

# Lesson Planning for Teachers

## Introduction

Teachers spend many hours planning their lessons. Traditionally, two tools are used for planning, the Unit of Work and the hand-written weekly planner. Units of Work are typed up by the teacher, borrowed from another teacher or acquired by downloading them from the Internet. The general idea of planning is to locate or create Units of Work and then to distribute them over a term, so that over the course of an academic year, the major facets of the curriculum are covered for a particular age group.

Lesson planning is constrained by other aspects of school life, such as sports days, pet days, school concerts, school trips etc. The weather, holidays and a teacher's own health also impact on lesson planning.

Lesson delivery tends to be of two types, reinforcement learning where children are endeavouring to retain basic facts (routine lessons) and discovery (Units of Work) where children are learning new things that they've not been exposed to before.

## Effective Teachers

What makes a teacher effective? To be effective a teacher has to maximise their childrens' on task time. Measured on this basis, a teacher's personality is not a major contributor to their effectiveness with children – more important, is how well organised they are. The fun teacher at school usually wasn't the one we learned the most from. The teacher we learned most from, was the one that kept the learning material flowing to our individual ability levels.

To be an effective teacher then, requires excellent organisational skills.

## Technology and Organisation

At face value, it would appear that IT, should improve an individual's organisational skills. This hasn't proved to be the case. Why?

1. Most IT solutions are too complicated. The time investment required to master the tools used exceeds the savings in time made.
2. On PC's, the lack of IT support, has resulted in many teacher's laptops becoming hopelessly misconfigured, so that new software loaded onto the machine crashes or is too slow to use.
3. The data being loaded into computer databases cannot be retrieved except by using the tool that loaded it in the first place. Since the time investment to create Units of Work is a significant portion of teachers' time they are unlikely to commit to an IT solution which does not allow them to retrieve their data and use it elsewhere.

## The Internet and Lesson Planning

Numerous Internet based lesson planning companies have appeared since Internet access has become ubiquitous. They have been able to bypass the first two problems with traditional PC based software listed above. Nevertheless, the elephant in the room, is which will survive and which won't? The lesson planning software space is too crowded for them all and when they disappear, so does your data. Despite the technical problems that need to be overcome with PC based software, at least you can be assured that your data is under your own control.

## What features should Lesson Planning Software have?

Regardless of whether your lesson planning software tool is Internet based or PC based, a number of core features must be present. They are in order of importance:

1. Export **all** data as a single batch job into human readable form for use outside the lesson planning software tool.
2. All data resides in a database which is simple to back up.
3. Supporting files can be associated with lessons.
4. Units of Work can be copied between databases.
5. Earlier lesson plans can be reused.
6. All lessons for a teaching day can be printed to hard copy, regardless of the Unit of Work they belong to.
7. Lessons display on a point and click Calendar and can be easily moved about.
8. Curriculum standards can be integrated into lesson plans.
9. The software is quick to use.

We will now discuss each of the points above in more detail.

1. Single batch job database export must be a key feature of any lesson planning tool. As noted above, for users, the software tool isn't of much value, it's the data inside it that is important. This is the reason why software packages that produce individual files such as Word processors and Spreadsheets are so popular, because users have explicit control over the data they create. Conversely, most database applications hide users' data inside relational tables that they cannot access except by way of the application, one lesson plan at a time.
2. Where individual file based applications such as Word processors and Spreadsheets fall down is that they emit large numbers of files that must be explicitly managed by their users. Many times the files are saved in disparate locations on the user's PC and versionitis is also a problem. Conversely a database, stores all it's data in a single large file, which is easy to back up and store on separate media for safety.
3. The ability to associate supporting files alongside lessons is vital. Three different approaches are used to do this, the simplest is to simply link to the file. Another approach is to copy the file to a special directory and rename the file to a number to avoid file naming conflicts. The third method is to copy the file inside the database. Linking to the file is unsatisfactory as the file may be moved or deleted and then we have a broken link. Copying the file and renaming it is better, but the file cannot be exported and is more difficult to backup. Copying the file inside the database is the most secure solution, since the file can be backed up and exported with very little effort required from the user.
4. Why would we want to copy Units of Work between databases? For three reasons. The first is to copy lessons forward in time on your own database. The second is to share lessons between users. The third is synchronise between databases. Copying lessons forward in time is the most common reason for copying Units of Work and is preferable to reusing existing lessons, because lessons need to be changed to fit the new delivery situation. If an existing lesson is simply changed then the earlier version is lost forever.

5. To reuse earlier lesson plans they must first be found. To be useful the search must include the supporting files' content as well as the lesson plans. Database software is lacking here as the supporting files are embedded inside the database in an unsearchable format. The only way to search everything is to have it as a collection of files and use the operating system's search facility to locate your text.
6. Teacher's need lesson planning software to produce a to-do list. While having the overview of a Unit of Work is useful, the daily delivery of a Unit of Work requires it to be broken down into discrete time segments that can be combined with other Units of Work to make up a teaching day. It is much easier to manage your day if you can simply print the lessons to be delivered, first thing in the morning, to hard copy.
7. Teachers need to be flexible. Things happen and schedules must be changed. Hand written weekly planners are generally written in pencil, because they undergo so much change. Lesson planning software must also enable teachers to easily move lessons about. Many packages are too rigid, preventing lessons from overlapping or changing in duration. Others force changes in lesson times to cascade forward, when perhaps there just wasn't enough time to deliver a specific lesson and only it needs to be bumped forward to the next time slot for that Subject.
8. Curriculum standards should be able to be integrated into lesson plans. However, too much emphasis is placed on this capability by many software vendors. A Unit of Work doesn't miraculously appear just because you assigned a curriculum standard to it. Unit of Work creation requires intense concentration and creativity and for a curriculum standard to be applied properly it needs to be rewritten in the teacher's own words.
9. Making software quick to use involves several elements:
  - Fast startup and shutdown
  - Pages populate with data quickly
  - The application remembers user sign-ons, window positions, file directory settings and printer settings
  - The number of open windows is kept to a minimum
  - Screen real estate is maximised

## Using Classmaker as an Effective Teacher

No software tool can turn you into an effective teacher. In fact, it is my belief, that an ineffective teacher becomes even more of a liability if they attempt to use a software tool to assist them. Teachers who struggle with IT should avoid it wherever possible. Stick with the hand-written weekly planner and Units of Work created in a simple Word processor. Put your documents where they are automatically indexed using a file indexing tool such as Windows Search, so that you can quickly search them. Providing you save all your documents under a single directory tree, you can easily Zip them up and copy them to separate media for safety. Keeping your records in the simple way detailed above, adequately covers items 1 to 5 listed above in What Features Lesson Planning Software should have, without any dramas.

But, if your understanding of how PC's work, means that the simple procedures listed above are no problem, then a more sophisticated approach that can also cover items 6 to 9 **in addition to** items 1 to 5, might be warranted.

The biggest gain in efficiency that teachers can reap, requires that the software tool chosen is able to print all lessons for a teaching day to hard copy, regardless of the Unit of Work they belong to. The other major benefit the software tool must bring is a point and click Weekly calendar. But these features must not become available at the expense of items 1 to 5 and unfortunately nearly every software tool available on the market today does exactly that, being unable in a single batch job to export **all** their data in human readable form for use outside the lesson planning software tool.

So how does Classmaker achieve every item 1 to 9 listed in What Features Lesson Planning Software should have?

1. All lesson plans **including** supporting files can be exported in a single batch job by user as a directory tree under a top level folder called the user's name. The lesson plans are exported as HTML files and the supporting files appear alongside them. Once the export is complete it is easy to search for anything, including the contents of the supporting files, using Windows Search.
2. Classmaker's data, including supporting files, resides in **one** FirebirdSQL relational database file. A simple batch file creates a compressed backup which can be copied to separate media for safety.
3. Classmaker stores it's supporting files inside it's database. A Unit of Work in Classmaker comprises individual lessons and supporting files.
4. In Classmaker multiple Units of Work can be exported to disk as individual \*.dat files in a single batch job. The \*.dat file format includes the individual lessons and supporting files in **one** file for each Unit of Work. Each \*.dat file can be imported back into the same database or a different database just by clicking on them. Because of Classmaker's hierarchical Long Term plan, Unit plan, Lesson plan structure, imported \*.dat files cannot overwrite or duplicate each other. Copying lessons forward in time using \*.dat files is easy to do.
5. Reusing past lesson plans in Classmaker is straight-forward. Export everything to disk by user (database export doesn't need to occur very often because you know the lessons you have created recently), search for what you want, when you've found it, search for a small segment (at least two letters anywhere inside the lesson name) of the lesson name inside Classmaker, mark the Unit plan for export and import it again under your current Long Term plan. Modify the imported Unit plan as necessary to fit your current Long Term plan objectives.

6. Printing off the daily to-do list is quickly achieved in Classmaker. A print lessons screen allows you to view the lessons on any day in the current week. After that, it's simply a case of sending the print-job to a printer, Postscript file or HTML file. Classmaker remembers your printer settings between sessions, so there's no need to set them up every time.
7. Classmaker uses two different point and click calendars which are linked together. The Long Term calendar tells you at a glance what Units Of Work you will be delivering in the coming term as it displays Units of Work by Subject on the vertical axis and Week of the Term on the horizontal axis. The Weekly calendar displays individual lessons arranged by time of day on the vertical axis and day of the week on the horizontal axis. Both calendars allow two records to overlap each other. The Weekly calendar display allows lessons to be moved about in time by small increments of a few minutes or large increments of 1 day, 1 week or to be bumped to occupy the next slot set aside for the next lesson planned for that Unit of Work. You can also flag lessons as having not been taught.
8. Classmaker doesn't supply curriculum standards inside its database, but has the provision to list them in the Lesson Plan field called Achievement Objectives. If you want to list the curriculum standards for quick access in your lessons, store your achievement objectives in a persistent Long Term plan using the three levels as follows:
  1. Long Term plan - ability level
  2. Unit plans - subjects
  3. Lesson plans - achievement objectives

From here it is a simple matter to locate and cut and paste the appropriate curriculum standards into your lesson plans.

9. Classmaker is fast. Why? Because it starts up and shuts down almost instantaneously and its pages populate with data quickly. If an application is fast in these two areas users have no qualms about opening and destroying windows on a whim to achieve their objectives. They will happily pop Classmaker up to do something e.g. print off a report and then immediately shut it down again to do something else. Classmaker remembers the last user, window positions, file directories and printer settings, features which make a huge difference to user productivity. It also sensibly expands to occupy all screen real estate and tabs have been used rather than new windows wherever possible.

## Conclusion

Are you a highly organised teacher? If so, it's almost a certainty that you are an effective teacher. Highly organised individuals can utilise IT to augment their effectiveness as teachers, providing the IT solution chosen:

1. Is simple to use.
2. Is being loaded onto a hardware platform that is capable of running the solution without crashing.
3. Has an open architecture that allows the user to access the data being entered from outside the tool.

Classmaker is a lesson planning IT solution capable of augmenting teacher effectiveness using the following core feature set, in descending order of importance:

1. Export **all** data as a single batch job into human readable form for use outside the lesson planning software tool.
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