UNIT 3  COURSE MAINTENANCE AND REVISION

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3.0  OBJECTIVES

When you have worked through the unit, you should be able to:

- explain the two corrective operations for updating a course;
- explain the three levels of corrections; and
- discuss the need for revision of a course.

3.1  INTRODUCTION

We have discussed the process of course preparation, the difficulties and problems in editing distance teaching materials and the importance of using simple and clear language in units 1 and 2 respectively.

Although distance teaching institutions take care to try and prepare perfect materials, it is not unusual to find that these materials suffer from shortcomings, however insignificant these might be. Thus, revising, reshaping and updating the materials is a legitimate part of the ongoing process of distance teaching. What you consider a good text today may become inadequate or 'outdated' tomorrow. A continuous concern for sustaining the 'usefulness' and the 'usability' (the attribute of being easy to
use) of the course is imperative. This unit discusses what this ‘continuous concern’ means in practical terms.

### 3.2 TWO CORRECTIVE OPERATIONS

Distance education courses have a ‘life-span’, of a number of ‘course-terms’. That is to say a distance education course is not discarded after being used for just one group of learners. It is used with successive learner-groups enrolled in the programme year after year.

Over the life-span of a course all the three considerations listed below are subject to change. The learner-group (i.e., the attributes of the group) may be affected by (a) the changing ‘values’ and requirements of life, (b) the content and its presentation, and (c) new developments/inventions in the relevant fields, or even by changes in the programme of the courses, the examination pattern, etc. The impact of changes in these respects in turn affects the quality of the course in turn, if suitable amendments or revisions are not carried out.

There is a need for ‘updating’ a course with regard to the changing learner-needs and the new developments in the curriculum as also in course-content and course presentation techniques. To this need we can now add a second one to satisfy our concern for maintaining the quality of a course. The second one is the need to identify the developmental and production errors and to correct/amend them. So two corrective operations become necessary to maintain the quality of a course once it is produced:

i) updating the course in respect of content, presentation and curricular changes, and

ii) dealing with developmental and production errors.

Both are significant. The former grows extensive operationally as the course grows older. But it is not likely to demand any great attention immediately on launching a course. The latter operation is different from the former in that it demands immediate attention soon after a course is put to use. If due attention is paid during the process of course development and production and in the initial years of course-use, it may grow operationally less extensive with the passage of time. While the former corrective operation is directed by the changes witnessed outside the process of course production, the latter is governed by failures within this process.

### 3.3 THREE LEVELS OF CORRECTION

The two corrective operations described above can be carried out on two levels, namely
Course Maintenance and Revision

- course maintenance, and
- course revision

At the course maintenance level, the possible activities are:

- dealing with the errors that have escaped notice, or appeared at the time of proof-reading,
- changing a word or phrase or a mark of punctuation here and there;
- re-printing a short section or two if the errors therein are too many to list down or too complex to explain.

The amount of redrafting (and reprinting) of the course material at this level is kept to the minimum—not beyond a few sections containing substantial errors. At the level of course revision we are concerned with almost similar details but a more liberal attitude towards redrafting part(s) of course material is allowed. Parts or whole of units/blecks may be rewritten, if this is deemed necessary.

But if an entire course needs to be rewritten, it is advisable to withdraw it and replace it with a new course. In such cases of replacement, the question of following the two lines of operation, which are applicable in the case of course maintenance and of course revision, does not arise at all. Such cases demand a different approach altogether.

The choice of the level of correction is made primarily on considerations of the ‘age’ of the course and the quantum of ‘change’ the course needs. The economy involved in the operations becomes a secondary factor. The figure 1 presents the context of use of each of these levels in relation to the quantum of change required.

<table>
<thead>
<tr>
<th>Operations to carry out</th>
<th>Degree of change required in the course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course withdrawal/ replacement</td>
<td>100</td>
</tr>
<tr>
<td>Course-revision</td>
<td>Considerable</td>
</tr>
<tr>
<td>Course maintenance</td>
<td>0</td>
</tr>
</tbody>
</table>

*Figure 1: Correction-levels for quality maintenance operations in relation to the degree of change that a course may need.*
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In the first few years of use the quality maintenance operation for a course may be pitched at the level of course maintenance. Later it can be carried out on the level of course revision. The revision operations should not normally be delayed beyond ten years of course use.

3.4 PREOPERATION ACTIVITIES:
COLLECTING INFORMATION ABOUT THE CHANGES REQUIRED

In sections 3.2 and 3.3 we have identified two corrective operations and three levels of correction respectively. Now the question is how to identify the specific quality maintenance activities that are required by a course. There are two means which can help in this activity:

- systematic feedback from course-users; and
- unsystematic collection of information

The two means are not mutually exclusive but can complement each other.

The use of either of these procedures can be made considerably easy and effective if the course users in distance education are conscious of their respective roles as distinct from those of course users in a traditional context. The learners in the context of distance education should recognise their role as one that is coordinate with, and not subordinate to, the roles of others in the programme/system to make these procedures successful.

3.4.1 Systematic feedback from course users

Systematic feedback can be obtained from
- the records of learners’ scores on assignments
- the learners’ assessment of the course materials

The assignment record

A periodic review of learners’ scores on assignments can help us identify problems with the assignments. We should ascertain the source of difficulty.

Difficulties emerging from assignments may have the following sources, one or more of them put together.

- The learner-ability assumed while preparing the assignment may be much higher than the actual learner-ability and consequently the standard/level of performance expected may be higher than it can be in reality.
- The objective or the task set for the assignment may not reflect the objective or the learning experience of the unit that precedes it.
Course Maintenance and Revision

- The presentation of the assignment may be defective. As a consequence the learner gets a partially or totally different idea of the task required from what the course-writer intends to give.*

If the difficulty is found to lie in any of these sources then there is something wrong with the assignment and it should be rectified. If one of these is really the source of difficulty and yet the learners have fared badly in dealing with the assignment, then we will have to check the unit that precedes the assignment.

Learners' assessment of the course-materials

The learners' assessment of the course material can help us in the process of improving the material. This assessment can be carried out by presenting an 'assessment questionnaire' with every assignment/unit and getting the learners' responses to it. Such a questionnaire may include:

i) a checklist of the learning experiences

Illustration 1

<table>
<thead>
<tr>
<th>Tick the appropriate box to indicate what you feel about the unit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The unit is</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>stimulating: ☐</td>
</tr>
<tr>
<td>boring: ☐</td>
</tr>
<tr>
<td>demanding: ☐</td>
</tr>
<tr>
<td>informative: ☐</td>
</tr>
</tbody>
</table>

*A case of illustration can be given here. A course on writing good test-items— in the context of teaching literature— was followed by the assignment given below:

Find an 'appreciation' question on a poem included in the B.A. question paper of your university and rewrite it stating as precisely as possible the scope of the answer. Suggest a maximum length for the answer.

What the course-writers wanted the learners to do was to modify a chosen defective item so as to make the item convey precisely the task required of the examinees and also the scope and the length of the answer expected of them. But most of the learners just reproduced verbatim the defective item (misled by the word 'rewrite') and misfocused their efforts on giving an unduly long account of the scope of the answer. This misunderstanding could have been avoided if the assignment was reworded as:

Choose an 'appreciation' question on a poem from the BA question papers of your university

Attempt to modify the question so as to make it a better one with adequate instruction on the scope and the length of the answer you expect.
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ii) statements of opinion which the learner is to endorse on a 4 or 5-point scale.

Illustration 2

"The unit presents so much data that it is difficult to keep track of the main argument"

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Tick the appropriate box to indicate the extent of your agreement/disagreement with the statement.)

iii) sometimes each box is given a verbal description as in the following illustration, and the learners are asked to indicate their views by tick-marking the appropriate box.

Illustration 3

The problems that are given in the assignment are:

- too much
- slightly
- just right
- too easy
- difficult
difficult

[Note that in Illustration 1 each box represented different attributes. But in Illustration 3 the boxes represent the different degrees of the same attribute (namely, the ‘facility’ of the assignment problems)]

Constructing and using such items may seem to be superficially easy. But they involve some dangers. The most serious of these is that an examiner is likely to put his/her ideas into learners’ head, because of which they fail to present their spontaneous opinions. The learners are constrained to select from only those responses that are provided. One way to avoid this danger is to allow some form of open-ended response also.

We can include questions similar to those in the following illustration.
Illustration 4

Which part(s) of the unit did you like best?

..........................................................................................
..........................................................................................
..........................................................................................

Which part(s) of the unit should be changed?

..........................................................................................
..........................................................................................
..........................................................................................

What change(s) would make these parts more interesting?

<table>
<thead>
<tr>
<th>Part(s)</th>
<th>Change(s) that you desire</th>
<th>Your reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

While constructing a questionnaire, you should remember that the points/issues you ask questions about, i.e., the ‘test-points’ will not be the same in all contexts. They will vary from one course to another and also according to the point within the course (at the end of a section/unit/block) at which your questionnaire is to be completed. The choice test-points and the mode of their presentation should be guided by the kinds of decision you hope to be able to make on obtaining the learners’ responses.

The difficulty with such assessment questionnaires is the huge bulk of the information collected that you have to process through. Sometimes institutions are forced to throw these papers away, just for want of time to process them. A computer, where available, may be of help in such circumstances. But even there, one should be able to spare the time and effort to feed the data into the computer. Only relevant and manageable data should be collected to work on systematically.
3.4.2 Unsystematic collection of information

You can collect information on the necessary quality-maintenance activities through several unsystematic methods. These methods will also be useful and they need not be looked down upon simply because the process is unsystematic.

The institution can send a ‘course comments’ page or a ‘difficulty sheet’ with every course book and ask the learners to return these with their remarks.

It can invite learners to write about the difficulties or problems they face. It can also ask them to point out the ‘errors’ that they notice.

Learners may hesitate to write in the beginning. But they ought to be encouraged to communicate. Even an angry letter from a dissatisfied learner or an expression of disappointment from too keen a learner may contain some useful hints as how to maintain/improve course quality. The institution can also get ‘errors’ pointed out by its own faculty. For instance the third source of difficulty in assignments which we mentioned can be noticed when a majority of learners proceed on the basis of a misunderstanding. Having identified the source of the difficulty they must write to the institute suggesting how it can be removed.

One can collect views from other subject experts on the faculty of similar institutions, prospective learners/employers etc.

The members of the faculty can mingle with students during seminars, summer schools or any other gathering at study centres/regional service centres. They can talk to them freely and elicit their views about the course, and can forward the opinions thus collected to the institution.

What we have suggested here is that there are many possible ways in which the institution can remain informed about the weaknesses of the learning materials which can then be subsequently improved upon. Quite a few of these ways and means may not necessarily be ‘systematic’.

3.4.3 Keeping the record of information collected

The above section makes it obvious that the collection of requisite information is not to be effected at one sitting, nor from one single source. Information, when proper efforts are initiated, will keep coming from different sources round the year. Hence it is necessary to develop and maintain a device to keep record of all pieces of relevant information that are obtained from time to time and from different sources.

To meet this purpose the institution should maintain a ‘correction file’ for each course. The file may be opened as soon as the course is printed. All the information pertaining to the corrections needed and the difficulties...
experienced should be placed in this file. Besides, a copy of the course book should be retained with this file exclusively for the purpose of marking errors. We call this a marked copy. The marking should preferably be made in some brightly coloured ink so as to be noticeable. Observations helpful to update the course with regard to the post-publication developments in the area concerned—like additional information made available, changes in the sources linked with the course (such as a new edition of a textbook with a different numbering scheme, or a reference book going out of print, or references to radio programmes which are no longer broadcast), etc.—should also be marked in the relevant places in the 'marked copy' for corrections. The 'marked copy' and the 'corrections file' should be kept safe because these are to be the documents which we need for quality maintenance operations.

3.5 COURSE MAINTENANCE OPERATIONS

On the basis of the information collected, if we feel the course is not so bad as to require an immediate withdrawal, we can turn our attention to course-maintenance operations. In the first few years of launching a course it is the maintenance operations rather than revision-operations that an institution should think of practising.

3.5.1 Deciding on the corrections to make

Course maintenance involves a series of activities which are too scrupulously planned. When the error-data are collected (by maintaining 'corrections file' and 'marked copy') you must decide in respect of each correction-note whether it is to be dealt with urgently or whether it can wait. In other words, you should decide whether leaving a correction unattended will seriously affect the understanding of a learner. That is, you should decide as to which errors are serious enough as to warrant immediate remedial treatment and which, if allowed to stay uncorrected, are likely to mislead the learners.

The choice of the correction-notes to be used immediately should be made on the basis of the seriousness of the error(s) involved. The amount or the extent of change such errors require and the resources needed to bring about this change, may constitute a secondary consideration.

3.5.2 Carrying out the corrections

When you have identified the errors that need immediate attention, you can prepare an errata sheet which must contain an index column (locating precisely the context of error occurrence), an error column (where a phrase, word or line is given with the error component clearly marked) and a correction column (where you show what the corrected version should look like).
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Illustration: An Errata Sheet

ERRATA SHEET

Code: CD/DI/Oct-94

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
<th>Line</th>
<th>Please read</th>
<th>In the place of</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>ACTIVITY III</td>
<td>8</td>
<td>Please mark the behaviours, conditions and standards with, and respectively in— the statements of BO's in Activity II.</td>
<td>Please write,—and in at the behaviours, conditions and standards respectively with the BO's in Activity II.</td>
</tr>
<tr>
<td>9</td>
<td>MODULES ON FROG I</td>
<td>12</td>
<td>Characteristics of Frog</td>
<td>Characteristics in Frog</td>
</tr>
<tr>
<td>11</td>
<td>MEDIA I</td>
<td>5</td>
<td>Transparencies</td>
<td>Transpotencies</td>
</tr>
</tbody>
</table>

The errata sheets must be dated and coded. This will help us when we want to replace an earlier errata sheet with an updated version. It is likely that more errors are discovered on a later date or errors taken to be inconsequential turn out to be serious with a particular learner-group.

The shorter the length of an errata the easier its use and the greater its usefulness. Where mistakes are more substantial, we had better rewrite and print a page or a few pages rather than include lengthy lists or passages in an errata sheet.

Activity 1

Suppose your error-data on a particular (ten page long) unit of a course presents 40 errors of which two are factual errors, four are serious proof reading errors and the others are proof reading errors likely to be of relatively little consequence (including errors of display, design, indenting, alignment, etc.)

If you are to prepare an errata sheet, will you include all the 40 errors or just a few chosen ones? On what basis will you decide the inclusion of errors?

Write your answer on a separate sheet.
Comments

There may be errors which you can reasonably expect your learners to identify and rectify themselves or expect to cause no hindrance in getting the message across. You can keep these errors out of your errata sheet. If you include all the errors, they may tend to fill many pages, the serious and significant ones getting mixed up with the less serious/not at-all serious ones.

When an errata list is short, a learner may carry out the correction in the ‘text’ with ease, before he/she starts studying it.

3.5.3 Rewriting part(s) of a course

Rewriting part(s) of a course or short passage(s) of 4-5 lines may be undertaken, when the part(s) is/are found to suffer from substantial errors.

Rewriting part of a course is admissible for yet another purpose namely that of updating. But it should not be attempted just because you find a part of your courses lightly unsatisfactory. You had better allow it to stay till the course is revised. It is not possible to revise courses simply because there is some scope for improvement.

When you have to update a part of the course-content, you can prepare and issue an ‘updating slip’ or a ‘supplementary booklet’ depending on the amount of ‘content’ you are updating. Issuing these slips, is easier and more pragmatic than revising the course just for the purpose of updating a part. Nevertheless, if the stocks are low, one might prefer to reprint an amended edition.

3.5.4 Minimising course maintenance operations

There may be certain parts of a course which need to be changed periodically. For instance, the course committee directing the preparation/implementation of a course may desire to change assignments with every learner enrolment. In the process of course development, if you design your courses to accommodate such routine change, it will keep the work of course maintenance at a minimum. Perhaps printing assignments separately is preferable in the above case, so that new assignment sheets may be issued with every fresh learner-enrollment without having to amend/revise/replace the assignment sheets if they form a part of the course book.

3.6 REVISIING A COURSE

Revision operations are much more elaborate and broadbased than maintenance operations. Consequently, they involve more time, money,
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planning and effort. An institution cannot generally afford to spend its resources on revising a course after every other term. The general policy is to check whether a course needs revision after a period of operation, say, five to seven years. In practice even this frequency is often found to be difficult to stick to because of the pressure of work on institutions. But at any rate, to allow a course to continue unrevised beyond ten years of continuous use is not advisable because, even if the content remains satisfactory, the written material may begin to appear dated.

Course revision is then to be thought of under either or both of the following circumstances:

When the course becomes too old-fashioned to continue in use, the quantum of course maintenance activities becomes too large and relatively more expensive than (or, as expensive as) course revision.

### 3.6.1 How to decide on the need for a revision?

Any course-revision should be undertaken on a planned basis. As it involves considerable expenditure, it should be initiated only when you are sure that it cannot be postponed any further. A periodic checking of the course may guide you in deciding whether a revision is immediately necessary. The sources that will help you confirm this necessity are:

- The corrections file
- Learners comments on/assessment of the course
- Tutor's comments on/assessment of the course
- Comments of an external authority on the subject
- Consultations with experts
- Opinions of former students on the usefulness of the course
- Views of potential students on their expectations from the course

You should decide whether a revision is necessary by studying these various sources.

It is possible that these sources indicate that the course still holds good and may continue to do so for some more time with, perhaps, some minor modifications, in which case we don't advocate any revisions.

We said that the need for revision should be decided on after studying the different sources listed above. But a more pertinent question is: what should you look for while studying these sources? In other words, what observations will warrant the need for otherwise of an immediate revision of a course? The following considerations should help you in this regard:

- **The age of the course**
  If the course has become very old, say, more than a decade old, it should be revised.
Course Maintenance and Revision

- **The degree of its success**
  You can allow your course to continue without revision, if positive comments from your learners and tutors outweigh the criticism from other quarters.

- **The period of its operation**
  The course must have been in operation long enough to give you a clear picture of what revisions are needed.

- **The stock position**
  If the existing stock is large, a revision may mean wasting it.

- **The ‘life-expectancy’ of the course**
  If the course is not to be of use or if it is not expected to be in considerable demand after one or two years, revision may be uneconomical.

- **The student strength**
  If the student strength is low, revision may be unduly costly and, perhaps, unadvisable.

- **The finance and workforce available**
  Revision is feasible only if finance and workforce are available to meet the minimum requirements.

- **The institutional priority**
  Priorities may vary from institution to institution (and also from time to time) and may shift back and forth between revising an old course and introducing a new one.

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**Activity 2**

Suppose you work in a distance education institution. Your institution launched a new course two years ago. Two cycles of enrolment are over and the learners of the third are currently in the course. On checking the performance of the course, you find it has been very unsatisfactory from different points of view. But you also observe that revision will be uneconomical.

Think for a while and decide how you will deal with the course.

**Write your answer on a separate sheet.**

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**Comments**

The course is considered very unsatisfactory. At the same time revision is going to be uneconomical.

Besides, the course is only two years old and a revision after two years of use is not desirable, but allowing an unsatisfactory course to continue in use will affect the image of your institution and may also be harmful to the credibility of the other courses your institution offers.
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So you can check whether the course may be made to reach a satisfactory level by subjecting it to some course-maintenance activities. If it can thus be made satisfactory, well and good, but if not, you had better withdraw the course. By doing so you will be avoiding considerable undue expenses, besides protecting the image of your institution.

3.6.2 Revision operations: some issues

When you decide on the revision of a course, you also have to decide on what exactly to revise. Most often the entire course does not need alteration. If you find that the whole course needs substantial change, you had better replace it with a different course rather than revise it. Revision should not be confused with replacement, since revision is relevant when it is required for a partial modification of the materials in use. You need to modify only those parts:

- which are found too difficult for the learner to follow
- which effect bad teaching/learning
- which have become out-of-date

So a course revision is not to be equated with the rewriting of the whole course. Some parts of the course may need to be completely rewritten, while some may need a few amendments and yet others may be retained without any change.

Another important question is: Who is to do the revision? The best person to revise a course is the original writer. For a writer to revise his/her own course would be a good exercise in recognising the subtleties of course development and improving upon the skill of course-writing. Anyway, if it is not possible to get the writer to do this work, you can request one or more of the course tutors and/or the course editor to do it rather than entrusting it with some outsider who is a total stranger to the whole affair. The course tutors and the editor may have a more practical awareness of the weakness of the course.

3.7 LET US SUM UP

This unit has discussed the need for sustained quality maintenance activities to keep distance education courses ‘useful’ and ‘usable’. You are to start collecting data on errors and the inadequacies/failures of the course soon after the course is put to use. You are also to monitor the course in order to decide on the necessary corrections, updating and similar activities. After a course has been in use for a few years, you are to assess it thoroughly and revise it, if you find such revision necessary. If too large a portion of a course needs to be revised and/or its revision is uneconomical it can be withdrawn, and replaced with a new course if this is desired and feasible.