

## **AN OVERVIEW**

### **Introduction**

Questionnaires are instruments that all of us are familiar with:

- We receive them in the post as part of our official mail
- We see them in newspapers and journals
- We are asked to complete them as part of a survey at work, and so forth.

As trainers, we may not just have to receive, see, and complete – we may also have to consider constructing, administering, and interpreting the responses. This may be because we wish to obtain information to help in an analysis of need or validate a training activity, or some other purpose. These notes have been written to help those who may wish to construct and use questionnaires to validate a training activity; the principles should hold good for any other purpose.

There are a number of activities that need careful thought when considering whether or not to construct and use a questionnaire. They can be subdivided into four groups.

#### **1. Deciding to use a questionnaire**

- Deciding upon general area(s) that more general information is required about
- Identifying a specific problem
- Checking that a questionnaire is suitable.

#### **2. Constructing a questionnaire**

- Choosing the format for questions
- Identifying the frame of reference for the target group
- Writing the questions
- Testing the questions
- Revising the questions
- Re-testing the questions if necessary
- Revising the questions if necessary
- Designing a summary sheet
- Organising the questionnaire

#### **3. Administering the questionnaire**

- Administering the questionnaire

#### **4. Interpreting the results of the questionnaire**

- Interpreting the results of the questionnaire.

These 'activities' are briefly described and discussed below.

## **Deciding upon general area(s) that more information is required about**

This activity will often be considered when planning the total validation system for a particular training activity. The problem areas are usually identified by a discussion between the people involved with the activity (the training designers, the direct trainers, and so forth). They should reach a consensus view that:

- A particular aspect is worth looking at in more detail  
and
- The information collected will enable decisions to be made **either** to confirm that what was done was acceptable **and/or** to improve the training design or implementation.

### **Example**

A designer of a programme has discussed with some of its direct trainers a recurring concern – the project work component.

## **Identifying a specific problem**

Having decided upon the general area, specific questions need to be formulated. The questions asked will influence the choice of method. Different types of questions lead to different ways of collecting information. A number of interviews will often help to identify the specific problems which can be restated as a series of questions.

### **Example**

A trainer (validator) has been asked by two training teams (X and Y) to collect information to enable them to review the project work component of their programmes. The trainer – an outsider adviser in this case – decides to interview the programme direct trainers concerned before proceeding to collect information from the learners. He interviews four direct trainers from the two training teams and obtains the following responses:

- Trainer A: Amongst other things, I am always worried about enthusiasm for the project excluding all other activities – this can lead to specialisation with little breadth. This enthusiasm also leads to repeated contact with me (either by telephone, telex, or memo) which, although welcome, does cause problems.
- Trainer B: Containing the project is often a problem – resources and time are not always available for elaborate project work.

**Example continued**

Trainer C: The project follows some of the basic skills we have tried to develop on the programme, but not others – if they do not follow, how is the learner supposed to integrate his knowledge, skills and attitudes – another question I often ask myself is – do I give enough time to the help I should give to each learner?

Trainer D: I was talking to some line managers from some of the departments recently – they seemed to be critical of the project work carried out in their departments. Their main criticisms were – too time-consuming and not really relevant.

These responses were then taken by the trainer (validator) as a guide in constructing a questionnaire, by rephrasing them as the following set of questions (these are NOT the precise questions/items to be used in the questionnaire):

- How much time do the learners spend on:
  - theoretical framework
  - practical skills development
  - project?
- Do they think this is the best balance?
- Is the coaching system giving the correct amount of support and guidance?
- Is the timing and duration of the project such that it proceeds as smoothly as possible?
- Are the resources (time and people) available adequate for the projects that the learners work on?
- Does the project allow the learner to integrate his skills, knowledge, and attitudes, with his work activities?

## Checking that a questionnaire is suitable

The final decision to use a questionnaire will often depend on the particular context of the validation. It is difficult to give precise advice. However, the following guidelines may help.

A questionnaire may be appropriate if:

- You want to ask a definite set of questions and give the respondents time to consider their replies.
- There are more respondents than you have facilities or time to interview.
- The respondents are widely geographically dispersed and you neither have the time nor the finance to visit them.
- The writing/reading skills of the respondents may possibly be inadequate.
- You have the time to construct a good instrument before you use it.
- You have the production facilities available (typing, reprographic, paper, etc.)
- You have considered the problem of omissions, ie questions answered.
- You have considered the problem of response rate, i.e. questionnaires not returned.

However, a decision has to be made in terms of what information is needed as well as practical constraints. **Remember:** matching – scientific soundness, administrative convenience, political acceptability.

### Example

The trainer (validator) decided to use a questionnaire to collect information from the learners. The decision to use a questionnaire was based on:

- The number of learners attending programmes run by the two teams in the past nine months (X = 65, Y = 59).
- The timing of the project, ie at the end of the programme.
- Available access guide to learners.

This met the 'Is it necessary to use a questionnaire?' criterion.

## 1. Checklist

### Example

Tick (✓) as many boxes as necessary.

These are skilled areas in which I was already competent when I joined the programme:

#### Photography:

Camera work	..	..	..	..	..	..	<input type="checkbox"/>
Developing	..	..	..	..	..	..	<input type="checkbox"/>
Printing	..	..	..	..	..	..	<input type="checkbox"/>
Enlarging	..	..	..	..	..	..	<input type="checkbox"/>

## 2. Two-way questions

This type of format forces a choice, a better approach might probably be to add a third choice – 'Do not know' (but this does have inherent difficulties), therefore making sure that two-way questions give a realistic choice.

### Example

Tick (✓) one box only.

Will you choose another project based on computer-assisted learning?

Yes	..	..	..	..	..	..	<input type="checkbox"/>
No	..	..	..	..	..	..	<input type="checkbox"/>
Do not know	..	..	..	..	..	..	<input type="checkbox"/>

Although in itself a questionnaire is a valid method for collecting the information, if resources were available it would probably be cross-checked by combination with another method. The questions identified in the previous activity – Identifying a specific problem – could then be negotiated with the trainers concerned to assess suitability.

## Choosing the format for questions

Two types of question are constructed for questionnaires

- Open response questions  
and
- Closed response questions.

The former tend to be used for more complex questions and the latter for simpler ones.

### A. Open response questions

This type of question allows the person (respondent) answering the questions some freedom in the way in which they answer – but hopefully not too much!

#### Example

In your opinion, what new skills did you acquire through carrying out your project?

.....

.....

.....

.....

### B. Closed response questions

In answering these questions the respondent has to choose from among a number of answers that have been provided. These questions can be written in a number of ways:

### 3. Multiple-choice questions

This type of format gives a wider range than two-way questions.

#### Example

Tick (✓) one box only.

Did you enjoy the style of learning?

Not at all	..	..	..	..	..	..	..	<input type="checkbox"/>
A little	..	..	..	..	..	..	..	<input type="checkbox"/>
Fairly	..	..	..	..	..	..	..	<input type="checkbox"/>
Quite a lot	..	..	..	..	..	..	..	<input type="checkbox"/>
Very much	..	..	..	..	..	..	..	<input type="checkbox"/>

### 4. Rating scales

Some types of scale used formally in an attitude rating scale may be used less formally in small groups of questions. The question types are Likert and Semantic differential (Osgood). Both have different characteristics.

#### Likert scale

The Likert scale is a list of statements and the respondent makes a judgement on every item. The scales may vary from simple alternatives (eg agree/disagree) to a ten-point scale. Normally the scales used are three to six-point ones. Even-numbered scales force a choice (eradicates the 'central tendency'), odd-numbered scales allow a neutral position to be taken (allows the 'central tendency').

#### Examples

Ring (O) one of the numbers.

How relevant do you think this topic is to your everyday job?

very relevant			relevant			not at all relevant
5	4	3	2	1		

Tick (✓) one of the boxes.

How relevant do you think this topic is to your everyday job?

Very relevant..	..	..	..	..	..	..	<input type="checkbox"/>
Quite relevant..	..	..	..	..	..	..	<input type="checkbox"/>
Relevant	..	..	..	..	..	..	<input type="checkbox"/>
A little relevant	..	..	..	..	..	..	<input type="checkbox"/>
Not at all relevant	..	..	..	..	..	..	<input type="checkbox"/>

**Examples** continued

**Note:** The scale numbers do not have to be disclosed; if they are not, it is important to name the unnamed ones, eg 4 = quite relevant, 2 = a little relevant.

**Semantic differential scales**

Semantic differential scales are thought to be useful when the respondents are likely to have strong opinions. It represents a general reaction to the person, object, or materials it is focusing on. The vocabulary must, of course, be appropriate for the respondents.

It is based on the use of paired adjectives (bi-polar opposites) written on either side of the page, with 5, 6 or 7 possible positions in between.

The pairs should be arranged so that the positive and negative adjectives are not all on the right or left. If the same pairs are used in a number of items they should be in the same order.

The score is obtained by giving 0 for the most negative response and 6 for the most positive (on a 7 position scale). 0 is used so that they can be displayed graphically with a 0 base on the graph.

The scores for each item are added to give a score for that item.

**Example**

Tick (✓) one boxes on each scale.

The help and advice given to tackle the project was:

Informative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Uninformative
Boring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Interesting
Superficial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Profound
Helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unhelpful



It is not usual to disclose numbers in a semantic differential scale, but if it is felt to be necessary to do so, the above example could look like this:

### Example

Ring (O) one of the numbers on each scale.

The help and advice given to tackle the project was:

Informative	1	2	3	4	5	6	7	Informative
Boring	1	2	3	4	5	6	7	Interesting
Superficial	1	2	3	4	5	6	7	Profound
Helpful	1	2	3	4	5	6	7	Unhelpful

In the above example, the number 1 has been used to show graphically, this would need to be subtracted from responses.

## 5. Ranking scales

The respondent is asked to place a number of statements in order:

### Example

The following aims have been suggested as relevant for project work after the programme you have attended. Rank them in order of importance to you as a learner. Put a 1 against the aim you consider most important, 2 against the next important, and so on. Rank all aims.

Aim	Ranking
To increase your knowledge in one specific area to a high standard	
To improve skill in doing critically relevant literature searches	
To increase independence	
To improve the ability to interpret data critically	
To increase interest in studying your subject	
To increase ability to present information and ideas lucidly	
To increase ability to work under constraints (of time, space, and money)	
To develop practical skills	

To open up the ranking scale spaces can be left for respondents to enter other factors (in this example, aims) and rank them.

**Example**

After considering the format of the questionnaire the trainer (validator) in this case decided to use a mixture of open and closed questions because, although some of his questions are relatively simple, others need more complex answers.

**Identifying the frame of reference for the target group**

Before beginning to construct the questionnaire it is a good idea to draw up a frame of reference for the target group, ie list the characteristics of the respondents. The frame of reference can serve as a reminder to consider such things as:

- Vocabulary
- Knowledge
- Experience
- Bias

as the questions are written.

**Example**

Two programmes are being considered so the frame of reference needed to check that only questions on common areas were asked or sub-sections arranged. The trainer (validator) drew up the following frame of reference.

**Frame of reference:**

- Post-experience programme
- Mature learners
- Three years minimum supervisory/managerial experience
- Degree or advanced diploma holders, but a mixture of academic/professional subject areas
- 50% England and Wales based  
20% Scotland based  
30% Overseas based
- 60% Studied for professional qualifications in last three years  
40% Studied for professional qualifications over three years ago

## Writing the questions

This activity is probably best carried out in parallel with the activity 'testing the question' described on page 18. The writing of questions needs considerable thought and attention. Take time to make sure that the questions are:

- Relevant
- Credible
- Relate to the identified specified problems.

**Remember:** The type of question asked influences the summary sheet design and the time needed to analyse and summarise.

When writing the questions use a separate piece of paper or a filing card for each. This will help when organising the order.

### Example

The numbers in circles eg (2) relate to the example listed in '**Identifying a specific problem**' on page 2. The following questions (for the questionnaire) were written by the trainer (validator) to enable him to collect information to answer those specific questions.

- A. Please estimate the number of days you spent over the year on these aspects of your programme. NB 8 hours = 1 day.

Theoretical studies

Practical skills

Project work

(1)

- B. What is the percentage value of the total assessment mark given to the project work?

%

(1)

- C. Please tick (✓) one of the following boxes:

I feel that on the project work I spent:

Too much time

☐

Too little time

☐

About the correct amount of time

☐

(1)

**Example continued**

D. Please tick (✓) one of the boxes and comment as appropriate.

Who chose the project topic?

You

☐

Your manager

☐

Both of you

☐

Someone else

☐

Who?

Comment: .....

.....

2

E. Please insert the number(s) in sections (a) and (b) as appropriate.

How many formal sessions (about your project) did you have with your trainers while:

a) Planning it

Doing it

Writing it

b) On average, how long did each session last?

Minutes

c) Please tick (✓) one box.

Do you think that this amount of contact was:

Too little

☐

About right

☐

Too much

☐

2

F. Please tick (✓) one box.

During the formal sessions you had with your trainer about your project, was the guidance given:

Too general

☐

About right

☐

Too detailed

☐

2

**Example continued**

G. Please describe any problems caused by (a) the timing (eg starting at a busy work time), and (b) the duration (eg six months):

- (a) .....
- .....
- (b) .....
- .....

3

H. Please list any difficulties eg resource shortages, bottlenecks, etc., you experienced when working on your project:

- .....
- .....
- .....
- .....

4

I. Please tick (✓) one box.

Will the results of your project become a normal part of your occupational activities, e.g. managing?

- |     |          |                          |
|-----|----------|--------------------------|
| (a) | Yes      | <input type="checkbox"/> |
|     | No       | <input type="checkbox"/> |
|     | Not sure | <input type="checkbox"/> |

(b) If you answered 'No' or 'Not sure', please explain why:

- .....
- .....
- .....
- .....

5

**Example continued**

J. In your opinion, what is the response of your colleagues to your project?

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

5

**Testing the questions**

Each question needs to be tested against specific criteria. The following criteria can be useful:

- Does the question involve only one idea?
- Is the question worded as simply as possible?
- Is the question as brief as possible?
- Is the question as direct as possible?
- Does the question allow the respondent to admit lack of knowledge without loss of face?
- Are the words unambiguous when considering the target group?
- Do the words and phrases of the question influence the response?
- Is the question a negative question?
- Is the question loaded?

In order to see their usefulness, test the questions written in the previous section. See whether or not they reach the criteria (some do not, or at least are doubtful).

**Remember:** The questions are attempting to obtain information about the specific problems formulated in '**Identifying a specific problem**' (page 6).

In addition to testing the questions yourself, ask other people to test them using the same criteria. Ideally they should be tested by two groups:

- Colleagues and
- Target group.

It may well be that it is not possible to achieve the ideal of representatives of the target group to test the questions. It is then even more vital to obtain help from colleagues.

**Revising the questions**

Those questions that need revising should be revised, and if necessary retested and revised again until they are regarded as useable.

## **Designing a summary sheet**

This activity can be carried out in parallel with the next activity - 'Organising the questionnaire'. The order of questions and position on the page can affect the ease with which the collected data can be processed and analysed.

In most small scale validation exercises the scoring of the data will be done manually. If larger scale ones are contemplated and access to a computer is possible, help should be sought at this time from computer specialists. As time for scoring is usually limited, careful preparation of a data summary sheet during the construction may save valuable time and frustration later.

## **Open response questions**

Open response questions may need to be categorised and coded. Preliminary matrices may help, but space is needed for unexpected categories to be added as recognised. The information can be summarised in three main ways:

- A descriptive written summary with or without direct quotes.
- The responses can be divided into categories and direct quotes or alternatively, summaries can be recorded.
- The categories can be coded, i.e. given a numerical value.

These three ways are exclusive, combinations may be used. The three methods are briefly described below. Reports are used as the example of an open response instrument in all three cases.

### **A descriptive written summary**

This method is suitable only if there are a few reports. The reports are read through and notes are made of what appear to be important points. From these notes a summary is made. If quotations are going to be used, potential quotes can be identified by underlining them as they are read through. The quotes used can be selected from the underlined statements.

### **A way of summarising a number of reports**

Use file cards (or sheets of paper) as summary sheets. Alternatively an analysis matrix can be drawn - Appendix 1.

Select one of the reports, read it carefully, and each time a new opinion or event is described summarise it on a new card. In the right corner place a tally mark (1) to indicate that it has appeared once.

Read the rest of the reports making new cards as necessary.

When you come to an opinion or description of an event that seems to have occurred before, find the card that summarises it. Check to make sure that it means the same and then record an additional tally stroke (//) and so on (### /) as more similar opinions or descriptions occur in other reports. If part of the statement is new, summarise that part on another card.

Prepare a summary, covering the most frequent statements, for your report.

If your categories at any time do not seem satisfactory, you need to begin again. It is difficult and leads to errors to adjust what you have already done.

### **Coding categories**

Categories chosen should be relevant and useful. For example, categories can be chosen related to training method, audio-visual aids, programme content, and validation procedures. A matrix like the one below can be devised to aid summarising comments within reports relating to these aspects.

<b>Category</b>	<b>Comments</b>		
	<b>Favourable</b>	<b>Unfavourable</b>	<b>Difficult to categories</b>
Training method	###	///	//
Audio-visual aids	### //	//	0
Programme content	###	//	0
Validation procedures	///	//	//

This allows a numerical statement to be made. However, considerable information has been lost compared with direct quotes and a written summary, but statistical analysis can now be carried out.

Categories and decisions should be checked by somebody else. This can either be done by asking a colleague to review the categories and decisions or doing the whole job themselves.



In all three methods of summarising open response questions great care needs to be taken that the summary is not distorted by features the analyser has chosen to focus on, when he or she chooses the categories or main points contained in the reports. One way of overcoming this is by two people independently analysing the reports, this then allows any discrepancies between the two summaries to be looked at again in more detail.

An example set of reports is given as Appendix 2. You may care to use them as practice – there are no provided answers!

## Closed response questions

Closed response questions are easier to summarise. There are two basic types of summary sheets – tally and score.

### Tally sheets

The original questionnaire can be used or a simple sheet can be designed, as below:

Too little	### /
About right	///
Too much	## ///

and completed with tally strokes.

### Score sheets

Respondent	Question								
	A	B	C	D	E	F	G	H	etc.
1	a*	a	c	c	a	c	b	a	
2	b	a	b	d	b	b	d	a	
3	c	a	a	e	b	c	c	d	
etc.	* coded response letters or numbers								

Examples of blank score sheets used for Likert and semantic differential scales are given as Appendices 3 and 4. These are used for recording responses to an opinion questionnaire about training activities – workshops. The item number would need to be inserted. In the case of the Likert scales a % score is obtained for displaying on a bar chart and similar information from the semantic differential scales – except in this case it is displayed on a graph.

### Example

In this problem the trainer (validator) decided not to use a computer. The initial problem was to decide on the categories that were to be used to summarise the data. As explained above, in closed response questions most responses will allow a numerical value or letter code to be used, whereas open response questions have responses that may or may not be acceptably coded.

In this example questionnaire, both closed and open questions have been used. The summary sheet should allow subsequent analyses to proceed easily by having rows of scores that need to be operated on in proximity to other relevant scores. It is necessary at this stage to decide which if any statistical analysis methods will be used later.

Data summary sheet for the questions in this example is given below:

	Days									
	0-40	41-80	81-120	121-160	161-200	Average	Range			
A. Theoretical studies										
Practical skills										
Project work										
Can't really remember										
B. Percentage value of total assessment work	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100

**Example** continued**Data Summary Sheet** continued**C.** Too much time

Too little time

About the correct amount

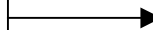

**D.** You

Your manager

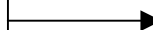
Both of you

Someone else

Comments

--



See back of page

**E.**

Number of sessions	0-3	4-6	7-9	10-12	13-15	16-18	Average	Range
Planning								
Doing it								
Writing it								

Average length of sessions (minutes)	0-15	16-30	31-45	45-50	<60	Average	Range

**Example** continued

**Data Summary Sheet** continued

**E.** continued

<b>Contact:</b>	Too little	
	About right	
	Too much	

**F. Guidance:** Too general

About right

Too detailed


**G. Comments:** Timing problems (if necessary decide categories when scoring).

--

**H. Comments:** Resource problems (if necessary decide categories when scoring).

--

**Example** continued

**Data Summary Sheet** continued

**I.** Normal part of occupational activities

Yes

No

Not sure


Explanation of 'No' (No) and 'Not sure' (NS):

--

**J.** Response of colleagues:

--

## Organising the questionnaire

It is important that the appearance of the pages of the questionnaire do not deter the respondent from co-operating when completing it either by not completing it, or by completing only part of it. Each page should not appear to be cramped. There should be:

- Adequate spaces between questions
  - Adequate spaces between questions and responses
  - Adequate spaces for open responses
  - A  to the right hand side is the best space for closed responses
  - The question sequence should be logical, making certain that contingency questions follow the starter question and are clearly related
  - Adjacent questions should not influence each other
  - The instructions given to respondents must be carefully checked to ensure that they are unambiguous
  - This includes sub-instructions where relevant and the spacing of sub-sections
  - The introduction to the questionnaire must be clear and include a deadline for return
  - The questionnaire should be tried out on a few people with knowledge of the content if possible (typical respondents) alternatively, someone who can put themselves in the position of a respondent
- NB. The pilot run is important. It allows for the removal of ambiguities. Any changes that are made should be tested against the criteria list in 'Testing the Questions' on page 18. If the order of the questions needs to be changed, adjustments may need to be made to the data summary sheet.**

## Administering the questionnaire

The questionnaire can be used as part of the validation strategy. Decide when to administer it. Estimate the time it will take to print, mail out, respond to, score, process and analyse it.

**Remember:** Asking the respondent's name may give answers less farther right than if the option of anonymity is given. However, the respondent's name allows for encouragement of a higher response rate to questionnaires by a follow-up request for its return.

A checklist for the construction of a questionnaire is given in Appendix 5.

## **Interpreting the results of the questionnaire**

All constructors of questionnaires when they first start to interpret the results seem to want to find some formulas which will help them to decide whether they have got good or bad information. Unfortunately there are no magic formulas to help them. There are, however, a few clues:

- Does the information match up with their objectives and/or what they expected to find?
- Can the information be compared with a similar or related study or investigation?
- Does the information appear complete enough to aid deciding courses of action?

Usually a report will be required and notes on this is given elsewhere.

## Appendix 1

### Analysis matrix




## **Appendix 2**

### **Example set of reports**

This set of seven reports was written by a group of learners attending a two-part Training/Educational Technology Programme. The reports were written after the first part. They were written in response to the general question:

'What is your reaction to this part of the programme?'

The reports were limited to one side of A4 paper. They illustrate the problems of analysing open response questions. You may like to summarise them, using the three methods outlined on pages 19-25. Ask a colleague to do the same, and check one another. You do not have to start at Report A, or read them in the order given. The analysis matrix sheet (Appendix 1) can be used, or cards.

#### **Report A**

I had expected a programme oriented more towards gadgetry with a lesser theoretical content, but this was due to the fact that I had no previous experience of the subject.

The programme and the way it was presented was fascinating and stimulating to the extent that working on the three given projects was a pleasure, and time alone appeared to be the limiting factor.

In hindsight, the programme will be very valuable to me as a trainer and it is remarkable not only in the breadth of its coverage but also in the depth of its penetration in this subject, in such a short period of time.

#### **Report B**

It has been interesting, being mostly new, and stimulating. When applying for the programme in the first place I thought that we should be dealing more with hardware, that we haven't has not disappointed me since there has been so much to do that was new that to have spent more time on hardware would have meant the loss of much that will be, and has already been, useful.

The worksheets have been most helpful in guiding me through 'the darkness' as well as providing a framework in which to base the assignments.

There has seemed to be a tremendous amount of reading to do, but on reflection, I think it is preferable to being given a long reading list at the beginning to which one may refer in one final assignment. By having to consult journals etc., for references I have been made more aware of the range available.

## **Appendix 2** continued

### **Report C**

Gut reaction is needed for a more media-based module; for more studio time, for directed play to investigate potentialities of media and hence for aesthetic determination of values of media-based learning systems as well as technical-based.

### **Report D**

There was an attempt to cover too much ground in time available. I must have spent about 80% of my study time at least, on Ed.Tech. and I feel I have not completed the programme to my satisfaction as all worksheets have not been completed.

Practical work included in not assessed. Practical assessment only takes place in the following part, a part I have not opted for. So my practical work will not be assessed.

Some rationalisation is needed.

I have enjoyed the programme, in a masochistic way, and objectives stated before each section were a great aid to relevant study.

### **Report E**

1. A fair summary of an individualised programme.
2. Value of assignments and work put in.
3. The three weeks of media works fit rather unhappily into the overall pattern. Though Educational Technology devolved from media studies, it is by now more associated with systems thinking and actual mechanical use of media and elementary media production may be less relevant.
4. With the exception of the session on Bloom there seemed little advantage in splitting the group. The amount of interaction was rather limited and probably would have been maintained in a total group situation.
5. The wallet folder packs in the library seemed to do what they were intended to.

### **Report F**

The course is a useful contribution to the techniques of training. It brings together a body of scattered information in the field of training such as objectives, mastery learning, evaluation, and validation, AV media, etc. This is especially so in writing up the last assignment on 'design'.

The course is self-contained and comprehensive. It is well organised and carefully planned. As a direct trainer I find this a most valuable part of the whole programme.

**Appendix 2** continued**Report G**

1. It did what I wanted it to do – it gave me a good theoretical framework for reviewing my own considerable training experience and also served as an introduction for further study.
2. The work load was excessive at times, but in fairness I do not see how it could have been reduced.
3. The unavailability of reading and wallet folder packs was often inconvenient but again, it would have been difficult to overcome this.
4. I found it impossible to relate the first two assignments to my final choice of topic. It was only after I had down the first two that I was able to decide finally on a specific topic. (But I would concede that this was only difficult because I was not dealing with a specific curriculum).
5. I found it enjoyable.
6. I would have liked more time to read around subjects.

## Appendix 3

### Opinion questionnaire analysis sheet – Likert scales

Workshop: .....

Ref. No: ..... Dates: ..... Page No. of pages

Participant/ Item												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
R												
Raw	a											
	b											
	c											
	d											
	e											
%	a											
	b											
	c											
	d											
	e											

## Opinion Questionnaire Analysis Sheet

Workshop: .....

Page No.      of      Pages

## - Semantic Differential Scales

Ref. No: .....

Range: 0 = 0%      3 = 50%

1 = 17%      4 = 66%

Dates: .....

2 = 22%

5 = 83%

6 = 100%

Participant/Item															
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
Total scores															
Total respondents															
Raw mean															
% mean															

## Appendix 5

### Constructing a questionnaire: Checklist

Tick on completion of the stage or decision

**1. Identify general problem area(s)**

☐

**2. Identify specific problems**

☐

**3. Check your approach for collecting information**

Is a questionnaire necessary?

☐

Is a questionnaire a valid means of gathering information?

☐

If the answers above are 'Yes' continue ....

**4. Choose format**

a) Open

☐

b) Closed

☐

c) Mixed

☐

If b) or c) type of questions chosen:

Checklist

☐

Two-way questions

☐

Multiple choice questions

☐

Ranking scale

☐

Others (specify below)

.....

☐

.....

☐

.....

☐

**5. Identify frame of reference of target group**

List major characteristics of target group:

--

Have you considered

Vocabulary

Respondent's knowledge

Respondent's bias


**6. Write the questions**

While writing the questions keep asking whether or not:

- a) They are relevant to the problem
- b) They are credible
- c) They converge on a particular aspect of the general problem, ie one of the identified specific problems.

**7. Designing a data summary sheet**

Consider questionnaire format —→ a) Open ended questions

b) Closed questions

c) Both a) and b)


IF open questions used and you want to summarise data

—→ Categorise data

and possibly

—→ Code data


Decide on how you will score the questionnaire

—→ By hand

By machine

IF hand scoring decide how you will summarise data

—→ Tally sheet

Score sheet

Other

While designing your summary sheet it is useful to decide how you will process your data

—→ By hand

By machine


IF processing by computer, have you adjusted the questionnaire form to aid key punching?

—→ No

--

Yes

--

**8. Testing your questions**

This group of questions should help you to criticise each of your questions:

**Good items allow the 'Yes' box to be ticked (✓).**

Does the question involve only one idea?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Is the question worded as simply as possible?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Is the question as brief as possible?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Is the question as direct as possible?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Are the words used unambiguous when considering the target group?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Does the question allow the respondent to admit lack of knowledge without loss of face?	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>

**Good items allow the 'No' box to be ticked (✓).**

Do the words and phrases of the question influence the response?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the question a negative question?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the question loaded?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

**9. Organising the questionnaire**

Appearance of the page(s) – check that you have:

- Not crammed the questions on to the page
- Left a space between blocks of related questions
- Instructed respondent to use back of page (if required)
- Used a ☐ as the best space for closed items

☐  
☐  
☐  
☐

Relations of questions – check that:

- The question sequence is logical
- Contingency questions follow the starter question
- Adjacent questions do not influence each other's responses

☐  
☐  
☐

Instructions to respondents – check that:

- The introduction is unambiguous
- The sub-section introductions are unambiguous
- The sub-section limits are clearly marked by space or lines
- Your response instructions are clear
- You have included a deadline for return (if appropriate)

☐  
☐  
☐  
☐  
☐

Have you tried out the assembled questionnaire on a few people?

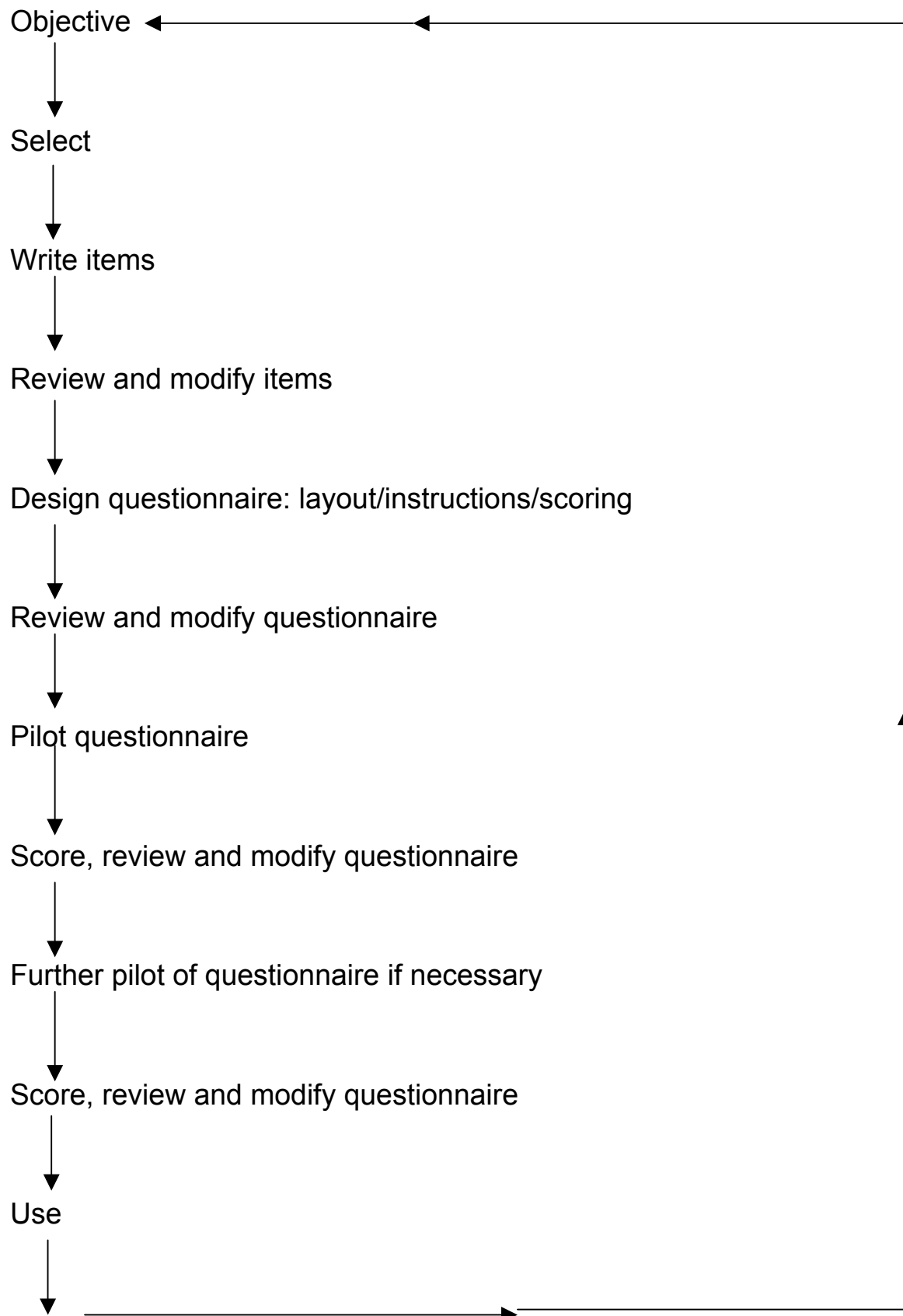
☐

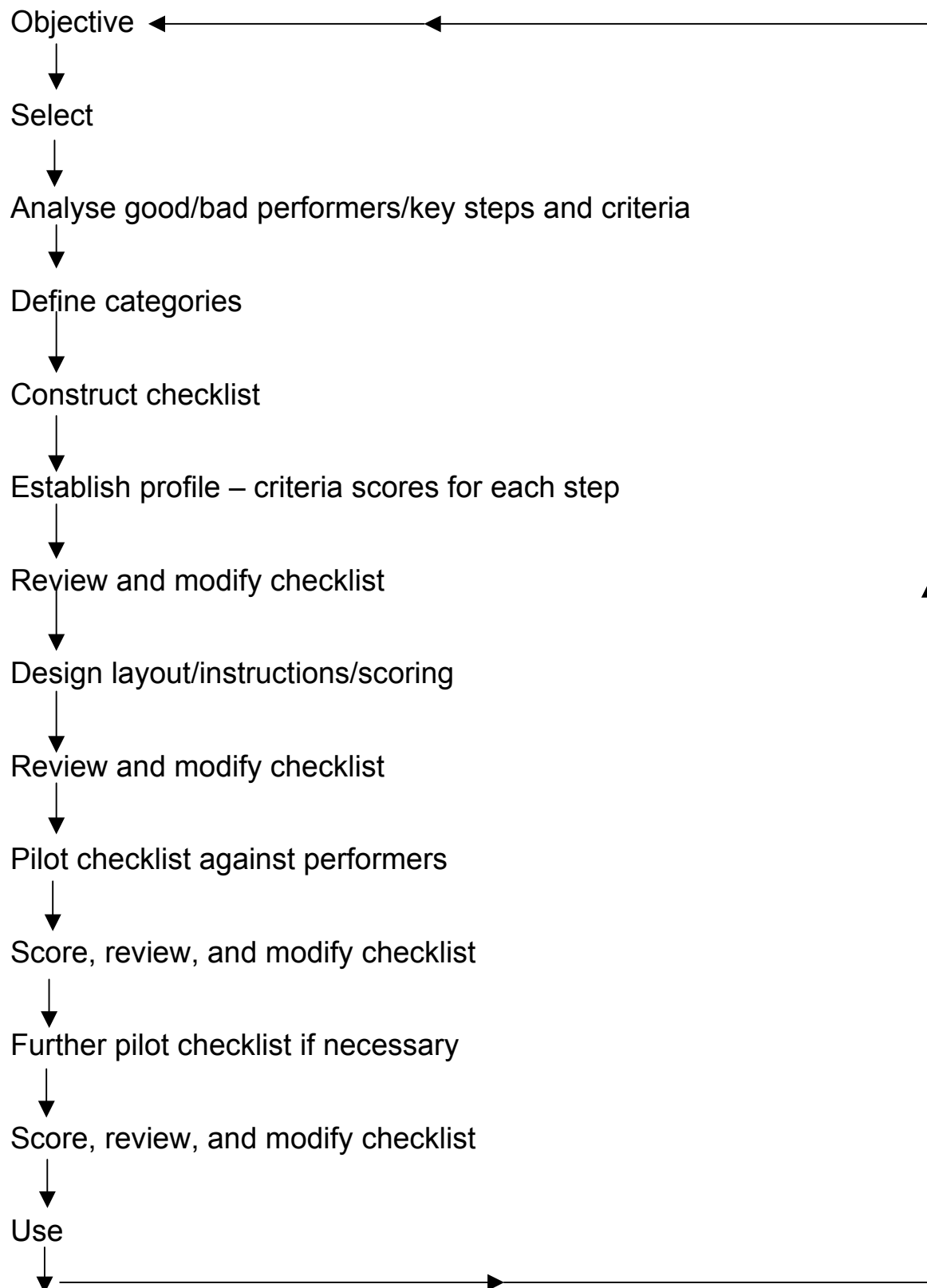


**10. Administering the questionnaire**

When planning the administering of the questionnaire you should consider:

- At what time in the course to administer
- Your project time scale
- Printing time
- Scoring time
- Processing time
- Cost
- Anonymous or name


**Steps involved in constructing questionnaires**

**Steps involved in constructing skill process checklists**

**Steps involved in constructing objective test items**