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12. TEACHING CO-CREATION

Paradoxes in Rock and Pop Ensemble Classes

> In the domain of arts-based rock and pop music, co-creative processes are essential in the formation of the artistic expression.
>
> (Behr, 2015, p. 18; Green, 2006, p. 106)

INTRODUCTION

All musicians intuitively know and understand the experience of co-creation in a band, but we have yet to develop awareness in Higher Education (HE) of the tacit knowledge and practices linked to these experiences. When teaching rock and pop ensemble playing in HE, we often limit ourselves to focusing, during classes, on the music tradition and the domain-specific technical skills. This frequently results in a retrospective product characterised by variations of reproduction (Christensen, 2013, p. 35) or merely a cover version, instead of an original and authentic art-based product and performance. Meanwhile, the same students can be capable of creating excellent, creative and authentic concerts with their own bands.

Today, it is often the degree of perceived authenticity of the performer (Moore, 2002, p. 210; Behr, 2014, p. 18) and originality of the performance (Hebert, 2011, p. 13) that separates the experience of pop and rock as entertainment (expectation affirmative in a closed form) or art (unpredictable in an open form). It could be considered paradoxical that we often end up reproducing originals, instead of teaching how to create an original expression and sound (Christensen, 2013, p. 35) – which is essential for the genre as an art form (Anthony, 2015, p. 142; Behr, 2015, p. 18; Hebert, 2011, p. 13).

There seems to be a lack of codified knowledge and methodology for working with these parameters in relation to rock and pop music as an art form. The purpose of this chapter is to map out an educational design structure for working dynamically towards authentic, co-creative and original performances in rock and pop ensemble classes in HE, while granting musical and personal autonomy to the students.

Institutional Background

The Royal Academy of Music, Aarhus (RAMA) is a music conservatoire providing HE in music. Achieving a high level of artistic performance skills is central to the

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coursework of both the performance and the teaching degrees. Student admission is audition-based, focusing on artistic performance skills, and no secondary degree or prior formal academic training is required. Since 2003 RAMA has followed university models, with graduate and postgraduate levels (Bachelor and Master degrees) as part of implementation of the Bologna process.

The Rhythmic Music Department at RAMA has existed since 1991. The Danish term *rhythmic music* covers music genres characterised by having pulse and an element of improvisation at their core, such as jazz, rock, pop, folk, and world music. The main objective of the curricula in the Rhythmic Music Department is to:

> …help students develop their musical and artistic personalities without forgetting the all-important aspect: to be able to work with others in a creative and dynamic manner… emphasis is placed on the individual student's creative and independent development as a musician, an artist, and a communicator. (RAMA, 2011, p. 3)

The learning objectives for ensemble playing in the RAMA Music BA (2011, p. 11) mention general, domain-specific crafts in the field such as:

- musical and technical skills at a level that supports working professionally;
- artistic skills are described as the ability "to make relevant artistic choices and assessments, especially with regard to developing his/her artistic expression";
- co-creative skills are emphasised as being "able to work in a creative, investigative, and analytical manner in a musical and artistic context" (p. 11).

Limitations of the Aesthetic Learning Tradition

RAMA traditionally provides ensemble classes largely based on aesthetic learning (Christensen, 2013, p. 35) formed by the professional skills and personal knowledge (Eraut, 2000, p. 114) of the instructors and the professional performance traditions in their domains. The strength of aesthetic learning, as with all apprentice ship-style learning, is that students learn the domain-specific technical skills and traditions (Eraut, 1994, p. 6) through social learning (Marquardt & Waddill, 2004, p. 188). Aural copying also leads to enhancement of the ability to listen to music and thus appreciate and understand more (Green, 2006, p. 115) on a tacit knowledge level (Eraut, 2000, p. 118). However, the traditional focus on aesthetic learning leads to several challenges in the educational setting of a rock and pop ensemble class:

- the focus on a pre-defined aesthetic product leads the students to replicate what is around them (Christensen, 2013, p. 35) and thus the result is reproductive instead of creative and authentic. Acquiring technical skills and traditional knowledge through aesthetic learning does not necessarily lead to developing artistic competencies;
- focussing on the musical text or inherent meanings may suggest that these are the only 'real' or 'important' aspects of music, thus ignoring the social and cultural

influences on both the production and reception of that text (Green, 2005, p. 190), as well as the importance and relevance of frames and obstructions for creativity to occur (Lehmann, 2012, p. 152);
- the assessment and student feedback refer to a pre-set but not explicit product influenced by instructor preferences (Christensen, 2013, p. 35). The format is closed, yet invisible;
- a structure or method for working with the creative process is not clearly stated (Christensen, 2013, p. 35) and hence is not part of the learning outcome;
- a lack of contextual understanding and limited methodological and practical abilities lead students to doubt their competence (Rønnestad, 2008, p. 283);
- fear of failure can become a stifling factor in the student's performances, artistic as well as educational.

It appears that the aesthetic learning tradition (Christensen, 2013, p. 35) can lead, for the students, to an imbalance between the learning objectives in curriculum and the actual learning outcomes of the coursework. Research and educational design development in similar domains of education, such as design (Sanders & Stappers, 2008) and dramaturgy (Lehmann, 2012), have shown that incorporating codified knowledge (Eraut, 2000, p. 113) from other domains can be beneficial for the development of propositional knowledge (Eraut, 1994, p. 43) and educational design. A similar development is still in its very early days at RAMA.

The Aesthetic Paradox in Ensemble Playing Classes

This leaves us with the paradox in rock and pop ensemble playing classes: the tradition of aesthetic learning leads to variations of reproduction instead of to creative and original artistic expressions, or creative structures that the students can benefit from in their future professions (Christensen, 2013, p. 35). New approaches, structures and methods for teaching the domain-specific tacit knowledge must be developed and applied to achieve the curriculum-defined artistic and co-creative learning objectives.

This leads to the research question for our pedagogic development project: What could be an appropriate design structure from an instructor's point of view for facilitating a learning process focusing on the co-creative artistic competencies in rock and pop ensemble playing classes in HE?

MATERIALS AND RESEARCH METHODS

In order to investigate this research question, the author conducted a pedagogic development project at RAMA with an ensemble class for one semester. Due to the performance orientation of the pedagogic development project with a focus on "problem-finding creativity" (Getzels & Csikszentmihalyi, 1976, p. 79; Sawyer, 2003, pp. 104–106; 2007, p. 45; 2012a, pp. 90–93) and process as the product, the

aim was not to study "what is true", but "what is worth doing" (Gergen & Gergen, 2012, p. 49).

The general aim of the pedagogic development project at RAMA was to:

- qualify teaching rock and pop ensemble playing in HE by focusing on the co-creative artistic competencies and collaborative perspectives;
- develop teaching methods for unarticulated tacit knowledge in this field;
- test co-creation as a conscious learning strategy and teaching method in rock and pop ensemble classes.

"To embrace co-creativity requires that one believes that all people are creative" (Sanders & Stappers, 2008, p. 9). Thus the main hypothesis in the development project in relation to working with co-creation in an arts educational setting is: creativity is not a special innate talent, but rather cognitive abilities and a lot of hard work within a framework that enables this (Sawyer, 2007, p. 124). The right approach and attitude for creativity to occur can be identified, managed, trained, and learned (Bono, 1970, pp. 11–13).

Socio-cultural definitions of creativity include the concept that the product or process must be novel and appropriate to the domain (Sawyer, 2012a, p. 214). "Creativity in bands is socially constructed" (Behr, 2015, p. 9) and, in particular, the result of a group effort (Sawyer, 2003, pp. 4–5), which in this pedagogic development project was sought during classes by taking into account the design of the structure and the facilitation of the coursework. In order to describe creativity and the related co-creative artistic competencies in a rock or pop band performance, theory and research from a broad range of related academic fields were applied, in an attempt to identify the co-creative artistic learning objectives, and reveal the underlying didactics and methodology of this pedagogic development project. The deriving educational design was tested with a RAMA ensemble class.

Class notes, class conversations, feedback from participating students and recordings of the student course evaluation were included in the analysis of the potential and limitations of the co-creative educational design approach.

Description of the Case Studied

The ensemble class consisted of 7 students, from Denmark (3), Finland (3) and Ireland (1), representing three different educational programmes in the Rhythmic Music department (Rhythmic Music, Rhythmic Music and Dance, and Global Music) and all study levels, from second year Bachelor students to final year Master students, playing drums, bass, guitar, plus four vocalists. Their previous experience in arts-based rock and pop ranged from some performance experience, to comprehensive performance experience and identity. The instructor participated on keyboards, and two of the vocalists occasionally played additional keyboards and piano. Each student had chosen this particular course from a range of ensemble class options. This freedom of choice in what to learn and when during their education

is hoped to be an enhancing factor with regard to the students' intrinsic motivation (Amabile, 1998, p. 79). The course comprised 10 x 2-hour lessons (process) during one semester and ended with a 20-minute public concert performance (product), followed by an evaluation of the course with the students.

General Course Structure

The primary idea behind the educational design was to mimic the work process of co-creative bands, as a similar learning environment "is essential to the tertiary popular music student's real world Knowledge" (Anthony, 2015, p. 144). The students at RAMA are already very competent on their instruments, and several other classes focus on developing technical skills. The group identity of bands is rooted in concrete actions, entangled in socialisation and creativity (Behr, 2014, p. 18). So our development project attempted to facilitate the co-creation of an artistic expression by designing "a conducive environment" (KEA, 2009, p. 32) for exploratory behaviour in rock and pop ensemble classes in "an atmosphere where people trust each other" (Ind & Coates, 2013, p. 89). This was inspired by the fundamental belief of action learning that "we learn best when undertaking some action upon which we reflect" (Marquardt & Waddill, 2004, p. 190), combined with a dialogic experience-based learning process.

Parallel to the role of co-designing researcher (Sanders & Stappers, 2008, pp. 12–13) and of action-learning coach (Marquardt & Waddill, 2004, pp. 197–198), the instructor conducted the workshop-based ensemble classes as a facilitator, actively and equally involved in the interactive musical co-creation process, while stepping in and out of the facilitating role. The task for the facilitating instructor was to bring the students into the co-creative process "in the ways most conducive to their ability to participate" (Sanders & Stappers, 2008, p. 14) by setting the right framework and defining tasks that enabled the students to have relevant co-creative experiences through group improvisations. "This means leading, guiding, and providing scaffolds, as well as clean slates" (Sanders & Stappers, 2008, p. 14) depending on the student's levels of creativity. "The students must be given freedom to explore" (Anthony, 2015, p. 143) as "individuals create through exploration, dialogue and experimentation" (Ind & Coates, 2013, p. 91).

Torunn Kjølner's general structure for *Conceptual Devising* (Kjølner, 2009) as a theatre production method was applied for a theoretical understanding of structuring the co-creative workshop process during the ensemble course. In brief, the group of students worked through three production phases during the semester:

- Phase 1: Create/generate material; through an open and improvisational approach the students work with stripped-down songs as a framework, exploring the potentials and different options of the material, while building a set of mutual co-creative concepts, values and trust.
- Phase 2: Composition and dramaturgy; students select the songs to be used at the concert and find an overall characterising concept/theme/atmosphere for devising their concert.

- Phase 3: Tests of concept/staging; this phase is the final concert and the way it is executed and evaluated.

Though all three phases are experienced in the development project, the emphasis in this chapter is on studying phase 1.

IDENTIFICATION OF THE DOMAIN-SPECIFIC CO-CREATIVE SKILLS

An attempt to identify the domain-specific aesthetic and educational characteristics in rock and pop formed the basis for the development of the co-creative educational design. The theoretical background and the deriving didactics and methodology in the course design will be presented in the following section.

Aesthetic Features of Arts-Based Rock and Pop

Post-modern rock and pop music can be regarded as a kind of modern folk music (Behr, 2015, pp. 1–6; Moore, 2002). There is an interaction between the music, the performer and the audience that can create identity-confirming recognition, as well as pose identity-evolving questions to the recipient. According to Behr (2014) rock can be understood as "a social construct of a particular way of making music" (p. 18), a set of practices that are subject to authentication in relation to a genre-specific methodology (p. 18) favouring interactions between band members (p. 16), group creativity (p. 6), and originality (Hebert, 2011, p. 13).

The co-creative process in the ensemble performance of a rock band seems to be a crucial element in the shaping of the artistic expression (Behr, 2015, p. 18; Green 2006, p. 106), and is arguably more important than the instrumental skills of each individual musician. History has provided a long list of brilliantly creative rock and pop bands formed by musicians with average technical skills, as well as brilliant rock bands where, after the band broke up, the solo careers and performances of the band members have not nearly lived up to the band's former level. This point of view is supported by contemporary systems-based theories of creativity that suggest creativity is not a singular effort, but rather a group process (Jones, 2014; Sawyer, 2007).

From an aesthetic point of view the borders between rock and pop are "open to question and dependent on both their context and the listener's position" (Behr, 2014, p. 5), and "distinctions between jazz and popular music are ill-defined at best" (Hebert, 2011, p. 15). This is especially the case in Europe, where the genres have been adopted from outside the culture and transformed into artistic expressions unattached to the cultural heritage, but with an added and integrated European cultural dimension. There is no distinction between jazz and popular music genres in the educational settings of the Rhythmic Department at RAMA. Still students and instructors tend to identify themselves as belonging more to one tradition than the other.

Though jazz and popular music are both originally rooted in blues music and have pulse and an element of improvisation at their musical core, numerous aesthetic and educational differences also exist. While competencies in rock and pop music are primarily based on "socially acquired informal knowledge" (McPhail, 2013, p. 45), competencies in jazz build on "socially developed but formally acquired disciplinary knowledge" (McPhail, 2013, p 45). Jazz ensembles have a tradition to build from. The jazz standard songs with similar harmonic structures provide a common frame with a corresponding well-developed set of musical tools and improvisation rules (Sawyer, 2003, p. 31, pp. 50–54). These can be taught formally (Green, 2006, p. 106), and applied by the individual musician when playing in a jazz ensemble (Sawyer, 2003, p. 31). However a similar formal learning tradition is lacking in rock and pop music, where the aesthetic and educational tradition is much more anarchistic in its nature. The musicians are primarily self-taught through informal learning, which takes place in groups, "involving discussion, watching, listening to and imitating each other" (Green, 2006, p. 106). Their primary task is to find the group's unique sound and ground rules for playing together in a co-creation of the vision, form and content (Hauen, 2011, p. 688) with an "emphasis on creativity and 'cutting edge' practices rather than cultural heritage" (Hebert, 2011, p. 13). The musicians "perform more than just musical functions. They are intrinsic to the 'character' of the band" (Behr, 2015, p. 11). While jazz ensembles are often defined and named by the bandleader, rock and pop bands are often defined as a collective with a group name.

The element of group improvisation, also called jamming, is a common and basic principle in the co-creative work process of most rock bands, but unlike in jazz ensembles, it happens without a common tradition and frame of standard songs and improvisation rules. Instead, the sum of the individual band members' musical taste, experience, skills, informal tacit knowledge and creativity (Green, 2006, p. 106) defines the frames for the group improvisations. The improvisatory elements in rock and pop are heavily based on factors such as energy, sound and personal characteristics in the playing style, and the musicians need "experience to gain the confidence to explore music and follow their instincts" (Anthony, 2015, p. 143). Improvisations are more often expressed as group improvisations of the song, rather than as an instrumental soloist with an accompaniment. The emphasis is on interpreting and performing the song, prior to any instrumental solos that might only be added to enhance the energy and expression of the song. The joint achievement is the focal point, but each musician and vocalist has a major responsibility for managing his/her personal role and contribution to it. It is a group performance with a broad management structure. This co-creative approach calls for more than the cooperative competencies of merely supporting and working through a general idea defined by an instructor or a bandleader (Hauen, 2011, p. 688).

An attempt to sum up the differences in the educational and aesthetic tradition of jazz and rock/pop ensembles is shown in Tables 12.1 and 12.2. The derived educational (Table 12.1) and aesthetic (Table 12.2) characteristics for arts-based

rock/pop ensembles formed the basis for the co-creative educational design (Table 12.3) and the corresponding structural elements (Table 12.4) in the educational development project.

Table 12.1. Educational differences in the tradition of jazz and rock/pop

Jazz	*Rock and pop*
Formal educational tradition based on: • Socially developed but formally acquired disciplinary knowledge • Formal education + organised jam sessions • Standard songs	Informal educational tradition based on: • Socially acquired informal knowledge • Self-taught through informal learning in bands • Original songs and radical interpretations
Improvisational rules & tools	Improvisation based on sound, energy, and personality
Task: Build on/from tradition	Task: Find the group's unique sound and ground rules for playing together

Table 12.2. Aesthetic differences in the tradition of jazz and rock/pop

Aesthetic characteristics in jazz	*Aesthetic characteristics in rock and pop*
Cultural heritage	Creativity and cutting edge practices
Excellence in performance	Perceived authenticity in performance
Build from tradition	Break with tradition, no common tradition
Musicians perform musical functions	Musicians intrinsic to the 'character' of the band
Individual improvisations over the chorus/ theme	Interpreting the song through group improvisations
Individual soloists + accompaniment	Group improvisation prior to individual solos
Bandleader defining vision, form and content	Joint group co-creation of vision, form and content
Named after the bandleader + number of musicians	Defined as a collective with a group name

CO-CREATIVE CONSIDERATIONS FOR THE EDUCATIONAL DESIGN STRUCTURE

Playing in a band is a highly complicated co-creative group performance with multiple factors in play (Sawyer, 2003, pp. 4–5), where the self-directed improvising band members reach "insights and direction through the process of interaction and mutual self-commentary" (Ind & Coates, 2013, p. 91). Co-creation occurs in communities centred around voluntariness, confidence, desire and interest, where all community

members contribute to the co-creative process with a focus on the common good while constantly seeking innovation (Hauen, 2011, p. 691). "Co-designing requires creative initiative on the part of the entire team" (Sanders & Stappers, 2008, p. 9). Hence group creativity involves distributed cognition when integrating individual contributions in the formation of the collective product (Sawyer, 2012a). "People will be most creative when they feel motivated by the interest, satisfaction, and challenge of the work itself – and not by external pressure" (Amabile, 1998, p. 79). By giving individuals space to be themselves, while using their creative power in favour of the group (Hauen, 2011, p. 691), co-creative communities obtain not only better ideas – as collaboration over time is the best way to distinguish good ideas from bad (Sawyer, 2007, p. 124) – but also very inclusive results (Hauen, 2011, p. 691).

These co-creative aspects were integrated into the educational design by making group improvisation the foundation of class activities. All songs were approached as frames for improvisation and playful co-creation, instead of as a preconceived end point. "Play provides the freedom to do things differently on each occasion" (Ind & Coates, 2013, p. 90), and thus emphasise the creative element of co-creation in rock and pop ensemble playing. To avoid musical habits of thought and to encourage exploration, the songs chosen by the instructor were either supposedly unfamiliar to the students, or original compositions by the instructor, presented in an open, basic version that was easy to learn and remember, but did not provide straight answers as to how it should be played. The intention was to have the students work in a format closer to the aesthetic tradition of the musical genre. Also, inspired by co-design methodology, we aimed to change the students' role from passive consumers to expert adaptors of their knowledge and experience (Sanders & Sstappers, 2008, p. 12), whilst enhancing the level of motivation in the process and authenticity of the product through group improvised student contributions. However, in order for the students to do so, "they must be given appropriate tools for expressing themselves" (Sanders & Stappers, 2008, p. 12).

Problem-Finding Creativity

Most studies in creativity focus on fixed end products that can be analysed. But in the case of art-based rock and pop music, the process during the performance *is* the actual product (Sawyer, 2003, p. 5). The high level of improvisation in the group performance challenges the way we look at it in an educational context, as there is no fixed end product or defined end goal, bar the one "intrinsic to the performance itself – to perform well and to entertain the audience" (Sawyer, 2007, p. 45). The improvising artist must find ways to allow this to happen by taking advantage of ideas and accidents as they occur (Ind & Coates, 2013, p. 90) from the moment-to-moment contingency (Sawyer, 2012b, p. 72). The type of creativity involved in an improvised aesthetic product is called "problem-finding creativity", as opposed to "problem-solving creativity" (Getzels & Csikszentmihalyi, 1976, p. 79; Sawyer, 2003, pp. 104–106; 2007, p. 45; 2012a, pp. 90–93). While problem-solving creativity

has a defined goal – a problem that needs to be solved – problem-finding creativity seeks to find and define the problem, or challenge, while solving it (Getzels & Csikszentmihalyi, 1976, p. 83; Sawyer, 2007, p. 45). Improvising musicians notice small emerging musical ideas, motifs, patterns, possibilities, and contrasts, explore them and build upon them, use them as a frame or an obstacle, while playing. In order to find a creatively significant problem, "changing elements and introducing new combinations… is more likely to contribute to an original solution" (Getzels & Csikszentmihalyi, 1976, p. 92).

Three dimensions are important in problem-finding creativity, according to Getzels and Csikszentmihalyi (1976):

- "openness to the problem" (pp. 90–91), in this case the song or frame given for the musical improvisation and performance, as well as the length of time the problem remains open;
- "exploratory behaviour" (p. 91) while playing;
- added "changes in the structure and content of the initial problem" (p. 91).

These actions delay the problem-solving process and prevent premature fixation on an unoriginal problem that might lead to unoriginal solutions (pp. 91–92). This is suggesting a very different approach in the ensemble classes from the traditional aesthetic learning processes based on teacher instruction and reproduction. "Early fixation on a melodic line or other musical decisions might influence the subsequent outcome" (Kleinmintz, Goldstein, Mayseless, Abecasis, & Shamay-Tsoory, 2014, p. 7). Instead, keeping the form of the song open and for as long as possible, while exploring it through improvisation and different added obstructions (e.g. a change of instrumental roles, tempo, rhythm, groove, harmonies, key, dynamics, sound effects, emotions, lyric interpretations), should enhance the level of creativity and originality in the performance. Conscious structural thinking triggers other opportunities for approaching elements in art production than a merely aesthetic approach, opportunities you would hardly have come up with through purely aesthetic entrances (Christensen, 2013, p. 35).

Affirmation and Openness to Problems

An open-minded affirmative approach and communication (Lehmann, 2012, pp. 151–152) is arguably the most important mindset and attitude for students to adopt. Exploring open formats while changing perspectives and structures demands an affirmative communication and mindset for options and stimuli to keep emerging.

The facilitating instructor articulated this competence as a ground rule for communication in the class. Statements were commented and rephrased when critical, vertical-thinking mindset and communication took over. So "I don't like that chord" (critical and closing) was rephrased as "that's an option" (affirming the idea), "what if we played another chord there?" (generative and open). This

demonstrated effectively the difference in mindsets and modes of communication, and the subsequent responses and reactions. Affirmative communication generated options instead of rejections. The effect of the change was instant, liberating and motivating for the students. A similar affirmative approach was sought in the musical communication, and additionally taught and conceptualised through applied theatre and drama exercises.

Action Learning and Problem-Finding Creativity

An educational parallel to problem-finding creativity is found in action learning, where open-ended problems, project tasks or challenges of importance to the group or individual are used "to excite the interest of the participants in what they cannot see already" (Marquardt & Waddill, 2004, p. 190). The problem "creates a hook for experimentation using stored knowledge" (Marquardt & Waddill, 2004, p. 190), in a process that emphasises questions and reflection.

In group improvisations, the identity of a creative problem does not exist until musically expressed and communicated in some way. "Problems only 'exist' when declared by social agreement" (Jones, 2014, p. 97). Other band members finding and reacting to the problems already available in the music, offered by their improvising peers, is what distinguishes musical problems as creative hooks for experimentation from noise in the music. A musical statement needs a reply, to become conversational and acquire meaning through this retrospective interpretation (Sawyer, 2012b, p. 72). Hence another ground rule for playing in the ensemble class was to seek problems to build on, and focus on "taking in", listening and responding, prior to "sending out". The instructor articulated this in the ground rules "make the others sound good", and "make it possible" (by adding interactional meaning to or offering ways out of musical statements). These proved to be simple, efficient and creatively more generative tasks than the stifling idea of having to come up with something interesting on the spot. Also, they assisted in building a safe, conducive environment for improvisatory explorations, as any impulsive musical statement was likely to be picked up and built upon, enhanced and made better by the others, if they stuck with their idea long enough for anyone to be able to notice and respond.

APPLICATION OF THE EDUCATIONAL STRUCTURES IN CLASSES

Examples of how the educational design was facilitated during classes will be presented in the following section.

Tuning into a common group 'breath' and impulse: The frame for the first ensemble playing exercise was to improvise collectively, starting by exploring one single note (A). A pulse was not to be added before an impulse for it derived naturally from the improvisation. Same rule was applied (but not directly expressed) for adding other notes. The group improvisation evolved naturally and showed the students had good improvisational skills and listened attentively and responded accordingly to

each other's ideas. When a common pulse and groove was established, the instructor added a very simple, melodic three-note line based on an A major triad and a short lyric consisting of 8 three-syllable phrases for the vocalists to elaborate on and improvise from. The group improvisation went on for about 15 minutes before finding a natural ending. The instructor then opened the class discussion by asking: "What did you experience?" This facilitated an experienced-based discussion about some of the basic co-creative competencies in rock and pop music:

- fear as a stifling factor in co-creativity. Fear of rejection and fear of the space a completely open improvisation provides;
- how the pulse and introduction of a simple melodic structure provided frames for improvisation and scaffolding for a direction in the co-creation of a more song-based and rock/pop sounding group improvisation;
- roles in the music: taking the lead through clear initiatives and musical statements or backing up the lead by supporting and enhancing it or adding contrasts to it musically. These lead/supporting roles were mutable and impulse-driven during the improvisation;
- frames and limitations as an idea-stimulating and fear-diminishing factor in creativity;
- an introduction to the CSP-zone model (Allan, Kingdon, Murrin, & Rudkin, 2009, p. 176) introducing the concepts of the comfort/stretch/panic zones, identification of the corresponding emotions, and the importance of stretch zone behaviour in creativity.

The ensemble playing exercise was repeated, followed by a class discussion adding recognition of and further perspectives to the themes listed above.

Song introduction. After this exercise, the instructor introduced the students to the song "Squares" (The Beta Band) by singing and playing the three basic parts of the song. Each part consists of one melodic line that is repeated with variations in the lyrics. The harmonic base for all three parts was presented as one chord (F minor) with an optional descending chromatic four-note bass line. The groove was presented as shuffle. These elements provided the scaffolding for the next group improvisation.

The themes in the class discussion that followed were:

- the amount of information downloaded in relation to traditional ensemble playing classes and originality in the performance;
- the comfort zone provided by the shuffled groove and the style indicating musical roles, and at the same time how stifling these musically ready-made roles were for coming up with original ideas;

This was followed by a new group improvisation of "Squares", but this time with even notes as the groove. The enhancement of originality in this performance was noted in the class discussion and the importance of keeping the format open for creativity to occur was confirmed. Thus, in one session, the students had identified the impact of rules and frames on creativity, experienced and articulated both panic

zone, stretch zone and comfort zone behaviour and how these impacted their co-creativity in ensemble playing.

Action Learning through Co-Creation

From a social constructionist perspective, knowledge production and social action go together (Burr, 2015, p. 5). In addition to co-creation of music, the students also co-create tacit and propositional knowledge as individuals and as a group while revealing new realities through musical and verbal dialogue (Camargo-Borges & Rasera, 2013, p. 4; Green, 2006, p. 106). The instructor-facilitated conversational approach (Iversen, Pedersen, Krogh, & Jensen, 2015, pp. 5–6) to experience-based reflections and class discussions, and the informal social interactions of the students (Eraut, 2000, p. 120), are important factors in the transformation of tacit and codified knowledge into propositional knowledge (Eraut, 1994, pp. 107–116; Rønnestad, 2008, p. 290), as language gains its meaning through experience (Burr, 2015, pp. 9–12). Thus social experience and language both play a vital part in the learner-led co-creation of new perspectives and propositional knowledge of creativity in ensemble playing, as well as in the collaborative development of the emerging artistic expression (Sawyer, 2012b, p. 72).

It is common for trained musicians to think of music as a language due to the inherent meaning of the musical syntax of sounds and silences, and socially and culturally delineated meaning (Green, 2006, p. 102). Hence, for trained musicians, music also gains meaning through experience and dialogue. "Most improvisation practice is conversational and takes place in a group setting" (Kleinmintz et al., 2014, p. 7). Conversations lead to flow, emerging "from the successive individual contributions of the participants" (Sawyer, 2012b, p. 63) and flow leads to creativity (Sawyer, 2007, p. 43). Realities are created "through language, in its varied forms of presentation, stimulating a process of continuous creation" (Camargo-Borges & Rasera, 2013, p. 3). By making equal participation (Sawyer, 2012b, p. 72) in musical improvisation, instead of instruction, the centre of the social action of the ensemble class, the students are freed through spontaneity to relate and act in the moving, changing world around them (Spolin, 1999, p. 4), and empowered to co-create an authentic artistic expression through the collaborative emergence (Sawyer, 2012b, p. 72) of the musical communication.

Instructor Facilitation of Reflection

Meaning emerges while creative impulses and ideas are being used, and "in the conversations that recipients have with each other" (Ind & Coates, 2013, p. 91). So the co-creative activities were followed by the instructor posing unbiased, open-ended questions, thus allowing the students to reflect, express their experiences and emotions. In this way they developed a domain-specific language and acquired experience-based propositional knowledge through the co-creative work with the music. To avoid a sense of approval/disapproval of their artistic expressions and

thus enhance artistic authenticity (Spolin, 1999, pp. 6–9), the instructor's feedback and evaluation focused on their problem-finding exploratory behaviour and co-creative approaches (process), rather than on their aesthetic and musical choices (product), and was based on the students' own wordings and experience-based reflections.

The facilitating instructor assisted in condensing themes and concepts, topics and challenges from the experience-based class discussions, and related these to codified knowledge and applicable domain theories (Sanders & Stappers, 2008, p. 14) when relevant. "The degree to which teachers can create links between informal and formal knowledge" (McPhail, 2013, p. 43) and thereby extend students' understanding and conceptual abilities, can be "a key factor in student engagement" (McPhail, 2013, p. 43).

By extending the time of reflection-in-action during ensemble classes through experience-based class discussions, and thus including a reflection-on-action, the desired functional closure of the reflection-in-action leading to a professional co-creative approach and competent behaviour (Rønnestad, 2008, p. 288) could be facilitated. Time is a factor in knowledge creation, and a similar extension of the time in musical exploration and reflection-in-action through improvisation in an open-ended format of the song is desirable in co-creative ensemble playing, as "systems inquiries require the learning and re-integration of new thinking that occurs over successive explorations and exchanges" (Jones, 2014, p. 125).

RESULTS

Two main contributions were derived from the pedagogic development project:

- structures for a co-creative educational design (Table 12.3) inspired by the informal educational tradition in rock and pop ensembles (Table 12.1), incorporating the educational characteristics and corresponding learning objectives (Table 12.3).
- a mapping of the structural elements of the educational design and corresponding co-creative competencies (Table 12.4), derived from the aesthetic characteristics of rock and pop ensembles (Table 12.2).

The Co-Creative Workshop-Based Teaching Process

The facilitating instructor has three possible threads of interaction: structure, content and process. By changing perspective of the content from product to process and thus incorporating the aesthetic and educational tradition of art-based rock and pop ensembles (Table 12.1 and 12.2) in the educational design (Table 12.3), other competencies and structural elements of the co-creative group process are revealed (Table 12.4). By including these in the educational design (Table 12.3), genre-relevant structural framework for facilitating the co-creative process is provided, enabling "conceptualisation and operationalisation of co-creation challenges and opportunities" (Degnegaard, 2014, p. 104) by the design. Generative, empathetic and

Table 12.3. Co-creative learning objectives and corresponding co-creative educational design approach in rock and pop ensemble classes

Informal educational tradition in rock and pop based on:	*Corresponding co-creative learning objectives*	*Corresponding co-creative educational design approach*
Socially acquired informal knowledge	Intrinsic motivation, engagement, interest	Task and term clarification, change of structures
Self-taught through informal learning in bands	Participation and experience-based reflection, respect, affirmative communication, voluntariness	Facilitation of an affirmative, conducive environment for group exploration and reflection, openness to problems
Original songs and radical interpretations	Lateral thinking skills, aesthetic sensitivity, desire	Using original material or unfamiliar songs as frames
Improvisation based on sound, energy, personality	Use of emotions, courage, trust, readiness, confidence	Exploration through added obstructions, use of emotions, lyrics interpretation
ARTISTIC TASK Find the group's unique sound and ground rules for playing together	ARTISTIC COMPETENCE Authentic performance, co-creating an original artistic group expression	INSTRUCTOR TASK & COMPETENCE Facilitate an art-based conducive environment for artistic co-creation in rock and pop ensemble classes

trans-disciplinary methods (Jones, 2014, p. 99) can assist the instructor in facilitating the complex bottom-up processes of collaborative emergence (Sawyer, 2012b, pp. 71–72) in improvisatory musical co-creation, the action learning on which the rock and pop ensemble class is based. Hence the educational design practices of the co-creative process become more systemic, transparent, and in accordance with the learning objectives of the RAMA curriculum.

DISCUSSION

Creativity research has found "it takes a minimum of ten years of hard work and practice before attaining the high level of performance that results in great creativity" (Sawyer, 2007, p. 124). Thus, in an educational setting, rather than focusing on the quality of the current end product, it may be preferable to study the process and structures enabling development that qualify the student to reach this level of artistic competence in the future. The creative paradox that the goal is achieved through abandonment of target steering (Lehmann, 2012, p. 153) is very much in place here and is fundamentally different from the reproductive aesthetic learning tradition. Lehmann's (2012) two other creative paradoxes – that proactivity occurs through reactivity (p. 152), and that freedom is won through limitations (p. 153) – are telling us something about how this can be achieved

Table 12.4. Corresponding co-creative competencies and structural elements of the educational co-design approach

Aesthetic characteristics of rock and pop	*Corresponding co-creative competencies*	*Corresponding structural elements of the educational co-design approach*
Creativity and cutting edge practices	Openness to problems, exploratory behaviour, changing perspective	Facilitate a conducive environment and scaffolding for problem-finding creativity and exploratory behaviour
Perceived authenticity in performance	Group improvisation, presence and spontaneity at the centre	Group improvisation and spontaneity at the centre, process prior to product
Break with tradition, no common tradition	Stretch zone behaviour, playful co-creation, flow	Match challenges with competencies, songs perceived as frames for playful co-creation
Musicians intrinsic to the 'character' of the band	Sharing personal knowledge and experience	Enable students to apply and share knowledge and experiences
Interpreting the song through group improvisations	Open approach, affirmative communication, suspend judgement, understand and nurture ideas, change perspectives, reactivity	Keeping the format open, feedback beyond approval/disapproval, nurture ideas, change perspectives, apply frames, add obstructions.
Group improvisation prior to individual solos	Contingency preparedness, readiness, let go of control	Focus: Joint achievements, make the others sound good
Joint group co-creation of vision, form and content	Achieving results by abandonment of pre-conceived endpoints, letting go of personal baggage	Equal participation in music making, facilitation of experiences and group reflection, pose questions, relate experiences to codified knowledge
Defined as a collective with a group name	Working as a band, not an ensemble class	Approach students as competent peers

through training of reactivity and readiness in improvisational explorations, in an affirmative, conducive environment of frames and rules, enabling the dissolution of an ultimate goal into concrete tasks.

Instructors tend to teach the way they have been taught, in this case, meaning informal learning or methods inherited from classical or jazz music education, with a formal educational base and different aesthetic learning outcomes. To change this, the instructors have to be creative, too, in their role as facilitators, and develop new approaches to the way they teach and what they teach. Moving focus from a fixed product to an open process may feel like a radical, unsettling change of

paradigm, challenging the instructor's self-confidence. However "if the conclusion of the process was already evident, there would be no creation" (Ind & Coates, 2013, p. 91). This supports the importance of the development of a theoretical and methodological basis clarifying the relevant qualifications for rock and pop musicians. In other words, theoretically grounded, arts-based teaching practice as the foundation for reflection on personal and group competencies in the field.

Students already possess tacit knowledge about creative processes from their professional experiences outside HE. Transforming this tacit knowledge into codified and propositional knowledge through experience-based reflections can strengthen their contextual understanding and experience of professional competence. In the aesthetic learning tradition of rock and pop ensemble classes at RAMA, the students are generally left to reflect on their experiences by themselves. This might indicate some of the reasons why this learning tradition does not lead to developing the required co-creative competencies. They are neither being experienced nor articulated.

Looking at the learning outcomes articulated by the students during the class evaluation, it is noticeable that the majority of the responses were related to lateral thinking, while Amabile (1998) argues that this is a hard skill and slow process to develop (pp. 79–80). However, the responses do not tell to what degree these lateral thinking skills have been developed by the students, but merely that they have gained an awareness of them and articulated their tacit knowledge in this area and thus transformed it to codified and propositional knowledge (Eraut, 1994, pp. 107–116). The language they used indicates that the knowledge has been primarily produced through action-based reflection, rather than transferred as codified knowledge.

Each class is a unique group of students who will develop a unique construction of knowledge. However, multiple studies of the co-creative educational design structure and how various groups of students behave in it might reveal some patterns of general learning outcomes and general limitations of the educational design and didactics. Research into the long-term effects on students and how the co-creative methods have been incorporated in their further artistic development may show how dependent students were on the facilitator and whether they can apply the knowledge independently without facilitation in future processes.

CONCLUSION

Lehmann's three paradoxes of creativity, together with the three dimensions of problem-finding creativity, suggest some reasons why the traditional aesthetic learning approach is not helping us to develop artistic co-creative competencies in class. They also suggest alternative approaches.

Social constructivist theories hint that we cannot pinpoint what knowledge the students will produce during these classes. However, a general design structure for the process management and facilitation of the classes might be a more relevant focus point for figuring out "what is worth doing". We can identify relevant competencies,

mindsets and approaches enabling the students to navigate in such a structure, and facilitate options for experiencing and learning these through the educational design. However, the outcome of other competencies and skills they will develop, creative as well as artistic, will be highly dependent on the unique sum of people in the actual class, what shared experiences they will produce, and what language, mindset and culture they will develop and adopt.

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