“Working-learning Integrated” Curriculum Development Practice and Reflection - Taking vehicle maintenance as the example

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Background

“Working-learning Integrated” Curriculum Development

Courses reform and reconstruction

Courses quality

policy support
About our courses

- **Type**
  
general basic courses, specialized basic courses, specialized courses

- **Characteristics**
  
  It is the so-called “parallel curriculum of theory and practice”

- **Problems**

  - **theory teaching**
    
    the didactic reduction of the discipline knowledge, no direct relationship to specific work.

  - **Practical teaching**
    
    focusing on training of work skills and techniques, it is hard to help students to build high-level vocational competence.

  - **overall understanding of work**
    
    It is difficult to establish a direct link between study and work practice.
Policy support

2003

MOE
Excellent Course Development Project of the Higher Education Teaching Quality and Teaching Reform Program

2006

MOE
Views on Improving the Overall quality of Higher Vocational Teaching

2006

MOE, MOF
Project of Constructing National Model Higher Vocational Institutes
objectives of curriculum reform

- to rebuild the curriculum system in accordance with the work process based “working-learning integrated” curriculum ideas and methods;
- to form a set of specialized core curriculum standards which have reference effects;
- to build curriculum resource with learning materials as the major content;
- to implement the new curricula with the process of “trial teaching – evaluation – improvement - promotion”;
- to realize the overall improvement of education and teaching quality through model curriculum development and implementation.
Outline of the curriculum development process

STEP 1
Deciding on the specialized curriculum system (learning field)

STEP 2
Development of specific (learning field) subject curriculum
Step 1-1: Expert worker workshop (EXWOWO)

5 Stages of career development

- Apprenticeship
- Team management
- Sector management
- Integrated sector management
- Accomplish a technical task independently

14 Professional tasks

- 1. Knowledge of trades and businesses
- 2. Auto assembly replacement
- 3. Vehicle maintenance
- 4. Auto minor trouble diagnosis and repair
- 5. Vehicle maintenance reception
- 6. Auto assembly overhaul
- 7. Team maintenance inspection
- 8. Team maintenance inspection
- 9. Vehicle maintenance inspection and testing
- 10. Customer relationship establishment and maintenance
- 11. Coordination between teams and workshops
- 12. Workshop scheduling
- 13. Technical guidance
- 14. Vehicle maintenance enterprise operation
### Step 1-2: Transfer Professional tasks to Courses

<table>
<thead>
<tr>
<th>Knowledge of trades and businesses</th>
<th>(1) Knowledge of trades and businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto assembly replacement</td>
<td>(2) Auto electromechanical basics</td>
</tr>
<tr>
<td></td>
<td>(3) Car disassembly</td>
</tr>
<tr>
<td>Vehicle maintenance</td>
<td>(4) Auto maintenance</td>
</tr>
<tr>
<td>Auto minor trouble diagnosis and repair</td>
<td>(5) Auto minor trouble diagnosis and fixing</td>
</tr>
<tr>
<td>Vehicle maintenance reception</td>
<td>(6) Vehicle maintenance reception</td>
</tr>
<tr>
<td>Auto assembly overhaul</td>
<td>(7) Auto engine overhaul</td>
</tr>
<tr>
<td></td>
<td>(8) Auto automatic transmission trouble diagnosis and fixing</td>
</tr>
<tr>
<td>Auto major trouble diagnosis and fixing</td>
<td>(9) Auto major trouble diagnosis and fixing</td>
</tr>
<tr>
<td>Team maintenance inspection</td>
<td>(10) Customer relationship establishment and maintenance</td>
</tr>
<tr>
<td>Vehicle maintenance inspection and testing</td>
<td></td>
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<td>(11) Vehicle maintenance quality inspection</td>
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<td>Coordination between teams and workshops</td>
<td></td>
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<td>(12) Vehicle maintenance enterprise operation management</td>
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<td>Technical guidance</td>
<td></td>
</tr>
<tr>
<td>Vehicle maintenance enterprise operation</td>
<td></td>
</tr>
</tbody>
</table>
Step 2-1: Development of specific subject curriculum

Principle 1

Comprehensive learning tasks
1. ........
2. ........
3. ........
4. ........
5. ........
6. ........
7. ........

Auto minor trouble diagnosis and fixing

Principle 2

Comprehensive learning tasks
8. ........
9. ........
10. .......
11. .......
12. .......
13. .......
14. .......
15. .......

### Step 2-2: Design of learning organization

<table>
<thead>
<tr>
<th></th>
<th>Work-learning station 1</th>
<th>Work-learning station 2</th>
<th>Work-learning station 3</th>
<th>Work-learning station 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Place of teaching</strong></td>
<td>2 ICT room</td>
<td>8 Learning-training areas</td>
<td>Top 5 brand training centers</td>
<td>Off-campus training base</td>
</tr>
<tr>
<td><strong>Major media/means</strong></td>
<td>Simulation teaching Software</td>
<td>Fault diagnosis bench</td>
<td>Real cars</td>
<td>Summer practice and internships before graduation</td>
</tr>
<tr>
<td><strong>Teaching features</strong></td>
<td>Virtual training</td>
<td>Simulated training</td>
<td>Real production training</td>
<td>summer practice and internships before graduation</td>
</tr>
</tbody>
</table>
Work-learning station 1
Work-learning station 2
Work-learning station 3
Work-learning station 4
Step 2-3: Development of teaching materials

- Courseware
- Online course resource and teaching resources bank
- Tests bank
- Featured learning materials
- Teaching cases and exercises
Step 2-4: Teaching process

**principle 1**

Putting emphasis on the selection of learning materials and attach less importance on the textbooks

**principle 2**

Adopting an approach of “holistic action”

**principle 3**

Student-centered learning
Summary and reflection

1. Integrated occupation analysis
2. Adherence to the logical principles of career development
3. Realization of incorporation of enterprises and the college
4. Innovative ideas in learning materials’ content organization and layout
Summary and reflection

1. The teacher’s competence
2. Higher demand for teaching environment
3. Corresponding management system
4. Some aspects of the teaching practice are not strictly carried out
Thank You !