

Leigh Landy

**Educating students in electroacoustic music studies:  
What does this consist of and how can we best deliver it?**

***“Position Paper” for the final EMS10 group discussion***

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## **Abstract**

Electroacoustic music is still in its youth in some senses and its revolutionary character offers significant challenges to education. Do we, for example, borrow the traditional music education approach separating (roughly) history, theory, technology and science and artistic practice? Are courses in electroacoustic music studies not better delivered holistically taking into account the broad horizon of (my term) sound-based music? This short position paper will, after its contextual introduction, commence with a survey of pedagogical papers offered at EMS10 and then tackle the proposed vision related to holistic approaches to education, not only at university/conservatoire level, but also for younger students and any interested individuals of all ages as well. Following this paper, all conference participants will be able to contribute their ideas related to EMS10's theme during an extended group discussion.

## **1. Context**

There is absolutely no need to share with this audience how much experimentation took place in a significant amount of 20<sup>th</sup> century contemporary music. Some of these developments were indeed revolutionary and, amongst these, a large proportion is related to the inherent innovative nature of electroacoustic music. Think of sonic materials, means of manipulation, structuring, use of space, new protocols of live performance, means of dissemination, and so on. Although I would never contend that this meant that new music was detaching itself from the hugely diverse spectrum of musical traditions, what was developed involved various combinations of tradition, departure, integration and interdisciplinarity. With this in mind, and focusing here on this year's theme of “Teaching Electroacoustic Music”, the question must be raised: do traditional approaches to music teaching map well onto the field of electroacoustic music studies? If not, what is missing, what is superfluous and what might need to be further evolved? In this very country, China, and in many others as well, there exist institutions where it is expected that students take harmony and counterpoint exams before specialising in electroacoustic music. What might the rationale for this be other than: ‘that is what we have been doing with our potential music students for years’? Might there be other models of vertical and horizontal music making that might be at least as relevant? Is Machaut or Beethoven more important than gamelan music or intelligent dance music in terms of useful knowledge related to this type of music? Is any one of these more important than, say, intertextuality coming from the world of contemporary literature or montage techniques evolved within the audio-visual media? Furthermore, as stated in the talk's abstract, there exists the common separation in a good deal of music education between, for example, history, theory, technology and science and artistic practice. Is this the only or best way to teach this music? This paper commences with an overview of what has been presented over the recent days at EMS10, moves on to a couple of initiatives with which I have been involved in recent years and then takes these thoughts one step further with a view of how to address this

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fundamental theme perhaps more collaboratively than music educators have in the past. Hopefully this will provide some food for thought for the conference's closing discussion.

## **2. Overview of what we have heard at EMS10**

Of the pedagogical papers presented in the last few days, a brief overview is presented: asking important general questions regarding teaching electroacoustic music (Liu at the roundtable); the philosophical/contextual framework for discussing innovative forms of pedagogy + making the right choice when several choices can be made in terms of analytical study (Terrien); how things have evolved in teaching this repertoire from analogue times until today (Eloy); the specific case of teaching Schaeffer's Tarty (Normandeau); evolutionary innovative approaches (Rolnick, Ballora, Dudas, Dal Farra, Zhang); and integrationist approaches along the line of this paper's proposal (Martin, Bossis, Whalley). Both Dal Farra and Martin also discussed pedagogical issues related to learners at pre-university levels.

## **3. A return to the EARS site's index**

One of the *raison d'être* of the ElectroAcoustic Resource Site's index (its homepage can be found at: [www.ears.dmu.ac.uk](http://www.ears.dmu.ac.uk)) is to delineate and create a coherent overview of the areas related to electroacoustic music studies. This demonstrates clearly how interdisciplinary the field is and what sorts of and, to an extent, how much information today's student should learn to be able to appreciate, understand and make this kind of music. The realm of studies bridges areas outside of music with musical ones including musicological areas as well as those related to music's dynamic technology, performance practices, means of production and dissemination. One of the EARS team's goals has been to catalyse debates related to EMS10's theme, that is, support discussions of methods related to pedagogical approaches at all levels of education for all types of potential EMS-based specialisations. Such debates have, in my experience, been few and far between. It will be interesting to see to what extent the index will be reflected upon in the issues raised during the discussion.

## **4. That paradigm I presented at EMS08**

Having published on the sound-based music paradigm (Landy 2007a and b, 2008), you may be aware that I do not believe that these studies need to be deeply embedded in a more general music study in the sense that many compulsory aspects of that study are not entirely necessary. For example, many students at my university cannot read music notation and still do extremely well on our course. The sound-based music paradigm offers a healthy overlap with note-based music as it does with the other new media or digital arts. Therefore the most relevant aspects of these deserve to be included, but should not lead the study (except, of course, in specific cases where there is a cross-disciplinary project involved). In other words, assuming the existence of this paradigm, the relevant subject areas related to this paradigmatic behaviour should feature when educating people in the field.

## **5. EARS II goals and users group**

The first of the two educational initiatives with which I am involved (my university is the other one – that's the next subject) is the Pedagogical EARS Site (or EARS II). I have spoken on this subject at other EMS meetings (see, for example, Landy 2009, which includes indicative illustrations related to this subject) and therefore will keep this description as brief as possible. To summarise, this site, which is still in development, is intended primarily for the age group 11-14 (as well as users of all ages interested in the area) and a second level EARS II for university-level students is in the planning

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stage. It is based on the integration of listening/understanding/making and is concept based. This means that we do not start around 1948 with an historical timeline or present history or any other aspect related to this subject in isolation, but instead present concepts such as: music with real-life sounds, music with synthesised sounds and the like in terms of aspects related to listening, understanding and making.

As EARS II is to be an online environment, be it one based on a downloadable rich Internet application, its pedagogical strategy must be pre-programmed. The EARS II team's approach is based on clear advice from the education scholar, Diane Laurillard, who states that children much prefer 'sit-forward' interactive media to 'sit-back' narrative media of traditional print or television (Laurillard 109). Clearly there are 'sit-back' items on many of EARS II's pages, but most also include 'sit-forward' aspects related to learning more about terms, listening to sound examples, watching audio-visual examples and, perhaps most importantly, engaging in real-time audio-visual activities such as learning about various means of real-time sound manipulation within the learning system.

Repertoire acquisition takes place alongside the introduction of related technological and/or theoretical aspects. What is presented to the classroom student or any other Internet visitor depends on the goal of the chosen learning navigation. The EARS II system allows concepts to be applied creatively at virtually any point using the Sound Organiser software platform that is also still in development. The site is to be navigated based on a teacher's curricular plan, a previously programmed plan by the EARS team or an individual's own route. EARS II supports the broad spectrum of sound-based music including such things as noise music, sound art (including installations), electronica performance, experimental forms of popular music and the like, not to mention acousmatic music.

So what is being included in this eLearning environment? The original idea, launched by a member of the DigiArts team working at Unesco, was to take a reduced list of EARS terms and define these terms for young people. However, it was clear that offering a dictionary without any sounds or creative opportunity would serve little purpose. It is also clear that available equipment, the level of students *and* teachers and the goals of a given class will vary from place to place, from country to country. It is for this reason that the EARS II team is attempting to be as eclectic as possible whilst offering flexibility to its users. It is, in our view, more important to allow for this holistic approach to discovery than to predetermine exactly what a given group or individual wants to learn and cause frustration when facilities are perceived to be inadequate. In other words, the holistic approach is more important than predetermining the necessary content. A breadth of learning opportunities allows visitors to slot in according to their desires and needs. Furthermore, the system will be made culturally adaptable (that is, involving more than simple translation of content) thus allowing for more local or regional content and audio-visual materials to be used. It is therefore our goal to make teachers' lives easier and thus hopefully will open the world of sound-based music to future generations of musicians.

## **6. The De Montfort University/Music Technology and Innovation Research Centre (MTI) strategy**

The MTI is the first or one of the first programmes that exist on their own, that is, not embedded in a music department. This has offered us the opportunity to define our own path as the staff working within the university's original music subject area had been diminished to a single individual before the Music, Technology and Innovation Research Centre's course was written. Due to extreme timetable difficulties (a large university in need of more spaces that are difficult to achieve in a tight economy), we must take reality into account and therefore cannot be as experimental as we might like, such as by applying the project system of short, extremely intensive holistic courses more often than is possible in the current circumstances; still, we take good advantage of our many international guests in terms of short, intensive workshop-based learning opportunities.

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In terms of our main undergraduate programmes, three things are important that are relevant to the goals of this talk: our eclecticism, our goal of holism and our working towards the future. Our *eclecticism* is based on the MTI members' view that we do not want to be a 'school of composition', but instead we prefer to facilitate our students' individual development in any aspect of music technological creativity as virtually every student is focused on musical practice. Although we respect the continental European traditional separation of theory and practice, we prefer to celebrate the development of thinking artists and practicing musicologists and would not have it any other way. This leads to creative work spanning a very broad horizon. To get a taste of this horizon, the best thing to do is visit the MTI's student-based jukebox ([www.mti.dmu.ac.uk/jukebox/jukeboxinfo.html](http://www.mti.dmu.ac.uk/jukebox/jukeboxinfo.html))

In terms of teaching, including at Masters level, we avoid the above-mentioned traditional means of separate strand learning and opt for a more *holistic* approach. In other words, more practice-based modules include research aspects to ensure that essential contextual and, where relevant, theoretical knowledge is acquired. Symmetrically, modules focused on scholarly issues include practical elements in order to have students practice what they preach or, more poignantly, become involved in action research where scholarly outcomes inform practical ones and vice-versa. This is a clear didactic vision to enable students to confront new concepts from different interconnected angles at the same time. Although individual students will exhibit a variety of strengths, at least they gain confidence in terms of all aspects of what they are learning, thus avoiding the often-encountered situation of a student being alienated in terms of one aspect of learning whilst thriving in another thus leading often to an unbalanced CV and possible difficulty in finding work later on. Our postgraduate research students tend to include practical, technological and scholarly aspects in their work accordingly. Only a minority of PhD dissertations focuses largely on either theory or practice reflecting our thinking practitioner approach.

We look toward the *future* by constantly analysing what courses and modules we have on offer. Our field, like any field involving new technologies, evolves rapidly. That does not mean that the field re-establishes itself every computer generation, but we do need to keep more universal aspects embedded in our teaching in tandem with more dynamic ones. Staff members need to keep up to date and students are looking toward employment a number of years after they commence. That means that we all need to be forward looking and often anticipate how we believe things may evolve and participate in some of these dynamic developments. Our investing in a new course focusing on new means of technologically driven performance (digital and post-digital) is a major experimental step. Our recognition of audio-visual artistic opportunities involving sound-based music is another. Our equipment and software must reflect the here and now as well as the anticipated tomorrow. With restricted budgets, this is quite a challenge, but there is, in our view, no other option and we have done quite well during our first decade of existence and have received a major three-year investment commencing this year to jump ahead yet again.

## 7. Taking this one step further

The two examples above are semi-autobiographical. That is, I played a part in both and therefore am describing these journeys as an insider. Discussing our theme also infers looking at educating music students elsewhere, that is, from the outside. Do we have a right to suggest that established practices of teaching deserve to be challenged with the establishment of the field of electroacoustic music studies? Perhaps not, but what we do have the right to do is to work together to describe relevant approaches to educating people in this field and demonstrating its value through our own good practice and results.

Another reason to make such suggestions can be based on our investigating some of our students' needs. Let's look at an example. Often during EMS events, the question of the preservation of works has been discussed. Someone writing an instrumental work may also need to consider preservation

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issues, but clearly not in the same way as, for example, someone making real-time or even fixed medium electroacoustic performance work. In other words, potential means of preservation forms part of the production of a work as it does in terms of its fate after it has been completed. This means that aspects concerning technological development and means of preservation, digitisation and archiving all deserve to be included in this study. This is new; it is a fundamental issue to emerging musicians who are interested in a work's lifespan. Preservation may sound like a technological subject and, indeed, it largely is one; but it also involves strategies concerning what types of data might one search for in order to find this work. Here concepts from the social sciences and humanities are useful as well as music-contextual considerations.

This is one of many examples that identify our field as highly interdisciplinary and one in which more traditional education approaches may prove to be less than ideal. Let's move on to a second example. What types of repertoire do students of electroacoustic music need to be acquainted with in order to construct a strong contextual foundation? I believe that the answer to this question needs not be restricted to music. As suggested above, literature examples involving intertextual approaches, new media art examples, immersive environments including computer games and new forms of social networking may be just as relevant as examples taken from IDM, Latin American traditional music or baroque music.

Another example: can you imagine teaching typomorphology or spectromorphology without asking students to create their own examples related to the terms they are using as well as listening to sound examples related to the same concepts? Frankly, I cannot envision dealing with either as a purely theoretical construct.

A final example: I am convinced that new interactive means of analysis are to increase in importance due to their 'sit-forward' nature of understanding through doing. I can imagine many EMS colleagues suggesting that there is so much to analysis that it can easily be taught in isolation; everyone present can come up with several examples where this indeed occurs. I, however, would prefer analysis to be introduced in tandem with the creative application of aspects of that analysis as well as the more general contextual foundations related to the history, placement and technological aspects of a given work. In short, I do not believe I shall be able to find an example easily that successfully defies the desired holistic approach in our field.

The above leads towards a final question, one that hopefully will form the link to the group discussion. What do our students need to learn in the area of electroacoustic music studies in its widest sense? Attached to this question is a second one, and this is the one I have focused on here: how do we best deliver it? The original EARS site with its index has been a key reference in terms of my own pedagogical practice; it reminds me what needs to be and what might be delivered to my students. It has also demonstrated some holes that needed immediate filling in our programmes over the years underlining that the field is dynamic. We even discovered that the site, itself, excluded some items when it came online over half a decade ago. These had to be added subsequently and more will be added in the future naturally.

Returning to these two questions, the first question is by no means an easy one. Those working within music departments who see their students only part of the time during their study will have clear limits in terms of the time they are able to allocate. In the country in which I work, an undergraduate study lasts but three years. In other countries, such studies last one, two or even three more years. Still, the choice is one based on the time allowed, potential availability of resources and the vision of the team as well as the desires and needs of the students choosing the course. We have chosen for breadth and depth wherever possible. Depth is particularly important at postgraduate levels. There is much that we can still improve at the MTI and this is discussed several times annually by the teaching team. Equally important is that we co-ordinate with you and others in our community what is foundational to our field, what is useful to know and what is of marginal or more individual interest. I have never seen this

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discussion take place outside of the walls of a single institution. Given the ongoing growth in our field, is it not about time that we did look at this on a more global basis?

## 8. Conclusion

The purpose of this position paper has been to invite EMS Network members and other interested parties to engage in a long-overdue discussion concerning the elements of common interest related to the teaching of electroacoustic music studies and the most efficient approaches to learning. This term, EMS is to be interpreted in its most eclectic sense in terms of its related repertoires as well as its subject areas. Clearly if one were to be teaching a group of future school teachers, the emphases might vary with those chosen for a group of musical analysts, specialists in cultural studies and practicing musicians (if we are talking about higher education students). Nonetheless, there must exist a core of knowledge relevant to all.

I have written before that a great deal of writing in our field has to do with high-level theory and that there is much low-level writing that still needs to be written. I consider this situation to be related to the lack of norms in the delivery of electroacoustic music studies internationally and suggest that the time is ripe to do something about this and look at the best methods to achieve these goals, at levels ranging from the introductory to the advanced and destined for users of various ages, that is in primary, secondary education and higher education and also regarding lifelong learning. I have now said my piece and am interested what everyone else has to say about this important subject. Before doing so, I would like to thank our hosts here in Shanghai for choosing this subject that is so close to my heart and, I am certain, the hearts of many others in this room.

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