Hip-Hop pedagogy as production practice: Reverse-engineering the sample-based aesthetic

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This is an author accepted manuscript of an article published by Intellect in Journal of Popular Music Education, 2 (1-2), pp. 45-63.

The final definitive version is available online:

https://dx.doi.org/10.1386/jpme.2.1-2.45_1

The Good, the Bad and the Ugly in Rap Production Pedagogy:

Negotiating Live Performance, Sampling and Stylistic Authenticity in the Design of Music Production Curricula

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Introduction

Hip-hop practice contains a rich matrix of creative methodologies within its paradigm, which have the potential to inform and inspire music production pedagogy in higher education. The techno-artistic trajectory of rap production consists of numerous phases that may involve live performance, recording, sampling, synthesis, programming, mixing and mastering. Furthermore, it is not rare for self-contained processes—such as *interpolation*[1] and the creation of content *for* sampling—to be actualised as developmental phases within the larger production cycle. The well-documented issues affecting phonographic sampling have given rise to alternative methodologies, inviting live musicianship within hip-hop practice, but also a dependance on synthetic sonics (often as signifiers of geographical or stylistic divergence). As a consequence, contemporary hip-hop production—arguably more than any other commercial music-making form—can provide a dynamic, applied context for the exploration, implementation, interplay and interaction of most phonographic stages conceived and practiced within popular music production, with obvious benefits for the design of curricula. This is not to say that other musics do not deploy multiple methodologies within their production cycles, or that hip-hop exemplifies a sole case of multi-layered—or *bricolage*—production. After all, many popular musics have borrowed from hip-hop

[1] *Interpolation* refers to the studio re-creation of the performances and sonics of an existing recording, which avoids breaching mechanical (phonographic) copyright, whilst still in use of the original composition.

practices, and the rap production paradigm can be traced outside of strict stylistic barriers (a fact that widens its appeal and potential as a driver for pedagogical design). But hip-hop offers a *hybrid* production vehicle par excellence, both live and electronic, performed and programmed, modern and vintage.

The paper explores the space between these apparent polarities designating a field of creative opportunities, in order to fuel pedagogical design, explore creative problems (for academics and students alike) and locate potential synergies in complimentary fields of popular music curricula that may benefit from further integration. The theorising and design extrapolations are inspired by parallel careers as academic and rap practitioner. On the one hand, reflecting on the contribution to numerous programme and module designs in the areas of music production, technology, composition, performance and synthesis, and on the other, as a self-producing hip-hop artist spanning a ten-year career, initially independently, for the most part in collaboration with major labels, and currently deploying creative practice as professional context for doctoral research. The investigation aims at enriching curricula with aspects of scholarship acquired through these experiences, infusing methods of production delivery with knowledge gained from real-world hip-hop making practices, whilst exploring the creative and pedagogical potential in rap production curricula.

But what aspects of contemporary music production could be addressed which are now under-represented in higher education? What are some of the unique synergies that can be discovered converging live performance, the sample-based process, and various notions of 'composition' as encompassed within the hip-hop paradigm?

Sampling: facing the music

At the heart of hip-hop music production lies sampling, both as aesthetic ideal and problematic methodology. Much has been written in the literature about sampling as composition (Demers 2003; Rodgers 2003; Moorefield 2005; Harkins 2008; 2010; Morey and McIntyre 2014; Swiboda 2014), the ethics and legality of sampling (Goodwin 1988; McLeod 2004; Collins 2008), and sampling as a driver of stylistic authenticity in hip-hop (Rose 1994; Marshall 2006; Williams 2010; Schloss 2014). In his extensive ethnographic study *Making Beats: The Art of Sampled-Based Hip-Hop,* Schloss (2014, p.72) states that "the idea of sampling as an aesthetic ideal may appear jarring to individuals trained in other musical traditions, but it absolutely exemplifies the approach of most hip-hop producers", and he later adds that "this preference is not for the act of sampling, but for the sound of sampling: It is a matter of aesthetics" (Schloss 2014, p. 78).

Despite the live and synthetic alternatives deployed as a reaction to the legal context surrounding sampling (and the numerous sub-genres borne out of it as a result), most scholars and practitioners alike attribute a direct link between perceived hip-hop authenticity and the sound of sampling[2]. The conundrum between stylistic authenticity (aesthetics) versus legal implications (pragmatics) raises important questions, and puts academics in an awkward place when advising students. What processes and methodologies should be required or accepted for pedagogical design involving hip-hop production coursework as output? Should phonographic content be acceptable as source material for sampling or not? What are the implications of either strategy? Are we training practitioners leading them head-on into legal battles, or are we denying them an industry paradigm? Can we talk aesthetics if the raw materials of the art-form are not fully consid-

[2] For a stimulating discussion of The Roots' position on this problem see Wayne Marshall's (2006) article: 'Giving up Hip-Hop's Firstborn: A Quest for the Real after the Death of Sampling'.

ered? And finally, how effective can the students' portfolios be if they cannot become public-facing (due to copyright infringement embedded within the work)?

Of course, this conundrum is not purely academic. It characterises an industry dynamic, too, where mainstream producers are able to clear samples, underground producers work below the legal radar, while everyone in between faces similar questions. It is perhaps an academic responsibility to explore alternatives and—going further—to set in motion pedagogy that will continue to explore potential alternatives through future coursework actualisation and critical analysis. But these alternatives should reach beyond the existing polarities of live-versus-sampled, or sampled-versus-synthetic. Is there a way to merge the sample-based aesthetic with the production of copyright-free content? Can this content be sourced from within the student output (i.e. through collaboration between production and performance cohorts)? What are the synergies between different fields of popular music curricula that can feed into this interaction? And in that case, what differentiates a phonographic sample from the inclusion of—newly conceived and recorded—live musicianship? A set of important questions that require theorising before any pedagogical design can be set in motion, as they have implications for the exercises set and the overall alignment of the curriculum.

Sample-based authenticity and pedagogical design

The quest for sonic authenticity in hip-hop, and the importance of sampling in this pursuit, can thus inspire pedagogical design through an exploration of the variables that contribute to a sample-based phonographic aesthetic. Of course, authenticity in any field is difficult to define and, according to Peterson (1997, p.5), it is a "socially agreed-upon construct", so we should be careful not to attribute notions of stylistic authenticity directly to inherent sonic characteristics (or processes). For this reason, an inclusive and democratic design should promote knowledge con-

tribution from the student cohort (the current practitioners), as opposed to canonised and dogmatic signifiers set in stone by the curriculum. In their proposition towards a theory of stylistic morphing, Sandywell and Beer (2006, p.119) argue that the notion of genre may not even exist as previously defined—following the digitisation of contemporary music culture—pointing our attention to a re-definition focusing on the perspective of the active practitioner:

> It seems that there is no such thing as genre. Rather there are generic resources, parameters, incitements. Under further scrutiny canons prove to be complex configured collections of stylistic signifiers traversing cultural fields and interwoven with cultural objects. Against this paradoxical conclusion we suggest that genre is more than a technical or theoretical term. It is also a practitioner's term invoked in the recognition, consumption, and production of musical performances.

Through discourse analysis, Kembrew McLeod (1999, pp.137-146) formulated six semantic dimensions for the study of authenticity claims within hip-hop, identifying social-psychological, racial, political-economic, gender-sexual, social-locational and cultural signifiers as those of key importance. Yet for music practitioners, sonic signatures also act as *material* signifiers of style and genre, and by extension, as signifiers of stylistic authenticity. Morey and McIntyre (2000, p.43) claim that "(f)or sampling composers, these modes of intertextual action, that draw on pre-existing works, operate as an extended form of co-creation rather than existing as merely a conceptual activity".

Furthermore, these signifiers define sub-genres for practitioners and become important in the discourse and examination of their differences, history and future genre development, echoing Sandywell and Beer's position above. Therefore, the systematic study of how production—and sampling—processes contribute to particular sonic signatures in hip-hop, and how these signify 'realness' or stylistic relevance, appears as a valid pursuit, not only in pedagogy but for hip-hop musicology as well.

Hip-hop production processes, however, can be examined from at least two key methodological perspectives: on the one hand, the sampling processes themselves, functioning as key contributors to the shaping of the sonic output, and, on the other, the source content—the samples—with which the aforementioned processes interact. Many previous pursuits in musicological and pedagogical literature have dealt with the former (as discussed above), but less attention has been given to the source material itself. What is it that constitutes valuable sampling source material and what draws samplists in? What's more interesting as a creative opportunity here—in practice and pedagogy that deals with the creation of original source material—is the examination of the phonographic attributes that interact favourably with sampling, and by extension, their infusion into the creation, capture and production of original content. So, as a form of legal necessity—borne out of copyright restrictions—becoming the mother of creative and analytical invention, such an exploration can expand the musicological inquiry, inspire pedagogical design and explore hip-hop production alternatives. But can this content be sourced from within the curricula, in other words, are there synergies in existing pedagogical fields that could be exploited for such an inquiry?

Synergies: between live performance and the phonographic sample

A number of UK institutions provide some flavour of popular music programme with elements of both production and performance[3]. Composition or song-writing are either implemented in both of these areas, or treated as separate entities. Whichever the case, an obvious creative

[3] At the time of writing, there are 7 UK Universities offering first degrees with Popular Music *and* Production in their title, 6 offering first degrees with Music Production *and* Performance in their title, and 3 offering first degrees with Music Technology *and* Performance in their title (source: Unistats 2017). However—in relation to first degrees—, there are references to *Music Production* by 150 Universities, to *Music Technology* by 146, to *Music Performance* by 140, to *Commercial Music* by 122, to *Music Composition* by 113, and to *Popular Music* by 113, which indicates that while a smaller number of these institutions offer the discussed topics in combination, the subjects do take place on the same locations/campuses, likely also sharing the same studio/rehearsal facilities.

opportunity seems to be staring academia in the face with regards to a hip-hop paradigm. A music production curriculum informed by hip-hop can potentially interact with the creation, performance and recording of new music, which can—in turn—function as source material for further sampling. Yet, if this creative equation were so simple, one might consider that the aesthetic issue would have already been resolved in music industry, where these resources have long (co)existed. But the aesthetics of sample-based hip-hop are more intricate, and perhaps it is that level of sophistication that makes the problem worth examining, both for academics tackling design, but also for students engaging with curricula.

From Dr. Dre's interpolation practices, to Southern (T)Rap's synthetic dependance, to The Roots' predominantly-live hip-hop and—most recently—to De La Soul's sampling of "more than 200 hours of the Rhythm Roots Allstars, a 10-piece funk and soul band" (Cohen 2016) for *and the Anonymous Nobody* album, rap practitioners assume a number of positions towards sampling: from denial and avoidance, to phonographic mimicry, to reverse-engineering their own samples. Even when no samples are used, sampling as an aesthetic ideal seems to be referenced in the poetics of the sound. In the case of The Roots, the referentiality is expressed with regards to the sonics of ?uestlove's drum kit. Some live hip-hop refers to musical utterances resulting from sampling in absentia, while Trap and much of the more synthetic Southern Rap seems to echo eras of the genre (Electro-funk, Miami Bass) that remained largely sample-averse, either due to technological limitations (expense of early sampling technology) or in response to 'function' and conscious geographical differentiation (for example, Southern Bass music catering for the dance floor, and distancing itself both from the East and West Coasts).

It is important to consider what differentiates the phonographic sample from a number of practiced alternatives, such as interpolation, attempting to reverse-engineer a sample, or the recording of new performances. After all, as Schloss (2014, p.159) states, "(s)ample-based hip-

hop music, therefore, is simultaneously live and not-live", or—as I have been referring to it in this paper—*hybrid* in its production. So what is it that differentiates the live performance packed *within* a phonographic sample from the recording of a *new* live performance? The question can be dealt with from a number of perspectives. It could be argued that there is a *historicity* both in the musicianship *and* the sonics of a phonographic sample. The longer the duration of the sample used, the more it retains original performance nuances and motivic information, supporting a case for nostalgia of musical values, while, at the same time, infusing 'distance' in a phonographic sample that differentiates it from a modern performance or segment thereof. But a large percentage of the practice focuses on texture (sonics), rather than motifs (music) and as producer Vitamin D describes in Schloss (2014, p.164): "So I'm more taking their *texture* and taking what their producer did with them, and taking their *sound*. As opposed to taking their composition" (emphasis in original).

This is exemplified clearly in the hip-hop practice of 'chopping' single hits and smaller record segments, focusing our attention on the phonographic signatures embedded in the *sonics* of a record's *instance*, and not necessarily in the music that a longer loop or section contains. How are these different to the production of new recordings? First of all, we have to systematise what we define as a new recording. This could refer to an individual overdub recorded on top of a hip-hop beat[4], or it could consist of a series of recordings: multiple overdubs or simultaneous performances by a number of live musicians performed over the hip-hop production (or performed independently and then incorporated into the hip-hop production as sample content).

But there are further record-production phases differentiating a phonographic sample from a new recording. A sample contains textural 'marks' of the layered processes that eventually

[4] Hip-hop practitioners refer to "beat" as a whole production, characteristic of the focus on groove and texture as primary compositional concerns.

gave birth to the sampled record. Most likely—and depending on the era—these consist of the colouration imprinted upon the sources by vintage microphones, pre-amps and recording desks, before further artefacts (compression and colouration) are added as a result of the recording media used (such as tape). Furthermore, a mix process would ensue where the tape is played back through the mixing desk, with further colouration resulting from the use of the desk's electronics, and any additional use of onboard or external equalisation, dynamics and effect processing. Followed by a capture of the mix on another format (most likely two-track tape) with its own contribution to compression characteristics and colouration, before final artefacts are embedded onto the record as a result of mastering and manufacturing processes. Apart from the mechanical phases discussed here, the output is shaped by human agency and creative decision-making, as well as the capture of real spaces via leakage, reflections caught on multiple microphones, and the use of rooms as echo chambers.

Another important variable to consider in the differentiation between new recordings and the use of phonographic samples is that of workflow, and the effect that the order of actualising different processes may have on the sonic output. The creative and textural implications of starting a hip-hop composition from a sample are very different to the results acquired when recording individual or multiple overdubs on top of a *beat*. Furthermore, the whole notion of a sample-based aesthetic needs to be examined from the perspective of sampling *as a process*. As mentioned above, sampling processes actively define the poetics of the output not only due to the raw materials used (phonographic samples), but also because of how they shape these as active determinants, through chopping, rearrangement, juxtaposition and interaction with the source content. A mapping of sampling processes to an aesthetic typology is beyond the scope of this paper, but examples include the characteristics of samplers' interface designs, operating scripts and workflow implications, and their effect on particular musical utterances (such as Akai MPCs' im-

perfect yet highly swung quantisation templates; monophonic triggering and auto-muting of samples; and the drum pads of the physical interface promoting a predominantly percussive user approach).

It is perhaps in the space where sampling practices interact with phonographic sonic signatures that a hip-hop aesthetic is born. From an educational standpoint, what becomes essential is to consider the exploration of such aesthetics as central to the pedagogical design. A constructive alignment of coursework can then take into account such aims for the pedagogical design as learning outcomes. These can include: the infusion of phonographic characteristics upon newly created work; the production of samples as phonographic segments; the exploration of vintage production techniques pertinent to a chosen era; the investigation of the phonographic context; and the 'production' of live performances with stylised sonics and referential musicianship as objectives (these are reflected in the design undertaking below).

The integrated production of original content for the purposes of sampling in such a synchronous, or near-synchronous context creates scope for further synergies. Given an interdisciplinary or collaborative coursework activity—where production and performance students work together towards a hip-hop output—the sample-based process acquires the potential to shape the production of the source material with *meta* considerations in mind, avoiding some of the limitations imposed by working with material created in the past. The students may opt for tracking new content to a metronome, expanding the sampling pool with extended instrumental sections, and implementing exaggerated structural and dynamic variations for future exploitation. Important considerations can be pursued as part of the pedagogical design and opened up for experimentation by the student body, such as the degree of 'self-consciousness' practiced when creating new source material.

Hip-Hop is a form of 'meta' record production process, as it involves the application of phonographic processes upon material that has itself been the *result* of a phonographic process (often from a different era). Part of its mechanics is this very manipulation of content that was created without the 'meta' genre in mind: a funk or soul record done for its own sake, with its inherent syncopation used or abused, exaggerated and over-exposed through repetition and re-programming, chopping and truncating within the new context. Schloss (2014, p.151 or 159) accurately describes that:

> A hip-hop beat consists of a number of real-time collective performances (original recordings), which are digitally sampled and arranged into a cyclic structure (the beat) by a single author (the producer). In order to appreciate the music, a listener must hear both the original interactions and how they have been organised into new relationships with each other.

This raises important questions about the amount of distance that should be practiced when creating 'source content' for incorporation into a hip-hop method or sampling production phase. And this should be left open for the practical exploration to investigate, and for the critical reflection to evaluate, enabling pedagogical design that is open-ended and incubates further knowledge, both for academics and the student body.

Why Hip-Hop? (and some cautionary tales)

But why utilise Hip-Hop as an academic paradigm? Snell and Söderman (2014, pp. 167-170) pinpoint the potential of Hip-Hop in an academic context as pertaining to three main areas: its effective illustration of critical pedagogy and democratic theory; its relationship to a multitude of other musical genres; and its fluidity demonstrated in the construction of identities, and their interplay with current contexts and communities. As discussed above, Hip-Hop is indeed inherently inter-stylistic and hybrid in its production methods and sonic outputs. Yet, in re-

ferring to sampling as a vehicle for this inter-stylistic negotiation, Snell and Söderman perhaps fall into the literary trap of treating sound somewhat semantically. For a practitioner (*and* an industry *and* its legal landscape), a sample carries more than a musical signpost; it also carries material sound, or *mechanical borrowing*, and this is something that a pedagogy of Hip-Hop production needs to address. Beyond a philosophically inclusive cross-genre position—which is indeed welcome and enriches the argument towards a hip-hop pedagogy—it is essential to consider the mechanical implications of inter-stylistic music-making, and how it can be effectively implemented, should the potential of hip-hop pedagogy be fully explored. In unlocking the methodological, compositional and inter-stylistic problematics, theory can be enriched by practice, and student practice and reflection can enrich the knowledge-base further. Exploring this dynamic to a hands-on degree can be supportive of Snell and Söderman's democratic vision of a verbal and musical critical discourse with Hip-Hop as a vehicle, because the actualisation of interdisciplinary collaboration between writers, performers and producers (students and academics) can bring to the forefront unforeseen creative scenarios requiring trouble-shooting, communication and thus, inevitably, innovation.

At the same time it is important to be critical of potential traps and remain pragmatic about blue-sky-thinking that appears overly utopian. Snell and Söderman (2014, pp.126-128) often present hip-hop music as a contemporary, edgy and modern alternative to other genres—such as rock and jazz—which have been canonised in education (particularly in North America and, somewhat, in Scandinavian countries) and can appear irrelevant or old-fashioned to the student body. Although, the authors are not explicit about Hip-Hop being the *only* music suitable to an academic curriculum and are quick to point out its inclusivity of other genres, we need to remember that Rap is also quite old itself (38-years old phonographically to be precise, and over 40-years old if we include its non-recorded, performative/aural tradition). Within Rap there are many

sub-genres and eras, including Old-School, New School and the Golden Age, with sonic and musical aesthetics that to a younger audience may still be perceptible as old-fashioned. I recall a particular case, where a 19-year old student returned the week after a personal studio tutorial to inform me that he had spent the week researching UK Drum n' Bass (a genre much newer to Hip-Hop), as he had missed it in its first wave and because he found many of the artist/producer references I was offering inspiring, but totally unknown to him. As a cautionary tale, this highlights that from an academic standpoint we need to remain aware that we may have different notions of 'cutting-edge' to our students, and that a lecturer's DJ Premier may be a student's equivalent of Phil Spector. In other words, we should be careful not to end up canonising the hip-hop method itself, but instead focus on exploring its lessons, potential and creative opportunities.

Yet Hip-Hop is indeed popular, commercially successful, international and yet localised, morphing into numerous sub-genres and local scenes, in multiple languages and with wide-ranging sonic footprints. Its *morphing* ability sees it mingle not only with styles from the past but also with world music from the distant territories it reaches and *contaminates*. Importantly, it has also directly affected other musical genres, particularly electronic dance music in its evolution of styles such as Trap and Glitch-Hop. But even without a direct influence, Hip-Hop's sample-based methodology, beat prominence and cyclic/Afrocentric sensibilities can be felt upon pretty much every popular style, providing further reason to critically and dialectically negotiate the variables that contribute to its aesthetic within an academic context.

The musical discourse envisioned requires further practical obstacles to be considered before actualisation. Some of the collaborative music scenarios discussed by Snell and Söderman (2014, p.173) suggest studio collaboration between producer(s) and popular music performers, mash-up remixing, and group composition and arrangement. In the fifteen years of academic practice during which I have actively enabled such collaborative work—through curriculum de-

sign and cross-course negotiation—a number of observations have been repeatedly highlighted upon reflexive analysis. Although the premise, potential and intention for collaborative work are positive, the parameters of interaction require careful design, particularly with regards to the meeting of learning outcomes for different cohorts, the synchronisation of coursework deadlines and the political dynamic between courses (affecting the use of resources and other logistics).

Degree of freedom and the role of the instructor

At the centre of successful curricula, especially ones that honour both a critical and democratic ethos, lies a balanced approach between freedom and structure. In a constructivist or connectivist pedagogical paradigm, which resonates well with a hip-hop philosophy, it is an outdated notion to perceive of the lecturer as the sole holder of knowledge, instead shifting the focus to a community of enquiry. This is true perhaps of all disciplines, but particularly so in the dynamic world of a popular music founded upon and redefined through its connectivity to other musics. The methodological paradigm here is meta-modern and its embrace into a pedagogical design needs to practice and preach lessons learned from its very modus operandi. The *trans-morphing* speed of most electronic music styles has become exponential, and hip-hop's acceleration is notable especially because of its inter-stylistic tendencies. Sandywell and Beer (2005, p.115) define 'trans-morphing' as "the creation of trans-genres by morphing across genres […] This process generates a hybrid genre as the performer is simultaneously positioned in two or more genres". The speed of stylistic morphing, but also the implications it has on the use and appropriation of technologies, are particularly problematic for pedagogic design and academic planning. The process of validating units, modules or programmes, sets in motion outcomes, coursework and activities for a number of years to come, and the design has to remain flexible enough to foresee musical, industrial and technological change.

Additionally, if we are to acknowledge and invite students' input into the communal enquiry about the genre, as well as its production and meaning, information should be provided in support of critical discussion, guiding knowledge-construction and reflection, but not as dogma or absolute truth. This is accepted in modern pedagogy in most theoretical discussions, but the notion resonates louder with studio practice. Some of the most essential sonic and musical innovations have taken place because of practitioners rebelling—or ignoring—a tool's inherent script. From amplifier overdrive in Rock n' Roll, to digitally crunched drum waveforms in Drum n' Bass, to exaggerated side-chain compression in Glitch-Hop, the examples are endless, and what was once regarded inappropriate for one generation or style, becomes an aesthetic ideal for the next. Our current computer and interface technologies allow multiple routes to similar sonic artefacts, while a user can always surprise a manufacturer with her creative abuse of a prescribed function.

But where does this leave an instructor of creative technologies, which are fundamentally meant to serve aesthetics, and frequently so of a future style? Again, not only the design, but the whole pedagogical stance needs to promote a balanced applicability of techniques linked to predictable aesthetic results and stylistic implications, but with an open mind about the power of such techniques in the hands of a young innovator, and/or in a different context.

Finally, any stylistic predictions of longevity require careful consideration. Hip-Hop itself was initially labelled a fad, and while we praise its paradigm currently, it is undergoing substantial internal morphing, favouring synthesis over sampling as one radical mainstay against its original design, to the degree where Hip-Hop as a stylistic label may mean very different things to different members of its fanbase (there are numerous discussions on rap forums questioning Trap as a legitimate Hip-Hop sub-genre for example, while for the best part of the last decade Grime was considered just a local anomaly outside of the UK radar). With these points in mind, the lec-

turer assumes the role of facilitator of creativity, moderator of discussion, instigator of critical questioning and provider of foundational knowledge (history, technology, aesthetics), not unlike the roles an effective producer assumes in the studio.

And while it is commendable to think of students as naturally drawn to innovation, expression and creative risk-taking, a large part of my academic experience—and that of many colleagues—has been spent motivating students to avoid clichés: tendencies which can be the result of numerous forces, such as technology that is preset-prescriptive, knowledge presented online as the sole route to a specific aesthetic result (without the time/space to provide alternatives or context), or limited stylistic/historic references owing to a student's more restricted listening pool. Let us not forget that a student coming into higher education today has to catch up with three or four more decades of recorded history as opposed to her instructor. Beyond historical, technological and musicological knowledge hidden in the past, the lecturer can also contextualise empirical knowledge accumulated from real-world experience: insights gathered from the very dynamic of making this music. This is why a practitioner's perspective is essential when deploying hip-hop *making* as a pedagogical paradigm. Beyond the added benefit of perceived authenticity—from the students' perspective—for a lecturer that has practiced the trade, a purely theoretical delivery creates a gap between musicological motivation and studio practice, which in the case of Hip-Hop is clearly counter-intuitive, as Hip-Hop's instrument *is* music technology.

Structure, creativity and artistic identity: a reflexive study

For a recent reflexive study on the role of the instructor in undergraduate music project work (Exarchos 2015), I maintained a year-long supervisory diary (Exarchos 2014) spanning two final-year modules and a cohort of eleven tutees. One of the modules was primarily theoretical and consisted of written thesis-style work and the other required the undertaking of a large music project supported by reflective documentation. The personal diary was used to report upon each supervisory session, outline identified phenomena and their context, and expand with further clarification and reflection. A process of *coding* was utilised to identify recurring themes in the text, focusing on phenomena of importance as "critical incidents" (Kamler and Thomson 2006, p.69). A table was produced noting the frequency of recurring themes, cross-referenced against relevant pedagogical literature (see Table 1 below):

Table 1. Issues emerging from the supervisory diary

Recurring themes	**Frequency** (of occurrence in the diary)
Structure	15
Policy	13
Methodology	12
Supervisor (staff) development	11
Literacy	10
Scholarly writing (and reading)	9
Supervisory role (and style)	8
Relationship (dynamic)	6
Autonomy	4
Time (management)	4
Developing supervisee's confidence	4
Redeploying effective strategies	4
(Critical) analysis	4
Tailored / individual supervision	3
Undergraduate supervision	3
Previous experience (student/staff)	3

Recurring themes	**Frequency** (of occurrence in the diary)
Learning (vs. outcomes) approach	3
Topic choice	2
Research	2
Empathy / emotional intelligence	2
Ethics	2
Record-keeping	1
Industry / employability	1
Technology	1

With *structure* identified as a primary concern in the reflexive analysis, it was important to consider the pedagogical matrix of related aspects, namely the dynamic between prescription and freedom in creative practice curricula. Although the study described focused predominantly on student-led, project-based work, a number of findings and resulting arguments appear relevant to a discussion of any future curricula that attempt to balance creative freedom and artistic expression, against the rigidity of pedagogical design.

On the one hand, my concerns about structure in the supervision of student projects were raised by an apparent clash between the quest for methodical provision, instruction and support, and the implications rigid guidelines may have on students' independence, confidence growth, creativity and, by consequence, their artistic identity. In discussing the supervision of practiced-based art and design research degrees, Hockey and Allen-Collinson (2002, p.352) oppose the systematic quantifying of methodology against the undefinable 'magic' that students perceive as a risk to their creative identities, and this also feels relevant to undergraduate project work. In discussing identity and adaptation from the perspective of practice-based art and design research degree students, Hockey (2003, p.86) confirms similar findings in undergraduate project work, and quotes student and supervisors' reporting that "(t)here were fears that creativity would be frozen

by objectivity". On the other hand, it is also important to avoid a "play-it-by-ear" paradigm (Gibbs, Morgan and Northedge 1998), acknowledged in undergraduate supervision literature as a common reactive response by instructors, who end up relying on the development of personal guidelines as a counter measure.

The discussion of project-based work is relevant to the design of hip-hop production curricula, not only in negotiating the balance between institutional frameworks and self-led practice (which by implication appears as an intuitive and relevant coursework strategy here), but also in considering the place of theory in a predominantly practice-based design. The theoretical issue is two-fold, as it affects both the hypothesis and questions that drive the design, but also the place of theory within the design itself. In other words, the hip-hop production curriculum proposed in the following chapter, starts from a hypothesis relating to rap's sonic authenticity, and the questions that drive it relate to the processes that pursue it. So, there is undoubtedly a theoretical foundation at work here that enables a framework, facilitating the alignment of learning outcomes, coursework and activities that shape the design. Yet, in line with the previous discussion of a democratic and critical ethos in the design, it would be a mistake to let the designer's theoretical (or practical) findings rigidly predetermine the shape of the students' creative outputs. Although it is important to guide the design with research and industry experience, it is also essential to allow students their own findings, which will in turn contribute to the communal knowledge and future development of the pedagogical design. This is where the second consideration of a theoretical underpinning becomes relevant: that of the place of theory *within* the design. This can take the form of historical, technical or musicological research set as coursework for the students, but also as theorising borne out of reflexive analysis *upon* the practical experimentation carried out by students. In either case, the time-mapping of the curriculum has to portray an effective interplay between theory and practice, respectful of the potential for emerging knowledge and the contribu-

tion of students towards it. Hamilton, Carson and Ellison (2013, p.18) highlight the benefit of a balanced, parallel approach between theory and practice that remains sensitive to the subject area:

> Some supervisors suggest that the practice should lead while others propose that theoretical and contextual research drives the practice (this depends largely on their discipline perspective). However, none suggest that continuously working on both simultaneously is crucial, and supervisors are often acutely aware of the difficulties of balancing creative and theoretical progress.

The alignment of coursework tasks in the design thus becomes essential not only in balancing practice-based work with theory, but also in providing creative freedom that is nevertheless structured with guided activities. Specifically for music supervision, Madsen (2003, p.79) underlines the benefit of breaking down larger phases into manageable components:

> If actual learning is to culminate in a substantive product the entire process needs to be completed by successive approximations from beginning to end. […] The best approach is to have students carry through the entire process by working with more advanced scholars, or by doing 'mini-experiments' or 'mini-projects' that can be accomplished within a short period of time…

Furthermore, Hamilton, Carson and Ellison (2013, p.9) point out the "importance of a student-tailored approach that combines a sense of routine and regularity but also allows students who prefer to work independently to be able to do so".

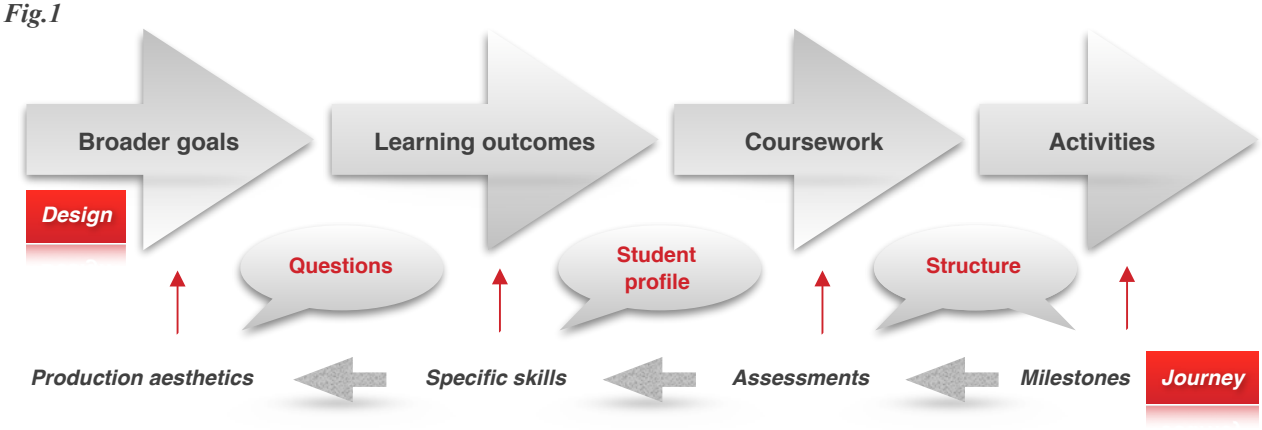
Constructive alignment: designing a level-5 rap production module

But how does the discussion above help shape the design of a predominantly practice-based, hip-hop production curriculum, which is founded on a critical and democratic ethos, inviting the student body in to the construction of knowledge? A useful parallel notion might be the progression from a constructivist paradigm to what Siemens (2004) defines as "connectivism", as mentioned above, alluding to a model of learning where not only content is being constructed by

the learner(s), but a whole network of them are evaluating information, connecting data and deciding on its relevance on a continuous basis (in direct interaction with the technologies that afford this very traffic). Although this is a concept discussed by Rennie and Morrison (2013) in relation to online technologies in their *E-Learning and Social Networking Handbook*, the paradigm shift fits well with an inter-stylistic music-making philosophy, afforded in this instance by *music* technologies.

With these conceptual aims in mind—and in line with putting theory to practice—it is important to demonstrate a design attempt in this paper, suggesting how a potential curriculum would connect goals and outcomes to coursework and activities. For the purposes of this case study I am putting forward a modular design which would best suit a (twenty-credit) level-five programme due to its inherent stylistic and technical specificity. A number of additional sources have been helpful in informing the design process, particularly Bloom's *Taxonomy of Educational Objectives* (1956)—including more recent revisions (Krathwohl 2002), especially those considering implications for music education (Hanna 2007)—, the principle of "constructive alignment" (Biggs and Tang 2007), and Stein and Graham's *Essentials for Blended Learning* (2014). Merging these design guidelines, with previous design experience, and elevating the key questions of the—rap production—aesthetic quest to pedagogical goals for the module, I have followed a reverse-engineering process, starting from broader module goals, defining relevant learning outcomes, and setting the coursework that targets them (which in turn allowed for further micro-design of weekly activities leading to the specific items of coursework). The aim throughout has been to provide structure in the form of milestones, whilst allowing a high degree of independence in the creative practice. A secondary, but key, aim has been to enable and inspire collaboration, whilst safe-guarding individual contribution and ensuring progression. The following illustration (figure 1) portrays the design process schematically:

Fig.1



MODULE GOALS

Starting with the broader goals, these could take the following form (text box 1):

The module aims to:

• develop individuals with an advanced audio engineering, digital processing and music production skillsbase; (**G1**)

• enable the student to explore inter-stylistic musical relationships, producing original and stylistically focused hip-hop content; (**G2**)

• develop analytical techniques consistent with scholarly practice, articulating critical thinking and reflexive methodologies. (**G3**)

Txt.1

The language above has been kept intentionally broad, in order to remain descriptive but allow for further specificity in the drawing of the learning outcomes. The outcomes should correspond to—and be drawn from—the module goals, but focus on describing specific and measurable abilities that a student completing the module should possess. This is also an essential ingredient in setting respective assessment methods, which will encompass the learning outcomes.

LEARNING OUTCOMES

The outcomes could take the following form (text box 2):

Upon completion of the module successful students will be able to:

1. *utilise a range of recording and mixing technologies effectively to produce authentic phonographic content that can inspire and function in a sampling context;* (**L1** < **G1**)
2. *apply relevant vintage techniques to the production of live performances, infusing them with phonographic signatures that are referential to specific eras and styles;* (**L2** < **G1**)
3. *create and produce original hip-hop content through creative programming, audio manipulation, synthesis and sampling techniques, evaluating the output in relation to market trends and stylistic references;* (**L3** < **G2**)
4. *combine hybrid (post)production processes in pursuit of sub-genre specialisation and unique producer identities;* (**L4** < **G2**)
5. *critically evaluate the entire hip-hop production process from conception to commercial exploitation in relation to a range of contemporary styles;* (**L5** < **G3**) *and*
6. *research and critically review the historical, technical, stylistic and cultural contexts surrounding hip-hop production, applying progressive research skills including reflexivity, sourcing, assimilating, critiquing and referencing;* (**L6** < **G3**)

Txt.2

Below, a constructive alignment of coursework items has been drawn (table 2) mapped to the learning outcomes above, followed by supporting assessment criteria (table 3), which—in turn—lead to the weekly activities represented in the module timetable (table 4). The timetable, furthermore, highlights blended activities mapped against the practice-based alignment (in the additional column), in support of the parallel theoretical/critical underpinning discussed above.

Assessment Methods	**COURSEWORK 1** (week 5)	**COURSEWORK 2** (week 11)	**COURSEWORK 3** (week 12)
Method {summative}	Live performance recording and production **(Sample Content)**	Hip-hop production in chosen sub-genre **(Rap Master)**	Reflexive analysis **(Online Blog)**
Requirement	**>** meets specific era production signature	**>** includes sampling techniques utilising CW1 content	**>** reflects on process and outputs of CW1 and CW2
	> considers 'meta' production	**>** involves additional production techniques relevant to sub-genre (e.g. synthesis, additional programming and/or overdub or vocal recording)	**>** regularity (weekly*)
Weight	30%	50%	20%
Learning Outcomes assessed	1, 2	3, 4	5, 6
***Reflexive alignment (milestones for online blog)** **{formative}**	*Historical research into vintage engineering techniques* **[week 4]**	*Historical and technical research into sampling (software and/or hardware tools)* **[week 7]** *Case-study analysis (e.g. artist, artwork, label, style) in chosen sub-genre* **[week 9]**	*Blog representing weekly reflection and analysis on processes leading to—and outputs from—CW1 and CW2* **[week 12]**

Tbl.2

Assessment Criteria

The ability to engineer, record, mix and arrange for vintage and contemporary styles;

the effective application of microphone techniques, and recording and production strategies to complete the works coherently;

the selection and control of appropriate means of production;

the ability to creatively program, edit, sample and synthesise to meet hip-hop subgenre aesthetics;

the creative and exploratory nature of the practical work;

the reference to contemporary subculture in the hip-hop output;

the relevance and effective application of theoretical knowledge; and

the quality and coherence of the research into production styles.

Tbl.3

Week	**Module Timetable** (activities and teaching methods)	**Online activity** (blog topics)
1	**Introduction to module** (lecture) Module briefing: aims, outcomes and assessment Brief history of Hip-Hop Making records within records	*Choose an era / locate a band* *discuss case studies* *what is sampled* *digging in the crates*
2	**Capturing the sonics of an era** (masterclass) Vintage microphone techniques Colouring the source Capturing space	*Producing in the rehearsal space* *arrangement and instrumentation* *structure and dynamics* *groove and timing*
3	**Recording the band** (workshop) Capturing a performance Studio paradigms: live and overdubs Leveraging 'bleed'	*Reverse-engineering the past* *creating sample content* *'meta' considerations* *letting the 'past' breathe*
4	**Mixing time-machine** (seminar) Re-amping and DIY echo-chambers Manufacturing 'glue' Mechanical colouration: mastering and media formats	*Historical research into vintage engineering (recording and mixing) techniques*
5	**CW1 Deadline—Assessment Event <<<<<<<<<<** *Present:* Live performance recording and production **(Sample Content)** Peer and marker feedback	
6	**Digital sampling** (lecture) From musique concrète to Marley Marl Hardware and software tools Sampling techniques: chopping and manipulation	*Reflect on process and output (CW1)*
7	**Analogue synthesis** (lecture) From Stockhausen to G-funk Breaking down the synth: signal flow Hardware and virtual, analogue and beyond	*Historical and technical research into sampling (software and/or hardware tools)*
8	**Sample-clearing alternatives** (seminar) Dr. Dre's school of interpolation Going back to The Roots: live hip-hop Synth rap and sample-aversion	*Synthesis in hip-hop* *role of synths in sub-genres* *a timeline of synthesis in rap* *synth turf wars (West & South)*
9	**Producing the rap** (masterclass) Recording paradigms Production styles: single voice, adds and overdubbing Mixing the rap	*Case-study analysis (e.g. artist, artwork, label, style) in chosen sub-genre*
10	**Mixing Hip-Hop** (workshop, masterclass) Supervised workshop Dissecting work-in-progress Buss processing, compression and Glitch	*Reflect on process and output (CW2)*
11	**CW2 Deadline—Assessment Event <<<<<<<<<<** *Present:* Hip-hop production in chosen sub-genre **(Rap Master)** Peer and marker feedback	
12		**CW3 Deadline <<<<<<<<<<** *Complete:* Reflexive analysis **(Online Blog)**

Tbl.4

Outroduction

The design exercise in this paper has been the result of a pedagogical discussion merging professional practice, reflexivity, and inter-textual analysis ranging from literature on hip-hop and music technology pedagogy, to hip-hop studies and the musicology of production. The focus on design philosophy, aesthetics, sonic authenticity and the development of student identity and independence has been essential in informing the execution of the design. The aim has been to provide a useful framework for academics and students alike, whilst enabling self-expression, innovation and the construction of new knowledge not yet predicted by the design. Although not by any means a complete and final template, it is my hope that the thinking, theorising and process of arriving at the suggested curriculum will be helpful to other academics investigating the challenge of balancing the forces of pragmatism, aesthetics, technology and art in techno-artistic curricula that utilise studio technologies (beyond stylistic restrictions or prescribed canons). A further extrapolation is to challenge the 'territorial' modus operandi of music curricula in many (UK) institutions, which—understandably—reflect the organisational complications of coursework that crosses courses, resources and disciplines; a challenge that requires both an open mind from facilitators, but also attention to cross-disciplinary design detail that can lead to curricula which are functional, democratic, manageable and forward thinking.

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