Part 2. Project Results : Infusing Sustainability in Curricula

Phase 1. Awareness phase (summary)

This phase focuses on an awareness and campaigning process which is required to comprehensively address sustainable development through series of lectures and workshops (See Appendix 1 for details)

that allow some restructuring of the academic functions and learning process such that the education become culturally appropriate and locally relevant. It also includes designing educational contents and methods which the learner should acquire.

This phase will be implemented throughout the academic term of the university in the form of series of interactive lectures and workshops

Phase 2. Preparation phase (Summary)

The second phase is aimed at developing the scientific and educational base necessary to address key environment and sustainable development priorities, including ecosystems management; climate change adaptation; management of the world's freshwater and marine resources; and responses to disasters and risks, sustainable energy sources, green cities, etc. In this phase formulation of focal groups from each faculty (Appendix 2) were identified to work on evaluating the sustainable development content of curricula in each faculty using different tools available, followed by mainstreaming sustainable development and sustainability science in the curricula.

The time allocated for this phase is 6 months.

System thinking in terms of the 4 main components of sustainable development; economy, nature, society and wellbeing were used to illustrate the sustainability components in the curricula as a show case of each faculty. However, the detailed analysis and quantification of the current situation is implemented using the USAT.

The results of such analysis in each faculty are represented below for each faculty, arranged by alphabetical order. The general trend of presenting the results in all faculties takes the following sequence:

1. Assessing the Status Quo
   a) Review of curricula for selection of relevant courses for evaluating the components of sustainable development
   b) Evaluation of components of sustainable development in courses using USAT tool

c) Analysis of the results in terms of Education – Research – Activities and Practices.
d) Calculating percentage of current situation as indicators

2. Proposed plan of action using sustainable development goals as indicators for improvement of the current situation.

3. Expected results foreseen.
   a) Expected results foreseen in 2020-2022 Education – Research – Activities and Practices
   b) An Overview of the results foreseen
   c) Calculating percentage of the expected result

4. Examples of Practices
5. Comparisons and final recommendations

Appendix 2 shows the results of the exercise taken or each Faculty. For more details refer to the full report on https://www.pua.edu.eg/sustainability-transformations/sustainability-transformations-in-education/

The general recommendations of phase two at each level are:

University Level
1. Implementation sustainability concepts in University courses
2. Participation in international competitions related to sustainability
3. Integration between and within faculties of the university   in research related to sustainability
4. Establish a unit for sustainable development at the university
5. Holding a university annual SD conference
6. Implement sustainability practices e.g.
   a) Use the digital communications to reduce the usage of paper and ink & different materials .
   b) Install solar photo-voltage capacity
   c) Encourage University's own transportation
   d) Develop an "PUA Transportation app" to create a carpooling network and include an interactive bus schedule/map.
   e) Convert indoor lighting to LED lamps and outdoor lighting to LED lamps or solar-powered lighting.
   f) Install motion sensors in all corridors
   g) Add sorting stations and an efficient campus compactor.
   h) Circulate weekly sustainability awareness tips using email.

i) Form a sustainability student team to patrol campus and target high emitters (emission police).

Faculty Level:
1. Motivate professors to do more research related to sustainability
2. Communication with stakeholders to apply innovative solutions or problems related to sustainability
3. Use of Education for sustainable development as a tool of education and learning
4. Hold workshops to introduce and apply Sustainability to students and staff
5. Introducing a new course entitled "Introduction to Sustainability" (3 credit hours, two hours lecture and one hour practical) that deals with Sustainability, its goals and plans

Student Level:
1. Introducing sustainability to students in related topics
2. Targeting SDGs in all graduation projects
3. Motivate students to share in sustainability activities through an annual competition of the best project in the field of sustainability

Phase 3. Sustainability in practice.

This third phase focuses on the implementation of a change project for sustainable development in practice articulating a global vision in local terms. This phase addresses sustainable development goals and ways towards their achievements through implementation in the curricula in each Faculty of the University as well as small case projects in the different faculties of Pharos University. The following are the result of this phase, where almost all faculties of the university has infused sustainability in its curricula at different levels. The table below demonstrates the results of this phase. The table shows for each faculty the name of the course addressing each particular SDG, and course code, and the topic in such course. Some courses are relevant to more than one SDG.