

Integrating value education and sustainable development into a Dutch university curriculum

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Abstract

Despite the mainstream technological approach of Science in academic curricula, with its focus on specialisation, the Dutch history of higher education is an interesting example of an alternative development. The *Vrije Universiteit of Amsterdam* has declared in its mission statement a pedagogical ideal of “broad academic education”, oriented towards educating students to become “moral responsible and reflective scientists and professionals”.

This paper describes a pilot study focusing on organizational dynamics, learning processes involved in value education, and the question of how a philosophical/ethical perspective on sustainability can be integrated into the curriculum. A critical evaluation of this pilot study suggests that students need more insight into the status of values as different from empirical facts.

Introduction

Almost five years ago the *Vrije Universiteit of Amsterdam* in the Netherlands started a programme of integrating sustainable development into the curricula. This programme is meant to enrich scientific education with transdisciplinary knowledge and issues concerning sustainable development.

It is linked to another programme, called “On values”, which aims to promote communication and reflection on values in the scientific enterprise.

This paper describes a pilot study focusing on the implementation of value education, transdisciplinary contents, and didactical models, in the curriculum of the university. The pilot study involved a complex interaction of organizational dynamics and learning processes, and included the management of didactics, philosophical and ethical perspectives and content development concerning sustainability issues. This complex intermingling of processes and perspectives resembles the art of cooking. When you want to prepare good food, a recipe book is a help. But the hands of a good cook and the use of fresh quality products are also absolutely necessary. Whether you get a fine meal depends on the integration process of how these elements are mingled.

Starting from this metaphor, the success of the pilot study depends on the process of fusing these different elements into a fine meal of knowledge. Thus, it requires a level of capability similar to that of a good cook – to have a feeling for the right moment and the right mix of ingredients, using transdisciplinary contents (food) of good quality and the aid of well-designed plans, strategies and models (recipes).

First, the historical and cultural setting of the two educational programmes is described, revealing the roots and reasons behind the university’s interest in integrating sustainable development and ethical reflection into the curriculum.

Then the context of the fusion process is described, which resulted in a particular course on “Sustainability in food supply” in the faculty of Earth and life Sciences, based on a specially designed didactical model. The last part of the paper focuses on a critical evaluation of the learning processes, which consider values in sustainable development from a philosophical point of view. A critical evaluation of this pilot study, as seen from our educational ideal, suggests that students need more insight into moral values, as distinct from empirical facts, methodological norms and international conventions. The results suggest that it is possible to improve the learning effects in three ways, through intuition, reflection and communication. More specifically, the research findings indicate a need for value education along the route of enhancing the competences of intuitive awareness, philosophical reflection on conceptual frameworks, and dialogue on issues of values and sustainable development. Finally, these results are translated into a philosophic-didactical design.

Historical and philosophical setting of programmes

The concept of value education is embedded in a long philosophical tradition, starting from the Greek concept of *paedeia* (from which our word “pedagogy” stems) and culminating in the Enlightenment idea and ideal of a systematic improvement of our rational faculties, leading to the moral, cognitive and technical development of the individual and of society as a whole. Thus, the whole concept of value education is part and parcel of a broader conception of development as a process of developing the human being as a “whole person”, including the “cultural”, “political” and “spiritual”. The concept has been transformed into the German concept of *Bildung*, articulated by Wilhelm von Humboldt as the ideal of a “free university”. “Free” in this context means “free from external principles”, for example economic, legal or utilitarian principles, and free to carry out the purpose of “liberal education”.

The Romantic concept of *Bildung* aimed at an integrative development of the sciences, the humanities and the arts. This integrative perspective was articulated in the philosophic tradition of Idealism, with authors like Schelling, Goethe, Herder, Hegel and Von Humboldt counterbalancing the one-sided aspect of the Enlightenment ideal of the privileging of our rational faculties. The Romantic correction aimed at a rehabilitation of our intuition, empathy and imagination as “non-rational” faculties for generating knowledge. Maybe it is an irony of history that this ideal of “liberal education” from a broad perspective was gradually impoverished in Europe and has been transported to the West and implemented in some prestigious universities of the USA.

Nowadays most Dutch universities suffer from a narrowed scope and a specialist-technical orientation which applies knowledge from a utilitarian-economical perspective. This type of thinking is characterised by, for example Heidegger, as being “instrumental-calculating” in orientation, and opposed to the more “original-poetical form of thinking” that he articulated in his philosophy. Habermas elaborated on the social consequences of the “instrumental” type of thinking in society in terms of the “colonisation” of our “private world” by the subsystems of politics and economics.

As a consequence, questions of mental, spiritual and moral development are articulated in a materialistic and instrumental discourse. This implies that academic curricula and developmental programmes for improving the “output” of our universities are dictated by “economic thinking”. We talk about the “human capital” of our organizations, and we see universities as “business enterprises”, expecting them to generate profitable “educational products”. Our government sanctions universities financially according to the rates by which they maximise the output of scientific products.

Facing the social and ecological consequences of “economic thinking” in society in terms of our threatened cultural and natural resources, we seriously question whether quantitative standards alone can guarantee a quality test for the improvement of universities and “academic curricula”. What other perspective do we need for qualitative refinements to counterbalance further rationalisation of our educational system?

Broad vision behind the programmes offered

Our educational programmes titled “Values in science” and “Sustainable development” are embedded in a broad vision of education in which students of all departments receive an introductory course in philosophy, especially in respect to the main themes of the disciplinary field, and a historical overview of the development of the sciences and humanities, called “encyclopaedia”. Thus, the pedagogical ideal of the Vrije Universiteit of Amsterdam of “educating students to become reflective and responsible scientists and professionals” can be seen as inspired by a more original and integrated concept of education. From this historic-cultural point of view there is interconnectedness between the two programmes: starting from different angles they both contribute to the rehabilitation of moral responsibility and social engagement at the core of scientific and professional activities.

The pilot study

To implement the pilot study for value education and sustainable development into the curriculum required the cooperation of the management team of the Earth and Life Sciences with our education expertise group, as well as cooperation with the institute for teacher education, with lecturers from several disciplines and with a professor of ethics of the Bezinningscentrum (Appel, 2002). This teamwork was a precondition for receiving the educational, disciplinary and didactical input for the course.

In particular a dilemma-oriented learning model (DOLM), focusing on choices in dilemma’s and dialogue (Boschhuizen, 2002a; Boschhuizen and Kee, forthcoming) was used. Working with this learning model, students in different disciplines are confronted with cases, containing choices in (ethical) dilemmas. This model was used to design a transdisciplinary course (Van Langen et al., 2001; Van Langen and Van Straalen, 2002) on food supply, with sustainability issues in which a value perspective was integrated.

DOLM is a four-phase model with nine steps (see also Figure 1):

- Phase A. The intuitive phase: The students read a short description of a case study involving dilemmas. They intuitively choose a course of action in this specific situation and formulate the arguments and moral values underlying their choice (1). The students then discuss their choices and values (2).
- Phase B. Knowledge acquisition: In the next stage, the students study relevant bodies of knowledge (3). Subsequently, they make another choice and offer their arguments and an explanation of their values (4). This is followed by a discussion between the students on choices and values (5).
- Phase C. Reflection on the relevant bodies of knowledge: In this phase, the students reflect on the truth of the relevant bodies of knowledge from a philosophical perspective (6), after which they make their choices again, present their arguments and clarify their values (7). In this phase too, they discuss their choices and values with each other (8).
- Phase D. Reflection on the learning process: the students reflect on the three choices made in the earlier phases and give a verbal description of their learning process (9).

By means of these four phases, dialogical communication and reflection on moral issues and sustainable development are stimulated and structured. With respect to the specially designed course for the earth and life Sciences, the following value-learning processes could be observed:

- students confirm the values of justice for people, for future generations, and for all organic life on earth;
- students broaden their values with one or two of the others;
- students change their values into one of the others (Boschhuizen, 2002b).

In total, 80 third-year biology students at the VU in Amsterdam attended the course.

Reflection on values in sustainable development

We now turn to the question of what the educational aim presupposes in a philosophical-didactical sense. This analysis focuses on improving the integration of sustainable development and value learning with respect to ethical and reflective competencies. This means cultivating an intuitive feeling for the way in which this perspective differs from the conventional disciplinary approach to the subject.

Disciplinary perspectives on issues of sustainability in food supply offer scientific, technical and practical knowledge about the way in which food supply in the context of a particular case – a fictional poor country called Abundantia – could be reorganized on a sustainable basis. One option, for example, is the introduction of high-tech agricultural innovations, like genetic modification; another option could be implementing an educational programme to improve the social and working conditions of the local people. These options imply different ecological, moral, religious and social effects on the people involved and, on the country's, natural and cultural resources.

In the course students had to choose between eight different options and justify their choice in terms of both scientific know-how regarding the effects, and philosophical and ethical terms. Weighing these options against each other is not just a technical exercise of balancing their positive against their negative social and ecological effects. Ultimately, choosing between different options implies choosing between different value systems that accompany the choice and its effects. These are ultimately choices between different ways in which a community conceptualises and values human beings in relation to each other, to the cultural and natural surroundings, and to a spiritual or religious dimension. When students acquire an intuitive feeling for these value aspects, that are inherent in professional choices and in different ways of behaving, the first target of value education is considered to have been attained.

Student values emerge

Let us look at some examples of students' reflections on values with regard to food sustainability.

The first example comes from a task set in the course. Students had to give advice to the president of Abundantia on the problematic situation in the country concerning food security. One student wrote:

My advice has been changed during this course. First, I considered everything to be permitted in order to improve the life conditions of Abundantia, even a war with neighbouring countries and people. After studying the literature my opinion changed dramatically. I found out that it is not right to improve your own situation at the cost of others. This would result in creating additional

problems to the one you try to resolve: namely war and the problems that stem from it. The solution it offers works in the short term only.

In the sentence “... it is not right to improve your own situation at the cost of others”. The concept of “right” is ambivalent, referring either to an ethical or a practical-empirical evaluation. The reader first may think the student expresses an ethical judgement, but then later the meaning switches to pragmatic considerations, when the writer adds: “... creating additional problems to the one you try to resolve”. “The solution it offers works on the short term only”. This example shows how subtle and difficult it is for students to specify and differentiate the ethical dimension, as fundamentally different from other ways of evaluating the situation.

In the next example, a student shows a similar difficulty in expressing the ethical dimension in a judgement. The example shows that students tend to “translate” the ethical dimension either into a “subjective mode” of expressing feelings or “an objective mode” of referring to a factual situation. The student wrote:

About all negative effects I consider unacceptable. The loss of ram forest continues now for years and years. This is really something horrible [sic], after a little longer there will be no piece of “natural land” left. Rain forest is one of the most important ecosystems of the earth and it is just not right that it will be lost.

These words reveal a personal involvement in the subject matter, which is a necessary starting point for value education. This shows especially in the following exclamation: “... This is really something horrible [sic]”. At the same time the student shows a difficulty in articulating the ethical dimension in this negative judgement (“... I consider unacceptable”) by means of argumentation, so that the statement does not transcend the level of emotional expression.

This seems to be a general problem in value education: students tend to perceive the ethical dimension either as “subjective”, being of an irrational nature and subjective to rhetorical arguments, or as “objective”, referring to empirical facts or positive conventions. This ambivalence is Education and manifest in the following statements:

... This is really something horrible (a subjective exclamation).

Rain forest is one of the most important ecosystems of the earth ... (an objectification of a value judgement).

The question therefore seems to be: how can we define an ethical dimension for students that is “inter-subjective” in nature – that is open for rational debate as well as for personal involvement?

In the third example a student shows a more reflective way of expressing value judgements:

The reason why I think it is not acceptable anymore is because I think that every human being has an equal right to be “happy”. Happiness is embedded in the fulfilment of basic needs (having food, shelter, etc.). Because of these (to me unacceptable) consequences, this is not possible anymore ... I think the values which are related to these issues are based on equality and the right of having “as much” happiness as every other human being ... Related values to this issue are equality, autonomy and especially care for others. By this I mean future generations and the land as such.

This student adds argumentation to the moral judgement, by referring to values that are at stake: “The reason why I think it is not acceptable anymore is because I think that every human being has an equal right to be ‘happy’”.

A justification of the judgement is given by means of defining a generally accepted notion of an equal human right to happiness and by referring to related values and needs:

Happiness is embedded in the fulfilment of basic needs (having food, shelter, etc.).

I think the values which are related to these issues are based on equality and the right of having “as much” happiness as every other human being ...

The results show first of all an inherent ambivalence of moral judgement: that “value judgements” are generally interpreted by students either as “subjective exclamations” or as “objective facts”.

Inter-subjectivity

In order to grasp the specific epistemological status of the ethical it is helpful to introduce the concept of “inter-subjectivity” in relation to values. The cultivation of “value intuitions” and a basic understanding of the ethical perspective constitute a first and preliminary condition for value education.

The construction of conceptual schemes and concepts for articulating value intuitions and an ethical dimension is an important second step.

The educational aim of refining the discourse concerning value judgements can be realised by offering students a philosophical perspective and an ethical framework relating to issues of “sustainable development” within the different transdisciplinary fields. This would contribute to an improvement of the “colloquial language” and the dichotomic (“subjective” versus “objective”) way in which most students express their value interpretations and moral judgements.

Correcting students’ inadequate dichotomic perspective on values, leading to discussions in which you want to convince the other that you are right, and the other is wrong, constitutes therefore an important educational aim. To contribute to this aim, our educational programmes depart from a dialogical perspective. This implies a feeling for the fundamental difference between dialogue and discussion. Dialogue presupposes openness of mind and heart, both for one’s own intuitive awareness as well as for different points of view that will be expressed by others.

From a dialogical perspective, the confrontation with other points of view and differences in moral judgement is positively valued in principle. That is, instead of perceiving other points of view as threatening to your own “truth”, you might perceive them as possibilities to sharpen, transform or enrich your own perspective. In this way dialogue is a pre-condition for the transformation of the first level of subjective intuitions, vague notions, and irrational opinions about values and sustainability issues, into a more scientific and profound articulation. The pivotal principle for value education is translated into the dialogical competence of careful conceptualising and judging ethical matters in more refined discourse, and of communicating in an open way. The development of dialogical competence thus constitutes a fundamental third track in value education.

The concept of value education

This analysis suggests that it is possible to improve value education by integrating a philosophical (i.e. ethical) perspective on issues of sustainable development. The aim of “value education” fits into the general pedagogical ideal of the Vrije Universiteit of Amsterdam of enhancing a professional and responsible attitude with respect to the use of scientific knowledge. Students have to learn to approach theoretical and practical problems or dilemmas in a more complex and multidimensional way than just finding a “technical solution”. This would imply developing intellectual, “dialogical” and moral competencies to consider the question what the right way is, from different perspectives. “Right” refers here to moral, ecological, spiritual, psychological and social dimensions that complement “technical know-how”.

To elaborate further on the concept of value education, let us try to interpret these empirical findings from a philosophical point of view. The phenomenological-hermeneutical tradition inspired by the German philosopher Heidegger is particularly useful here, as his philosophical perspective incorporates a correction to the one-sided track in the Enlightenment ideal. This correction is similar to the Romantic idea that we, as human beings, are capable of having an empathetic direct relation to the world and an intuitive faculty that enables us to become aware of this “inner relation” we have towards “being”.

Normally we see and act from a paradigmatic view according to conceptual schemes that are instrumental to our goals and targets: for example, the scheme of being a professional, of being a Citizen, of being a mother, etc. Such schemes define our “normal” way of thinking and acting: how to behave, feel and talk like a good professional, Citizen, or mother. We cannot see “brutal facts”, but we become aware of “interpreted” reality according to these disciplinary and social schemes. This conceptualised mode of reality is what Heidegger called “the world”, which is not to be identified with “being” or “Da-sein”. Our human truth is not “naked” (as Nietzsche put it) but “dressed” in conceptual “clothes”. By cultivating “openness” of mind and heart, we are able to see “reality” as it is: conceptually “clothed” by our continuous activity of conceptual framing.

The development of our “moral faculty”, our intuitions, emotions and imagination concerning value judgements, can be seen as a necessary supplement to the project of Enlightenment by “emancipating” them as “non-rational” autonomous components of social, moral and emotional intelligence. With our intuitive, emotional and imaginative faculties we can become aware of this inner connection with being – “the phenomenological given” – a mode of being that Heidegger called “*Da-sein*”.

The philosophic-didactical design

In this last part of the article, I present a philosophic-didactical design as a tentative interpretation of the empirical results of the pilot study described above. Starting from a common sense notion of “intuitions” as “ill-defined, vague or irrational ideas”, we may discern our faculty of the intuition now as our ability to relate to the “inner dimension of being” in the sense of cultivating “openness of mind and heart” in order to apprehend the phenomenological given. Elaborating the phenomenological perspective, in the sense of cultivating pre-reflexive faculties like intuition, imagination and empathy, constitutes therefore a philosophical precondition for value education.

The second condition complements this phenomenological perspective with hermeneutics: it aims at the development of our reflexive and interpretative faculties. To reflect on “the

phenomenological given” is a “product” of the way in which we interpret our world of experience as being a mix of intuitions, feelings, concepts, theories, values, etc. In this way we can become aware of what Nietzsche called “perspectivism” and what “post-modern” philosophers have articulated as the “fundamental otherness” in all our conceptualisations, i.e. the “infinite possible ways” in which we can structure our world: scientific, political, ethical, cultural, “naïve”, religious ... ways. Translated into our philosophic-didactical model for value education, we can then invite students to reflect on the legitimacy of these different perspectives. The third condition is the implementation of a dialogical approach to value education, both in the organizational context of lecturers, in order to invite them to innovate the disciplinary fields with philosophical and sustainability perspectives, and in the learning environments of students by means of interactive didactical models. The dialogical approach reflects the fact that the generation of knowledge is not an isolated enterprise but is embedded in a social context. This most fundamental condition generates the possibility of a continuous refinement of conceptual frameworks within the community of scientists, students and professionals. Dialogue stimulates creativity in communication processes both in the context of intra- and interpersonal learning processes – by relating theories to the world of experience of students – as in the organizational context by ultimately stimulating the development of a learning organization.

These three conditions can be translated into a philosophic-didactical design that aims at:

- (1) The development of an intuitive sense so that students get a feeling for moral, existential and religious questions inherent in the use of scientific knowledge.
- (2) The integration of adequate philosophical and ethical perspectives in conceptual frameworks, so that students learn to articulate questions of sustainable development and of values in the application of Science.
- (3) The cultivation of a dialogical approach in learning processes, by which our “vague” and “equivocal” value intuitions are expressed and tested by communicating them to others. The phenomenologico-hermeneutical principle of “suspension of (one dimensional, exclusive) truth claims” is an important rule in dialogical communication in order to avoid a debating atmosphere in which only one perspective will be claimed to be the “right” one.

Conclusions

Seen from the historical and cultural setting presented in the first part of this article, our educational programmes depart from the Romantic idea of an intuitive, pre-reflexive awareness of values, complemented with the Enlightenment idea/ideal of developing reflective competence concerning moral intuitions, concepts and emotions in respect to values in sustainable development by means of dialogical communication.

A pilot study in the faculty of earth and life Sciences was presented in which three perspectives were combined: processes of organizational dynamics and change, didactical models enhancing students learning processes, and the articulation of a philosophical-ethical dimension inherent in issues of sustainable development. The results were analysed from a philosophical perspective focusing on the concept of value education. The analysis suggests that obtaining the ultimate goal of value education may be a rather high expectation, but our hope is that we will be able to translate these empirical findings somehow in a pragmatic way; thus, contributing to several targets:

The cultivation of dialogical communication at the level of organizational development as well as at the level of students’ learning processes, aiming at expressing, communicating

and refining intuitions, ideas, feelings, concepts and common-sense notions. This contributes to:

The development of a learning organization as being an adequate context for the implementation of sustainable development and a value perspective in higher education. This contributes to:

- The stimulation of learning environments for students with respect of sustainable development and value education, for example:
- The development of the DOLM in which, especially learning processes that broaden perspectives are stimulated.
- The development of other didactical instruments that enhance intuitive and reflective learning processes by other sorts of dialogical and expressive forms of communication, art-related means like creating metaphoric, narrative or scenic expressions, group (Socratic) dialogue, individual presentations, and debating forms, etc.
- The refinement of conceptual frameworks, focusing on philosophical and ethical aspects related to transdisciplinary contents in issues of sustainable development.

The long-term conclusion suggested by the pilot study is that along these educational lines our programmes on values and sustainable development could contribute to a larger cultural ideal: the re-integration of a value perspective in Science, technology and education, enhancing a sense of moral and social responsibility in questions of sustainable development, thus modestly contributing to a “re-valuation of our world”.

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