

# Education Through Sustainability or Sustainability Through Education

Philip Robertson

It may be said that the human race is in a state of crisis and has been forced to change as a result of this crisis. Education involves many practises of learning by means of failure and as science is an art of compromise, failure of past generations have allowed for the restrictions to become known. Enough failures and inoperable solutions have occurred for the human race to realise the importance of educating itself in order to reduce future failures. Being open to change may be seen as allowing a process of learning (Handy, 1990: 44). Therefore it may be suggested that change by a means of education is an operable, if not correct, solution to the lack of sustainability within the lifestyle of the human race. Education allows for a lack of cybernetic conversation between fields of study as, although many faculties are incorporated in the same building, each field of study has been constrained to a defined practice and title. Design has the advantage in this sense as it is difficult to constrain it to a single methodology, title or practice. Whole Systems Design in corporation with design inquiry, look to provoke and investigate this matter for the purpose of, exactly that, a whole systems solution (Advanced design institute, 1993: 2)

Designing through metaphors is an effective solution for provocation as it allows for an understanding of functionality through a different medium, therefore a metaphor may be used to understand a complex machine or complex way of thinking (Mountford, 1994: 25). This process may be used to introduce the concept of holistic thinking utilised within education for sustainability. A child, at a young age, is taught the alphabet for the purpose of effective uniform communication at the present and later stages in life. The alphabet is only complete once all letters have been accounted for and their places defined. Through algebra, the same child, at a later stage is taught a different use of the alphabet for the purpose of understanding variables. Although the use of the letter has changed, the child still understands its place in the alphabet. This may be related to holistic thinking as every influential factor needs to be realised, defined and positioned for an effective sustainable solution (Advanced design institute, 1993: 3). As children are taught to distinguish between letters in the alphabet and how to use them in order to communicate effectively, design students should be educated to distinguish between influential factors and how to use them in order to design, not only effectively, but sustainably too.

The use of adult learning in the faculty of design, with relation to sustainable design, allows for a change of mindset within the influential and powerful generations. This is accomplished through design inquiry (Advanced design institute, 1993: 1). As inquiry may be defined as seeking clarity (Oxford University Press, 2010), it is important to note that awareness does not complete the process to recovery in a crisis. Application of that knowledge through respective fields, such as design, while incorporating systems thinking and cybernetic conversation allows for further sustainable methodologies and solutions (Advanced design institute, 1993: 1). Design may be used as a practice as it feeds consumer behaviour while inquiry seeks to define the needs of consumers and whole system design incorporates the use of other fields of studies to produce an enriched solution (Kimbell, 2009: 9). The further use of provocation, which will be discussed later, within design inquiry allows for questions such as whether it may be possible for consumers to continue consumption behaviours while establishing a sustainable lifestyle. In this example, the need for consumption in the human race should be investigated through inquiry and incorporated in the systems design in order to use it, perhaps as an advantage, for a sustainable solution.

The importance of adult education in the sense of sustainable solutions should be stressed when tackling organisations which may or may not influence the outcome of the solutions in a dramatic sense. It is not possible for a crisis to be solved by adjusting pre-existing systems in place. The need for changing full identities becomes greater as the human race increases acceleration into a crisis (Advanced design institute, 1994: 1). Utilising design as a synthesising process introduces clear heads and sends foundations of corporations into a series of inquiries in order to dissect issues in terms of sustainability (Advanced design institute, 1994: 1). Whole systems design has the ability to allow for all goals and aims in the corporation to be accounted for while changing the methodology of achieving those same goals and aims. The use of design, instead of science, allows for issues to be inspected with a systemic approach which investigates consequences in multi-dimensional forms such as human-interaction, environmental impact and profit (Advanced Design Institute, 1994: 1). The error within this methodology lies within the difficulty to limit research to achieve reachable goals (Advanced Design Institute, 1994: 3). The use of education in whole systems design towards influential members in corporations becomes beneficial, as the profiles of these persons are generally goal orientated.

The ability that design has to communicate with end users is apparent in the relation that ethnography has to design. A controversial field such as ethnography where questions are raised in the viability of research when engaged by the mediator is useful for designers as the feedback loops

present the designer with a bottom up type of research. The relation to sustainability lies within identifying the viability of a sustainable solution by presenting it to a user before production.

The term human-centeredness may seem arrogant towards the human race as it relates to the design of products and technology to fit the needs of ourselves (Krippendorff, 1997: 1). This may be correct, however; this term is perhaps the sole reason to why designers exist. It may also be the reason why the world is leading deeper into a crisis. It may also allow designers from different focuses to change the effect that the lifestyles of the human race. The method by which information is created and shared is moving further away from a physical form, to a digital form (Krippendorff, 1997: 1). This is to the extent that information is more tangible, transportable and freely available than ever (Latour, 1985: 5).

The use of interaction design in this regard allows for the matter which has been manipulated digitally to become more physical. This is how the use of human-centeredness can allow for the user to achieve the same interaction from a digital device when compared to a piece of paper. This will result in less use of printed media and allow for less paper to be used.

A holistic designer conducting ethnographic research would observe the system as a whole by identifying all points of interaction and lines of communication in order to develop a behavioural study of the users in question (Blomberg, et al, 1993: 7). The designer has the opportunity to allow for provocation to take place by observing real-life situations in order to incorporate the ethnographic research as a vital part in the design process. The importance of the observer in the design process is highlighted where typical methods of research fall short. This is when the participant expresses his or her views orally instead of physically. It may be suggested that what people relay to questionnaires is not what they realistically do in everyday life (Blomberg, et al, 1993: 9). Dramatic performances by the user often provoke more thought into the designer and allow for every detail of the action to be analysed. The key to produce and live sustainably may be hidden within simple actions that people perform every day. As explained previously, a consumer has a need to fulfil what is commonly known as “retail therapy”. By the use of ethnographic field methods, this may be supported by sustainability.

The study of various particulars in their limitations with the use of feedback loops and multi-dimensional interactions is a similar approach than when dealing with a liquid centre approach in an organisation (Stolterman, Nelson, 2009). A liquid centre approach looks to take into account all facets of an organisation in a complex manner by allowing a free form of communication in order to optimise productivity within the organisation (Stolterman, Nelson, 2009). As the topic of adult

education has previously been discussed, the ability to educate decision-makers in large corporations to utilize a liquid centre approach, in not only their organisations, but also their products could see the incorporation of sustainable solutions outputted on regular bases. The role of the designer becomes more of an educator towards corporations. It may be wise, for the purpose of optimisation and sustainability to allow for designers to rearrange whole systems within large organisations.

The difference between learning through educational systems in place at institutions and real-life business situations, as described in Harold Nelson's article titled *Everything Real is Not True*, appears to contradict the idea of adult education (to a limited extent). The article defines the difference in learning between a school environment and a business environment. Valid points are raised as there is more conversation between particulars within the business environment (Advanced Design Institute, 2010). It seems beyond the scope of this written piece to determine the appropriate time and or the appropriateness of introducing whole systems thinking to organisation directors. Perhaps it is better to allow designers who have been trained specifically to deal with complex situations as such. The problem may still lie in striking interest within the eye of the organisation director in terms of sustainability. As designers are more aware of change in terms of consequence, provoking the correct people should be left to their will (Advanced Design Institute, 1993). As the human race accelerates towards a deeper crisis, drastic change is required through design awareness. The use of reflection through design, also referred to as critical design, may allow mass produced products to act as tools for education to the masses.

As human beings often think or reflect sub-consciously, the thoughts are present except they may not be physically noticeable or expressed (Sengers, 2005). The use of reflection through design looks to provoke hidden emotions by means of following a path of self-discovery. Utilising this process is beneficial when discussing sustainable design education. As many consumers have the ability to develop their own decisions and opinions about products (Sengers, 2005), provoking a change for good may be possible. As mass production has an exponential growth rate, the results may be notable. However, critical design seems to stray away from mass production and focus on once-off products. With the use of whole systems design, all possible solutions which have been discussed may be accounted for in terms of conventional education as well as education through design.

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