Learning and Teaching Practices in Economics – Example 2
Catering for Learner Diversity: categorising learning content into foundation and extended parts according to students’ readiness

Introduction

Students in an Economics class may be more diverse in their abilities, aptitudes, learning styles and experience, etc. when they choose their elective subjects according to their interest. Teachers reported that certain parts of each topic in the curriculum may be rather difficult for some students to grasp and it takes much lesson time for them to handle but without satisfactory results. At worse, students lose sense of achievement, become unmotivated or even give up in late Secondary 4. Apart from adopting wide range of learning and teaching strategies to meet the needs of students, categorizing the learning content into foundation and extended parts according to students’ abilities and readiness is one of the ways to help them go through the learning journey in senior secondary level.

Basic information of the school

• It is an aided, co-educational school;
• Most students are of low ability, some of them are at bottom-ten level;
• Chinese is the medium of instruction in Economics;
• Teacher-student relationship in this subject is very good. Students find the teacher supportive and encouraging.

Details of the method

The teacher finds that some parts of the curriculum content are rather difficult to his students, especially those concepts adopted from the previous Sixth Form Economics curriculum. In view of this, he divides each topic into foundation part and extended part according to the level of difficulty/degree of complexity of the concepts. Students are informed that they have to try hard to master the foundation part and the extended part is for students targeting at higher levels in HKDSE. Hence, students would not feel frustrated even when they fail to master the extended part. The teacher and his students spend much time and effort on the foundation part. As students’ abilities and readiness vary from year to year, the teacher reviews the coverage of the foundation part and extended part for each cohort of students.

The sample topic used for illustration here is deposit creation and contraction. The worksheets used by the teacher are attached as follows:
To facilitate students’ mastery of the complicated topic of deposit creation and contraction, the teacher only introduces the basic and essential concepts as well as simple cases so that students can follow without much difficulty.

The first concept introduced is ‘fractional reserve system’. It is introduced through some authentic historical bank-run events.

The second concept introduced is reserve ratio.
The third concept introduced is legal reserve ratio / minimum reserve ratio.

Apart from the above three basic concepts, the assumptions that give rise to the maximum deposit creation / contraction are introduced.

The deposit creation process is introduced. As the students have acquired knowledge of accounting in another subject, there is no need for the teacher to explain the concepts related to T-account.

The first case used for illustrating the deposit creation process is “new deposit accepted by a bank”.
情況II:
- 甲銀行將$1,000的20%留作儲備，其餘的80%即$800作為貸款借出。
甲銀行的資產負債表:

<table>
<thead>
<tr>
<th>資產</th>
<th>負債</th>
</tr>
</thead>
<tbody>
<tr>
<td>儲備 +</td>
<td>存款 +$1000</td>
</tr>
<tr>
<td>貸款/放款 +</td>
<td></td>
</tr>
</tbody>
</table>

情況III:
- 由Y小姐收到的該筆貸款$800，又存入另一間銀行，乙銀行。
乙銀行的資產負債表:

<table>
<thead>
<tr>
<th>資產</th>
<th>負債</th>
</tr>
</thead>
<tbody>
<tr>
<td>現金 +</td>
<td>存款 +</td>
</tr>
</tbody>
</table>

情況IV:
- 乙銀行將$800的20%留作儲備，其餘的80%即$640作為貸款借出。
乙銀行的資產負債表:

<table>
<thead>
<tr>
<th>資產</th>
<th>負債</th>
</tr>
</thead>
<tbody>
<tr>
<td>儲備 +</td>
<td>存款 +$5</td>
</tr>
<tr>
<td>貸款 +</td>
<td></td>
</tr>
</tbody>
</table>

情況V:
- 借款人又將該筆貸款$640，又存入另一間銀行，丙銀行。
- 丙銀行將$640的20%留作儲備，其餘的80%即作為貸款借出。
丙銀行的資產負債表:

<table>
<thead>
<tr>
<th>資產</th>
<th>負債</th>
</tr>
</thead>
<tbody>
<tr>
<td>儲備 +</td>
<td>存款 +</td>
</tr>
<tr>
<td>貸款 +</td>
<td></td>
</tr>
</tbody>
</table>

存款的創造過程會無休止地繼續下去。
The deposit creation progress is connected to the topic of Geometric Progression that students have learned in Mathematics.

The formula for deposit creation is then generalised from the numerical example discussed.

<table>
<thead>
<tr>
<th>銀行</th>
<th>存款的創造總額</th>
<th>新貸款</th>
<th>現金儲備</th>
</tr>
</thead>
<tbody>
<tr>
<td>甲銀行</td>
<td>$1000</td>
<td>$800</td>
<td>$200</td>
</tr>
<tr>
<td>乙銀行</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>丙銀行</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>丁銀行</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>整個銀行制度</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

存款的創造總額 =

存款的創造是一種等級數。

存款的創造總額

\[ a = \frac{1}{1 - r} \quad a = \quad r = \]

经济的存款创造公式 1:

存款创造的最高总额 = 最初存款额 X 最大银行乘数

= X

在我们的例子中，没有超额储备时，
存款创造的最大可能值 = 最初存款额 X 最大银行乘数

=
存款創造的過程：

- 新
- 銀行的_______增加，出現________。
- 銀行將超額儲備___，成為人們的________。
- 他們將這些貸款保存於銀行________內，成為________。
- 由於有新存款，因此銀行的_______增加，出現________。

此過程不斷重覆，導致存款不斷增加。

溫習題：

(1) A textual summary of deposit creation is then provided for helping students consolidate their learning.

(2) Exercises are provided immediately to check student understanding.

(Note: the exercises are deleted here to avoid the potential copyright issue.)
The second case for deposit creation (i.e. existence of excess reserve) is introduced in the exercises. The formula is then generalised.
The concept of deposit contraction is introduced. The process is not described again in the worksheet.

The two formulae for deposit contraction are summarised.

Consolidation exercises are provided immediately to check student understanding. (Note: the exercises are deleted here to avoid the potential copyright issue.)
Three sub-topics are put in the extended part as the teacher finds them difficult to the students.

The first sub-topic is on monetary base which was not included in the S4-5 Economics curriculum designed for the previous HKCE Examination. Students are required to grasp M1, M2 and M3. Putting this concept in the extended part may help reduce the cognitive demand of the weak students who find difficulty in distinguishing the various types of money supply.
The simplest case for deposit creation / contraction which is regarded as the basic knowledge that students have to master is discussed in the foundation part. The more complicated cases (i.e. deposit created / contracted less than the maximum amount) are put in the extended part.

The third subtopic included in the extended part is the change in money supply in response to the change in monetary base. Most students find this concept and the related calculations difficult. Arranging this subtopic in the extended part helps reduce students' cognitive load, maintain their learning motivation as well as use lesson time more efficiently on those learning contents that they can master.
Remarks

Teachers may consider various factors in categorizing the learning content into foundation and extended parts. They can apply this method flexibly.

(a) The foundation part covers the basic concepts for students to master the subtopic while the extended part includes the more complicated cases or scenarios of the same subtopic, in which more variables are allowed to vary.

(b) As a variant of item (a), the extended part can be in the form of challenging tasks.

(c) The learning contents covered in the extended part may be reduced when students become more familiar with the method of study and way of thinking in this subject, or when students have acquired more prior or supplementary knowledge. The contents of the extended part may be revisited when students become more ready to handle them.

(d) Some students are more capable of using graphical approach to handle economic concepts while others feel more comfortable in using numerical schedules. Teachers may put the graphical analysis of some subtopics in the extended part.