1.5 Improvisation and the Improvisational Practice Cycle

While a deep fascination with the teaching and learning of improvisation relates directly to my own specialism of jazz, the formation of a theory of learning (in this case the Improvisational Practice Cycle) demonstrates how experience and systematic reflection (see Part 2) combine to form a hypothesis, evolving from personal practice and refined through engagement with existing research.¹

Once commonplace within the Western European classical tradition, improvisation has been neglected since the mid-nineteenth century. Recently however, new courses have seen its reintroduction as part of a creative emphasis within the conservatoire curriculum, although unexposed to the rigours of educational scrutiny and at times, prone to self-conscious protection. Within the GSMD, improvisation is assumed to be integral to all musical activities. It is formally taught by PCS teachers throughout the school, by jazz musicians within jazz classes and Music Studies teachers as appropriate.

I work on the assumption that improvisation redefines the nature of any teaching and learning exchange. Indeed, recent neuroscientific research hypothesises that the human brain works in a remarkably improvisatory fashion.² As structured play, improvisation is a fundamental interaction amongst the learner and the outside world of objects and dynamic processes. It is here that the materials of the inner and outer worlds meet, as the creative faculty engages with the perceived limits of the physical world, in time. Furthermore, if this state is so natural, we must question why conservatoire students frequently have to relearn an innate process.

The value of the improvisatory process is that it requires that learners make choices in real time, initiating creative decisions, deciding when to proceed, reviewing in the moment, planning and evaluating in time. It can only occur within the student’s immediate creative, physical and intellectual locus. This operation integrates functions of separate hemispheres of the brain and challenges the emphasis on verbal explanation since so much action and expression clearly occurs without speech. An improviser is compelled to act, think and reflect in the past, present and future, simultaneously. Some improvisers describe the experience as sensing rather than thinking. Significantly, when so much music teaching is dominated by verbal explanation, musical improvisation can only take place in sound, in time - as distinct from composition, which takes place in sound but out of time. Like composition, improvisation locates the imagining of sound in potential but

¹ This emphasis on learning, as distinct to the accumulation of teaching techniques, relates to the transition from determinist notions of learning as a function of student ability and learning as a result of teaching, through to learning as a result of student perceptions and inputs. Learning is about what the student “does” rather than what the teacher does or a simple matter of natural aptitude. See The 3P Model of learning and teaching, Biggs, J. Teaching for Quality Learning at University Milton Keynes: SRHE & Open University Press, 1999, p.18 – 24.

raises awkward questions as to what exactly we mean when discussing “the ear”. At the very least we are required to distinguish between the different and distinct levels of improvisational and hence aural, activity.

Within the music curriculum, the presence of improvisation reflects Stenhouse’s assertion that we are constrained by assumptions and habits built up in the past and that it is the business of education to make us freer and more creative. Furthermore, improvisation combines action, creation and evaluation - as one, distinct from written or even verbal feedback in that it occurs in the same context and material as the subject matter being evaluated. Here, both teaching and learning activity and evaluation are integrated. No other learning or evaluative activity so faithfully resembles both subject and participant it attempts to serve. This is Keller’s Functional Analysis, “music about music”. (See 4.3)

While the element of play is central to improvisation, the act itself is nevertheless distinguished by stylistic preference, vocabularies and personal temperament. However, despite the widespread introduction of composition and improvisation in schools during the 1970’s the implementation of improvisation has itself been largely “improvised” and although teachers within conservatoires generally enthuse as to its usefulness, it is rarely examined in depth as an educational devise or with any attention to best practice. As a result, projections abound as to stylistic habits and generic behaviours, often resulting in disassociation rather than integration of mutual interests - jazz versus free improvisation, group composition versus historical interpretation. Significantly, in my 15 years at the GSMD, I have never participated in any formal discussion or enquiry as to the usefulness and range of applications for improvisation, despite its apparently widespread acceptance. At the same time, there is little evidence of any general awareness of the distinct variations in experience specific to improvised procedures or that the nature and value of an improvised experience is affected by its educational implementation.

Ironically, a deeper appreciation of improvisation and its range of educational potential is hindered by the proliferation of study aids in jazz, rock and pop that prey upon the acquisitive nature of students, presenting compendiums of “hot licks and cool grooves”, with little attention to the whole range of processes that characterise musical or artistic development. While process-based content is at last entering jazz education literature (Hal Crook’s How to Improvise and Ready, Aim, Improvise are excellent publications), this is a recent occurrence, very much in its infancy. As yet, I am not aware of an informed overview relating to the process and practice and implementation of improvisation as an educational process or tool.

The implication is that a thorough study of improvisation is overdue, but for the purpose of this work let us consider one teaching and learning situation, for example the notion that improvisation is observable and that processes, objectives and potential experiences may be defined according to desired teaching and learning experiences. In this respect, improvisation

3 Stenhouse, L. op.cit., 213.
4 Stylistic factionalism is rife within the specific field of jazz as much as between any wider generic definitions.
5 A review of contemporary jazz method books aptly notes that, beyond introductory lessons on traditional devices such as “repetition, transposition, sequence, inversion and so forth,” little insight is provided on how to turn theoretical materials into “melodic gold”. Smith 1983: 79-80 in Berliner, op.cit., note 17, 792.
meets a range of learning needs.

**Improvisation resembling a continuum of open and closed questions:**

**Improvisational activities as 2 types of teaching and learning activities:**

1. **An open or “free” improvisation:** Little or no predetermination (save those agreed or projected by the improvisers) - as in an open question, inviting a free and person-centred response from the learner.

2. **A “limited” (or partly closed) improvisation:** A specific objective or experience in mind - say motivic development or rhythmic application, serves to lead the improviser towards an area of expected, desired or projected outcomes. Despite the prescribed structure, the learner’s curiosity and creativity is accessed as they engage in an investigation of how materials behave and their personal relationship with them. The extent of limits may be adjusted according to the degree of focus required.

*Other closed questions, i.e. “2+2 = ?”, or what is the key signature of E major? are absolute, closed questions with no equivalent in improvising, as improvising implies an interactive relationship with infinite potential outcomes.*

Every aspect of improvisation involves an element of autonomy for the participant. While behavioural/cognitive approaches to teaching lead towards specific outcomes, behaviour modification and a success-failure template, so too, may certain improvisatory practices. Determinist methodologies identifying selected improvised activities as possessing (or lacking) desired outcomes may result in the acquisition of prescribed experiences or skills. However, this doesn’t necessarily result in a personal experience of processes. The challenge is to balance the acquisition of tangible objectives within a framework that enables individual process, (i.e. attraction, reproduction, application, manipulation, modification and transformation, all processes, see the **Improvisational Practice Cycle** below). Some would call this “structured play”.

**Improvisation as educational and artistic tool**

The fact that the majority of improvisers historically have learnt and operated outside the conservatoire sector has resulted in unfamiliarity with research or educational practice. For some musicians, the process of improvisation may seem a sensing act, mysterious and intangible, conscious awareness appearing to inhibit the process of creation. Others, technicists, promote skills, while creatives emphasise process and so it goes on. However, as teachers we

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8 A teacher’s unconscious projections may be more powerful than declared teaching objectives. See Performance Gap, page 38.
must inform and elevate our thinking and consider the educational value of improvisation.

The nature of improvisatory procedures parallel key issues within the teaching and learning exchange. In the same way that learning ranges from deep to superficial, so students operate at varying levels of musical inquiry and interactivity. The degree to which improvisation is present is a factor in this. Similar levels of engagement have been identified by educational theorists; for example the SOLO taxonomy\(^\text{10}\) (Structure of the Observed Learning Outcome) was devised in order to "understand understanding". Beginning with regurgitation, progressing to analytical, relational and finally hypothetical thinking, John Biggs traces a path parallel to an improviser’s progression from imitation, through assimilation, towards transformation and innovation\(^\text{11}\). Significantly, Biggs suggests that new developments in understanding are immediately absorbed as part of the established range of wisdom and no longer classed as higher thinking. By contrast, an improviser is constantly reworking materials and is propelled by process and creative will. Most important however, is the presence of play and attraction, which continually replenish a cyclical mode of enquiry and realisation.

The creation of something new is not accomplished by the intellect but by the play instinct acting from inner necessity. The creative mind plays with the objects it loves.\(^\text{12}\)

Biggs promotes a linear hierarchy of understanding while the improviser’s manifesto is a continuum. Arguably, all innovation originates from improvisation. The practice is circular and at its most vital, free from awareness of time. In the classroom it is the teacher’s job to maintain this kind of absorption and alignment.

Creativity is not simply a matter of letting go. Serious creative achievement relies on knowledge, control of materials and command of ideas. Creative education involves a balance between teaching knowledge and skills, and encouraging innovation.\(^\text{13}\)

**Practice, improvising, evaluation and the creative continuum.**

Creative endeavour is thought to resist precise definition, revealing a breadth of activity from the most concrete and cognitive through to the most invisible or intuitive. It is the teacher’s task to a) devise a template for understanding the creative process and its relationship to performance and learning and b) devise methods of appraisal and evaluation that represent the essential nature of this mercurial experience.


\(^{11}\) “Imitate, assimilate, innovate”, attributed to jazz trumpeter, Clark Terry.


\(^{13}\) National Advisory Committee on Creative and Cultural Education, *All Our Futures: Creativity, Culture and Education*, Report to the Secretary of State for Education and Employment the Secretary of State for Culture, Media and Sport, May 1999, p6.
Since different activities are appropriate to different developmental stages, balance is a key issue. Consequently, the process of practising improvising (perhaps composition too) can be represented along a variable continuum of tangible and intangible properties. Whereas the SOLO taxonomy provides a framework for understanding understanding, the 4 Reservoirs of creative activity provide a framework for understanding creative or improvisational processes. This assists both teacher and students in reconciling preferences in practice, previously assumed to be mutually exclusive as well as forming a diagnostic tool in identifying blocks in practice, obstacles to completion or poor motivation.

**Fig 1a:** 4 Reservoirs of creative activity.

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<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Language</td>
<td>Forms</td>
<td>Concept</td>
<td>Spirit, Beauty</td>
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<tr>
<td>Recordings</td>
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<td>Intention</td>
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<tr>
<td>Body of Knowledge</td>
<td></td>
<td></td>
<td>Attraction</td>
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<tr>
<td>TANGIBLE</td>
<td>Invisible</td>
<td>Mystery</td>
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**Fig 1b:** The 4 Reservoirs of creative activity:

1. **Language, recorded performance.**
   Totally concrete, literally “set in vinyl”, immutable, a reproduction of what is possible. Representations of artistic or technical perfection. Note the inherent contradiction of improvised music (music in flux), once recorded may be perceived as absolute.
   Example: Recording of Oscar Peterson playing “On Green Dolphin Street”, complete with transcribed improvisation.

2. **Forms**
   Absolute in outline, (E major has four sharps, the chord sequence of “On Green Dolphin Street”, or Rhumba clavé), less absolute in execution or interpretation.
   Example: The form of “On Green Dolphin Street”, key of C, 32 bars, ABAC, modulations to Eb major and A minor.

   The manifestation of form is determined by Concept.

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The model (1a) is deliberately horizontal. While it is possible to perceive attention to the language or form as “lower” than the creative impulse or a personal concept, all four are interdependent: An inspired performer lacking clarity and appropriate technique frustrates as much as a technically able bore.

**The Improvisational Practice Cycle**

While the 4 Reservoirs of creative activity plot creative or improvisatory practice along a horizontal range, developmental improvisatory progress may be represented along a complimentary, vertical cyclical continuum, *The Improvisational Practice Cycle*. As with the acquisition of spoken language, reference points refer to the internalisation, manifestation and adaptation of skills alongside the creative processes and practice of improvisation. Whilst displayed vertically, the process is cyclical, assisting the teacher in identifying 3 key developmental stages of *formation, competence* and *mastery* - also known as *perception* (as in listening), *conceptualising* (as in understanding) and *execution* (as in doing), within each locus. Significantly, each of the 7 loci also cross-reference with the 4 reservoirs of creative activity, although while the latter are interchangeable, the practice cycle is a set progression. (See fig 1 & 2)
fig 2: The Improvisational Practice Cycle, 7 loci within an improvisatory progression:

1 **Attraction** (Also called recognition). An attitude. “From the heart” beauty. Note. There are 2 types of beauty - sheer, jaw dropping beauty and “the beauty of usefulness” - i.e. a minor II V I phrase or a particularly effective fingering.

2 **Reproduction** - The process of: manufacturing the beautiful object exactly and reliably. Becoming the object, process or concept, in its most basic, material form. Notice how this stage requires attraction to have taken place alongside a commitment to accuracy.

3 **Application** - The process of: making useful, application to musical situations. This is training, becoming adept, skilful, thoroughly researching all possible applications of the object.

4 **Manipulation** - The process of: more flexible application and use. The object remains but may be adapted to suit a wider range of contexts.

5 **Modification** - The process of: changing elements of the object, freely and deliberately, while still referring to it in its original form. Note, curiosity plays a part here.

6 **Transformation** - The process of: creative and extreme manipulation. The object may now remain as a prompt, a springboard, or simply an echo. Gesture may become more important than detail, feeling more than the spelling. Meaning leads now.

7 **Readiness** - An attitude. Readiness for attraction to a new object or impulse. By now the artist has thoroughly absorbed both the beauty and the detail of the original, desired object, gaining reliability and adaptability but significantly leading to original material as a result of the process, which now begins again....

The practice cycle represents a process of integration, the transition of a chosen object initially perceived as outside of the student’s experience yet to which they are attracted and motivated to employ, undergoing a process by which it is absorbed and becomes an intimate part of the
person’s own means of expression. The word “recognise”, to re-know, or re-see is significant here, suggesting a Socratic acknowledgement of the latent presence of the object, already in potential, within. In the 1st locus, the balance lies 100% with the “object” as it maintains its original form, by the 4th and 5th loci the balance is roughly equal as creative will is exerted. However, as the student progresses through the loci, they assume increasing control until by the 7th the process has assumed supremacy and full integration and originality has occurred. Berliner further explains the process:

... experimental improvising with a set of known model phrases reveals precise transformational processes at play, shedding light on ruminations of the musical imagination and such potentially enigmatic matters as the difference between intention and realization in the articulation of ideas.\(^\text{15}\)

Progression through the 7 stages may occur in a few minutes or a few months depending upon the size, complexity or scale of the task involved. For example, a melodic fragment may take 5 minutes to undergo the full process in 1 key, and 2 days (or more) to gain competence in 12 keys. A conceptual approach to improvisation may take a moment to connect with but 3 months to internalise and use at will. For the teacher, the important factor is the recognition of a set of developmental stages and the formation of strategies for the planning, implementation and evaluation of teaching and learning.

Fig 3- Co-relationship of the Improvisational Practice Cycle and the 4 Reservoirs of creative activity:

The *Improvisational Practice Cycle* has evolved from long-term observation of students, is

\(^{15}\) Berliner, *Thinking in Jazz*, op.cit., p12.
intimately representative of actual experience and forms a reliable and responsive diagnostic tool integrating the tangible and intangible aspects of music making. Key to its significance is the synthesis of skills, process and crucially, attitude. Learning processes may be presented in cyclical sequence, yet the choice to progress stems from an attitude or will. This may be desire, inspiration, fear or acquiescence to institutional pressure and naturally, the nature of motivation will determine the quality of learning. The identification of attitude is as close as we can get to the demonstrable presence of self-realisation or vocation as a driving factor in the learning process. Indeed, the transformation of a negative learning experience into insight or productive action reveals the work of an attitude or will, while the distinction between compulsion, impulse or choice considers differing degrees of will-power. In this context, the presence of attitude and will contrasts with taxonomies of learning based solely on cognitive or behavioural input and outcomes, instead aligning the transmission of a skill-base with developmental needs. Curriculum review must consequently recognise the three-fold nature of learning, comprising of: attitude (motivation and will), process (adaptation and use of materials) and skill (reproduction and application of technique).  

Summary:

• Recent neuroscientific research suggests that the brain’s natural state is one of improvisation.
• As “structured play”, improvisation is an interaction amongst the “learner” and the outside world of objects and dynamic processes.
• Improvisation requires that learners make choices in real time, initiating creative decisions, reviewing in the moment, planning, and evaluating in time - without verbalisation and at their own pace.
• Improvisation redefines the nature of any teaching and learning exchange.
• Improvisation integrates teaching, learning, and evaluation. No other learning or evaluative process so faithfully resembles both subject and participant it attempts to serve.
• Templates such as Bloom’s Taxonomy of Educational Objectives and the SOLO taxonomy provide useful mapping devices assisting student profiling.

16 A three-fold model of learning comprising: attitude, process and skill, will form the subject of further research. Neuroscientists researching consciousness appear to leave “will” aside. (See Edelman, Gerald M. and Tononi, Giulio Consciousness: How Matter Becomes Imagination London: Penguin 2000, page 18.) At the “harder” end of psychology, cognitive and behavioural psychologists “train” will, while softer, human-centred psychologists (Rogers, Jung etc), examine its psychopathology, ranging from compulsion to creative choice and as far as symbolic and mystical interpretations.
and diagnosis but are linear. By contrast, the practice of improvisation may be considered as 2 interlocking models: 1) A horizontal continuum: Language, Forms, Concept and Spirit within 2) A Cycle: Attraction, Reproduction, Application, Manipulation, Modification, Transformation and Readiness.

- Improvisation is a process of absorption as a chosen object initially perceived as “outside”, is subjected to creative will and integrated.
- It is the teacher’s task to devise templates for understanding the creative process alongside methods of appraisal and evaluation.
- The nature of the improvisational process determines the quality of the learning experience and vice versa.
- Improvisation can be simultaneously expressive, experiential, analytical and reflective.

### 4.3 Music about music

_All conceptual thought about music is a detour, from music via terms to music,_

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whereas functional analysis proceeds direct from music via music.\textsuperscript{18}

Hans Keller

As well as contributing to a review and modification of a personal teaching practice, the research served to confirm and develop notions previously held but now further considered. For years, improvisation had been central to my personal teaching style (not solely within the context of jazz). Similarly, my experience of whole-brain learning with Janet Ritterman had raised my awareness of the effects and repercussions of verbal explanation adjacent to the essentially non-verbal actions of musicians - the cognitive alongside the affective. My experience continually demonstrates that students are able to absorb, reproduce, adapt, modify and transform musical devices in combination with sophisticated creative and organisational processes, paralleling the higher order verbs within the developmental learning taxonomies of Bloom and Biggs. This is common with improvised musical, as opposed to verbal processes begging the question whether there is a need to for musicians to verbalise at all. While assessment exercises requiring verbal or written explanation result in cognitive or intellectual outcomes, they discriminate against some musicians who prefer to let the “music do the talking”.

As a novice researcher I was delighted to discover support for this view within the academic musical establishment. Frustrated with words and critical traditional analytical methodology, the musicologist and broadcaster Hans Keller (1919-1985) developed and promoted “Functional Analysis”, a method of musical analysis using purely musical terms without commentary or explanation. This “music about music” would promote forms of engagement with music whereby the listeners and students would experience musical features through specially “composed” examples drawing on elements within the selected composition. As Keller explains:

If you want to get the emotional impact of an interrupted cadence, you have to feel the emotional impact of its terms of reference.\textsuperscript{19}

The purely musical method.... cuts straight across the sometimes unbearable divisions between musicologists and musicians, professionals and amateurs.... The whole problem of technical language is side-tracked. So far as the aim of functional analysis is concerned, the listener need never have heard of a first and second subject. (For that matter, Mozart never knew the German equivalents of these terms either.)\textsuperscript{20}

A “voice-leading graph”...could easily be outside the spontaneous experience of many a recipient, and would thus transgress the borders of what I consider legitimate analysis.\textsuperscript{21}

\textsuperscript{20} Keller, Hans “The Musical Analysis of Music”, op.cit.
A preference for discovery born of direct musical experience parallels the experience of improvisers and jazz musicians in particular, who employ a creative and educational practice that combines experiential, aural, oral, person-centred and rote-learning, practised (and performed) within short, repetitive forms. This is classic whole-brain learning. Neuropsychologists further support this emphasis providing scientific evidence for the verbal and non-verbal preferences in relation to the hemispherical functions of the brain:

Right hemisphere functions include “the ability to remember music, nonsense figures, and faces and to perform a variety of non-verbal, viso-spatial tasks.... Studies of auditory perception indicate a right hemisphere specialisation for the perception of melodies, musical chords, sonar sounds.... The principal characteristic which these right-hemisphere functions share, and which distinguishes them from the corresponding left-hemisphere functions is that they are non-verbal.22

Moving from a verbal bias towards a balanced whole-brain approach appears to be preferable as the left-brain assists us in producing detail and accuracy alongside the right brain’s capacity for perception. Interestingly, recent research suggests that music students use similar mechanisms for problem solving as science students, however, the former are more likely to employ a whole-brain approach.23

My experiences over 20 years, as well as those recorded throughout this research, support and reinforce a view that the mode of discussion and communication most intimately resembling music, is music itself. Whether teaching children, students or adult learners, the problems always begin with the introduction of words and nomenclature. While verbal discussion is of value in the conceptual, psychological and philosophical realms, the actual communication of the act of making music is best achieved within the immediate medium of music itself. Our intuition, experience, scientists and an eminent musicologist tell us this, while students who switch off in musical analysis classes or appear to be lost for words reinforce the view. This new knowledge must form a significant factor within our educational planning, diagnosis of needs and implementation of curriculum objectives.

Returning to Steve Watt’s point, "the mode of delivery should reflect the essential nature of the music", I respectfully wonder what took Keller so long.
