LAMS Revisited
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Abstract
This paper aims to provide principled and focussed discussion on key threads in LAMS (Learner Activity Management System) learning design\(^1\) literature (section 2) and seeks to look at issues pertaining to more advanced LAMS usage (section 3). The paper may be of interest to new and/or existing LAMS users who would like to read more about current issues in LAMS learning design literature and may be of use to the more adventurous computer-savvy LAMS user who aspires to exploit further the potential of certain LAMS tools. The version of LAMS described in this paper is Version 2.1.1\(^2\). It is hoped that study of this extended paper and its preceding introductory paper (Alexander 2008a, An overview of LAMS) will be of particular value to those wishing to gain more confidence in the proficient utilisation of LAMS and to those intending to engage in debate on current LAMS issues. The paper’s thematically diverse core sections may also heighten reader awareness of a pressing issue: the need to bring together the *treasures* of progressively more hard-core and swiftly changing computer technologies with the beliefs of an increasingly discerning education community.

2. An overview of LAMS learning design literature
There appear to be a number of key threads in current LAMS literature regarding re-using/re-filling LAMS sequences; Section 2 attempts to crystallise such views in six thematic subsections. Section 2.1 looks briefly at some literature that discusses the idea of *filling-an-empty-shell* LAMS template and section 2.2 introduces literature that suggests reusing generic templates is a complicated process. In section 2.3 some ideas are presented regarding identifying examples of generic LAMS sequence designs and section 2.4 considers the importance of support in learning design. The relevance of the champion user in sequence creation is discussed in section 2.5 and views on the possible effect of the changing nature of education are examined in section 2.6. This overview of LAMS learning design literature draws mainly on the findings of some major LAMS studies and on the findings of some of the papers presented at previous LAMS conferences.

\(^1\) In this paper ‘learning design’ or ‘design for learning’ will broadly pertain to the Dalziel (2003b: 594) definition.
\(^2\) currently, the most up-to-date version as of writing this paper
2.1 Filling the empty-shell, exemplar LAMS template

One way to support lesson sequence creation for the teacher might be to use learning-design LAMS templates to be filled with subject-specific learning objects. Dalziel (2003a: 1-2) for instance suggests that a powerful feature of the learning design approach is that the content of a sequence could be altered to suit a different discipline, while leaving the activity structure unchanged (“What is Greatness” – “What is Jazz”). This kind of possibly time saving fill-the-empty-shell reuse may be pertinent to Littlejohn (2002: xi), who takes the view that in order to meet the challenge of the rapidly expanding future needs of higher education, the reuse of existing materials is “an obvious strategy”.

Dalziel (Bronwen) (2007:43) also provides an analogous perspective on the use of learning design templates and maintains that learning design templates, designed in LAMS, are being used to aid content experts who are otherwise unfamiliar with eLearning, to insert their content straight into an online learning environment. The templates are also designed to show them the range and extent of online activities that are available through LAMS. The templates have been used as a starting point and as an inspiration for the module design, but are not restricting new ideas (Bronwen Dalziel 2007:43).

By means of illustration, such a template is provided on LAMS Community; it is called Laboratory prac outline. Dalziel (Bronwen)\(^3\) states on this LAMS Community sequence outline that she would like to know if the no-content practical science laboratory sequence “would work for other laboratory practicals in science and school”. However, Sommaruga et al. (2008: 9) with regard to the re-usability of pedagogical templates, maintain that “pedagogical templates can represent a model that can be applied to a different domain, but the process is not direct and immediate”. Thus, there is also a need to investigate the degree to which content subject area impinges on the way a generic sequence template lends itself to reuse.

Another example of reuse could pertain to exemplar sequence templates to be used in RAMS (Research Activity Management System). It has been found at the University of Nicosia that there are common identifiable elements in managing a research enterprise lifecycle; thus re-using/re-filling RAMS sequence generic templates appears to be practicable. Figure 1 provides a screenshot of one of the three global templates to be used for research projects at the University

\(^3\) This LAMS sequence was downloaded in September 2008
of Nicosia. The template for now is in LAMS however, as RAMS is presently only a Beta version.

![Figure 1. An example of an exemplar template for research projects at the University of Nicosia](image)

### 2.2 Findings that suggest re-using is a complicated process

Levy et al. (2008) in an evaluation project funded by JISC as part of its Design for Learning programme (May 2006 to October 2007), looked at the extent to which tools such as LAMS add value to the practice and impact of designing for inquiry-based learning (IBL). The study elicited data using a wide-range of techniques: pre- and post-implementation interviews on 11 academic staff, follow-up interviews were carried out with 12 staff, 4 observations of classroom implementations, questionnaire feedback from 81 students (out of 221), one-to-one interviews were carried out with 4 student users, an evaluation session was run with 5 student ambassadors (Levy et al. 2008: 17). Levy et al. (2008: 2) maintain that “the ease with which activity-design is supported by LAMS was perceived as bringing a risk of unreflective, mechanistic approaches to design”. Furthermore, it was found that few participants “imagined reusing whole generic empty-shell sequences to which content could be dropped” (Levy et al. 2008: 37-8). Levy et al. (2008: 61) also however maintain that study data suggest that disciplinary and subject differences play a part in shaping pedagogical attitudes and approaches to sharing and reuse.

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4 Philippa et al. (2008: 8) state that design for learning has been defined by JISC as “the process of designing, planning and orchestrating learning activities” (JISC, 2006).
Walker and Masterman (2006) question whether there is a culture of sharing generic learning designs:

to what extent can a learning design created by one teacher for a specific curriculum and cohort of learners fit the context in which another teacher is working without a major input of effort by the latter? Is there a role for ‘generic’ learning designs created for a specific curriculum topic, but without a particular group of learners in mind? Previous research conducted by Masterman and Lee (2005b) in three UK universities yielded ambivalent results, with concerns being raised about contextualisation, the inability to represent fully the author’s pedagogy within a design. Put simply, the rhetoric of reuse may connect more with teachers’ espoused intention for action than the reality of sharing and reusing resources (cf Argyris, 1980).

Walker and Masterman (2006: 89-90)

This finding is echoed in Lucas et al. (2006) who undertook a project carried out at three universities in the UK: (Leicester, Oxford and Oxford Brookes). The project, which was funded through the JISC Distributed e-Learning Programme (2005), analysed aspects regarding the way LAMS learning designs were reused. Lucas et al. (2006: 56) state that “the method of data collection was not predetermined by the investigating team, but was devised by each tutor. The data collection instruments comprised the standard set of questions included in the LAMS Survey tool (Leicester), a questionnaire composed by the tutor (Oxford Brookes) and an asynchronous discussion between tutor and students (Oxford)”. It was found that:

although it has been proposed that sharing learning materials and learning designs leads to the dissemination of good practice (Littlejohn, 2003; Beetham, 2004; Britain, 2004), there has hitherto been little evidence in the Higher Education sector of what one might call a ‘culture of sharing’: making learning materials that one has created oneself available for widespread use by other practitioners and, conversely, reusing material produced by others.

Lucas et al. (2006: 55)

Lucas et al. (2006: 62-3) in addition maintain that their data suggest that reuse is a low-level and largely informal practice, which is carried out principally among personal acquaintances and involves a wide range of learning materials, but not learning designs. Moreover, Bamber and Mutter (2008: 72) assert that “it is essential to bear in mind that every student is different and every student has a preferred learning method and preferred learning design”.

2.3 Thoughts on identifying examples of generic LAMS sequence designs
Laurillard (2002)\(^5\) with regard to bringing academics closer to the design of interactive e-learning, provides a pragmatic suggestion for exploring the feasibility of generic LAMS sequence designs based on good existing e-learning activities and recommends finding examples of good existing e-learning activities. This view is echoed in Hughes (2007) who holds that “once a well-designed sequence has proven to be effective, it can easily be repurposed for use in different contexts”. However identifying good practice is undoubtedly an arduous and possibly subjective process. For instance, the rating scale and number of downloads for sequences available for downloading on LAMS Community is helpful, but high ratings or view numbers do not necessarily guarantee that the sequence can be cited as an example of good existing e-learning practice. Moreover, it is not clear how analysing the authored components of such diverse sequences could facilitate the process of creating workable generic LAMS templates.

Good practice may develop through a process of teacher reflection over an extended period of time. Alexander (2008b, 2007a, 2007b) for example found that in an eight-month, research-intensive, longitudinal study carried out in the University of Nicosia Language Lab on six experienced language lecturers, a clearer understanding of effective Internet ESOL pedagogy was developed towards the end of the study by a single pioneering teacher whose apparent reflection on resistance (student/teacher) led to the innovative dissemination of helpful “building blocks” of Internet pedagogy. The Kiely (2001) perspective on the process of developmental feedback-resistance-reflection-innovation cycles might therefore be germane to establishing effectual learning design templates. Consequently, it may be the case that a key component of confirming the efficacy of subject-specific learning design is predicated on understanding the process of reflecting on teacher-perceived resistance from students. Moreover, resistance may not appear straightaway: it could appear after several months of use as new teacher-student relationships/roles are formed in the new e-learning environment. Thus, adapting learning design to student epistemologies might also be an incremental process. This idea is also very broadly in line with a notion espoused in Nash et al. (2004: 1): a Trojan mouse bottom-up model approach of providing “small, manageable innovations that combine with other small changes to make substantial long-term impacts” in ICT. In a similar vein, Stecyk (2008: 192) discusses a

\(^5\) Drawn from a presentation on the implications of the SOURCE Project for the role of learning objects; the paper was presented at the Australian Universities Teaching Committee 2002 (AUTC) conference which focused on the subject of reusability of ICT learning resources.
small steps method; namely a bottom-up initiative to be conducted only when class leaders (teachers) recognize that an elearning system might raise teaching efficacy and assist in the organization of academic work.

2.4 Learning design and the importance of support

Another factor which may facilitate the formation of effective learning design templates is the kind of pre/post-lesson support given to teachers. Burns (2007) in a ALT/QIA Making e-Learning Work 2007 conference paper discusses the trialling of LAMS in ESOL within the context of the eLIDA CAMEL (e-learning independent design activities for collaborative approaches to the management of e-learning) project. This project was part of the JISC (Joint Information Systems Committee) design for learning strand. In this small-scale questionnaire study carried out on thirty-four fulltime summer students, it is held (Burns 2007: 1-3) that success in the trialling of LAMS is predicated on “critical-friend”-type practitioner support of, and feedback on, pre-lesson use LAMS sequences.

The idea of critical-friend-type practitioner support is a finding echoed by McDonald and Star (2006: 68) who maintain that Communities of Practice (CoPs) could provide the bottom up impetus for effective change management and professional development. Moreover it is held that:

Support for a bottom up approach requires a champion and/or sponsor. A champion is a senior manager who strongly believes that CoPs should be a primary mechanism for managing knowledge in the organisation, and aggressively provides guidance, funds, visibility and legitimacy to clear the way for CoPs to thrive and achieve results

McDonald and Star (2006: 68)

This view is also broadly endorsed in Laurillard (2006) who holds that if universities are to rethink their methods of teaching, they require a management structure that is capable of supporting innovation. Another kind of assistance may be the support between organisations. A noteworthy example of such support might be found in the way teachers can run joint classes using Shibboleth. Shibboleth may facilitate the speed with which good practice can be disseminated. Dalziel and Ghiglione (2007) maintain that:

Once LAMS servers join a Trust Federation, teachers can create their own Joint Classes immediately without requiring assistance from technical staff, hence empowering teachers and students to easily collaborate across organisational boundaries in a secure way

Dalziel and Ghiglione (2007: 50)
The importance of institutional support is also described in Walker and Masterman (2006), who discuss an investigation into the reusability of learning designs set in the context of a regional initiative, within the London Borough of Greenwich, to support students’ development of study skills through blended learning. It was found that “practitioners were concerned that their investment of time and energy in learning how to use LAMS would not be wasted should LAMS not be adopted at institutional level” and that “this factor was a major inhibitor of practitioner engagement with the system and the project” (Walker and Masterman 2006: 70).

Walker and Masterman (2006: 90) also draw attention to the need to consider the kind of teacher support that should be provided: it is stated (2006: 90) that “if there is indeed a gap between the principle and practice of reuse, then it has ramifications for the establishment and sustainability of communities to support reuse”. However, Walker and Masterman (2006: 97) maintain that a promising model for the fostering of communities is Collaborative Approaches to the Management of e-Learning (CAMEL). The idea was to encourage teachers from different institutions to discuss and reflect upon the positive and negative experiences of using specific learning designs with their learners; this process may be beneficial for teachers as it could encourage pedagogical reflection. Pedagogical reflection is a theme that resonates with Smart (2005) who maintains that some practitioners find that by focussing on the learning process they begin to reflect on why they were asking students to do particular activities in a certain order and then fine tune sequences after each session with students.

2.5 Sequence creation and the relevance of the champion/staff enthusiast user

Many mainstream LAMS studies report lower than expected numbers of sequences created. Russell et al. (2005) CRIPSAT for instance examined the achievements and innovative pedagogies arising from practitioners' use of LAMS in SSAT schools piloting the software. The wide range of data collection methods used during the approximate 7-month pilot study comprised an initial and final LAMS questionnaire, 27 management staff and teacher semi-structured interviews, 12 LAMS-session structured observations, interviews with pupil groups and analysis of LAMS server statistics. The scale of involvement of the forty-one schools that had registered to participate in the LAMS pilot varied significantly. Russell et al. (2005: 3) hold that approximately 224 uniquely titled sequences were created by pilot schools and, “of the 40 pilot schools using the pilot servers, 26 created at least one sequence, 14 created none” (Russell
et al. 2005: 3). However Table 7 in Russell et al. (2005: 36) provides more revealing data: one college (n=26) (Hathershaw Technology College) created about half the sequences in the study and in 11 of the 26 colleges that had prepared sequences, all of the sequences had been created by 1 person. This observation is possibly addressed in Russell et al. (2005: 4) who maintain that broad-based LAMS uptake may be a specialism of enthusiast or champion users. Russell et al. (2005: 51) state that “where a school had at least one management or staff enthusiast/champion to engage with and support LAMS development, then positive achievements would generally be made in that school”. However, it might also be of interest to document why/how colleges such as Hathershaw Technology College as an entity can be so productive and to analyse what the characteristics of such enthusiast/champion users are in such colleges.

The number of sequences reported to be created in the Masterman and Lee (2005a) JISC study also appear low and suggest that it is the enthusiast that produces most LAMS sequences. In the study, 40 participants were drawn from individuals already actively interested in e-learning; however only 14 relatively complete LAMS sequences “had been authored by, or were thought to have been authored by, participants in the LAMS trial” (Masterman and Lee 2005a: 28). Masterman and Lee (2005a: 35-36) maintain that it is likely that the 50% net attrition rate of participant involvement in the study was “to be expected in longitudinal field-based studies” and recommended funding supply staff to take over some of a participant’s normal duties. Levy et al. (2008: 16) found that in spite of 5 supportive training workshops carried out on 38 participants, “it did not prove possible to achieve a portfolio of 25 LAMS sequences, as hoped because of lower than expected pilot user recruitment”; only 14 completed sequences were created. The number of LAMS sequences available in Jameson et al. (2007:5) also appears comparatively low; the eLISA had a key focus on pedagogy in providing coherent access to shareable reusable study support learning objects, enhanced by blended learning and collaborative activities. “Eight (combined LAMS/Moodle) sequences were either adapted from ones created by the research team or created from scratch by teachers involved in the project” and only six teachers worked on their own, four worked in pairs (Jameson et al. 2007:13).

LAMS Community statistics are informative and also suggest that most sequences are created by a relatively-small number of LAMS users. The site, which boasts about 3200
members in 80 countries, encourages the sharing and adapting of freely available digital lesson plans and the exchange of experiences using LAMS. Yet many of the approximately 260 sequences (as of October 2008) available for viewing have been written by a significantly smaller number of presumably enthusiast users; moreover some of these sequences cannot be imported into recent versions of LAMS. Burns (2008), who examined the effects that the implementation of LAMS learning design had on a pre-intermediate class of ESOL adult learners at a further education college in London\(^7\), provides a possible answer regarding why so few sequences are created. She found that “practitioners enjoyed preparing and delivering their LAMS sequences but commented that creating their first sequence was very time consuming” (Burns 2008).

### 2.6 The education-technology relationship

Our understanding of pedagogy will undoubtedly play an important role in the development of LAMS. This is confirmed in Smart (2005) who notes in a report from the LAMS evaluation workshop held in Birmingham 11 January 2005, that James Dalziel, the LAMS project leader, “reminded participants that his mission in developing LAMS was to make sure that pedagogy led technology and not the reverse”. However, a recent Economist Intelligence Unit white paper\(^8\) unfortunately appears to be asserting a contrarian mainstream future trend. The white paper, which is on how technology will shape the future of learning in higher education, predicts that technological innovation will have a major influence on teaching methodologies over the next five years (Glenn 2008:6).

Nonetheless, trying to crystallise the essence of learning into practicable, learning-object-re-fillable, (Holy-Grail) templates may also be concomitant with the tools available (eventually) being able to encompass the gamut of complexities, intangibles, idiosyncrasies and affective factors prevalent in human learning. LAMS, which currently is “heavily based on IMS Learning Design and EML” (Dalziel 2003b: 594), may offer a different perspective on the potential to

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\(^7\) The variety of data collection methods in this small-scale action-research-type study included questionnaires and interviews.

\(^8\) Sponsored by the New Media Consortium (NMC): The New Media Consortium (NMC) is a community of hundreds of leading universities, colleges, museums, and research centers. The NMC stimulates and furthers the exploration and use of new media and technologies for learning and creative expression.
define learning if new or novel theories in education lead to the development of a diverse standpoint on the educational function of authoring tools. The choice of tools in Learner Management Systems does (should) after all reflect the in-vogue possible shelf-life set of educational beliefs regarding what effectual learning is. LAMS currently offers a strong and evident constructivist learning arena and is said to offer opportunities to students to take greater control and responsibility over what is learned: the learner therefore is thought to become an active agent in the learning process. This is echoed in Pearce and Cartmill (2007: 3) who hold that LAMS tools are “particularly effective in facilitating a more active approach to students” learning.

Nonetheless, even though the learner as an active agent in the learning process may also be a common thread in our understanding of learning (Laurillard 2008), it is the multifarious perspectives of what is actually meant by active agent that may create uncertainty in understanding education policy. This in turn may necessitate the creation of new concepts or lead to a refocusing on, or redefining of, existing perceptions of pedagogy. TESL for instance, has experienced many fundamental and abrupt changes: a flurry of novel, outwardly sturdy but often transient techniques for second learning acquisition for example were a reaction led principally by Chomsky (1964) against structural approaches to language learning. Well-known such approaches, which at their time all had an enticing and pervasive hook for the TESL community include: The Silent Way (Gattegno 1972); Total Physical Response (Asher 1969); Community Language Teaching (Curran 1976); Suggestopedia (Lozanov 1978); Communicative Approaches (Brumfit and Johnson 1979, Widdowson 1978, Yalden 1983); The Natural Way (Krashen and Terrell 1983). Such standpoints may partly resonate with Dobozy and Pospisil (2008: 113), who provide a contrarian perspective when stating that:

New approaches to learning and teaching, such as the flexible learning approach underpinned by humanist constructivist educational philosophy, need to be evaluated for their usefulness to provide solid evidence of their value-adding nature. The fact that a significant number of students seemed to openly reject our attempt to let them self-manage their learning through our provision of LAMS-based activities, may suggest that their non-engagement with this form of pedagogy is based on unmet needs. Thus, we need to proceed with caution when developing and implementing self-managed, flexi-learning programs.

Dobozy and Pospisil (2008: 113)

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9 Teaching English as a Second Language
2.7 A summary of the core points discussed in section 2

- It seems that there are some conflicting views in the literature regarding how exemplar LAMS templates can be identified and/or utilised for re-use/re-filling. Some research suggests that filling-the-empty-shell generic template could be effective in certain subject areas (Bronwen Dalziel 2007), whereas an increasing amount of literature indicates that re-using/re-filling templates is problematic (Levy et al. 2008, Walker and Masterman 2006, Lucas et al. 2006).

- Considering what works (good practice) may be a pragmatic technique for exploring the feasibility of generic LAMS sequence designs (Laurillard 2002, Hughes 2007), however identifying examples of good practice might be complex and may also develop through a process of teacher reflection over an extended period of time (Alexander 2008b, 2007a, 2007b). A supportive environment is a key factor which could help to facilitate the formation of effective learning design templates (Burns 2007, McDonald and Star 2006, Laurillard 2006, Walker and Masterman 2006).

- Many mainstream LAMS studies report lower than expected numbers of sequences created (Russell et al. 2005, Masterman and Lee 2005a, Levy et al. 2008, Jameson et al. 2007). The causes of this are not clear, however Burns (2008) asserts that creating the first LAMS sequence is very time consuming. Finally it is held that learning design tools will change as our understanding of pedagogy changes.

3 A techie’s view of LAMS

This second main section aims to provide a breakdown of some of the new and existing features of LAM and to describe some more advanced Author tool usage.

3.1 An outline of recent changes to LAMS

Some of the new developments announced on the LAMS/RAMS Technical Wiki page comprise information on:

(1) the current version of LAMS as of 5/10/2008 (LAM2.1.1). This updated version should be installed onto the relatively newly released (19 June 2008) LAMS2.1 version;
(2) a report on LAMS in mobiles giving a preference to Asus EEE-PC Subnotebook, Intel 2nd Generation Classmate Ubuntu and Intel 1st Generation Classmate Windows XP for general worldwide use. Using Flashless Interface, the Flashless Learner interface is useful if LAMS is to be run on mobile devices that do not support flash;

(3) new integrations for Blackboard CE 6 (ex WebCT Vista) and Microsoft SharePoint 3.0;

(4) Tool Adapters, in particular the Moodle Tool Adapter which is a tool adapter that permits Moodle tools to be used natively (as LAMS Tools) within a LAMS-Moodle integrated environment;

(5) the ability to insert an existing sequence, namely authors can now slot in complete sequences onto the canvas to use as part of another sequence;

(6) Incorporating Google gadgets;

(7) Creating Offline Activities, LAMS can also be used to describe the structure of a real-world lesson.

(8) a new animation for a flvPlayer Plugin for FCK Editor in LAMS

(9) the degree to which LAMS translations have progressed

(10) Using a Shibboleth Joint Trust Federation; separate LAMS servers can be set up to share lessons, students and roles (Click Here for a Demonstration).

(11) New Condition Gates allow a gate to open based on the outputs of a previous activity. Currently, these activities provide output conditions.

The next two upcoming versions of LAMS are LAMS2.2 (Beta) and LAMS2.3 as stated on the LAMS Roadmap. Among the new features in LAMS2.2 are: (i) new open-gate command criteria; (ii) new grouping and branching features (iii) Notifications (automatic notification emails when events occur) (iv) new Online Spreadsheets, Google Maps, Data collection and Dimdim integration conference tools. Direct contact with students hopefully will be developed further in LAMS2.3 which will have instant messaging.

### 3.2 Four new authoring tools

The LAMS User Documents Homepage is frequently updated with information about technical developments in LAMS; it is highly recommended therefore that LAMS’ administrators and sequence Authors regularly access this page in order to keep up-to-date with changes. Four new authoring tool icons now appear on this Homepage: Data Collection (reflective tool which is
currently under construction), **Spreadsheet** (informative tool which is currently under construction); **Google Maps** (reflective tool) and **DimDim Conference** (reflective tool). Figure 2 provides a screenshot of these four new tools. LAM therefore has 7 separate reflective tools (green colour), 4 informative tools (orangey colour), 3 collaborative tools (yellow) and 2 evaluative tools (purple colour). These new tools will comprise part of the upcoming **LAMS2.2 version** upgrade.

It is held however that more collaborative tools such as individual/group student Skype-like real-time collaboration or voice chat/forum options could provide real-time face-to-face contact which might significantly upgrade learning potential and afford a new complementary dimension to the written Chat and Forum tools. Moreover this kind of spoken Chat/Forum option might help to address for example Dobozy and Pospisil (2008: 112), who found that some students using LAMS were “concerned about the lack of face-to-face spontaneous interaction with the lecturer”.

Figure 2. Four new authoring tools

Some literature indicates that certain tools in the LAMS authoring environment are more commonly used than others. Russell *et al.* (2005: 174) for instance concluded based on a detailed analysis of 14 learning sequences that “the Noticeboard, Share Resources and Question and
Answer were the most used activities, while some activity types were not used at all”. This finding is endorsed in Philippa et al. (2008: 42) who maintain that novice LAMS users often use “a relatively limited palette of activities for their initial sequences” (Noticeboard, Resources+Forum, and Share Resources) and that a number of activities were little used. The two interconnected questions that come to mind however are: (1) the degree to which the pedagogical beliefs of the Author determines the way tools are used; (2) the degree to which increased choice of tools leads to actual new pedagogical designs by the Author. Thus in light of the creation of new LAMS authoring tools, there is a need for more research into how Author pedagogical beliefs effect/affect the use of the increasing range of LAMS authoring tools. Moreover, the more developed authoring tools become, the more training and support may be required to help implement change. Thus the risk of a fissure appearing in teacher and LAMS teacher trainer relationship might necessitate the creation of a skilled LAMS teacher-representative ‘materials uploader’. Namely, it may be quicker to discuss desirable content, learning outcomes and format with the teacher, rather than train teachers fully to use the increasingly sophisticated Author environment tools. Moreover the creation of such an intermediary expert LAMS Author may be an unavoidable outcome of a rift that could appear between technological innovation and practicable in-service teacher training.

3.3 FCK Editor

LAMS2.1.1 authoring tools currently use FCK Editor Version 2.5.1. Build 17566 (Figure 3). The popularity of the FCK Editor is reflected in its number of downloads (i.e. approximately 3 million by August 2008). The Editor is regularly updated and the most up-to-date release as of writing this paper was Version 2.6.3, moreover the FCK Editor Roadmap suggests that Version 3.0 is in the pipeline. A lengthy list of applications that use the Editor is available on here, a demo of the Editor is accessible on this site, and the FCK Editor’s User Guide is obtainable here.
The LAMS Roadmap does not appear to mention that the upcoming LAMS 2.2 and 2.3 versions will have updated FCK Editors. Some of FCK Editor Version 2.6.3 functions could be useful to LAMS users; for instance, spell check, multi-language support, style, a wider variety of paste functions, find/replace. Even though the FCK Editor is on the whole fairly easy to use, this section will look at the following more challenging areas: section 3.3.1 (inserting Google Gadgets), section 3.3.2 (inserting Images with the FCK Editor), section 3.3.3 (more aesthetic presentation of WebPages in LAMS), section 3.3.4 (tabular embedding of YouTube films), section 3.3.5 (converting videos of teacher speaking for flvPlayer use in LAMs).

3.3.1 Google Gadgets

A new feature of LAMS is the ability to include Google Gadgets as part of a LAMS sequence; this presentation shows how this can be done. The screenshots in Figure 4 shows the processes involved in doing this.

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10 The flvPlayer in LAMS is an additional installation that can appear in FCK Editor.
11 There are over 49000 thousand Google Gadgets
Once the Google Gadget has been chosen, the code has to be copied and pasted into FCK Editor.

First

Google Gadget code

Second

Click ‘Source’ on the FCK Editor

Third

Copy code directly or here if within a table for more aesthetic presentation

Figure 4. Bringing Google Gadgets into LAMS

3.3.2 Inserting Images with the FCK Editor
Information on inserting images with the FCK Editor is available on this site. The icon for inserting image is 📷. Figure 5 provides screenshots of two of its four bookmarks (Image Info, Link, Upload, Advanced). On the whole, inserting images is straightforward, however some parts of this tool’s options have many features and the FCK Editor User Guide does not appear to fully explain advanced usage.

![Figure 5. Screenshots of Image Info and Advanced of Inserting Image on the FCK Editor](image)

### 3.3.3 More aesthetic presentation of WebPages in LAMS

Utilising WebPages within LAMS undoubtedly enhances its learning capabilities. This section describes one advanced way of using Source on the KFCEditor to improve the visual presentation of Web links: WebPages a la “Fancy Noticeboard”\(^\text{12}\).

**WebPages a la Fancy Noticeboard**

Importing WebPages into LAMS is extremely useful, sophisticated and visually enhancing function. Figure 6 provides screenshots of how this is done and what this looks like.

\(^\text{12}\) Fancy Noticeboard as used in James Dalziel’s Lesson Three LAMS Activities (available on LAMS Community)
This is done by using the code formula below; note the size can be adjusted by changing the numbers in yellow in box 1 below (i.e. just change the yellow parts, keep the rest the same!)

BOX 1

```html
<div><iframe src="PUT URL HERE" width="95%" height="278"> </iframe></div>
```

This kind of usage could be useful for chat/forum activities where students can access a WebPage directly and still view the chat/forum contents.

### 3.3.4 Embedding YouTube films using the FCK Editor (Figure 7)

Paste YouTube Embed Code in the same way described in Section 3.3.1 Google Gadgets
Embedding Films (within tables) requires basic knowledge of computer codes; this may be a little complicated for non-computer savvy Authors. Also, the embed codes are not directly available in Google Video.

### 3.3.5 Converting videos of teachers for flvPlayer use in LAMS

The flvPlayer plugin uses the [JW Media Player](http://www.jwmediaplayer.com/) developed by Jeroen Wijering. The flvPlayer for the FCK Editor in LAMS, which is documented here, will allow the embedding of videos (using .flv files -Flash Video files) or sound (mp3 files) into activities. The use of teacher-recorded films in LAMS for Learners to view is a positive outcome of the flvPlayer plugin (see Figure 8). However, conversion of computer camera-recorded films to flv format may require the use of [Any Video Converter](https://www.anyvideoconverter.com/) or similar such video converters.

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13 Any Video Converter is a professional video converter which can convert video files from various formats with fast converting speed and good video quality. It can convert almost all video formats including DivX, XviD, MOV, rm, rmvb, MPEG, VOB, DVD, WMV, AVI to MPEG-I, MPEG-I, DVD NTSC, DVD PAL, Flash for Video (FLV), .AVI Video and Customized WMV movie formats. It also supports any user defined video file formats as the output.
Figure 8. Teacher video use in LAMS (should) enhance the e-learning experience

4. Conclusion: looking to the future of authoring

Even though, the enhancement of visual/audio/graphic features in LAMS may be hinting at a possible vision of the future of e-learning, time-saving simplification of the advanced features of LAMS authoring environment may now be a priority for more wide-scale use. This assertion may also be pertinent with regard to: (1) the need for a supportive environment (Burns 2007, McDonald and Star 2006, Laurillard 2006, Walker and Masterman 2006); (2) mainstream LAMS studies reporting lower than expected numbers of sequences created (Russell et al. 2005, Masterman and Lee 2005a, Levy et al. 2008, Jameson et al. 2007). For instance, as authoring features become more advanced, Authors may be required to use more coding/advanced features to create more impressive sequences. However, should Authors (really) have to use any coding...
or have to become ‘so’ computer savvy? And if so, how can they be supported effectively? Masterman and Lee (2005a: 3) for instance found that “lack of support for images and graphics can be a hindrance to the design of appropriate learning tasks”.

We may therefore be approaching a tectonic shift point in LAMS authoring design: to achieve the evermore impressive effects that technology is offering us, we may have to propose options whereby teachers can just upload the content (which could be quite varied) and choose the kind of empty and possibly subject-specific learning design template they would like to use. Namely, to utilise more advanced technologies, there would be little or no explicit authoring as is the case now. Such empty templates would already contain the most advanced authoring features LAMS might have to offer, but teachers would not have to learn how to author these features. The shift for the teacher thus would be towards choice of empty template and lesson content (within a new and simplified Author environment) rather than creation of full template with advanced technology features. This suggestion however implies more research is required appertaining to re-using/re-filling templates, as this has been found to be problematic (Levy et al. 2008, Walker and Masterman 2006, Lucas et al. 2006).

The author of this article would welcome any comments or questions regarding the ideas presented in this paper.

5. References
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