or innovations can be systematically assessed and compared against values ("**technology assessment**").

Aim: SGC radically promotes the **emergence of dynamic communication patterns among students**. These may be dominated by both self-interest and the commitment to professional quality – just as in real life. In this **field**

of tension a sensitive and often deliberately unstable social equilibrium emerges in which the students, based on their own behavioural inclinations, can experience first-hand the uncertainties of both Machiavellian and idealistic strategies for action. The moderator therein accompanies and supports.

The <u>role of the evaluator</u> moves from the moderator to the students. They define by themselves the case studies, their team, positions and policies and give each other points (contributing to the grade).

The concept of SGC (© Gilbert Ahamer) was developed in 2003 and since then has been implemented at different universities more than two dozen times for the following courses:

"*Technology Assessment*", "*Environmental Technology*", "*Systems Theory & Biology*" in the curricula "Civil Engineering", "Architecture" and "Industrial Electronics" at FH Joanneum
"Interdisciplinary Practicals" in the curriculum "Environmental Systems Sciences" of the University of Graz on the themes

Climate Change and Climate Models
Technology Assessment
Systems Analysis and Biology
Environmental effects of land use and energy supply
Global Change – Socio-ecologic competencies considering for example the new EU Member States
Participation in Municipal Sustainability Planning
Global Change in our networked environment
World in a Change? - Comparison of three socio-economic, climatic and technological future perspectives
Passive Houses and Low Energy Houses
A Climate to Act
Futurology
Peak Oil
Environment in South-East Europe and EU Enlargement
Technology Assessment and Climate Change
Energy Optimization in the Residential Sector
EIA & Strategic Environmental Assessment SEA
S7 - Pro and Contra of the Fürstenfeld Highway
Globalization from Chernobyl to the Styrian 380kV line
Ecological Way of Life: Nostalgic Past or Necessary Future?
Viticulture in Southern Styria under Impact of Climate Chg.
Go East: Environmental Aspects in Croatia and Slovenia

3. Seminar "Globalisation & Global Change" at Salzburg University

Figure 1: The levels of the negotiation game "Surfing Global Change" and their characteristics

Access: Free, only after personal communication with the author (© Gilbert Ahamer)

According to the high complexity of SGC and according to the comments received during the Sustainicum process, the author and copyright holder strongly recommends that personal support by the author is included in any attempt to implement SGC. Else its authentic character is likely to be not maintained.

Learning Outcomes

· Understand complex interdisciplinary issues that include several, often antagonistic actors/stakeholders
· Understand your counterparts in international projects
· Details see referenced literature

Relevance for Sustainability

As a result of considering different points of view (e.g. from construction companies and environmentalists), the arguments are discussed from the perspective of the divergent stakeholders. This creates social sustainability because negotiated solutions need not be renegotiated again. The other pillars of sustainability are incorporated herein by the lecturers' inputs and the students' individual research.

Related Teaching Resources

No specific previous knowledge / related resources required

Sustainability criteria

- Interdisciplinary
- Holistic thinking
- Systemic thinking
- Strengthens interpersonal competence
- Strengthens strategic competence
- Problem-solving oriented
- Intercultural

Preparation Efforts

Low

Access

Free

Sources and Links

Literature on Global Change

"Negotiate your Future: Web Based Role Play", Campus-Wide Information Systems CWIS, Vol. 21, No. 1, January 2004, p. 35-58, ISSN 1065-0741, see http://www.emeraldinsight.com/1065-0741.htm. (Outstanding Paper Award 2005: http://www.emeraldinsight.com/info/authors/literati_news/awards/papers_2005.jsp#5)

"SURFING GLOBAL CHANGE: Negotiating sustainable solutions". Simulation & Gaming - an International Journal, Vol. 37 No. 3, September 2006, p. 380-397. http://www.unice.fr/sg/, text at http://sag.sagepub.com.

"Rules of the new web-supported negotiation game 'SurfingGlobalChange'". Proceedings of the 9th European Annual Conference of the Society for Media in Science GMW04, http://www.gmw-online.de/ver/kong04.html, published by Waxmann Verlag, Münster - New York – München – Berlin, p. 145-156.

"Experiences during three generations of web based learning". Proceedings of the 9th European Annual Conference of the Society for Media in Science (GMW04), Waxmann Verlag, Waxmann Verlag, Münster - New York – München – Berlin, p. 157-169, http://www.waxmann.com/index2.html?kat/1417.html.

"SurfingGlobalChange - Content searching for equilibrated context". Vortrag am 8. Business Meeting "Forum Neue Medien", Krems, 1.7. 2004.

„A Dialogue Helps to Minimize a Potential 'Clash of Cultures'", contribution to the Euroweek04 conference, FH Kapfenberg, 26.4.2004, compare http://euroweek04.fh-joanneum.at, and published in: "The Challenge of the EU Enlargement", ed. by Tschandl, M., Leykam Verlag, Graz, p. 35-63.

"'SurfingGlobalChange' (SGC): ein Drehbuch für interdisziplinäre Lehrveranstaltungen". Newsletter Jänner 2005 - Neue Medien in der Lehre, Forum Neue Medien in der Lehre – Austria (FNM-A), p. 10-12.

"Geschichtsschreibung für eLearning in drei funktionellen Epochen". Newsletter März 2005 - Neue Medien in der Lehre, Forum Neue Medien in der Lehre – Austria (FNM-A), p. 8-11.

"How the use of web based tools may evolve along three generations of WBT". International Conference on Interactive Computer Aided Learning (ICL05) in Villach 2005, 12 pages, see http://www.icl-conference.org/archive.htm.

"Mutual review processes facilitate comprehension of opposed standpoints". International Conference on Interactive Computer Aided

Learning (ICL05) in Villach 2005, 14 pages, see http://www.icl-conference.org/archive.htm.

with Schrei, C.: "Exercise 'Technology Assessment' through a gaming procedure". In print at the 2005 special issue of The Journal of Design Research, 28 pages, see http://www.inderscience.com.

"'Surfing Global Change': How didactic visions can be implemented". Campus-Wide Information Systems CWIS, 2005, ISSN 1065-0741, Vol. 22, issue 5, p. 298 – 319,
see http://www.emeraldinsight.com/1065-0741.htm.

More recent literature: see also „Beschreibung der Lehrmethode"

Automatic PowerPoint presentation von SGC (please unzip locally):
http://www.uni-graz.at/globalstudies/deposit/SurfingGlobalChange-Presentation-2007.zip

also see the document containing detailed screenshots of the web platform!

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