

AUTHORING METHODS

What authoring methods are supported in GradeMaker?

GradeMaker supports two core methods for developing assessment materials:

- Item banking (building a bank of items, then compiling a paper from the bank)
- Whole paper authoring (writing an exam paper as a whole document from scratch)

This document explains what these options are. Note that the system is flexible. You can use 'item banking' for some subjects, and 'whole paper authoring for others'.

Whole paper authoring vs item banking

'Whole paper authoring' is the process whereby (typically) one author is asked to write a whole test from beginning to end.



Whole paper authoring - key features:

- The author writes the whole paper and is in full control
- The paper is visible to all reviewers
- This approach is often necessary when there's only one expert in a subject area
- If a paper leaks, a back-up paper is required.

'Item banking' is the process whereby (typically) several authors are asked to write items, which are reviewed and put in an Item Bank. Tests are then created by compiling items from the item bank.



Item banking - key features:

- Item authors only write items and cannot see the whole final paper. This increases test security and is a key reason for item banking adoption
- Item banking increases flexibility, for example making it easier to swap new items into a paper if coverage has to be changed (for example where students have missed a topic due to lockdown)
- If a paper leaks, a back-up can be compiled from the bank straight away.

Considerations when choosing item banking

For an organisation used to writing whole papers, item banking represents a significant change. Some of the key considerations are as follows:

- It is easier to find item authors than paper authors: they can focus on only a few topics if they wish, and they don't need to understand paper construction rules
- The job of item writers and reviewers in GradeMaker Pro is very simple. It is easy to get people up to speed
- It is easier to reject an item in an item banking model - this should not hold up paper development because the processes are decoupled
- Item banking makes item re-use easier, if you wish to do it
- Item banking allows you to use 'automated' test construction tools where they can help
- Because item writers can't guess the mix of items in a paper, paper reviewers need to check *all* paper level issues (e.g. coverage, difficulty range, distribution of MCQ answer options, accidental gender and cultural bias etc.)
- Item banking needs more planning. To get a balanced bank, you need to plan what to commission based on the specification. You can't just ask an author to provide you with a paper. You need to keep the bank under review and top it up from time to time.

Whichever model you choose:

- It is easy to re-order the items in papers and remove unwanted items if you wish. The mark scheme automatically updates.
- If you're short of an item at the final stage you can still add one in - from the bank or directly from an author.

The methods in practice

Examples of item banking at work

- A history paper has 10 optional topics. A group of authors are asked to write 10 possible items on each topic. Every year a paper is created using items from the bank to cover the topics.
- A biology paper covers 20 topics. Each year the exam assesses 10 of these, with 3 questions on each topic. A bank is created with 12 questions per topic. Tests are constructed from the bank covering a different mix of topics each year.

In both cases, the authors cannot guess what's in a specific test created from the bank.

Examples of paper authoring at work

- An English paper has only four questions. A theme connects them all together, so the test feels like a whole. It is given to one author to write.
- An advanced science exam has a complex specification, requiring particular items which will cover targeted topics, skills and difficulty levels. Creating such a test from a bank would be complex and difficult to do.
- An exam board has limited access to subject expertise in a particular area. It is not practical to build a bank of items and a trusted expert is asked to produce whole papers.

What's not covered in this guide...

- Templates - setting up items and papers for your authors in advance, to make their job as easy as possible.
- Workflow - defining up and managing the cycles of content review and setting dates for work to be completed.

To find out more about these topics contact the GradeMaker team.