

Helyn Thornbury
University of Strathclyde.

These are self assessment measures which are used to gauge a student's confidence level in a particular part of a course.

Uses

- ◆ Usually used in conjunction with other methods
- ◆ Gives an indication of the learning development of students as a comparative measure (before and after an activity)
- ◆ Provides a 'snapshot' of the class at a given point

Process

1. Identify situation to investigate

Confidence logs should be applied to identified situations. These can be:

- ◆ the particular point(s) in the class at which you wish to investigate the students' development – snapshot(s);
- ◆ an activity to investigate e.g. a scheduled lab session using a computer simulated experiment – comparative study.

For a comparative study, note that you will need to apply the logs before the identified situation as well as after.

2. Identify key areas of interest

You may be seeking information that is either general or specific.

General – Relating to the knowledge/skills objectives of the activity/course.

Specific – Relating to areas of interest (e.g. where you suspect there may be an area of weakness in the material).

In either case, define these interests before designing the statements for the log.

3. Construct statements

Many of the issues relating to the construction of questions for a questionnaire are equally valid in the context of confidence logs. However, it is important to remember the statements are not questions and should not be constructed as such.

Generally, they should be short, concise and unambiguous. Keep each statement simple; avoid combining areas together in one statement (or using high level statements) – if the student feels very confident in one aspect and not in the other it is very difficult for them to rate their confidence and fairly meaningless for you.

Remember to use language which the students will understand, particularly if you think they may have experience of the material in another context. Also, remember that there is a difference between an understanding of a theoretical and a technical competency so be clear what you are interested in, and communicate this to the student! (See box at end.)

Example Confidence Log

Topic	very confident	confident	some confidence	little confidence	no confidence
Calculating long division		✓			

Think about practical issues such as access and time available.

Don't use more than 12 statements – keep the log short for the student to fill in.

The knowledge and skills objectives of an activity/course may have previously been constructed in a useful form for Teaching Quality Assessment (TQA) specified documentation.

Remember to schedule time for the students to fill in the logs - or you may lose data when they run out of time and leave for their next class!

Tell the students that no knowledge of something equals no confidence! Otherwise they sometimes leave it blank!

4. Practicalities of application

There are various practical issues to consider. They can be summarised as when, where and how.

When

Comparative – For comparative studies, the when will be before and after a specific activity. Some issues to consider are: Is the activity timetabled? If it isn't, do you know when the students will do the activity? Do all the students work together or are they split into groups?

Snapshots – For a snapshot study, the when is related not to a specific activity but to a point in the class. As well as issues similar to those addressed for a comparative study, you should also consider whether or not all the students are expected to reach the specified point at the same time.

Where will you be able to get access to the students? In an existing lecture or lab., or will you need to arrange something?

How will the logs be presented? Part of the how is the introduction/instructions you give to the students. Some people use a short introductory paragraph to explain what is required of the student, others give these instructions verbally, some use both. This is really dependant on the situation but the students should receive some guidance. Other aspects you might consider include: whether the logs are going to be electronic- or paper-based; who, if anyone, will need to be there to administer the logs; and how long will it take to complete the logs?

5. Analysis

There are many ways to visually present the information from logs. Bar charts can be recommended as a simple and informative option.

Comparative – If you have anonymous logs you can look at the spread of confidence in a standard bar chart format for each of the statements. Comparing the bar charts before and after an activity will give you a general indication of any shift. If you can pair before and after confidence logs, this will allow you to chart changes in confidence which is generally more informative.

Snapshots – By constructing bar charts for each statement (as above) you can gain an overall impression of the confidence of the class at a given moment which can be compared with your expectations.

Other Relevant Pages:

Recipes

- Questionnaires
- Checklists
- Pre and post testing
- Focus groups
- Designing experiments

Information pages

- Statistics questions
- Likert scales
- Learning styles
- Student sample
- Guidelines for questions
- Pre and post tests
- Pedagogic toolkit

Serving Suggestions

References

Variation

Confidence logs can also be used longitudinally – in the same way as the snapshot outlined above but repeated over a period of time. This can allow you to look at the development of confidence over your whole class. By examining the logs you can check whether the development in the different areas matches your expectations, and you can look for groupings in the students. However, this type of analysis involves an associated increase in time and, as a consequence of the repetition, can negatively affect the quality of data.

Theory v Practice. Particularly in very practical areas, there can be a difference between an understanding from a theoretical perspective and a practical competency. If an activity is a combination of theoretical understanding and development of skill, separate out the two aspects in the logs.