

Introduction

The mechanisms for knowledge transfer in our education system are essential for a transition towards responsible consumerism. Didier Mulnet, who teaches at Clermont-Ferrand University, presents the five skills illustrated in the reference guide to sustainable development developed by a working group resulting from the conference of university presidents and the conference of Grandes Ecoles. It highlights the underlying issues, and particularly the need to change the educational model and to develop appropriate training tools with the aim of looking at the world globally and exercising responsibility based on ethical values.

Now, let us hand over to Didier Mulnet, responsible for ESD (Education for Sustainable Development) teacher training, ESPE Clermont-Auvergne.

Didier Mulnet's presentation

The baseline, or rather the reference guide, "training stakeholders in sustainable development" which was developed from the conference of university presidents and the conference of Grandes Ecoles puts forwards five meta-skills. Having a systemic vision and implementing it, having a prospective vision and implementing it, defining individual and collective skills, defining, enabling, and encouraging the move towards change, but also exercising responsibility in an ethical framework. In essence, these are the five great skills which have been organised, and broken down into five levers for action.

The first lever is basic knowledge. Knowledge and understanding. Next is identifying the resources for this knowledge. Then, analysing, understanding and positioning, proposing to enable acting and evaluating with constant interaction between these levers. There is no linear progression through these issues.

Here are some examples to help. If you want to understand greenhouse gases, but only certain greenhouse gases and their effects are mentioned, the complex becomes complicated. You do not understand anything if everything is not taken into account. If emotion and aesthetics are used, as in the central image, if you do not really reflect upon the true causes by returning to the investigation without reducing the problems, you will come up with a solution of the wind power sort which is only partial. The answer is a lot more complex.

We do not want to consider only household consumption either, because you see that it represents only a quarter of the story. We have to think in terms of global grey energy. If I now move onto the story of the acorn, the problem is simple. Global warming is rising in France more quickly than it is possible for the acorn to migrate towards the north through dissemination by the jay. It is a problem of speed in a perspective where evolution always follows the same rhythm.

If you go back to factor four, energy in France. In fact, you can see there are figures, but you cannot understand anything from these figures. The small curve, it is hard to believe that the increase of 3% annually in a trend will double this trend in twenty five years. But what is possible in one sense, an increase of, is also possible in the other sense, a decrease of 3% in consumption, leading to a halving of consumption in twenty-five years. Amplification in time, amplification in space, but there are also positive perspectives. Indeed, something can be done when moving from the individual to the collective, and vice versa.

As for the 2020 targets, 18% reduction in energy. We are at 20% for 2020. That is not a problem, except that our figures are incorrect. We have not taken into consideration the fact that GDP is practically zero. But GDP is correlated with energy consumption. We have forgotten that we have exported nearly all our energy production. In fact, these figures are very biased.

Changes. The changes are voluntary or imposed, progressive or rapid. Positive or negative changes, that does not mean very much changes that are reversible or not. In fact, it is the question we need to ask. We accommodate change or we react to these changes and there is a rupture.

From there on, questions arise about the meaning that we give to ethics. Virtue ethics, these are my values, common ethics that society gives me, deontological ethics, there are things that you do not do, consequentialist ethics, anything goes. Inevitably, in this regard, there are indeed some issues. Seeing the quantity of energy that we consume converted into euros, it comes to 63 billion euros annually, which is 280 billion euros between now and 2050. It is possible to move to a simple transition or it is possible to move to an almost energy revolution. That is a question of choice. All this is our responsibility and the ethics we are going to adopt.

To sum up, this reference guide highlights systemic, prospective and collective skills, responsibility and ethics, and changes, but these should be not seen as separate skills. It is the link, the spiral movement between these three which is important. Each of these skills has been subdivided into five dimensions or rather levers for action, but these five levers are not linear. You can start at the third point, go to the fourth point and come back to the first point. You can reverse, skip and jump between skills. In fact, it is a spiral movement moving from skill to skill and revisiting each skill.

To conclude, what are the educational issues? We have systemic, prospective, scientific and technical skills. We have other individual and collective skills in terms of change which are in the domain of human science, anthropology, sociology and psychology. All this with one goal. All this for what? To exercise responsibility according to ethical values. In fact, this skill guide gives us a new way to view the world. We open different windows. And if only one or two windows are opened, you see the world through a microscope. If all the windows are opened simultaneously, you see the world in all its diversity. To see it completely you have to open all the windows and deal simultaneously with all the skills.

Now, what is our problem? Our problem is that we do not yet have the training tools for these different systemic, prospective and other skills. We are going to have to create these tools. Moreover, we are also going to have to create the educational scenarios to implement them in context. Finally, here is a simple question. Shall we continue with low level education as in school

education, or shall we move towards strong education with a real paradigm shift from an educational perspective? Are we ready for this? It is an open question.

Conclusion

Education for sustainability goes with reform of learning methods: but are we ready to move towards a paradigm shift in education ?