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Abstract
The extent to which university departments foster learning literacies that equip students with the diverse skills required for employment in a digital world is an issue that is under increased scrutiny in British higher education. The Learning Literacies in the Digital Age report (LLiDA by Beetham et al. 2009) offers a framework of learning literacies, which encompasses a range of literacies including academic, information, digital and media literacies. Building on the LLiDA framework, this article outlines and discusses an approach that aimed to extend the development of information literacies of first-year undergraduate students along with digital and media literacies. The central characteristics of this approach involved students working collaboratively, in teams, on an enquiry-based learning task using the institutional virtual learning environment’s wiki tool. The task involved developing and creating a wiki on exactly the kind of learning literacies that students were meant to acquire during this enquiry. This dual development was underpinned by the collaborative input of staff from academic and central services departments. Student survey feedback and observation were used to map the various gains in the areas of 1) collaboration and communication skills, 2) information literacy (IL), academic practice (study skills) and employability skills, 3) media and digital/computer literacies and, finally, 4) disciplinary skills. The findings confirm the usefulness of the LLiDA framework as well as point to its potential for further development to map literacies specific to the discipline.

Keywords
information literacy, digital literacy, media literacy, literacies, enquiry-based learning, group work, wikis, undergraduates, study skills, collaboration

1. Introduction
Centres of higher and further education are required more and more not only to teach their students disciplinary knowledge, but also to prepare them for an increasingly varied employment career.

At the same time, the teaching of study skills to undergraduate students is a pertinent issue, and one under increasing scrutiny as a result of widening participation agendas and rapid
technology developments, in terms of increasingly digital study environments and massive growth in students’ use of digital media, both social and academic. These developments, along with the lack of stability in the employment sector, bring about the need for today’s students to be prepared for flexible, contract-based career arrangements, as well as for the rise of multidisciplinary teams and for active participation in networked communities.

The Learning Literacies for the Digital Age (LLiDA) project (Beetham et al. 2009) identifies a number of learning literacies as essential to student development. It offers a ‘framework of frameworks’ of digital and learning literacies, sub-dividing into different literacy areas that include:

- Metacognition – reflection, organisation, self-analysis;
- Academic practice, study skills – reading, synthesis, argumentation, problem-solving, academic writing;
- IL – identification, accession, organisation, evaluation;
- Communication and collaboration skills – teamwork, networking, speaking/listening skills;
- Media literacy – critical reading, creative production;
- ICT/digital/computer literacy – keyboard skills, use of presentation tools, navigation/user interface skills, adaptivity, agility;
- Employability – self-regulation, teamwork, problem-solving, innovation/enterprise;
- Citizenship – participation, engagement, ethicality.

Given that these literacies exist in the context of the digital age, all the listed areas need to consider the effective use of technologies. Beyond the normally well-established study skills support, strategies that support students’ development to prepare them for effective use of technologies are currently in short supply in higher education institutions (Beetham et al. 2009).

The framework proposed in the LLiDA project (Beetham et al. 2009) will serve as the basis in this article for extending the well-known concept of ‘study skills’ to potentially covering (or at least touching on) all of the learning literacy areas identified in the above framework on learning literacies, that is: metacognition; academic practice; IL; communication and collaboration skills; media literacy; ICT/digital/computer literacy; employability and citizenship. Using the music curriculum as an example, this article aims to address the gap identified above by offering an approach for skills development that is transferable to other disciplines and integrates academic, information and digital literacies. In this approach, students are supported to develop not only academic literacy and IL, but also to link these with the development of media and digital literacies through the collaborative involvement of academic and central services staff in the institution, including the library and e-learning units.

The article first considers the literature on study skills and literacies in a higher education setting, initially in a general sense. The development of these skills and literacies in a disciplinary setting is then outlined, followed by a consideration of an enquiry-based learning approach. The article then moves on to describing and giving the rationale for a project that was undertaken with first-year undergraduate music students, and facilitated by the authors of this paper (two academics, a liaison librarian and a learning technologist). Finally, the article reflects on the effectiveness of this approach in preparing music students for university study and for their lifelong learning careers, and it concludes with a consideration of the effectiveness of the approach and suggestions for future development.
2. From study skills to learning literacies

In order to describe an approach for developing students' learning literacies, it is necessary to define what is meant by the terms used throughout this article. Recently, there has been a shift away from 'study skills' to 'learning literacies', based on the argument that developing 'skills' is a simplified, deficit model and concerns the cognitive development of students, and most studies therefore focus on an area of 'weakness' in order to improve them. Durkin and Main (2002), for example, define study skills as including academic writing skills (e.g. note taking, writing essays) through to teamwork and communication skills; in their example, they focus on the development of academic writing, which was the weakest study skill area. Their eight-week study skills course included analysing assignment and exam questions, essay writing techniques, report writing techniques, referencing and bibliographies, and examination techniques. Wingate (2006) identifies 'study skills' (while also calling for this term's abolishment) by mapping them onto QCA's key skills framework (QCA 2000, cited in Wingate 2006) as: a) written and oral communication skills; b) library/information skills, c) using graphs in written work, d) planning and conducting group projects and e) time management. Wingate (2006) argues that the term 'study skills' signals a short-term skill which will not last, or be useful, beyond the walls of the university.

More recently, research has addressed these shortcomings of terminology – or rather, by shifts in terminology and by replacing 'skills' with 'literacies', it has achieved a move from a deficit, short-term model towards an enabling, capacity-building one. As the LLiDA framework identifies, learning literacies refer to students having capabilities that extend into their lifelong careers, and include 'learning to learn' or 'meta-learning' (Beetham et al. 2009; Biggs 1985). In a subsequent study, Littlejohn et al (2012) identify literacies as "foundational capabilities ... on which more particular skills depend." (p. 4.) Studies referring more specifically to IL also equate this with 'learning how to learn' (American Library Association 1989; Andretta 2005).

Others also advocate the term 'literacies' as it situates these capabilities not just cognitively but also socially and culturally (e.g. Gourlay 2009), involving a cultural entitlement and the need for continued practice, in opposition to 'skills' which suggests that once one has acquired them, one will possess them for life. This has been paralleled by the use of the terms 'information skills' or IL. As Andretta (2005) outlines, the model set out by the Society of College, National, and University Libraries (SCONUL) for the UK referred to ‘information skills’ (1999), while other countries such as the USA, Australia and New Zealand use IL. It should be noted however, that SCONUL’s recent iteration of the model (SCONUL 2011) does now refer to IL.

In line with this development and focus on capacity building, this article will use the term 'learning literacies' to both encompass the various areas of literacies introduced by the LLiDA model, such as IL and digital literacies as well as the more 'traditional' academic practice/study skills such as academic writing. Where the LLiDA framework extends these more traditional study skill areas (such as those discussed in Wingate 2006, Durkin and Main 2002) is with the inclusion of media literacy, ICT/digital/computer literacy and citizenship. In particular, whereas previous models would aim at developing ICT skills such as computer use, word processing etc., digital and media literacy also deals with students' capabilities in learning how their disciplinary knowledge can be communicated to different audiences effectively, how they can produce knowledge for others using different media and how they can manage their identities socially and virtually (Daley 2003; Lippincott 2007). The convergent capabilities that are now needed to communicate to different audiences effectively as well as through different media (paper, web, social media) reflect the changing world since the turn of the 21st century, prior to which skills in paper-based academic writing were in highest demand. With the spread of screen-based media many opportunities come for developing capabilities for writing, communicating and making use of opportunities that
the various digital technologies offer (Beetham et al. 2009). This is not to argue that writing skills are less important in a digital age; conversely, writing skills now need to expand to media literacy, i.e. requiring skills in writing and at the same time for the writer to be able to fully utilise the medium (paper or digital) and the format (academic report through to blogs) in which they are writing. Media literacy, as Littlejohn et al. (2012, p. 7) define it, is “at the intersection of academic and technical literacy, as concerned with the forms – technical as well as cultural – in which academic meaning is communicated.”

The LLiDA study and the subsequent study by the same team (Littlejohn et al. 2012) identify that in terms of embedding the development of these kinds of literacies in the curriculum, there has been separate development, for instance, as far as IL and digital literacies were concerned:

“While librarians have successfully articulated the literacies required to access digital information, and e-learning teams are beginning to define the capabilities of studying and learning effectively in digitally rich environments, these enterprises are rarely joined up.” (Littlejohn et al. 2012, p. 6)

There is evidence (Beetham et al. 2009; Kenedy and Monty 2008; Hegarty et al. 2009) that both students and academic staff tend to believe that students are more digitally capable and information literate than they actually are. Today’s students have often been referred to as ‘digital natives’ (Prensky 2001), but this term has itself been contested by various findings which demonstrate that students, although being digitally capable in their social lives, predominantly lack the capabilities to utilise social and digital media for their learning (Trinder et al. 2008). It has also been recognised for some time by librarians that the inclusion of IL teaching within the subject curriculum has a significant effect on student involvement with IL (Hepworth 2000; Stubbings and Franklin 2006). Although the term ‘literacies’ has only relatively recently come into common usage, many of the areas included have been recognised for some time under the guise of study skills. IL is treated separately from other literacies or study skills in much of the literature. This, presumably, is because IL had developed largely out of library skills training and had been seen as the domain of librarians (Grafstein 2002). IL expanded from simply finding information (library skills) to include “how to evaluate, use and communicate it in an ethical manner” (CILIP 2004). Librarians in the UK have been working with this definition for some time, but the further expansion suggested by Hepworth (2000) and incorporated within “... the description of information literacy as a multifaceted term encompassing all other forms of literacies...” (Andretta 2005, p. 16) is echoed in Secker and Coonan (2011). In some institutions librarians are being asked to extend their expertise beyond their earlier narrower understanding of and involvement with IL and into the other literacies listed in the introduction above, such as academic writing and digital literacy.

Research on initiatives developing learning literacies, or more precisely on the more ‘traditional’ study skills, seems to agree that bolt-on approaches (where this development is separate from subject skills) are less effective than those integrated into the subject curriculum (e.g. Wingate 2006; Beetham et al. 2009; Bent and Stockdale 2009; Secker and Coonan 2011). Using a pre- and post-workshop analysis, Durkin and Main (2002) found that a series of subject-led study skills workshops, which were well attended by students, were effective as a way for students to acquire study skills techniques (even in comparison with peer-mentoring sessions on study skills). For example, Burland and Pitts (2007) reported on experiences with fostering music students’ academic skills and music identities. Where the development of skills was embedded within the subject teaching, the students were successful in acquiring them, but optional sessions were not well attended. An additional disadvantage of separate, optional study skills provision is that only those who need it, or more accurately, perceive they need it, will attend. Wingate (2006) argues that in the diversity that characterises current higher education students, an inclusive approach that
reaches all students is needed. Beetham et al. (2009, p. 3) agree with the need for a discipline-based context, stating that “skills acquired iteratively, through practice within authentic tasks and as needed are better retained than those taught one-off, in isolation, and through instruction”, arguing that students then are sufficiently motivated and engaged in their development.

Through their research Beetham et al. identified three ways of integrating literacies:

A. Institution-wide programme (usually portfolio-based) with generic processes of review and reflection, but the specific skills practised and assessed in subject modules
B. Skills modules or module components, delivered alongside ‘subject’ teaching, typically by central services staff: may include tailored (subject-specific) tasks or examples
C. Literacy provision fully integrated into modules and/or programmes of study, including learning outcomes and assessment: typically in professional/vocational programmes that are already competence-based (but in one case via the tutorial system)” (2009, p.6).

The approach that this article reports on is based on a subject-based learning literacies development that was delivered and assessed by academic staff in conjunction with central services staff, in this case the library and the e-learning unit, who together are the authors of this paper. This approach is primarily ‘B’ with leaning towards ‘C’ listed above: a skills module delivered alongside ‘subject’ teaching, but delivered by academic and central staff through subject-specific learning outcomes and assessment and aligned with the academic/personal tutorial system, and so integrated in the programme of study.

3. Collaborative enquiry-based learning
Connected to the need for students to acquire these literacies is the need for them to become independent learners (Kulthau 1993; Bruce 1997; Secker and Coonan 2011). A useful approach to foster such student development is Enquiry-Based Learning (EBL). Discourses about EBL have developed on a national and international scale in recent years (Tosey et al. 2008). While there is no singular definition of EBL, various scholars have suggested that it commonly features a student-led approach to teaching that puts pursuing the topic of an ‘enquiry’ at its centre. The role of teaching staff shifts from being transmitters of knowledge to being facilitators for learning (Gokhale 1995). The characteristics of such an EBL-approach include:

- Engagement with a scenario or problem that is sufficiently open-ended to allow a variety of student solutions
- Students making decisions about questions to be asked and methods to be employed on a particular project
- Students’ assessment of their existing knowledge and skills required to complete a task
- Students taking responsibility for analysing and presenting findings that address the scenario or problem (Kahn and O’ Rourke 2004, p. 2).

The value of EBL is that it “enables students to undertake individual and collaborative enquiry into problems that do not have simple or unique solutions and assists them in formulating questions to understand the complexity of issues and their contexts” (Tosey et al. 2008, p. 4). Given its manifold benefits, this opportunity for collaboration was key in the proposed approach discussed in this article.

Collaborative learning has been cited as an example of active learning in which students are involved with exchanging ideas and solving problems together, rather than being ‘fed’
information by a teacher (Gokhale 1995; Livingstone and Lynch 2000; Cottrell 2001; Bourner et al. 2001). From a political and economic perspective, it has been argued that collaborative work helps to prepare students for group-based scenarios that may occur in the workplace (UK National Committee of Inquiry into Higher Education 1997; Livingstone and Lynch 2000). Furthermore, it has also been suggested that teamwork enables students, who may be from different social and educational backgrounds, to utilise their existing skills and experiences in order to provide unique contributions to projects. Thus, this process may assist students to recognise their self-worth, while raising their awareness of the value of working with others.

However, despite its perceived benefits, as some writers have pointed out, collaborative enquiry has been the subject of some anxiety amongst students and lecturers due to the fairness of workload between team members (Livingstone and Lynch 2000; Bourner et al. 2001; Gokhale 1995; Cottrell 2001). Despite these potential issues, an added benefit is that collaborative enquiry can harness students’ creativity and digital literacy (Benckendorff 2009).

4. The development of a disciplinary learning literacies module in music
This paper reports on the iterative development of a disciplinary learning literacies module since its first inception in 2007/8, with the various iterations resolving practical and educational issues which arose.

Two main issues contributed to the development of the disciplinary learning literacies module in music. One was the incredibly variable academic study skill level of undergraduate students in music on entry to the degree programme.

Most music students come to the university with A-levels in arts and humanities subjects. Due to the university’s admissions requirements, however, some enter with science A-levels (which require different skills, such as mathematical problem solving, rather than the more essay-oriented humanities subjects), and not all students have a music A-level. A number of other students come from practice- and vocational-oriented BTEC backgrounds. Moreover, many music students, at any institution, come to the subject because of a practical interest; that is, they identify themselves as musicians, as creative practitioners more than as scholars. They may compose, create and develop music by experimenting on instruments or with their voice, for example. In this sense, music as a subject is different from other humanities subjects, because many of the students are being asked to take a greater academic interest in something with which they have a primarily practical and creative relationship. Hence it was important for the music students to develop academic literacies, such as essay writing and referencing skills, that they may not have been exposed to during their pre-university studies.

The other main impetus for the module’s development was the adoption of the institutional Information Literacy Strategy in 2007/8. The Director of Undergraduate Studies welcomed the strategy and worked with the subject librarian for music in delivering five sessions to first-year undergraduate music students during that first year of the strategy. However, this change did not go far enough to address the variability of academic skills the first-year music students possessed.

The following year, 2008/09, therefore saw the creation of ‘Music Study Skills’ as a new module involving lecture sessions. (‘Study skills’ in the title of the module reflects the history of its development. In its current form, as was discussed above, development of learning literacies suits the approach.) The assessment included a feasibility study (searching for literature on a topic to determine how feasible it would be to write a project on it, thereby
assessing research and bibliographic method skills) and a reflective essay tied to the process of writing an essay for another compulsory module. One of the main issues in this version of the study skills module was low attendance; the module was perceived by the students as not being important (as in Durkin and Main 2002). Another issue was that the reflective essay did not really work well as a mode of assessment. On a practical level, the timing of the sessions and assignment in the study skills module in relation to the other module was difficult. Moreover, the linked compulsory module’s essay task was changed late in the day. This was a critical issue as the study skills module’s reflective assignment relied on students’ reflecting on this other module’s research assignment. When the other module essay became essentially a take-home exam, with the question released only a week ahead of the deadline, students found it difficult to complete the reflection, as there had been no research task as such on which to reflect. The reflective assessment for ‘Study Skills’ took place nonetheless, as it was preferable to keep the original plan than to try and change the assignment, but it was clearly not as useful an experience as it could have been for the students involved. Finally, there were pedagogical issues with assessing reflective practice, such as the implicit expectation by assessors that students write one of a limited number of ‘valid’ narratives (see Hargreaves 2004). These logistical and pedagogical factors combined to make the module coordinator reflect on the viability and value of using the same assessment mode in future years.

In the third year of development, 2009/10, apart from the educational need to address the limitations mentioned above, the lecturer concerned was due to go on research leave for the duration of the second semester. This meant that a means of delivering the module needed to be found taking into consideration both of these factors. This practical exigency led the lecturer to reflect on workshops she had previously attended on the benefits of group work, peer-assisted learning, enquiry-based learning and students teaching each other to enhance their own learning (in colloquial terms, the old adage “teaching is learning something twice”). In one sense, the reality of the situation compelled a new approach to the module; however, the resultant wiki project was at the same time a decision well informed by pedagogical theory, since both the nature of assessment and content delivery had to be changed and improved.

The second iteration of the Music Study Skills module consisted of two semesters. During the first semester of 2009/10, prior to going on research leave, the lecturer had provided taught sessions on the value of various study skills, such as referencing and academic writing. Students then had to complete the feasibility study assignment mentioned above. This required them to identify suitable sources for different projects and therefore assessed their bibliographic skills as well as their ability to evaluate academic sources.

For the second semester, the students formed groups of five or six and were given the task of using the wiki tool on the university virtual learning environment (VLE) to create a website to instruct and aid incoming first-year music students in developing study skills. To support them, a second music lecturer (as the first one was now on research leave), the liaison librarian for music and a learning technologist all attended the initial guidance sessions and some subsequent sessions to facilitate students’ collaborative enquiry-based learning using wikis.

This collaborative approach among the teaching team had multiple benefits for both staff and students:

- From a practical perspective, the first lecturer had been able to deliver all the weekly content in Semester 1 before going on research leave;
- Pedagogically, students would benefit from revisiting the information as teachers themselves in creating the wiki;
Through working in a group, the students could work together to tackle any issues that arose; The task made all music students get involved in an extended period of group work. This was important from a disciplinary perspective because even though popular and classical musicians in the department may have had experience of group work (in bands or ensembles for instance), there were some students who were non-musicians. Therefore the task fostered an important employability skill that was previously largely unsupported by the department, apart from in music performance, a subject area that not all music students were involved in.

The involvement of multiple staff members provided different kinds of input. Collaboration between staff had facilitated enquiry-based learning, modelling a team approach that also demonstrated to students the benefits of collaboration, something yet to be developed as a norm within educational settings based on individual achievement. The nature of the collaboration was as follows:

- The librarian was on hand to offer support in IL skills, such as consulting the relevant subject-databases, searching and retrieving information and evaluating results. As she was the liaison librarian for the discipline, students making links with her in their first year would also benefit from this connection for the rest of their academic study at the university.
- The learning technologist offered a session on using the wiki for students, with technological input about creating effective resources in this web medium.
- The academic staff member(s) provided subject-specific advice, helping groups outline the kinds of skills they wanted to incorporate in the wikis as well as monitoring and offering support with the group working skills.

On the assignment deadline the wikis were locked. The staff involved initially marked them independently. The learning technology developer and liaison librarian then fed their marks to the second lecturer, and a mark was agreed upon that considered subject relevance, site design and skills content. (For an indication of the marking criteria, and therefore the skills students were expected to develop as a result of this task, please see Table 1 in the Appendix.)

This format for the year-long Study Skills module was repeated in 2010/11, although this time the Director of Undergraduate Studies was the main lecturer over both first and second semesters. Once again the learning technologist and liaison librarian worked in collaboration with the lecturer during the second semester, when the wiki project assignment was undertaken. As will be explained below, the way in which the student groups were monitored and assessed was refined during 2010/11 in order to reflect student feedback and staff reflections from the previous year.

5. Module outcomes and learning literacies
The collaborative enquiry approach adopted during the module fostered the reinforcement of subject-specific knowledge and skills. Student groups produced material for their wiki sites (for an example wiki, see Figure 1 below) that outlined what they saw as the core skills required for undergraduate study (for example, essay writing skills and accurate referencing). Consequently, the wiki sites provided evidence that students had understood the key information literacy skills outlined during Semester 1.
The students were encouraged to use the full functionality of the wiki tool within the VLE and incorporate, for example, images, videos, links to external websites and text into their wikis, with appropriate attribution. Having to present this material in a multimedia format to a hypothetical audience of first-year undergraduates, student groups were required to develop distinct types of media and digital literacies. This development was clearly evidenced through the wikis and the results of the module evaluation survey. The survey was carried out in class with the whole cohort in May 2011 (n=40 out of 60), and students were asked to rate the extent that the process of developing a resource in Semester 2 (wiki task) had added to the development of the study skills covered in Semester 1. There was an option to add further comments. Students were also asked to rate the extent of specific skill development areas (see Table 2 in the Appendix) and highlight any other skills that they felt they had developed. Four themes of literacy development emerged from the survey, coinciding with staff observations and the LLiDA framework mentioned above. The themes were: communication and collaboration skills; digital literacy; IL and academic practice; and discipline-specific skills relating to music. These four themes will now be discussed in more detail from a critical, reflective perspective.

5.1 Communication and collaboration skills
There was strong evidence that students developed communication and collaboration skills as a result of wiki group work. Group work gains achieved the highest mean rating in the survey (M=3.7 out of 5, see Table 2 in the Appendix), and this is a promising result, given that in the first-year undergraduate music programme, collaboration and group work are not taught to this extent elsewhere.

Some students cited the challenges of group work as a significant element in their experience. Some described it positively, with typical gains as “maintaining a good dynamic”, “how to organize in a group”, and “using initiative”. Several articulated how the group work element had helped them to develop their own personal organisation skills: “It has helped me how to work and meet deadlines with different people.” Some students also connected this skill in teamwork to various areas that ranged from “coordinating tasks”, through to “producing constructive criticism”. Indeed, in many instances, collaboration was mentioned
as fundamental to various areas of literacy, confirming the module’s dual approach to develop collaborative enquiry through learning literacies and vice versa.

On the other hand, many other students experienced the negative aspect of group working, complaining of “other people’s distaste for the project” and the “unfair” marking of the project due to “some group members not pulling their weight” or “several members [seeming] to be non-existent”. Clearly, the issue of freeloaders and problems with teamwork, as with most teamwork tasks, surfaced in this case too.

5.2 IL and academic practice / study skills
Students also perceived skills gained in the area of IL, as well as academic practice and study skills. Employability or transferable skills as identified in the LLiDA framework, such as time management, are also included here as students acquired them in the context of academic work, so this is how they related to them. For instance, students indicated a favourable gain in organising and managing information (M=3.3). This was confirmed by their qualitative comments, and not just referring to managing information, which is one important aspect of IL. Many students commented that the collaborative Semester 2 wiki task “acted as a recap to topic covered in Semester 1” or “served as a good revision method of the topics…”; where Semester 1 referred to the various IL skills covered such as referencing and plagiarism, assessed in the form of an assignment. For instance one student felt that the wiki task allowed enhancement of skills in “searching for books in the library, [using] search terms”.

A recurrent theme in the open-ended comments was that the collaborative enquiry task “reinforced what I already know making things more memorable”. In addition time management skills, such as meeting deadlines and general study skills, were also cited by students among the gains in this process: “It has helped to consolidate my knowledge of study skills, and working in a group has provided me with other viewpoints and opinions, which is useful when reflecting on how I work individually.” This latter comment also ties academic practice together with reflective and metacognitive skills.

An interesting comment was that the wiki task “has helped [me] to gain more knowledge about the university, and how I could use my study environment more effectively”. Many wikis included a guide to the study and student spaces that music students would need to become familiar with, demonstrating how knowledge of the study environment can enhance student learning.

5.3 Digital literacies: media literacy and ICT/computer/digital literacy
In addition to academic practice, the development of digital literacies such as designing and presenting content were very much part of the module’s intended learning outcomes. Students perceived skill gains in this area, with a mean rating of 3.4 (out of the maximum 5). Open-ended responses also included this area. For instance, students remarked that now “I know what a wiki is and can create one.”

Students also perceived development in the area of media literacy, referring to the ability of producing multimedia or repurposing content for different media. In this case the medium was the wiki, a mini-website comprising webpages with text, audio, images and other multimedia. This development was evidenced by the quality of student wikis produced. Some of the most successful wikis demonstrated the way students developed not only their skills in IL (e.g. competence in searching for and presenting information), but in utilising the medium of the wiki by producing digital multimedia content for different purposes and audiences. Given that technical support for use of the wiki tool was contained to one session, with the option of access to the learning technologist should further support be needed, the sites’ navigability and the maximisation of the medium’s potential were largely a
result of students’ independent efforts. Just to exemplify, some students developed their own icons, and gave account of acquiring “drawing skills (!) for the icons and headers”; others shot their own videos of how to find one’s way round the music department (a notoriously labyrinthine building) or the library. Students’ work in these wikis demonstrated a real flair for a web (as opposed to a printed) audience (see such an example in Figure 1). The creativity displayed in the wikis was in part a result of the collaborative nature of the task. In conversation with students, it became clear that they were developing ideas for both presentation and content through talking with each other as their wiki task progressed.

What was interesting in some student accounts is that the development of the various literacies did come about because students had to present them to a hypothetical audience and in a different medium: “By presenting them creatively you have to understand the full content of the study skills to know how best to present and arrange them on the web.” These kinds of comments seemed to reinforce the module’s rationale and that the various skill areas were being developed through one another.

Through staff members’ experiences offering support in the face-to-face sessions, different models of operating as a team emerged with regards to working in this web environment. In some cases, students equally shared the wiki editing task according to topic and everyone contributed to the editing. In other cases, it was clear that some group members, who had a more ‘tech-savvy’ member, delegated wiki editing and creating of multimedia resources to these members, who contributed their expertise in, for instance, designing the above-mentioned own icons or videos. A few students even went beyond the rich-text editor options of the wiki and edited the HTML code directly. It seemed to staff that this digital exercise offered some students a creative outlet for their co-curricular talents. Perhaps it is one of these students who commented: “I think it would have been useful to have sessions teaching the group on basic HTML usage...Although I have a good understanding of HTML and using the computer software, but my group found this difficult”, suggesting that although their team could cope with the task, further support in digital literacy for all students would have been useful; perhaps this is an area for the institution to consider.

5.4 Disciplinary skills (music)
The final aspect of the literacy areas developed related to the disciplinary (in this case, music) skills of students. Student survey results indicated a mean of 2.7 rating of “being more confident as a student of music” as a result of the collaborative task. This suggests that some students clearly felt that their confidence as a music student improved, but it is also clear that some students didn’t see this gain emerging as strongly as in other areas, such as collaboration and group work.

The produced wikis help explain this above rating more richly. One of the most interesting aspects of the more successful project groups was students’ explication of the experiential aspects of subject-specific literacy. Their writing, for instance, often called upon the hypothetical audience’s interest in music, or drew attention to the specific challenges faced by music students in higher education. One wiki not only included a section on instrumental practice, but tied this in to good effect with the transition to university: “Moving away from home to university can throw a spanner in the works for your practicing [sic] if you aren’t careful. Suddenly a bunch of other things occupy your free time [...] or maybe you can only practice during certain hours because of sleeping hall mates”. Such contributions evidenced a clear understanding by the student authors of the intersection of musical life (in this case, practice) with generic transition issues (moving away from home). Another used a YouTube video splicing together multiple songs from which Coldplay’s “Viva la Vida” might have been ‘ripped off’ in order to bring a light-hearted tone to a page on plagiarism. Yet others included information on instrument insurance, passing references to the costs of instrument maintenance, and musicians’ health.
In the wiki content, students emphasised the value of local city knowledge by highlighting the importance of specific music venues in the city for music students. They also provided elaborate maps of the university’s music department that identified significant areas and individuals. Rather than being incidental to general ‘study skills’, such material demonstrated that many students viewed their routes, routines and interactions, both within and outside their department, as integral to their success during undergraduate study. And while tips on finding one’s way around a new city, through its network of bars and clubs, might be something of use to any new university student, these wikis used subject-relevant information (such as where to go to hear certain kinds of music) in ways that illustrated the particular need for this kind of information to music students specifically. Moreover, negotiating music departments, with their array of student and tutor networks and their diversity of spaces specifically dedicated to practice, composition, production and so on is fundamental to the academic praxis of any student in this subject area. The approach utilised during the wiki project provided the necessary flexibility for many students to reflect upon these aspects using a creative digital platform.

As indicated by the above rating of disciplinary skills, students were of split opinion as to whether the collaborative task benefited their development as a music student, and sometimes the same student would articulate both sides of the argument. Many responses pointed out the use value of “recapping what we did” or “good revision”, and many saw the value in the content of the first semester sessions, because it was “not usually dealt with in other modules”; meanwhile, there were some comments about the wiki task being “a waste of time” or “regurgitating information that we learnt in Semester 1” or “[it] felt like a GCSE ICT task rather than a powerful means to impart MUSICAL study skills”. In particular, students felt that the project could have been more useful if it had been concerned with subject-specific issues (e.g. critical listening, note taking from listening, efficiency of practice, group performance politics) as these had not been included in the teaching in Semester 1 and hence were not included in the wikis. The wiki assignment was therefore altered to encourage and enable students to include these more subject-specific literacies in the following year, rather than being focused solely on the general academic practice or study skills.

6. Conclusion
As indicated above, the re-designed module was introduced to fulfil needs in the teaching of learning literacies to first-year music students. IL was seen as a fundamental part of this and was wholly embedded within the teaching, as well as other kinds of literacies, such as media and digital literacy.

The module design and delivery required a level of staff dedication and preparedness to take a risk, and it was recognised all along that this project was experimental and that changes would need to be made for future cohorts. All the staff were strong advocates of the collaboration between academic and support staff, believing that this was the most effective way of teaching the students. It was also universally accepted among these staff that while technology should not drive the teaching, it should be used and experimented with where it is available. Along with the desire for this to be a group assignment, for the various reasons cited above, these factors supported the use of the wiki tool and the basic structure of the project which was found to be sound. As should always be the case with reflective practice, lessons were learned from the first cohort of students to be given this assignment, and changes were made for the second cohort. With respect to the practical delivery and design aspects of the module on the basis of staff reflections and student feedback, a number of changes have already been made, including:

- The students are now grouped so that students with the same academic personal tutor form a group, as opposed to friendship groups. This enables personal tutors to
take a lead role in supervising group work and ensure that each group starts from an equal footing.

- This has been further enhanced in more recent versions of the module by including personal tutors in regular group tutorial sessions for the first semester’s content.
- A group journal element has been added to the assignment. This requires student groups to upload minutes of group meetings, thereby helping them manage their time effectively, and to keep a record of individual contributions to the overall project. This has also helped staff to avoid the problem of groups leaving their work until the last minute because it motivates students to attend meetings.
- A mid-semester formative deadline was also introduced along with the more frequent support sessions from staff in the shape of their personal tutors. The formative deadline makes groups progress earlier with a noticeable improvement of the quality of wikis.
- In addition to group journals, students are now also asked to complete an individual journal that documents their progress. This helps staff to identify greater and lesser contributions within groups, with a view to allocating individual marks based in part on contribution to the process.
- Intra-group peer assessment supported by individual journals and tutor weighting of marks has been introduced.

As for future iterations of the module, given the student feedback, the following development ideas are being planned:

- Further developing the peer assessment element of the collaborative enquiry task.
- Increasing the disciplinary relevance of the wiki task by making the enquiry task more about the discipline of music rather than about general study skills. For instance, a future task could be, instead of designing a wiki on study skills, to ask students to create a wiki that focuses on a topic rooted in the discipline, perhaps researching the development of a musical genre, practice or culture and producing a website for a particular audience on that topic. Through the production of this wiki students would still need to practise and evidence the kinds of academic and transferable skills learnt in the first semester such as referencing. Balancing this generic need for the deployment of specific skills with the more particular one of reflecting on the development of them would need some careful thought.
- Revisiting module learning outcomes and making the digital and media literacy skills more explicit in the learning outcomes, which are already present in the marking criteria.
- Signalling a need for institutional co-curricular provision around digital literacy skills such as web design to provide opportunity for students to engage and develop their skills in this area, if they wish to.
- Calling attention to why this module is team-taught so that students are more aware of the kinds of skills involved in group work and their justification (when and why do musicians or musicologists need to work together or why this module is team-taught).

As more lessons are learned and technology also develops, no doubt this collaborative approach will develop further.

In terms of the module’s overall approach and intentions, some gains have already been perceived while others could be developed further. Such gains, whether achieved or desirable, and as perceived by other staff in the School of Music and students taking or having taken the module, fell under four main themes:

1. Collaboration and communication skills
2. IL as well as academic practice (study skills) and employability skills
3. Media and digital/computer literacies
4. Disciplinary skills

These themes mapped against the LLiDA framework very well, with the exception of the fourth one, disciplinary skills. This suggests on the one hand that the LLiDA framework served as a useful way to both frame the module development and analyse and discuss the findings with regards to students’ development of learning literacies. On the other hand, as was the case with the music module discussed above, the LLiDA framework could be further developed to map and interpret all the areas of discipline-specific literacies (as already signalled in the LLiDA report itself). For instance, a music-specific communication and collaboration skill that students could benefit from developing is the management of ensemble politics, such as how to rehearse in a group where there may be no nominated ensemble director. Another subject-specific example, rooted in the general academic skill of efficient note taking, concerns note taking practices when listening to music (as opposed to listening to lectures etc.) or critical listening (as opposed to a more generic skill of critical reading). Yet another example might be making instrumental practice efficient; for university music students, assignments and lectures often get prioritised over practice, whereas the timetables of conservatoire students might allow them more practice time per day. Long-term time management skills therefore become particularly important, since practice cannot be ‘crammed’ in quite the same way as essays often are. Moreover, developing meta-learning skills is crucial in this situation, so that students can reflect on precisely what to practice and how and thereby make the most of their practice-time. Thus, there is certainly further work to be done to draw out the discipline-relevant skills. Already, though, the synchronous ends aimed for by the module (the use of a collaborative enquiry task to develop students’ learning literacies, and the use of a range of academic/study skills to develop students’ collaborative abilities) are certainly being achieved to some extent, and are perceived as such by students having taken the module.

A need to further develop the discipline-specific angle of the learning literacies framework is one of the signalled outcomes of this project. Given that one of the novel approaches of this project was that it allows students to develop media and digital literacies, aspects that had not been part of their study previously, these findings also suggest further research areas that could include the intersection of some of the literacies developed, e.g. taking collaboration and communications skills in the context of digital and media literacies. For instance, although the teaching team had anecdotal evidence as to how students went about creating new media objects, what tools they used and what challenges they experienced, more could be done to collect more systematic evidence on this, which could also become part of students’ personal development record. This also links back to the above reflection about making digital and media literacies more explicit in the module and signals a need to increase students’ awareness of the value of the literacies they have gained (e.g. being able to present content in a different medium such as websites), as well as a need for staff members to record how students went about this process. The authors believe that the outputs of this study signal a potentially useful approach for developing learning literacies (such as information literacy and academic and study skills, as well as digital and media literacies) through a collaborative enquiry approach.
References


Burland, K. and Pitts, S. 2007. Becoming a music student investigating the skills and attitudes of students beginning a music degree. Arts and Humanities in Higher Education 6, pp. 289-308.


Appendix

Table 1: Marking criteria for the wiki task

<table>
<thead>
<tr>
<th>Class</th>
<th>Mark Range</th>
<th>Descriptive Equivalent for [module code] WIKIS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Class Honours</strong></td>
<td>90–100</td>
<td>Exemplary. Worthy of retaining for reference.</td>
</tr>
<tr>
<td></td>
<td>80–89</td>
<td>Similar to below but with more emphasis on originality. Consistently excellent presentation and writing style.</td>
</tr>
<tr>
<td></td>
<td>70–79</td>
<td>All key topics covered with evidence of thoughtful and imaginative approach to presentation and content. Additional areas or original content is strongly presented. Site usability is effective; presentation and writing style are very good.</td>
</tr>
<tr>
<td><strong>Upper Second Class Honours</strong></td>
<td>60–69</td>
<td>All key topics covered with sound treatment; originality should be present, in treatment, topics, or presentation. Site is well presented and offers good usability. Information is well communicated and relevant.</td>
</tr>
<tr>
<td><strong>Lower Second Class Honours</strong></td>
<td>50–59</td>
<td>Identification of important areas for consideration by site users, but offering limited treatment of a good range of material, or sound treatment of a narrower range. All key topics covered. Some additional information may be provided, but originality may be limited. Writing and/or presentation may be lacking in some areas.</td>
</tr>
<tr>
<td><strong>Third Class Honours</strong></td>
<td>40–49</td>
<td>Limited and/or basic information provided for most key topics. Some additional information may be provided but originality may be lacking. Writing weak, with notable errors in sentence construction, grammar, and spelling. Presentation of site may be poor and/or very ineffective.</td>
</tr>
<tr>
<td><strong>Fail</strong></td>
<td>35–39</td>
<td>Little effort. Shallow information; poorly presented and/or written. Failure to address a number of key topics. Poor writing with significant errors in sentence construction, grammar, and spelling. Site usability may be seriously lacking.</td>
</tr>
<tr>
<td></td>
<td>25–34</td>
<td>Negligible and irrelevant content.</td>
</tr>
<tr>
<td></td>
<td>15–24</td>
<td>An incomplete effort.</td>
</tr>
<tr>
<td></td>
<td>0–15</td>
<td>To be awarded to work that completely fails to meet basic standards of literacy, presentation, content, and completeness. Only given in the most exceptional of circumstances where no mitigating factors exist.</td>
</tr>
</tbody>
</table>

This assignment was worth 50% of the module mark.
Table 2: To what extent have you developed these skills as a result of the Semester 2 [wiki] task? (min=0 and max=5)

Key to mapped learning literacies (LLiDA): CCS=Communication and collaboration skills, ES=Employability, ML=Media literacy, DL=ICT/digital/computer literacy, D=disciplinary skills, AP=Academic practice and study skills, IL=Information literacy.
Table 3: Developments to the module since its inception in 2008-09

<table>
<thead>
<tr>
<th>YEAR</th>
<th>What happened/changed</th>
<th>What worked</th>
<th>What didn’t work</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-</td>
<td>MUSI114 Study Skills first delivered</td>
<td>The module happened at all; prior to this there had been very limited provision for IL, as per the</td>
<td>The second assignment was compromised because of changes in the assessment in that other module;</td>
</tr>
<tr>
<td>09</td>
<td>Fortnightly sessions throughout the year</td>
<td>university’s requirement and new Info Lit strategy.</td>
<td>students found it hard to complete the assignment for MUSI114 and didn’t find it useful reflection</td>
</tr>
<tr>
<td></td>
<td>Lecture topics on ‘traditional’ study skills</td>
<td>Students got to meet several members of the department early on in the year.</td>
<td>because the other module’s assignment was unusual.</td>
</tr>
<tr>
<td></td>
<td>Team taught; coordinated by AL1 but many sessions delivered by other members of</td>
<td></td>
<td>Fortnightly meant students didn’t take it seriously, and attendance dropped off quickly.</td>
</tr>
<tr>
<td></td>
<td>Music department</td>
<td></td>
<td>Content delivered through the year; students commented that some information would have been really</td>
</tr>
<tr>
<td></td>
<td>Assignment 1 = feasibility study</td>
<td></td>
<td>useful earlier</td>
</tr>
<tr>
<td></td>
<td>Assignment 2 = essay reflecting on the process of writing an essay for another</td>
<td></td>
<td>Highly variable PDP uptake from both staff and student perspective</td>
</tr>
<tr>
<td></td>
<td>compulsory module</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PDP (University Personal Development Programme) is embedded in module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009-</td>
<td>Renamed MUSI100 Studying Music</td>
<td>Students had more regular contact and the module ‘looked’ like it was more important, at least</td>
<td>Self-selecting groups meant some groups struggled and some individuals were quite isolated</td>
</tr>
<tr>
<td>10</td>
<td>AL1 was on leave in Semester 2; AL2, LL1 and LT took over</td>
<td>in Semester 1</td>
<td>Groups drifted for a long time and didn’t upload to the wikis much ahead of the deadline</td>
</tr>
<tr>
<td></td>
<td>All ‘content’ lectures took place weekly in Semester 1; vast majority delivered by AL1</td>
<td>Self-selecting groups meant some people worked well together</td>
<td>Students met fewer staff; burden of group supervision fell to AL2</td>
</tr>
<tr>
<td></td>
<td>Wiki project introduced to replace former second assignment, with AL2 supervising them</td>
<td>All ‘content’ delivered early, solving student concerns from previous year that some topics were</td>
<td>PDP uptake still highly erratic, especially in Semester 2</td>
</tr>
<tr>
<td></td>
<td>all</td>
<td>left very late before being introduced</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wiki groups were self-selecting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010-11</td>
<td>Wiki groups determined by personal tutor</td>
<td>Students have regular contact in Semester 2 with personal tutor</td>
<td>Group-work elements still hard to manage; some groups seriously compromised by poor contribution of members; issue of awarding a single group mark is seriously raised</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Personal tutors supervised wikis fortnightly in Semester 2, with bigger group sessions in interim weeks</td>
<td>Personal tutors starting to become more involved in provision, thereby dispersing burden of provision and enhancing relevance of personal tutor system to some extent</td>
<td>Variable levels of engagement and input from personal tutors</td>
</tr>
<tr>
<td></td>
<td>Interim sessions delivered by LT, AL1, and LL2 (in lieu of LL1)</td>
<td>Students working a bit more ahead of the deadline</td>
<td>Students not seeing much of their tutors until Semester 2; verbal comments from students that this could be improved</td>
</tr>
<tr>
<td></td>
<td>Mini-deadline set of Week 7 in Semester 2; groups had to get a site plan in for discussion in the following week’s big group session</td>
<td></td>
<td>PDP not at all functional</td>
</tr>
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<td></td>
<td>PDP not at all functional</td>
</tr>
</tbody>
</table>
2011-12

- Semester 1 now alternating between big lecture sessions delivered by AL1 (where they are asked to sit in their personal tutor groups), and tutorials in groups with personal tutor; tutorial sessions follow on from lecture sessions, so (for example), the lecture might be a session on the mechanics of referencing, and then tutorials go through worksheets for more individual support
- Individual meetings are scheduled into the regular contact slots, to cover: reflection on Semester 1 generally (Semester 1, Week 12); reflection on Semester 1 feedback and marks (Semester 2, Week 2); choosing modules for next year (Semester 2, Week 10)
- Semester 2 is more about independent group work; groups will be expected to meet at the usual scheduled time and write up reports of what they’ve agreed, what progress they’ve made
- Peer-assessment of contribution to process will inflect the final mark for individuals

- Burden of provision has been dispersed even further
- Students get regular contact early on with their tutors; relevance of tutor system is further enhanced
- This contact includes a more tailored version of what was PDP, and hopefully it will be more useful to students
- Tutors report pedagogical satisfaction, e.g., “I really feel like I can help them with their writing”
- Tutors also able to feed back useful information on individual students’ progress
- Some students report use value of small group work sessions
- Students are treated as a group from the beginning, in the hope their group dynamic is strengthened for Semester 2’s projects.

- Inevitably, the further the burden is dispersed, the more variable the quality of provision is likely to be, and it is already clearly highly variable even by the end of Semester 1

AL1 = academic lead  AL2 = academic lead in 2009-10  
LT = learning technologist  
LL1 = liaison librarian in 2009-10  LL2 = liaison librarian in 2010-12