Adoption of Outcomes-Based Education in the Philippines: The T.I.P. Experience

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Outline

1. Rationale
2. The T.I.P. OBE Framework
3. T.I.P.’s Implementation of OBE
4. Essentials for Effective OBE Implementation
5. Concluding Statement
Rationale

- **2008 CHED Curriculum Revision Highlight** - Transformation from Content-Based Curriculum to Competency-Based Curriculum or Outcomes-Based Curriculum

- CHED Memorandum Order No. 37 s. 2012. Policies, standards and guidelines in the establishment of an outcomes-based education (OBE) system in higher education institutions offering engineering programs

- CHED Memorandum Order No. 46 s. 2012. Policy-standard to enhance quality assurance (QA) in Philippine higher education through an outcomes-based and typology-based QA
Paradigm shift

Traditional method of teaching → outcomes-based education
T.I.P. Outcomes-Based Education: Leading The Way

**TIP EXTERNAL**
- External regulatory bodies (CHED, PRC, IMO etc.)
- Local and International Accreditation, Certifications, and Standards
- External Constituents

**TIP INTERNAL**
- Institutional Vision, Mission, Core Values, Core Competencies, Quality Policy
- TIP INITIATIVES: Faculty / Staff Development, Student Development

**TIP OBE**
- Long-term Goals for Alumni (LGA)
- Continuous Quality Improvement (CQI)
- Facilities Management Processes and Procedures, Resources and Support Structures, Sub-Systems

**Input**
- Students
- Input from Alumni (LGA)
- Assessment and Evaluation of LGAs

**Output**
- Graduates

**Other sources of information**
1, 2, 3, 4, 5

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The OBTL Framework*

- Intended Learning Outcomes (ILOs)
- Teaching and Learning Activities (TLAs)
- Assessment Tasks (ATs)

*City University of Hong Kong
Intended Learning Outcomes (ILOs)

• ILOs describe what the learners will be able to do when they have completed their course or program.

Teaching and Learning Activity (TLA)

Any activity which **stimulates, encourages or facilitates learning** of one or more intended learning outcome.

Assessment Task (AT)

Assessment can be any method of assessing how well a set of ILO has been achieved

How did we implement OBE/OBTL?
ACTIONS TAKEN FOR THE IMPLEMENTATION OF OBE/OBTL AT T.I.P.

1. Information Dissemination
2. Constructive Re-alignment
3. Capacity Building
4. Assessment and Evaluation
5. Continuous Quality Improvement
ACTIONS TAKEN FOR THE IMPLEMENTATION OF OBE/OBTL AT T.I.P.

1. Information Dissemination
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SY 2010-2011 Launching of the Full Implementation of OBTL at T.I.P.
Information Dissemination

OBTL Awareness Campaign

1. OBTL FLYER

• An introduction to outcomes-based teaching and learning
Rationale
In its continued quest for excellence and in the spirit of continuous improvement, TIP has embarked on a proactive plan to implement outcomes-based teaching and learning (OBTL) in all academic programs.

Recent trends in higher education require: 1.) increased emphasis on teaching and learning, and recognition of the scholarship of teaching; 2.) Shift of focus from teaching to learning; and 3.) promotion of greater transparency and accountability in educational institutions (Biggs and Tang, 2007).

What is OBTL?
OBTL is an approach where teaching and learning activities are developed to support the learning outcomes (University of Hong Kong, 2007).

OBTL is a generic title for a teaching delivery system where the curriculum topics are expressed as the outcomes students are intended to learn.

OBTL is about re-aligning intended learning outcomes with teaching and assessment, focus on what graduates know, what they can do and their personal attributes.

It is a student-centered approach in the delivery of an educational program where the curriculum topics in a program and the courses contained in it are expressed clearly as the intended outcomes are achieved. Teaching is then designed to directly encourage teachers to achieve those outcomes and reflect on the learning process with assessments undertaken. In this approach, teachers act as facilitators and teachers take responsibility and participate actively (City University of Hong Kong, 2007).

Why Use OBTL?
OBTL is logical, effective and both teachers and students find it more satisfying than traditional teaching. A benefit for students, possibly even more than teachers, is that the Intended Learning Outcomes (ILOs) tell them precisely not only what they are supposed to be learning, but how and according to what standard.

OBTL facilitates institutional performance along individual learners’ development level, active and experience-based learning and opportunities. These, in turn, to reflect learning processes to subsequent improvements.

How Does OBTL Differ from “Traditional” Teaching and Assessment?
Biggs (2007) discussed that traditionally, teachers used to plan their teaching by asking such questions as: What topics or content do I teach? What teaching methods do I use? How do I assess to see if the students have taken on board what I have taught them?

Teaching here is conceived of as a process of transmitting content to the students, so the methods tend to be expository, and assessment focused on checking how well the message has been received—hence the common use of lectures and demonstrations, with tutorials for clarification, and exams that rely on reporting back.
Information Dissemination

OBTL Awareness Campaign

• OBTL CHECKLIST FOR FACULTY MEMBERS
  - Guide questions for all faculty members in line with OBTL implementation
OBTL Checklist for Faculty Members

1. Have you explained to students what Outcomes-Based Teaching and Learning is all about?

2. Have you defined the course intended learning outcomes (CILOs)?

3. Are the CILOs properly explained to the students?

4. Have you identified the teaching and learning activities (TLAs) that facilitate the achievement of CILOs?

Reference: City University of Hongkong
OBTL Checklist for Faculty Members

5. Have you identified the assessment tasks (ATs) that can be used to measure whether the students have achieved the intended learning outcomes?

6. Did you ensure that students understand the outcomes they are meant to achieve, the tasks they are meant to do, and the assessment conditions?

7. Is there a feedback mechanism in place that will improve the course in the future?

Reference: City University of Hongkong
ACTIONS TAKEN FOR THE IMPLEMENTATION OF OBE/OBTL AT T.I.P.

1. Information Dissemination

2. **Constructive Re-alignment**

3. Capacity Building

4. Assessment of Outcomes and Evaluation

5. Continuous Quality Improvement
We began with the end in view

“What kind of TIP Graduates do we want to produce?”
Formulation of
Intended Learning Outcomes (ILOs)

at three Levels:

1. Institutional Level
2. Program Level
3. Course Level

Intended Learning Outcomes (ILOs) at three levels:

The **institutional level**, as a statement of what graduates of the institution are supposed to be able to do.

The **degree program level**, as a statement of what graduates from a particular degree program should be able to do.

The **course level**, as a statement of what students should be able to do at the completion of a given course.

Institutional Level

• Institutional Intended Learning Outcomes (IILOs)
• T.I.P. graduate attributes
# T.I.P. Graduate Attributes

## Institutional Intended Learning Outcomes (IILOs)

<table>
<thead>
<tr>
<th>Graduate Attributes</th>
<th>Intended Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Competence</strong></td>
<td><strong>Demonstrate</strong> understanding and mastery of the fundamental knowledge and skills required for effective professional practice in the field of specialization.</td>
</tr>
<tr>
<td><strong>Critical Thinking and Problem Solving Skills</strong></td>
<td><strong>Exercise</strong> critical and creative thinking in providing solutions to discipline-related problems.</td>
</tr>
<tr>
<td><strong>Communication Skills</strong></td>
<td><strong>Apply</strong> effective communication skills, both orally and in writing, using the English language.</td>
</tr>
<tr>
<td><strong>Lifelong Learning</strong></td>
<td><strong>Utilize</strong> lifelong learning skills in pursuit of personal development and excellence in professional practice</td>
</tr>
<tr>
<td><strong>Social and Ethical Responsibility</strong></td>
<td><strong>Hold</strong> personal values and beliefs as ethical professional consistent with Filipino family values, industry-desired values and global citizen values.</td>
</tr>
<tr>
<td><strong>Productivity</strong></td>
<td><strong>Contribute</strong> to nation-building and national development through application of new technology</td>
</tr>
<tr>
<td><strong>Interpersonal Skills</strong></td>
<td><strong>Work</strong> effectively in multi-disciplinary and multicultural teams</td>
</tr>
</tbody>
</table>
Program Level

• Program Educational Objectives (PEOs)

• Student Outcomes (SOs)
Course Level

Revision of all Course Syllabi to incorporate *Course Intended Learning Outcomes (CILOs)*

- What the students can do when they have completed the course/subject

  Ex. Algebra, Communication Arts, etc.
<table>
<thead>
<tr>
<th>Course Intended Learning Outcomes (CILOs)</th>
<th>Teaching and Learning Activities (TLAs)</th>
<th>Assessment Tasks (ATs)</th>
<th>Grading Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>CILO #2. <strong>Compare and contrast</strong> the structure and function of a typical animal and plant cell</td>
<td>Film Showing</td>
<td>Class Presentation</td>
<td>Rubric for Oral and Written Presentation</td>
</tr>
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<td>------------------------------------------</td>
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</tr>
<tr>
<td>CILO #3. <strong>Analyze</strong> the pattern of inheritance using multiple alleles and how these genes are transmitted from one generation to another.</td>
<td>Group Activity</td>
<td>Case Study</td>
<td>Rubric on Case Study</td>
</tr>
</tbody>
</table>
ACTIONS TAKEN FOR THE IMPLEMENTATION OF OBE/OBTL AT T.I.P.

1. Information Dissemination
2. Constructive Re-alignment
3. Capacity Building
4. Assessment of Outcomes and Evaluation
5. Continuous Quality Improvement
Capacity Building

Continuing Orientation and Re-Orientation of All Faculty Members and Officers
Capacity Building

Continuing Orientation and Re-Orientation of All Faculty Members and Officers
SUMMARY OF ACTIONS TAKEN FOR THE IMPLEMENTATION OF OBE/OBTL AT T.I.P.

1. Information Dissemination
2. Constructive Re-alignment
3. Capacity Building

4. **Assessment and Evaluation**

5. Continuous Quality Improvement
Assessment of Outcomes

Assessment in OBE is the process of determining the degree of attainment of an outcome at the course level as well as at the program level.
Assessment Methods

• Direct Method
• Indirect Method
PROGRAM LEVEL

Example of Assessment for PEOs

- Alumni Survey
- Employer Survey
Assessment of Student Outcomes

• Indirect Assessments
  - Student Survey
  - Faculty Survey
  - Graduating Students Survey

• Direct Assessments
  - Using Rubrics
Instruments Used for the Direct Assessments of Student Outcomes

1. Rubric for SO (a) Engineering Knowledge
2. Rubric for SO (b) Problem Analysis
3. Rubric for SO (c) Multiple Constraints
4. 4.a. Rubric for SO (d1) Conduct of Laboratory Experiments
   4.b. Rubric for SO (d2) Final Laboratory Project
5. Rubric for SO (e) Modern Tool Usage
6. Rubric for SO (f) Contemporary Issues
7. Rubric for SO (g) Environment and Sustainability
8. Rubric for SO (h) Ethics
9. Rubric for SO (i) Individual and Team Work
10. Rubric for SO (j) Effective Communication
11. Rubric for SO (k) Project Management and Finance
12. Rubric for SO (l) Lifelong Learning
### Results of Indirect SO Assessments

<table>
<thead>
<tr>
<th>Student Outcomes SOs</th>
<th>Faculty (%)</th>
<th>Graduating (%)</th>
<th>Student (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>84.40</td>
<td>82.41</td>
<td>72.22</td>
</tr>
<tr>
<td>b</td>
<td>84.60</td>
<td>82.22</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>84.57</td>
<td>73.33</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>84.20</td>
<td>86.85</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>85.60</td>
<td>86.20</td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>90.41</td>
<td>84.20</td>
<td></td>
</tr>
<tr>
<td>g</td>
<td>84.60</td>
<td>83.40</td>
<td></td>
</tr>
<tr>
<td>h</td>
<td>88.00</td>
<td>90.35</td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>87.78</td>
<td>97.28</td>
<td></td>
</tr>
<tr>
<td>j</td>
<td>90.53</td>
<td>90.00</td>
<td></td>
</tr>
<tr>
<td>k</td>
<td>85.40</td>
<td>85.42</td>
<td></td>
</tr>
<tr>
<td>l</td>
<td>85.00</td>
<td>85.47</td>
<td></td>
</tr>
<tr>
<td>Target Level of Attainment: 60% Mean Rating</td>
<td>87.40-88.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outcomes-Based Education: The Technological Institute of the Philippines (TIP) Experience
SUMMARY OF ACTIONS TAKEN FOR THE IMPLEMENTATION OF OBE/OBTL AT T.I.P.

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2. Constructive Re-alignment
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4. Assessment and Evaluation
5. Continuous Quality Improvement
What happens to the assessment results?

Use it for Continual Improvement
Essentials for Effective OBE Implementation:

• A detailed plan for outcomes-based education
• Commitment and full support from the top management
• Capacity building should be given top priority
• Continuous effort for dissemination
• Continuous quality improvement in all aspects of the implementation
Concluding Statement

As targeted in our assessment plan, we will further evaluate the impact of these initiatives on T.I.P. graduates. We are hopeful that all of these will contribute to the attainment of the educational objectives that we set for our graduates.