The Principles of Outcome-Based Education (OBE) Curriculum. What are Their Implications in Classroom Practices? (Case Study: Diploma Industrial Design Modules)

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Abstract
Since the 1900, industrial design has been developed as a technical disciplinary study in Malaysia. This paper discusses how the implication of OBE in some modules was giving more positive value to the students. The research is about the effectives of add on the computer lesson together with conventional technique on industrial design courses. This paper focuses on four modules in Diploma Industrial Design, UiTM Kedah.

Introduction
What is Outcome-based Education (OBE) Curriculum? According to Phyllis Schlafly Report (May 1993), OBE means a restructuring the subject or school curriculum. The Ministry of Higher Education (MOHE) emphasize OBE is about learning outcome. We lack of skilled and knowledgeable graduates, even though some of them score four flat in their CGPA. They are good in exam but in reality they still weak and lack of the technical knowledge and the soft skill.

Research Method and Data
Industrial Design Department will construct the entire module in Diploma Industrial Design, based on of entry and exit survey result. All the results will affects to the learning outcome whether it will achieve the objective or failed.

Result and finding
Those are some changes and comparison before and after OBE.

1. Modules: Industrial Engineering Drawing (IDT 151)
   Semester: 02

<table>
<thead>
<tr>
<th>Before OBE</th>
<th>After OBE</th>
</tr>
</thead>
</table>

Table 2: Analysis for Engineering Drawing module

Result: The students got knowledge both skill either in manual and computer based. Use of AutoCAD software is intricately not only in industry, but it also can be used in various fields and their application skills also meet the industry demand. For example architecture, interior design, and landscape design.
2. Modules: Studio Presentation (IDT 204)
Semester: 03

<table>
<thead>
<tr>
<th>Before OBE</th>
<th>After OBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Presentation panel (manual)</td>
<td>• Presentation panel (computerize)</td>
</tr>
<tr>
<td>• Adobe Illustrator and Adobe Photoshop software’s</td>
<td>• Communication skill</td>
</tr>
<tr>
<td>• Corporate identity</td>
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</tbody>
</table>

Table 3: Analysis for Studio Presentation module

Result: The students will be trained how to become good presenter. They will feel more confident in front of the people. The students also learn how to use Adobe Illustrator and Adobe Photoshop software’s. They learn how to create corporate identity in their design even though they were not in graphic areas.

3. Modules: Typography studies (EAD 211)
Semester: 03

<table>
<thead>
<tr>
<th>Before OBE</th>
<th>After OBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• None</td>
<td>• Compulsory to semester 3 industrial design students.</td>
</tr>
<tr>
<td>• Give knowledge about typography</td>
<td>• Student will apply on their panel presentation</td>
</tr>
<tr>
<td>• Presentation panel (computerize)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Analysis for Typography module

Result: This is elective modules, offered by Graphic Department. The students get a new knowledge about typography and they will know how apply on their panel presentation or poster.

4. Modules: Computer Aided Industrial Design 2 (IDT 252)
Semester: 04

<table>
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<tr>
<th>Before OBE</th>
<th>After OBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Computer numerical control (CNC)</td>
</tr>
</tbody>
</table>

Table 5: Analysis for Computer Aided in Design 2 module

Result: This is new modules. CNC was useful in industries. The students will have experiences in leading the machine together with the CAD software.

Conclusion and Suggestion

In the development of new or old curriculum, we found that is not really difficult to do some construction or adjustment. We are facing some of the facilities that can’t provide to the student. For example, CNC machine is very expensive, and student needs to queue. Secondly, full usage for computer lab. So, to solve computer problem, the students will bring their own laptop into their classes. The OBE wasn’t burden to the student. The student will get more knowledge and experiences. They also versatile and increase their confident level. Again, from the concepts and practices of OBE it is able to measure ‘what the students are capable of doing’ something which the traditional education system often fails to do. Students should demonstrate what they have learned. Ideally, the students should have an understanding of the content, which is a cognitive skill that goes much deeper than finding the correct answer.

References
Phyllis Schlafly (May 1993)“What’s Wrong with Outcome-based Education?”Report, pp1-2.
Industrial Design Department (2012), Art and Design Faculty, Universiti Teknologi Mara, Kedah, OBE workshop.