



Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

de Bruin, LR;Williamson, P;Wilson, E

Title:

Apprenticing the jazz performer through ensemble collaboration: A qualitative enquiry

Date:

2020

Citation:

de Bruin, L. R., Williamson, P. & Wilson, E. (2020). Apprenticing the jazz performer through ensemble collaboration: A qualitative enquiry. INTERNATIONAL JOURNAL OF MUSIC EDUCATION, 38 (2), pp.208-225. <https://doi.org/10.1177/0255761419887209>.

Persistent Link:

<https://hdl.handle.net/11343/311544>

Apprenticing the jazz performer through ensemble collaboration: A qualitative enquiry

International Journal of
Music Education
1–18

© The Author(s) 2019

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/0255761419887209

journals.sagepub.com/home/ijm



Leon R de Bruin 

Paul Williamson 

Monash University, Australia

Emily Wilson

The University of Melbourne, Australia

Abstract

The one-to-one teacher–student relationship is a common learning configuration within jazz education. However, opportunities to learn through engagement in ensemble performances and industry-level recording opportunities with esteemed jazz performers are rare classroom environments the tertiary jazz music institutions offer. This qualitative study examines ‘real-world’ jazz performance contexts within an Australian tertiary music course, exploring students’ learning experience spanning three diverse collaborative projects. Bandura’s Social Cognition Theory is utilized to elucidate an ecological system of musical development, where learning occurs in a social context within dynamic, reciprocal interactions between learners, environment and students’ adaptive behaviours that are bounded by context, culture and learner history. Findings from pre- and post-participation interviews reveal student and educator perspectives of engaging in authentic experiential learning situations. A stratum of positive influences impacting students included metacognitive, behavioural, emotional affordances, as well as the cultivation of a wider social, environmental and cultural/creative confidence and an expanding collaborative community influencing individuals’ learning decisions. Students and educator participants expressed professional-level expectations, real-world outcomes, and a deeper musical connection and understanding by students of the guest artist/composers’ intention, musical aesthetic and expert band direction. The authors maintain that inclusion of experience-based education and embedding of authentic professional industry experience and creative music-making contexts within educational settings enhance the learning of students and potentially enculturate richer musicianship in students and their developing creative communities.

Corresponding author:

Leon R de Bruin, Faculty of Education, Monash University, Clayton, VIC 3800, Australia.

Email: leon.debruin@monash.edu

Keywords

Creative pedagogies, improvisation, jazz education, social cognition theory

Introduction

Interpersonal learning relationships that evolve from ensemble activity can provide significant impact on students' capacity to develop individually and collectively. Literature consistently notes the substantial role that peer and teacher relationships play that emphasizes the socially embedded nature of learning (Rogoff, Baker-Sennett, Lacasa, & Goldsmith, 1995) and the ways this can transform patterns of participation and students' success (Baik, Naylor, & Arkoudis, 2015; de Bruin, 2017b; Martin, Marsh, McInerney, Green, & Dowson, 2007). The development of improvised and popular music-making in conservatories has promoted the synthesizing of an individual's process of developing knowledge and growth with their teacher in the one-to-one lesson with impactful communal methods that add to the qualities of improvement and progress in the student musician (Gatien, 2009; Lewis, 2002; Prouty, 2008).

An enduring question facing educational researchers who work within sociocultural paradigms is the relationship between individual learning and group-level knowledge; of how each influences the other (Bourdieu, 1986; Bronfenbrenner, 2005; Cairns & Cairns, 1995; Rogoff, 2003), and how learners absorb group experiences and reflect and reflex in the ways to cultivate individual strategies that align with contextual creative demand (de Bruin, 2019). The educational goal orientation in this context is to equip learners with knowledge acquired in the ensemble that can then be transformed into individualized skills that can also be utilized in performance in other groups. Exploring what and how individuals learn from their participation in group musical performance, this study focuses on a key feature of teaching improvisation: the balance between understanding stylistic conventions and traits, and creative freedom of expression (Clarke, 1988; Pressing, 1988). Understanding this balance is the key to understanding how individual musicians learn to negotiate improvisational musical creation.

This investigation of music performance (jazz and improvisation) in a conservatory creative music ensemble aims to examine how action and reflection within dynamic systems influence music students' learning. A sociocultural framework was utilized to view the development of student learning as supported by a rich environmental and social ecology of students, teachers and guest artists within a dynamic learning and teaching module at the Sir Zelman Cowen School of music, Monash University Melbourne, Australia, where development and growth was tracked over 9 months. A diverse performance schedule of the Music School's Art Ensemble and School of Music Artist-in-Residence ensembles was used to examine peer, teacher and ensemble (both) influences on learning and developing expertise as the students' progressed through more conventional and exemplar-driven learning to more experimental and personally explored modes of improvisational expression. The study investigated the learning immersions of undergraduate music performance students, performance teachers, visiting international and Australian touring collaborative artists, and new compositions by Australian and European composers.

Research supporting music-learning within collectives or ensembles is legion, asserting how collectivity can be a rewarding and fulfilling activity (Kokotsaki & Hallam, 2007), help develop belonging (Berthelot, 2017), promote collaboration (Ben-Tal & Salazar, 2014), establish common goals (Steinbeis & Koelsch, 2011) and promote a synchrony among learners (Oullier, de Guzman, Jantzen, Lagarde, & Scott Kelso, 2008). This entrainment and synchronic process has been shown to create social bonds and reciprocity (Hove & Risen, 2009; Lakin, Jefferis, Cheng, & Chartrand, 2003), and increase cooperation between individuals (Wiltermuth & Heath, 2009), and perceived group entitativity of shared unity, coherence and creative and social targets (Lakens, 2010).

Students cultivate motivations, desires and support from peers and teachers who help to nurture and encourage responsibility for outcomes and goals and provide a collective support mechanism additional to direct music-learning (de Bruin, 2016). This is an enduring aspect of learning carried forward into professional realms of creative music-making (Monson, 1996).

Studies investigating the influence of peer support acknowledge the connections and personal relatedness upon personal and emotional levels that can provide a wider benefit of academic motivation, engagement and achievement (Kiefer, Alley, & Ellerbrock, 2015). The concept of communities of musical practice has been used to describe the communal process that assists in the development of competence and construction of new skills generally (Wenger, 2009) and in jazz improvisation ensembles specifically (de Bruin, 2016; Kenny, 2014). Research demonstrates the importance of positive interpersonal relationships for healthy human functioning and achievement (Bandura, 1991; Rogoff et al., 1995) and in functional improvisational creativity (Berkowitz, 1996). More fine-grained investigation has asserted a diversity of relationships can exist that foster growth via help for tasks and challenges, emotional support in daily activities, and companionship in shared activities (Gutman, Sameroff, & Eccles, 2002), as well as contributing to social and emotional development (Abbott & Ryan, 2001).

Of salience to this study, jazz ensemble participation has been asserted as promoting creativity in learners (Creech & Hallam, 2017), cultivating peer mentoring musically and socially (Goodrich, 2007), as well as developing collaborative creativity and metacognitive strategies that facilitate student mastery of improvisational skills (de Bruin, 2017a; Wesolowski, 2013).

Studies concerned with the learning of improvisation within university ensembles have investigated the social psychology of collaborative groups; the development of group collectivity; and entrainment of learners towards performance conventions, styles and refinement of performance aesthetics (Gibson, 2010; Phillips-Silver, Aktipis, & Bryant, 2010; Sawyer, 2008). Becker (2000) further describes these expectations as the *etiquette* of improvisation, with Monson (1996) and Berliner (2009) underlying sets of social conventions learned through a process of professional socialization.

This study explores student and teacher understandings of musical and improvisational development. Exploring and development of students' and educator responses to professional-level expectations and real-world outcomes to learning the study reports on the social, environmental and cultural influences on individuals' cognitive, behavioural and emotional learning decisions from practice and ensemble experience. Bandura's (1991) social-cognitive theory (SCT) is utilized to explore the interaction between peers, teachers, friendship community and the societal landscape within communal musical events that impacts and steers personal musical development. Investigating how peer, teacher and environments influence student learning behaviours, the study considers the interactions of students within the learning environment and how learning relationships significantly impact general social and emotional development, as well as within formal and informal music-making activities and learning (de Bruin, 2016, 2018b). Acknowledging that the developmental needs of all students are larger than what a tertiary music school can address alone, this study thus analyses how these musical needs are met through relationships we hardly notice between teachers, peer groups and other members within a complex social microsystem.

SCT and regulation of learning

SCT posits that social context, environment and behaviour are dynamically and reciprocally interactive aspects of learning (Bandura, 1991). SCT places emphasis on social influence and its impact on external and internal social reinforcements to learning. SCT considers the unique way in which individuals acquire, maintain and develop behaviour, while also considering the social environment

in which individuals interact and reflex their actions and behaviours. The theory accounts for a person's past experiences, influences reinforcements and expectations, all of which shape whether, and the reasons why, a person will engage in specific behaviours and the reasons why a person engages in that behaviour.

SCT views learners as the managers and agents of their own endeavours, and they make intentional decisions to invest in learning and enact behaviour change (Bandura, 2001). The four components that influence human agency are (a) intentionality, (b) forethought, (c) self-reactiveness and (d) self-reflectiveness. Bandura (2001) states that, 'an intention is a representation of an action to be performed. It is not simply an expectation or prediction of future actions but a proactive commitment to bringing them about' (p. 5). As active agents of their own musical and social learning, students demonstrate intentionality setting goals needed to attain new behaviours, adjusting their motivation and self-efficacy to change and adapt. Individuals demonstrate forethought by anticipation of consequences of decisions to themselves, others, and the environment in both goal setting and in choosing to enact new behaviours demonstrating the intrinsic connectivity between Bandura's theory and metacognitive processes.

Learners engage metacognitively by purposefully adjusting their cognitions, behaviours, motivations and emotions to achieve learning goals. Learners engage in planning, reflection and self-feedback (Zimmerman, 2011) and while self-regulated learning demonstrates the role of regulation in individualized learning environments, socially-shared regulation of learning engages group members interactively in collaborative tasks triggered by authentic challenges that operate within a cyclical nature of task understanding, goal setting, planning and adaptation (Hadwin, Järvelä, & Miller, 2011).

Within the dynamic and complex social world of musical training in the conservatoire, learners evolve, adapt and self-regulate behaviour within vibrant and dynamic learning communities (de Bruin, 2016). Students self-regulate individually, co-regulate with teachers in the one-to-one lesson, as well as socially share regulation of learning within ensembles (de Bruin, 2017b). Learner processes consider 'reflection in action', whereby students acquire knowing-in-action under the tutelage of expert practitioners, and 'reflection on action', the deliberate review of one's actions on observed or experienced outcomes (Schön, 1983). The self-monitoring and self-evaluation of performance based on benchmarks or the performance of others promote the recognizing and self-realization of behavioural patterns and personal response to situations (Zimmerman, 2011). It involves affective self-reaction to valuing new knowledge and engaging in learning as well as self-reflection through evaluation of the results of actions (Bandura, 2001). Learners further motivate to replicate and advance new skills and behaviours and identify with teachers/role models. As Bandura (1991) states, 'many of the decisional rules for exercising control over dynamic environments must be learned through exploratory experiences' (p. 255). The music ensemble can ignite self-regulation and self-efficacy of tacit knowledge, by bringing together master performers/teachers together with learners who are crafting their expertise within zones of proximal development (Vygotsky, 1978).

The impact of learning relationships

High-quality learning relationships allow individuals not only to learn that certain beliefs are useful for functioning in particular environments, but that they actually internalize those valued by teachers and become part of the individual's own belief system (Wentzel, 1999). In a music-learning context, good interpersonal relationships with a particular instrumental teacher or exponent of improvisation are likely to lead students to internalize at least some of that teacher's beliefs and values about how to learn, sound, conceptualize and act (de Bruin, 2017b). Learning is supported through both 'hard'

and ‘soft’ scaffolds (Saye & Brush, 2002), static hard supports such as reading and rote learning of technical exercises, and dynamic ‘soft’ supports built from developing interaction.

These strategies enable a cognitive and social congruence through knowledgeable communication gained informally and empathically with students (Schmidt & Moust, 2000), developing a confluence of goals, aims and understandings (de Bruin, 2018a). This is acquired not only through verbal communication but also through student imitation, assimilation and cultivation of creative strategies that reflect at developing a cognitive architecture (Kirschner, Sweller, & Clark, 2006). Having the potential to be transferred to various learning settings, students learn not only how to behave in particular settings but also how to conduct and carry oneself as a burgeoning professional musician in situations more generally (Ryan & Deci, 2000).

It is from these experiences, evolving relationships between peers, collectives and communities of practice, that students develop a path of where they have been, where they are and where they are progressing to. This functional relatedness, or awareness of developing prowess and skill, is an important aspect of the self-regulative process in itself. As such, it has an energizing function on the self, as the learner works through the activation of positive affect and mood (Furrer & Skinner, 2003) and balances possible negativity associated with repairing errors, correcting assumptions and re-evaluating the salience of feedback provided (Timms, de Velle, & Lay, 2016). This regulative perception gained from interpersonal relationships provides a pathway towards deep engagement in learning. These positive emotional responses can drive students’ achievement behaviours, including their responses to challenge, self-regulation, participation and strategy use as they gain confidence and progress to more musically challenging and sophisticated realms of knowledge (Meyer & Turner, 2002). They can additionally – in a creative-collaborative sense – heighten the effectiveness of the group dynamic (Dolmans, Wolfhagen, Scherpbier, & Van der Vleuten, 2003), be ‘empathically attuned’ (Seddon, 2004) and contribute more effectively to communication, creativity and ‘group flow’ (Sawyer, 2006).

Methodology

The study consisted of three projects comprising immersive workshops, performances and recordings with visiting guest artists. Aligning with the aim of the module of learning and the music course generally, it aims to develop musicians through a progressive, holistic and culturally diverse approach to improvisational understanding through collaborative, innovative and forward-looking project design. Guest artists were contacted and secured up to 12 months in advance; the ensemble, a flexible one that met the needs of each guest artist, and the interviewees were present in all. The ensemble members received music 1 month before the scheduled week of rehearsals that culminated in a public performance and recording. As part of their course, they compulsorily engaged in a regular one-to-one instrumental lesson and another small jazz ensemble that performed standard ‘American Songbook’ repertoire as well as original compositions established within the Australian jazz canon. The student participants in this study were all either second- or third-year undergraduate music performance students. The instruments played by the participants include the saxophone, trumpet, trombone, piano, drums and bass. This developing and maturing level of performance allowed for a developing rather than naïve individual and ensemble-based proficiency and for their considered responses to the ensemble stimulus and their reflections of events and learning.

Initial co-planning and goal-setting discussions occurred between the students and their university teachers; the students maintained their personal workshop journal outlining learning goals that acted as ‘aide-memoires’ to the interview process. This step involved practising the music and developing understandings of the works (including previous works by the artists/composers). A 1-week intensive period occurred in which the students’ improvisation performer/educators played

with the students and engaged in three rehearsals of 3–4 hr length. The guest artists engaged using a range of diverse performance exemplars and dialogic communication. Their teaching and influence were via a blend of hands-on performative demonstration, discussion/clarification of creative concept and historicity to the works, as well as occasional anecdotes and remembrances of past performances, articulating a possibility of ‘where the music could go’. At the end of the week, a public performance and recording was arranged, which was followed by a joint-evaluation discussion. Workshop feedback was provided in relation to the agreed goals.

Data collection and analysis

This qualitative case study seeks to describe and evaluate the interconnections and relationships between social systems and better understand student learning within a dynamic ‘framework of sociocultural learning’ (Yin, 2009, p. 3), as well as to do justice to the nature of the teacher–student relationship as a socially constructed phenomenon (Poczwadowski, Barott, & Jowett, 2006). This is ideal as a tool to explore the social processes of coaching with a small participant sample allowing for a rich, descriptive and exploratory examination of the participants’ views (Charmaz, 2006).

Typically, case studies are observed as cases in their contexts by referring to individuals (Eriksson & Kovalainen, 2008). The research material was collected in two phases. At the beginning of workshop (Phase 1), students ($N=12$) and teachers/director ($n=4$) began practicing and journaling their thoughts and progression in understanding their role in performing the music at hand. Semi-formal individual interviews of the student cohort at the beginning and end of each guest artist visit allowed participants to deeply consider the following questions: ‘What did you do in preparing for the workshop?’ ‘Describe your thinking and aspects of learning during the rehearsal and individually’ and ‘What techniques/strategies did you use to gain confidence in the culminating performance?’ Also, ‘What would you like to learn in this module?’ and ‘What expectations do you have concerning working with the guest artist in the last rehearsal and the concert?’ The teacher/directors and guest artists were interviewed at the end of the final performance.

After the performance (Phase 2), the students reflected on their experiences of the workshops and culminating performance, guided by the following open questions: ‘What did you learn in the workshops and performance?’ ‘Describe your collaboration with the professional musicians’, ‘How did the guest artist and teachers change the ensemble dynamic?’ and ‘What aspects of the experience affected your learning, and how?’

The three rehearsal/workshop/performance cycles occurred in March, July and October 2017, and each performance was recorded for learning and archival purposes. The researchers analysed the transcribed data using content analysis (Berg & Lune, 2012; Schreier, 2012), which is a widely used method in the systematic analyses of interview materials in qualitative research and an appropriate for investigating the dyadic relationship between teachers, students and learning environment.

The data analysis process involved several steps initiated by examining the texts using an inductive method of ascribing initial themes. First, each interview transcript was unitised into smaller units of meaning and the response to each interview question comprised a unit. Then each unit of meaning was then compared to other units of meaning and subsequently grouped with similar units to form a category (Maykut & Morehouse, 1994). Third, when a unit of meaning could not be grouped with another, a new category was formed. At the point of theoretical saturation (no new categories could be formed), a rule of inclusion for each category was written and connected to similar categories to show relationships and patterns across the data (Maykut & Morehouse, 1994). Throughout the analysis, recurrent themes were located across the transcripts involving connecting the data back to the research questions, grouping these themes together to form larger, over-arching categories, and were tabulated according to theoretical or conceptual systems. From this, key

themes of what the musicians derived from their experiences allowed a 'framework' of descriptive codes to be refined.

This stratification of themes allowed detail of learning and the relationships expressed by participants in context to the learning environments, which were dynamic and evolving.

This basis of analysis is justified from the viewpoint of the research providing a framework for the examination of the material and the experience (Miles & Huberman, 1994; Schreier, 2012). The method also allows an analysis to be built on a theory or conceptual framework which makes it possible to collect the kind of data that refer to the theories in question (Marshall & Rossman, 2011). The data are reported across the following themes: individual learning and processes, adaptation to the collective musical environment, and developing expertise and community as an aspiring professional.

Trustworthiness

Trustworthiness, or the degree of rigour associated with research design and outcome decisions (Patton, 2010), relies upon several strategies to maximize a study's credibility, transferability, dependability and confirmability (Lincoln & Guba, 1986). Throughout data analysis, memos were maintained to encourage researcher reflexivity, particularly during coding frame development and revision (Schreier, 2012). We also engaged in triangulation of data sources and investigators, including debriefing and collation of an audit trail throughout the interview process (Patton, 2010). Finally, the authors independently coded and evaluated commonality of themes to ensure interrater reliability (Schreier, 2012).

Findings

Social interaction between students and teachers helped students better understand, widen perspectives and focus upon what was needed to fit in with a particular group. Accordingly, the individuals developed beliefs, orientations and values that were consistent with their relational environment and academic domain that facilitated their functioning effectively in the ensembles. In turn, these beliefs (if positive and adaptive) directed behaviour in the form of enhanced persistence, goal striving and regulation of learning. Students discussed their extant knowledge crafted from previous teachers, ensembles, environments and cumulative prior experience. The students discussed their positive and negative musical interrelations with each other, of performing with their teachers and the guest artists, and how this influenced their learning and practice through evolving strategies.

The data revealed vital and dynamic aspects of musical development, with the participants discussing their personal experiences of learning formally, informally and the blending of both within various situated contexts. The participants described evolving independent, cooperative and collaborative regulatory processes, and the motivations involved in cultivating them. The analysis process elicited several branched codes organized to three distinctive categories of thematically separated experiences: Individual learning and processes, adaptation to the collective musical environment and creative expertise as an aspiring professional. The data are examined through these three themes that outline the participant's specific outcomes in learning, the reflectivity inherent in their actions and of others collaboratively, their personal strategy construction, implementation of goals and the cultivating of a musical/creative identity, discussed below.

Individual learning and processes

Practicing for a series of rehearsals and performance situates students in a truly authentic workspace, in which capabilities are measured against desires and expectations, with what may

realistically be achieved within the given time-frame. Students discussed how such real-time performance demands initiated, developed and focused metacognitive capacities. Students utilized both ‘reflection on action’ as well as ‘reflection in action’ (Schön, 1983) in refining short-term goals and initializing strategies with the aim of attaining them. A student reflected,

S2: At the beginning of the year I was just developing strategies but as I understood and thought about my short-comings I developed some concepts on how I was going to operate within each ensemble, and how I might exchange ideas with others in performance.

This student further articulated the extent of these learning situations:

S4: Hearing professionals operate in rehearsal and performance contexts helped me realise and identify my own weaknesses, and how to work on these. Talking to lots of people, there’s a lot of noise to shut out and decipher, from fellow students and the occasional teacher. Hearing advice that resonated with my development and issues helped me acknowledge my own strengths and develop strategies and ideas I felt I wanted to pursue.

Students reflected on their growing capacity in ‘learning how to learn’ and evolving higher order strategies. They constructed their learning dependent on the context and learning environment/dynamic specific to that guest artist. They articulated that learning situations emerge from seemingly unexpected avenues. This student remembered such learning incidents:

S7: When the first guest artist came in and discussed certain ways of practicing, that really interested me. I started to develop some conceptions about how creative thinking and strategizing can improve my practice. I found in the ensemble I compared myself in a performative context against other students and professionals. That gave me motivation to open up and work on how to communicate in an ensemble with others – not just think only about me.

Situated learning within an ensemble facilitated socially shared regulatory behaviours involving their cognition, emotion, motivation and behaviour adapted according to the aims, goals and standards of both individuals and the group (de Bruin, 2017a; Hadwin et al., 2011). Such learning environments add value when the individuals who generate new ideas can also persuade others of the utility of those ideas and convince others to develop similar processes. Highly creative environments with professionals and added guest artists foster growth in creative self-efficacy that increases and enhances more sophisticated idea generation, and the shared idea-making and role-taking in asserting oneself within an ensemble.

Adaptation to the collective musical environment

Cooperative learning, or relational learning, was perceived as a significant aspect of adaptation to the collective musical environment. Joint cooperation between student cohorts, as well as those crafted between students and professionals in the ensemble, asserted the presence of joint goals, mutual rewards, shared resources and complementary roles (Qin, Johnson, & Johnson, 1995). In an ensemble acting as a situated and cooperative entity, students strived to reach goals through the support and joint focus of each other, expressed by this student:

S9: Having the teachers next to me, hearing the self-confidence and how purposefully and intensely they musically engage was such a noticeable difference. The teachers make us aware of listening to things that we were missing but were so important, and that made us rise and match that level of musicianship.

Thus, cooperative efforts crafted within a group or ensemble were more effective and productive than separate competitive learning efforts such as those involving decoding and recall of information (Barker, Garvin-Doxas & Jackson, 2002) and can be more conducive to higher level thinking and problem solving (de Bruin, 2017a; Qin et al., 1995).

The pursuit of joint goals and mutual rewards and the sharing of intellectual and physical resources that rely on interrelatedness and interconnectedness contributed to senses of achievement and motivation underpinning the participants' cognitive, social and behavioural musical outcomes. Sustained collective ensemble activity can shape powerful social systems that cultivate collective trust (Whitmeyer, 2002) and also enhance knowledge of altruistic and cooperative behaviour that is spread across a social network as a collective memory (Mohtashemi & Mui, 2003). Bandura (2012) suggests that self-efficacy beliefs can reinforce the behavioural intensity of joint and shared learning. One student described the rich and complex experience derived from creative ensemble work:

S1: In the ensembles I could develop a deeper understanding of the contextual nuances I needed to develop in my playing – not just sticking to the idea that rules are set in stone but also knowing there is a fluidity and spontaneous adaptability I need to develop.

A blended learning environment within the ensemble activated teacher/professional performers and guest artist with students that reinforced an interpersonal connectedness. This contributed to engagement and achievement by providing opportunities for self-understanding and participation alongside a mentor (Karcher, Davis, & Powell, 2002), increasing students' expectancies for success by regulating their achievement behaviours (Wigfield & Tonks, 2002), as well as emphasizing their mentors' beliefs and behaviours towards the development of students. Students gained a sense of efficacy, at least in part through the problem-solving, modelling and supportive musical and dialogic communication of the teachers and the guest artist in an authentic integrated learning environment (Bakhtin, 1981; Bandura, 1997; de Bruin, 2018a). A teacher/professional supported this view:

T2: It's really important to having these ongoing mentorship situations between students and the teachers that provide a realistic, sustainable, and developmental scaffold for their learning.

Students compared and evaluated the difference between themselves and their teachers, which made learning visible, presently audible and attainable, while disrupting naïve assumptions about what it may take to reach professional-level performance. This student reflected,

S11: This environment allowed us to hear and feel a difference between the teachers and the students' production of improvisatory dialogue. It was so distinct and hearing their strength of character and voice gave an exemplar of how to assert oneself. It gave us something to aspire to; technique, surety and conviction of ideas and how to operate and think in such an ensemble.

This was supported by another student comment:

S3: Hearing the works and the strength of personalities coming through, as well as seeing and hearing the way they musically respond and engage with each other was great. It made me think of how I need to integrate this playing and thinking into my practice.

It was evident that positive peer and teacher support in various guises facilitated regulated learning processes upon motivation and emotions, and this was crucial for both the collaborative

group as an entity and for the individual learners participating in collaboration with the ensemble. Adaptation to the musical environment was facilitated by setting tasks that were appropriately challenging, assigning work that students felt was important and meaningful, and by utilizing material that aroused motivation, curiosity and interest in the students (Covington, 1998; McInerney, 2000).

Developing expertise and community as an aspiring professional

Positive musical and emotional attachments to peers and teachers promote not only healthy social, emotional and intellectual functioning but also positive feelings of self-worth and self-esteem. These collaborative unions further sustained shared meanings, values and goals and higher level aspirations (Covington, 2002). Students positively reinforced their belonging and aspirational goals by operating within a safe and caring environment (McLaughlin, Irby, & Langman, 1994) where leader/mentor adults were able to model and interact with each other to produce effective behaviours and more sophisticated thinking in music-learning (de Bruin, Burnard, & Davis, 2018). Students working with professionals and 'icon' guest artists developed social skills and social capital (Bourdieu, 1986; Broh, 2002), and student's sense of control and autonomy and self-determination (Deci & Ryan, 2000; Reeve, Jang, Carrell, Jeon, & Barch, 2004). The ensemble work provided a sense of belonging within a valued community of practice (Wenger, 2009) promoting a positive well-being within the ensemble (Brown & Evans, 2002).

The reflection and action of teachers and the guest artists towards students reflected a professional judgement inclusive of expectation, criticism and disappointment. While teachers and guests were supportive, they also imposed a professional standard that everyone needed to attain. One teacher remarked,

T4: There is a set of values and skills that we feel are not negotiable, and we make it clear to each student musician in the ensemble that they are expected to rise to the challenges of not only performance, but in the ways they take on the creative thinking and collaboration of ideas.

The teachers supported learning by modelling active listening and providing feedback and interpersonal support that fostered an attentive and dynamic learning environment (Stetson, 2003). This in turn encouraged students to function with teachers they believed were caring and through which they could learn more through the shared experience as perceived by the students (Teven & McCroskey, 1997). A student captured this collaborative feeling:

S5: The teachers were pointing out things to listen to that I would have otherwise not been aware of and being enthusiastic to our efforts and our risk-taking. They just made the job sound so easy – they had a higher conception of what the whole thing was going to sound like, but there was an expectation that the students were to take on a creative responsibility – we were answerable to the teachers and the guests to deliver.

Teachers utilized pedagogical relationships involving connecting with students via challenging rehearsals and performances, and applying effective instructional strategies and positive expectations held towards students. Teachers established culturally responsive social interactions through maintaining fluid teacher–student relationships, while demonstrating connectedness with students, developing a community of learners and encouraging students to learn collaboratively. Students were immersed in changing expectations from what they perceived the music demanded of them. One student remarked,

P9: Carla Bley's writing *I feel* is designed to capture the personality of the members she wrote for – very much like Ellington did. I was initially puzzled as who to sound like; the recording or myself – it made me think deeply about how I go about interpreting the histories of this music, honouring it and adding something of my own. Watching her operate, and connect with Steve Swallow, who have been together for years – there was a 'knowingness' of each other; just the right word, phrase or gesture that only comes with lots of playing and working together.

A teacher discussed the outcomes of students, and how sometimes students do not attain levels of performance required:

T1: We try to get the students operating beyond their normal comfort zones. We've had terrific performances, but also times where everyone's worked hard, but fallen short, and after the performance the composer has looked them in the eye and said, 'That's not good enough, you all blew it!' The discussions that follow that bring an honesty and integrity to what they do – it can be gut-wrenching, and they do a remarkable job of learning from this.

Support from teachers, peers and guest artists within the ensemble contributed to senses of developing achievement and expertise, optimizing ones' capacities within a musical collective and feeling part of a community. A teacher reflected on this:

T3: What the students hear and get a sense of is the teacher and guest artists' well-cultivated voice and experience. Being able to create not just a melodic landscape, but a structural architecture is something every jazz student has to grapple with. Hearing it, and actively taking part in it with some masters of improvisation can be a powerful learning tool.

Operating at close quarters with seasoned professionals, students were at firsthand able to experience skilful self-regulated experts strategically plan, monitor and evaluate their outcomes, cognitive processes, motivations and emotions individually and in coordination with others. Students grasped an understanding of expert abilities, the need to overcome challenges, maintain focus, and develop a sense of and responsibility to the ensemble as a community.

Discussion

Teacher–student interpersonal relationships play a pivotal part in resolving complex, critical educational practice and the apprenticing of students to levels of mastery of musicianship and creativity. Teachers' interactions and feedback play a significant part in engaging students in creative pedagogies within (and beyond) the ensemble, where modelling, collaboration and communication shaped students' approaches to creative thinking.

The ensemble experience offered a fertile environment in which individual learning processes evolved, enabling the fine-tuning of cognitive, behavioural and creative development that included the updating and refining of complexity of ideas; the shifting from mental to physical tasks; and the promoting of self-monitoring, self-reflection and self-assessment. Interrelations between students produced moments of camaraderie, struggles, initiation, development, and the flow and synchronization of ideas and strategies across the ensemble. Students operated as multiple self-regulating individuals who guided and supported their regulation as well as regulating together as a collective social entity (Volet, Vauras, & Salonen, 2009). However, the specificity as to what they regulated on was different and varying, underlying the idiosyncratic nature of students' personal development.

Student-centred relations intersected and augmented with teacher influence where performance mastery and guidance promoted engagement in students' personal creative processes, and the guest

artists provided an authentic and realistic experience. The dynamic and dyadic teacher–student relationship revealed how peers and teachers feed off each other’s collaborative actions and ideas, and how this varies across various contexts, behaviours and environments.

Developing student capacities to learn how to learn (metacognition), self-motivate and strategically glean creative strategies from others are key issues in which praxis may be conceptualized from a relational perspective. Hence, the interplay of theory and practice from a socio-cognitive perspective provides direction for educators seeking to enhance students’ regulatory capacity, achievement and motivation. The 9-month module facilitated learning through the implementing of a visiting artist experience by providing

- A varied experience of specific individual, group and blended learning
- Impactful and teacher inspired creative musical learning sequences
- Dialogic, aural and performative learning
- Openness and trust
- Working with shared meanings, values and goals
- Learning attuned via peers, teachers and student self-reflexivity
- A dynamic, authentic learning environment.

Observing learning through the three lenses utilized in this inquiry elucidates how SCT applied to the learning and experiences garnered within a music conservatoire can identify self-efficacy, agency and the building of cognitive skills in students. Becker and Luthar (2002) suggest that students’ sense of achievement and responsibility can result from an integrated emphasis on social cohesion and academic mission. Authentic music-making scenarios that are designed to challenge and promote skill development, knowledge and collaborative capacity can incorporate individual, shared and collective skills that apprentice students towards expert capacities.

The practical implications of this learning relationship can be further enhanced by the relational understanding between theory and current issues and practices relating to student–teacher ensemble actions. An integrative framework is proposed that summarizes theory, constructs, mechanisms and practices relevant to the relational dynamics underpinning learning, engagement, achievement and goal setting within a socio-cognitive context. Figure 1 presents an organizing framework for this relational dynamic. Incorporating behavioural, contextual and environmental pillars, the model arranges traits of learning identified across individual, collaborative, situational and cognitive influences. It highlights the significance of a dynamic ensemble environment that offers diverse learning; teacher input that is strategic and exemplary; and students who can construct, develop and share meanings and values, and learn from each other and reflect on their own output. Spanning learner behaviours and processes, teacher expertise and an environmental/contextual malleability, the model outlines a relational framework of learning and teaching aims that can be used in a variety of ensemble-based learning situations.

This model allows teachers and music-learning institutions to mindfully align curricular and pedagogical goals and aims across modules of learning. The model relies on self-reflection and diagnosis that can identify how teachers’ thinking could expand student capabilities and capacities, as well as to identify barriers to successful apprenticing of student mastery in terms of knowledge, skills acquisition, or collaborative and collective application to ensemble work.

Conclusions and recommendations

Socialization and role acquisition are important aspects of creative collective music-making. Analysing student reflections from learning scenarios allows for the identification and detail of evolving participant mastery of technical skills, collaborative capacities and the developing roles

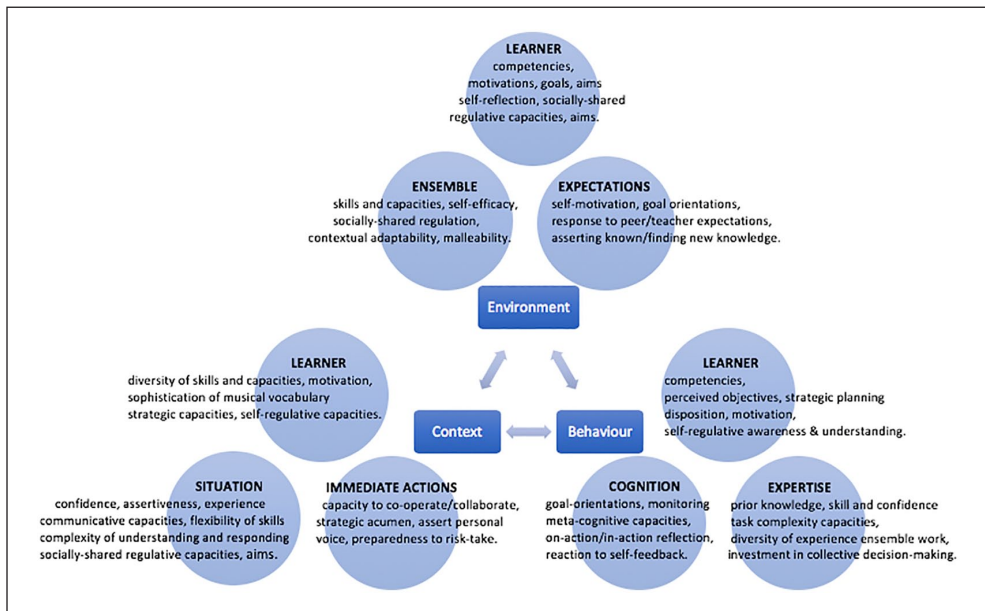


Figure 1. Model of social-cognitive and environmental development.

of personal voice and self-efficacy. Using visiting guest artists added a realism and authenticity to the ensemble learning experience, highlighting both successes and limitations, and the importance of a relational acumen in communicating with ensemble learners.

Implementing such a learning environment can make learning clear and visible and can optimize student supports for self-monitoring, self-diagnosis and affective actions towards applying new behaviours and learning towards subsequent similar situations. The study provides music ensemble directors, tutors and instrumental teachers with methods and strategies that can foster maturation of metacognitive processes and self-directed learning that fosters creative rather than re-creative minded musicians. The activities engaged by students promoted the embodiment and characteristics of human agency; intentionality, forethought, self-reaction and self-reflectiveness that, from an agentic perspective, assert added complexity upon Bandura's (2001) SCT. As educators seek to inculcate and assess for these traits and capacities in students, the 'Model of social-cognitive and environmental development' (Figure 1) can be used as an exemplar through which pedagogies that promote creative music education may be refined and calibrated.

This review has elucidated how one institution's organization of students, teacher practitioners and guest artists can develop and promote student learning. Theory and research support the proposition that positive relationships with teachers are cornerstones of young people's capacity to function effectively in social, affective and academic domains. With a focus on the latter, we suggest that teacher practices and pedagogies that respond reflexively across individual and group activity can enhance learner capacities for planning and reflection on actions and enhance in action engagement and achievement.

Furthermore, elements of educational theory provide guidance for educational practice directed at student motivation and achievement. Taken together, this integration of relationally based theory and practice holds implications for researchers of motivation and achievement in group music-learning settings and to interpersonal teacher–student strategies that enhance music-learning, and creative and critical thinking in students.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was financially supported by a Sir Zelman Cowen School of Music Research Development Grant, Monash University.

ORCID iDs

Leon R de Bruin  <https://orcid.org/0000-0002-5385-6406>

Paul Williamson  <https://orcid.org/0000-0002-2440-2165>

References

- Abbott, J., & Ryan, T. (2001). Constructing knowledge and shaping brains. *HOW Journal*, 9, 9–13.
- Baik, C., Naylor, R., & Arkoudis, S. (2015). *The first year experience in Australian universities*. Retrieved from https://melbourne-cshe.unimelb.edu.au/__data/assets/pdf_file/0016/1513123/FYE-2014-FULL-report-FINAL-web.pdf
- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays*. Austin: University of Texas Press.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50, 248–287.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1–26.
- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38, 9–44.
- Barker, L. J., Garvin-Doxas, K., & Jackson, M. (2002). Defensive climate in the computer science classroom. *ACM SIGCSE Bulletin*, 34(1), 43–47.
- Becker, B. E., & Luthar, S. S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist*, 37, 197–214.
- Becker, H. S. (2000). The etiquette of improvisation. *Mind, Culture, and Activity*, 7, 171–176.
- Ben-Tal, O., & Salazar, D. (2014). Rethinking the musical ensemble: A model for collaborative learning in higher education music technology. *Journal of Music, Technology & Education*, 7, 279–294.
- Berg, B. L., & Lune, H. (2012). *Qualitative research methods for the social sciences*. Hoboken, NJ: Pearson Education.
- Berkowitz, B. (1996). Personal and community sustainability. *American Journal of Community Psychology*, 24, 441–460.
- Berliner, P. F. (2009). *Thinking in jazz: The infinite art of improvisation*. Chicago, IL: The University of Chicago Press.
- Berthelot, J. P. (2017). *Institution-specific music and sense of belonging of undergraduate college students* (Doctoral dissertation, The University of Southern Mississippi, Hattiesburg). Retrieved from <https://aquila.usm.edu/cgi/viewcontent.cgi?article=2489&context=dissertations>
- Bourdieu, P. (1986). The forms of capital. In J. C. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). New York, NY: Greenwood Press.
- Broh, B. A. (2002). Linking extracurricular programming to academic achievement: Who benefits and why? *Sociology of Education*, 75, 69–91.
- Bronfenbrenner, U. (2005). The developing ecology of human development: Paradigm lost or paradigm regained. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 94–105). Thousand Oaks, CA: SAGE.

- Brown, R., & Evans, W. P. (2002). Extracurricular activity and ethnicity: Creating greater school connection among diverse student populations. *Urban Education*, 37, 41–58.
- Cairns, R. B., & Cairns, B. D. (1995). Social ecology over time and space. In P. Moen, G. H. Elder, & K. Lüscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 397–422). Washington, DC: American Psychological Association.
- Charmaz, C. (2006). *Constructing grounded theory: A practical guide to qualitative analysis*. London, England: SAGE.
- Clarke, E. (1988). Generative principles in music performance. In J. A. Sloboda (Ed.), *Generative processes in music: The psychology of performance, improvisation and composition* (pp. 1–26). Oxford, UK: Oxford University Press.
- Covington, M. V. (1998). *The will to learn: A guide for motivating young people*. Cambridge, UK: Cambridge University Press.
- Covington, M. V. (2002). Rewards and intrinsic motivation: A needs-based developmental perspective. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents* (pp. 169–192). Greenwich, CT: Information.
- Creech, A., & Hallam, S. (2017). Facilitating learning in small groups. In J. Rink, H. Gaunt, & A. Williamson (Eds.), *Musicians in the making: Pathways to creative performance* (Vol. 1, pp. 57–75). Oxford, UK: Oxford University Press.
- de Bruin, L. R. (2016). Expert voices in learning improvisation: Shaping regulation processes through experiential influence. *Music Education Research*, 19(4), 384–397.
- de Bruin, L. R. (2017a). Evolving regulatory processes used by students and experts in the acquiring of improvisational skills: A qualitative study. *Journal of Research in Music Education*, 65, 483–507. doi:10.1177/0022429417744348
- de Bruin, L. R. (2017b). Shaping interpersonal learning in the jazz improvisation lesson: Observing a dynamic systems approach. *International Journal of Music Education*, 36, 160–181. doi:10.1177/0255761417712318
- de Bruin, L. R. (2018a). Dialogic communication in the one-to-one improvisation lesson: A qualitative study. *Australian Journal of Teaching Education*, 43, 1–21. doi:10.14221/ajte.2018v43n5.1
- de Bruin, L. R. (2018b). Expert improvisers' formal, informal and situated influences on learning, motivation and self-efficacy: A qualitative study. *Music Education Research*, 21, 99–115.
- de Bruin, L. R. (2019). Improvising musicians' self-regulation and distributed creativities: A phenomenological investigation. *Thinking Skills and Creativity*, 32, 30–41.
- de Bruin, L. R., Burnard, P., & Davis, S. (2018). Propositions and provocations for advancing learning and teaching through creativities and the arts: Creativities conclusions and ongoing considerations. In L. R. de Bruin, P. Burnard & S. Davis (Eds.), *Creativities in Arts Education, Research and Practice: International perspectives for the future of learning and teaching* (pp. 291–294). Leiden, Netherlands: Brill.
- Deci, E., & Ryan, R. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
- Dolmans, D. H. J. M., Wolfhagen, H. A. P., Scherpbier, A. J. J. A., & Van der Vleuten, C. P. M. (2003). Development of an instrument to evaluate the effectiveness of teachers in guiding small groups. *Higher Education*, 46, 431–446.
- Eriksson, P., & Kovalainen, A. (2008). *Qualitative methods in business research*. London, England: SAGE.
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95, 148–162.
- Gatien, G. (2009). Categories and music transmission. *Action, Criticism, and Theory for Music Education*, 8, 94–119.
- Gibson, W. (2010). The group ethic in the improvising jazz ensemble: A symbolic interactionist analysis of music, identity, and social context. In N. K. Denzin (Ed.), *Studies in symbolic interaction* (pp. 11–28). Bingley, UK: Emerald Group.
- Goodrich, A. (2007). Peer mentoring in a high school jazz ensemble. *Journal of Research in Music Education*, 55, 94–114.

- Gutman, L. M., Sameroff, A., & Eccles, J. S. (2002). The academic achievement of African American students during early adolescence: An examination of multiple risk, promotive, and protective factors. *American Journal of Community Psychology*, 30, 401–428.
- Hadwin, A. F., Järvelä, S., & Miller, M. (2011). Self-regulated, co-regulated, and socially shared regulation of learning. In J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 65–84). New York, NY: Routledge.
- Hove, M. J., & Risen, J. L. (2009). It's all in the timing: Interpersonal synchrony increases affiliation. *Social Cognition*, 27, 949–960.
- Karcher, M. J., Davis, C., & Powell, B. (2002). The effects of development mentoring on connectedness and academic achievement. *School Community Journal*, 12, 35–50.
- Kenny, A. (2014). 'Collaborative creativity' within a jazz ensemble as a musical and social practice. *Thinking Skills and Creativity*, 13, 1–8.
- Kiefer, S. M., Alley, K. M., & Ellerbrock, C. R. (2015). Teacher and peer support for young adolescents' motivation, engagement, and school belonging. *RMLE Online*, 38, 1–18.
- Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41, 75–86.
- Kokotsaki, D., & Hallam, S. (2007). Higher education music students' perceptions of the benefits of participative music making. *Music Education Research*, 9, 93–109.
- Lakens, D. (2010). Movement synchrony and perceived entitativity. *Journal of Experimental Social Psychology*, 46, 701–708.
- Lakin, J. L., Jefferis, V. E., Cheng, C. M., & Chartrand, T. L. (2003). The chameleon effect as social glue: Evidence for the evolutionary significance of nonconscious mimicry. *Journal of Nonverbal Behavior*, 27, 145–162.
- Lewis, G. (2002). Improvised music after 1950: Afrological and Eurological perspectives. *Black Music Research Journal*, 22, 215–246.
- Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. In D. D. Williams (Ed.), *Naturalistic evaluation, new directions for program evaluation No. 30* (pp. 73–84). San Francisco, CA: Jossey-Bass.
- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed., Kindle version). Retrieved from <http://www.amazon.com>
- Martin, A. J., Marsh, H. W., McInerney, D. M., Green, J., & Dowson, M. (2007). Getting along with teachers and parents: The yields of good relationships for students' achievement motivation and self-esteem. *Australian Journal of Guidance and Counselling*, 17, 109–125.
- Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide*. London, England: Falmer Press.
- McLaughlin, M. W., Irby, M. A., & Langman, J. (1994). *Urban sanctuaries: Neighborhood organizations and the lives and futures of inner city youth*. San Francisco, CA: Jossey-Bass.
- McInerney, D. (2000). *Helping kids achieve their best*. Sydney, New South Wales, Australia: Allen & Unwin.
- Meyer, D. K., & Turner, J. C. (2002). Discovering emotion in classroom motivation research. *Educational Psychologist*, 37, 107–114.
- Miles, M., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: SAGE.
- Mohtashemi, M., & Mui, L. (2003). Evolution of indirect reciprocity by social information: The role of trust and reputation in evolution of altruism. *Journal of Theoretical Biology*, 223, 523–531. doi:10.1016/S0022-5193(03)00143-7
- Monson, I. (1996). *Saying something: Jazz improvisation and interaction*. Chicago, IL: The University of Chicago Press.
- Oullier, O., De Guzman, G. C., Jantzen, K. J., Lagarde, J., & Scott Kelso, J. A. (2008). Social coordination dynamics: Measuring human bonding. *Social Neuroscience*, 3, 178–192.
- Patton, M. Q. (2010). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: SAGE.

- Phillips-Silver, J., Aktipis, C. A., & Bryant, G. A. (2010). The ecology of entrainment: Foundations of coordinated rhythmic movement. *Music Perception: An Interdisciplinary Journal*, 28, 3–14.
- Poczwardowski, A., Barott, J. E., & Jowett, S. (2006). Diversifying approaches to research on athlete-coach relationships. *Psychology of Sport and Exercise*, 7, 125–142.
- Pressing, J. (1988). Improvisation: Methods and models. In J. Sloboda (Ed.), *Generative processes in music* (pp. 129–178). New York, NY: Clarendon Press.
- Prouty, K. E. (2008). The ‘finite’ art of improvisation: Pedagogy and power in jazz education. *Critical Studies in Improvisation/Études critiques en improvisation*, 4, 1–15.
- Qin, Z., Johnson, D. W., & Johnson, R. T. (1995). Cooperative versus competitive efforts and problem solving. *Review of Educational Research*, 65, 129–144.
- Reeve, J., Jang, H., Carrell, D., Jeon, S., & Barch, J. (2004). Enhancing students’ engagement by increasing teachers’ autonomy support. *Motivation and Emotion*, 28, 147–169.
- Rogoff, B. (2003). *The cultural nature of human development*. New York, NY: Oxford University Press.
- Rogoff, B., Baker-Sennett, J., Lacasa, P., & Goldsmith, D. (1995). Development through participation in sociocultural activity. *New Directions for Child and Adolescent Development*, 67, 45–65.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68–78.
- Sawyer, K. (2008). *The future of learning in the age of innovation* (Report prepared for Futurelab and the UK Department for Children, Schools and Families). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.504.541&rep=rep1&type=pdf>
- Sawyer, R. K. (2006). Group creativity: Musical performance and collaboration. *Psychology of Music*, 34, 148–165.
- Saye, J. W., & Brush, T. (2002). Scaffolding critical reasoning about history and social issues in multimedia-supported learning environments. *Educational Technology Research and Development*, 50, 77–96.
- Schmidt, H. G., & Moust, J. H. (2000). Factors affecting small-group tutorial learning: A review of research. In C. E. Hmelo & D. H. Evensen (Eds.), *Problem-based learning: A research perspective on learning interactions* (pp. 19–52). New York, NY: Routledge.
- Schön, D. (1983). *The reflective practitioner: How professionals think in action*. London, England: Temple Smith.
- Schreier, M. (2012). *Qualitative content analysis in practice*. Thousand Oaks, CA: SAGE.
- Seddon, F. A. (2004). Empathetic creativity: The product of empathetic attunement. In D. Miell & K. Littleton (Eds.), *Collaborative creativity* (pp. 65–78). London, England: Free Association Books.
- Steinbeis, N., & Koelsch, S. (2011). Affective priming effects of musical sounds on the processing of word meaning. *Journal of Cognitive Neuroscience*, 23, 604–621.
- Stetson, N. E. (2003). Using small-group development to facilitate cooperative learning base groups. In J. L. Cooper, P. Robinson, & D. Ball (Eds.), *Small group instruction in higher education, lessons from the past, visions of the future* (pp. 166–170). Stillwater, OK: New Forums Press.
- Teven, J. J., & McCroskey, J. C. (1997). The relationship of perceived teacher caring with student learning and teacher evaluation. *Communication Education*, 46, 1–9.
- Timms, M., de Velle, S., & Lay, D. (2016). Towards a model of how learners process feedback: A deeper look at learning. *Australian Journal of Education*, 60, 128–145.
- Volet, S., Vauras, M., & Salonen, P. (2009). Self- and social regulation in learning contexts: An integrative perspective. *Educational Psychologist*, 44, 215–226.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wenger, E. (2009). A social theory of learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists in their own words* (pp. 209–218). London, England: Routledge.
- Wentzel, K. R. (1999). Social-motivational processes and interpersonal relationships: Implications for understanding motivation at school. *Journal of Educational Psychology*, 91, 76–97.
- Wesolowski, B. C. (2013). Cognition and the assessment of interaction episodes in jazz improvisation. *Psychomusicology: Music, Mind, and Brain*, 23, 236–242.

- Whitmeyer, J. M. (2002). A deductive approach to friendship networks. *Journal of Mathematical Sociology*, 26, 147–165. doi:10.1080/00222500212989
- Wigfield, A., & Tonks, S. (2002). Adolescents' expectancies for success and achievement task values during the middle and high school years. *Academic Motivation of Adolescents*, 2, 53–82.
- Wiltermuth, S. S., & Heath, C. (2009). Synchrony and cooperation. *Psychological Science*, 20, 1–5.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks, CA: SAGE.
- Zimmerman, B. J. (2011). Basic domains of self-regulation of learning and performance. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 2–14). New York, NY: Routledge.