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Preparing Students for Meaningful Entrepreneurial Careers:

Two Australian Case Studies

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Abstract

In Australia, the creative industries are seen as vital to the development of a prosperous, creative and imaginative nation. This paper explores the potential of school-industry creative partnerships and addresses the necessary development of entrepreneurial behaviour in music education offering new premises on which to build a teaching/learning approach, which is better suited to future contexts. The paper follows two Australian case studies; the first case study traces a group of 15-17 year old music students who have developed their own music industry enterprise. The second case study follows a group of 8-14 year old music students who develop creativity, musicianship and confidence in collaboration with industry professionals. Our research asks how the participants developed entrepreneurial attributes through learning in situ. In order to explore this question we frame the study with Lave and Wenger's social learning theories of Legitimate Peripheral Participation (1991) and Communities of Practice (1998), guided by the concepts of entrepreneurial learning as framed by Johannisson (1991). Our cases suggest that linking with communities of practice that lie outside of schools is one way to empower music programmes to move in entrepreneurial directions.

Key words

Entrepreneurship, communities of practice, student enterprise, music industry, entrepreneurial competency, industry partnership

Introduction

Education has a role to play in fostering collaborative learning environments where students can gain a better understanding of the industry they will inhabit in the future. The report *Restoring Our Edge in Education* (The Business Council of Australia, 2007) argues the need for communication, teamwork, problem solving, ongoing learning, creativity, cultural understanding, entrepreneurship and leadership for collaboration in the workplace. In addition, the *Pathways to Technological Innovation* report (The Parliament of the Commonwealth of Australia, House of Representatives, Standing Committee on Science and Innovation, 2006) reveals a need to foster an entrepreneurial culture in Australia – one that starts in the early school years and continues through into public and private enterprises. In Queensland, the *Creative Workforce for a Smart State* Report similarly highlights that 'schools and teachers should foster the development of project management and entrepreneurship as core skills' (Oakley, 2007, p. 9). More recently, Young (2014) in his report to the UK government, *The Report on Small Firms 2010-2015*, cited self-employment on the rise and recommended enterprise in education as a way to help young people develop creativity, resilience, perseverance and self-belief as the necessary skills required upon leaving school.

Linking diverse communities of practice that lie beyond schools through the construction of communities of practice in music education could be one way to empower practitioners and expand school music education programmes in entrepreneurial directions (Froehlich, 2009).

Expanding students' networks to include industry professionals could foster an appropriate environment in which to develop new innovative products and ideas. This initiative would also contextualise and situate learning in an industry context.

Previous research into learning processes and pathways in the creative industries found that, 'compared with more established professions, qualification and entry routes into creative industries are opaque and lack clear progression' (Roberts, 2006: 19). Roberts proposes pathways to creative industries through career advice, a new qualification route, work-based training, education-business partnerships, mentoring networks and demand-led skills provision. Winterson & Russ (2009) also argue that more needs to be done to prepare music students for their future careers; if this is not done, there is a danger that universities are simply preparing students to fail as performers and composers. While music graduates could leave university with a range of tacit transferrable skills such as problem solving, opportunity scanning, creativity, communication and teamwork skills, these might not be visible either to future employers or to the students themselves. This is because these transferable industry skills are typically not taught, despite repeated calls to explicitly address them in the music curriculum. Ninan, Hearn and Oakley (2004) recommend that this kind of training should occur in the formative years, even before they arrive at university or technical colleges.

Creech *et al.'s* (2008) study of early-career classical musicians in the UK found that the competitive nature of the industry presented several challenges for newcomers to the music

profession. These included finding time for professional development and self-promotion, and dealing with self-doubt, fear, frustration and financial constraints. Similarly, Bennett (2007) in her detailed study of musicians, artists, arts workers and educators from across Australia, Europe and the USA found that most musicians wanted business skills and opportunities to learn about the profession in their formal training years. She concluded that in addition to performance skills, musicians require the skills to run a small business; the confidence to create new opportunities; communication skills for use in educational, ensemble and community settings; and industry knowledge and strong professional networks.

This has led researchers to question the role of music education, acknowledging that if musicians are to have sustainable careers they will in most cases be looking at self-employment (Bennett, 2007; Winterson & Russ, 2009). Rae (2005) suggests that young people need to become entrepreneurs of the self in navigating their futures. We argue that schools are not well equipped to develop these attributes in students and that new approaches to learning and teaching in the music education field need to be further explored.

This article explores the potential of creative partnerships and a broader notion of music education, which offers new premises on which to build an approach better suited to future contexts. The first case study traces a group of 14-17 year old music students who have developed and manage their own music industry enterprise – *Youth Music Industries* (YMI) – an enterprise aimed at building relationships with the wider community to create opportunities

for young musicians around Queensland to perform, publish, record, network and learn about the industry. The second case study – *YoungBlue* (YB), sees younger musicians aged between 8 and 14 developing creativity, musicianship and confidence in collaboration with industry professionals, realized in a professional performance setting.

In both cases we acknowledge that learning occurs through social interaction with others and this comparative case study is theoretically framed by Lave and Wenger's social learning theories of *Legitimate Peripheral Participation* (1991) and Wenger's *Communities of Practice* (1998), guided by the concepts of entrepreneurial learning as framed by Johannisson (1991). Our research asks how the participants through learning *in situ* develop behaviours and attitudes that will equip them for entrepreneurial futures and specifically in this context, the music industry.

Entrepreneurial Learning

Entrepreneurship is a 'discipline' which can be learned whilst others argue that one has to have desire and passion – something that cannot be taught (Drucker, 1985). Riese (2011), in her discussion of education policies in Norway, describes entrepreneurship education as a general virtue (promotion of activities that encourage using initiative, creativity and problem solving) and business (encouraging students to start new businesses). Beckman (2007) proposes a broader view on entrepreneurship that teaches students new skill sets in the context of the arts environment they will inhabit as professional artists. This involves innovation development,

entrepreneurial behaviour, arts culture and a more contextual integration of intellectual skills. Essentially, Beckman is suggesting a context-based curricular where students develop their own innovative and real-world outcomes to transition from student to professional.

In a project aimed at developing entrepreneurial characteristics in youth, Rasheed (2000) proposes that learning styles, which include active experimentation balanced with concrete experience, will enhance entrepreneurial propensity. His experiments in high schools establish real business situations as a context for learning. He cites a number of attributes that act as predictors for entrepreneurial behaviour including the need for achievement, creativity, initiative, risk-taking, setting objectives, independence, autonomy, motivation, energy and commitment. Rae (2005) alludes to another significant aspect of entrepreneurial learning: the development of entrepreneurial identity through personal and social emergence. This is developed through interaction with others where participants learn how to apply their abilities within networks to achieve their ends. He describes this as 'translating possibilities of "what could be" into enacted reality and self-belief and confidence that they are able to make that happen' (p. 328).

For the purpose of this study, and similarly to Beckman (2007), entrepreneurial learning is not a stand-alone subject but rather an authentic contextualised activity that develops entrepreneurial behaviour.

Entrepreneurial learning *in situ*

Many educators are reluctant to embrace the concept of entrepreneurship, as the term is generally linked with profit-making activity. Rae (2005) supports our view that learning is a fundamental and integral part of the entrepreneurial process, in which the human, social and behavioural activities are of as much concern as the economic aspects, which are often highlighted. We believe, similar to Gibb (1996), that while education can provide cultural awareness, knowledge and skills for entrepreneurship, the art of entrepreneurial practice is learned experientially in business rather than educational environments. Learning must be explored as contextual and active rather than an isolated educational process.

Wenger's Community of Practice theory (CoP) is a social learning theory that provides a framework to support the idea that 'learning is essentially, a fundamentally social phenomenon, reflecting our own deeply social nature as human beings capable of knowing' (1988, p. 3). Lave and Wenger (1991) designate learning as a function of activity, context and culture in which learning is situated. In CoPs, knowledge and skills are obtained by participating in activities that expert members of the community would perform and this sharing of knowledge through collaboration is core business of community learning. In both of the cases presented in this article the students gradually become more experienced and take greater ownership of their learning. The gradual increase in participation has been heralded by Lave and Wenger (1991) as 'legitimate peripheral participation' where learners 'steal' implicit

and explicit knowledge through participating and observing practitioners at the periphery or side of community activities (Brown & Duguid, 2002). Similar to apprenticeship, they soon move from peripheral participation to central participation (Hung, 1999).

Methodology

The research question has been investigated with a qualitative and interpretative approach allowing researchers to emphasise the context within which the activities studied occur and their meanings for participants (Bresler & Stake, 2002). In this light we have chosen a comparative case study approach allowing us to investigate, by systematic comparison, both cases using an empirical inquiry of real-world phenomena within its naturally occurring context (Kaarbo & Beasley, 1999; Yin, 2009). Fieldwork (Hammersley & Atkinson, 1995) is suitable, as the intention of the research was to reveal emerging processes as they occurred in the field. This also allowed for a variety of data collection strategies, including participant observations of both face-to-face and online meetings in Facebook (Jorgensen, 1989) conducted in combination with semi-structured interviews (Hitchcock & Hughes, 1995) and questionnaires (Creswell, 2013). Our roles were multi-faceted. Kelman was the researcher and teacher associated with YMI, collecting data between 2011 and 2014. Loades and Arthurs were the researchers and teacher/facilitators of the YB program, with data collected between 2008 and 2012. During this time we became very familiar with each other's work by both attending and participating in various activities. While the content of our programmes and the age groups

are different, our driving motivation to develop creative and entrepreneurial learners provided the impetus for this paper. In both case studies, written consent was provided by the parents, and pseudonyms applied throughout.

Our major concern was to find out how participants developed entrepreneurial attributes through our programmes. We have used Johannisson's 'Entrepreneurial Competencies Framework' (1991) to interpret the data, and CoP theory as a framework to explain entrepreneurial behaviour as learning through social interaction. Johannisson indicates that entrepreneurial learning does not take place in a social vacuum and further defines five states of learning: Know-why (attitudes, values, motives), Know-how (skills), Know-who (social skills), Know-when (insight), and Know-what (knowledge). Table 1 provides an overview of Johannisson's entrepreneurial competencies. Middleton and Donnellon (2014) further explain Know-what (including Know-who and Know-when) as knowledge for what needs to be done; Know-how as knowledge for performing entrepreneurial activities; and Know-why as knowledge that sustains personal engagement and legitimises action (p. 8).

Table 1 *Entrepreneurial competencies*

Term	Description	Definition
Know-Why	Attitudes, values, motives	Defined as self-confidence, drive, ability to take risks, entrepreneurial enthusiasm and availability of mentors and role models
Know-How	Skills	Defined as imitating and/or acquiring skills that can be used in action
Know-Who	Social skills	Defined as networking capability in production and social networks, embedded in personality characteristics and developed through practice in context
Know-When	Insight	Defined as experience and intuition to know when, opportunity, timing management
Know-What	Knowledge	Defined as encyclopaedic knowledge and institutional facts

Source: Adapted from Johannisson (1991)

Findings and Discussion

Youth Music Industries (YMI) is an enterprise that was established by the teacher/researcher in collaboration with her students. Students were regularly questioning the international music curriculum chosen by the school and its link to career pathways in the music industry. Over time these student conversations sparked an intervention. The teacher/researcher challenged her students with a newspaper article, where a 16-year-old Brisbane girl discussed the lack of

venues and opportunities for young musicians to play their music. The students were invited to provide a solution, not only to this problem, but also to the problems that they themselves faced as musicians in the present who were worried about their future. All the students from Years 10-12 were invited to participate in the conversations and eventually a group of nine students emerged as regular participants who became committed to the development and implementation of YMI. While YMI was set up as an association under the umbrella of the school organisation (similar to a Parents and Friends group), YMI was given the independence it needed for the students and the teacher to develop their venture. This included setting up a governance structure with an advisory board and its own bank account.

At the beginning of 2011 these students were between 14 and 16 years of age and in most cases were contemporary pop musicians who showed a strong interest in a career in the music industry. The teacher's aim for YMI was to establish a social learning environment where students could develop music industry and entrepreneurial skills experientially in a community of practice. This included her role as a co-member in the community, providing interventions along the way, which would ensure that the students would continue to be challenged. For example, in 2013 the teacher instigated a partnership with schools and arts organisations in regional north Queensland, leaving YMI students to determine the activities and direction of the partnership. The students' aims for YMI were to create opportunities for young musicians across Queensland to perform, record, publish and network, with a bigger vision of building a

youth music scene. Some of their initiatives included hosting a monthly, all-ages venue for emerging bands *(Emerge)*, staging an annual four stage, ten-hour music festival *(Four Walls Festival)* and programming an annual youth music industry conference *(Little BIGSOUND)* in partnership with Queensland's music industry organisation, QMusic. All of these events were profit-making activities, which allowed YMI to evolve and expand. For example, YMI began to stage their events in professional venues around Queensland, including regional towns such as Cairns. They also began to host regular 'meet-ups' for young people to come together to share expertise and experience related to various aspects of the music industry.

The DeepBlue (DB) educational program known as YoungBlue (YB) is a creative and entrepreneurial programme established by the DB Orchestra specially designed for school-age children. DB is an innovative performance group characterised by audience and performer interaction, theatrics, spontaneity and less formality (Lindblom, 2009). The 'orchestra unleashed' is self-described as comprising of 'strings, electronics and physical theatre, amplified and magnified by video and interactivity' and combining the 'lush strings of an orchestra, the groove of a band, the drama of theatre and the excitement of a circus (DeepBlue, 2017). The impetus for the development of the DB Orchestra was through an Australian Research Council Linkage grant in 2006 to investigate how orchestras can be sustainable in the 21st Century (Radbourne, 2007). Unlike most orchestras, DB is a for-profit organisation as it is conceived as an entrepreneurial group, with the business model based more on indie rock

groups rather than orchestras. They do not seek funding to compensate for market failure, but look more to investment and growth. DeepBlue is a successful mainstream innovative organisation using technology, co-creation and business-to-business strategies with community engagement at the forefront of its design.

In contrast to YMI, YB is mostly located outside of the school context, inviting young musicians to be a part of a professional orchestra. YB emerged from DB's approach to performance and business as a way to provide opportunities for young musicians to connect directly with industry experts and to understand the need to be outwardly focussed to connect to their audience. The YB program aims to empower young musicians to approach their music with a totally different attitude (YoungBlue, 2017) participating in workshops that cover all the elements of performance in order to produce a show in a public presentation with or alongside DB. The YB workshops are offered in a variety of contexts: 1) YB Workshops are an on-the-day workshop before a DeepBlue Performance. Since DeepBlue began touring regional and metropolitan Australia in 2008, YB was a way for DB to connect with communities on tour and provide local young musicians in rural towns an opportunity to perform on stage with a professional orchestra. YB workshops in this context offer young musicians an opportunity to meet a touring orchestra, workshop a piece of music with the musicians, and then perform in the show with DB. This version of YB takes place on the day of the performance, however YB's are given the sheet music in the lead up to the show. This version of YB expanded to 2)

DeepBlue at Your School; this version of YB workshops offers a series of activities that take place in a school, ranging from a one day workshop and performance to a full semester long program. This version views the school as a venue and although it is located within the school the programs are not a part of the school curriculum, usually taking place after school hours. Finally, 3) the DeepBlue Holiday Program is a full-time week-long programme, incorporating a range of activities to prepare participants to design, perform and produce their own public performance. This version of YB is usually located within a performance or university venue and takes place in the school holidays. All versions of YB occur in a creative, supportive and social environment, which generates opportunities and insights for young musicians. Workshops can cover movement, improvisation, composition, technology and live performance, stagecraft, public speaking, and circus antics, finally bringing together all the elements of performance into a music show. The YB program is now witnessing a full circle with a growing number of YBs beginning to audition and perform professionally with the DeepBlue orchestra.

Know-why

The following findings demonstrate how students in both case studies engage in meaningful, real-world activities which lead to entrepreneurial 'know-why' attributes such as: sense of achievement, self-confidence, vision, drive, aspiration, reflection, sustainability and ability to take risks.

In the YMI programme entrepreneurial ‘know-why’ was evidenced by the students’ vision. They demonstrated a sense of purpose and an awareness of the need to be sustainable and successful. In Chris’s words: ‘It’s definitely not a thing I have to do, I enjoy it, I’m all for everything we’re about’.

The students had developed a strong emotional response to the outcomes they were achieving. Ivan recalled how he felt seeing the audience ‘moshing’ when the headline band was on stage at the *Four Walls Festival*: ‘It was a highlight because it was real and we worked so hard and we actually accomplished it’.

This external reinforcement in the form of audiences enjoying the YMI events, was a significant factor in keeping the students connected emotionally to the vision, and motivated to continue committing the time and hard work. Brandon proudly posted a screenshot in their Facebook group, showing an endorsement that one local band had publicly shared online:

> Youth Music Industries are the way to go! They don’t need to sell any tickets and the crowd is always top notch. They are definitely the way to go for young bands in Brisbane if you ask us. They’ve been so good to us and have supported us through the thick of things.

Sharing these reviews and endorsements became a significant part of the community’s repertoire. The students shared any such artifacts, because they were reminders of how far they had come, and all that they had achieved. The positive work environment that they had achieved made work enjoyable and motivating. Keeping the workplace positive can be a

challenge for most adults; however, this was an element that the students seemed to intuit naturally. In the following Facebook excerpt, Hayden takes the time to post a celebratory message to remind the group of their achievements:

> *Hayden*: BTW guys, just wanted to say how proud I am of what we are doing. You should all be super proud, our event will be in all magazines next week! Tell your friends! And show them how cool we are, and that we are literally running a youth festival! You should all be super proud, and excited for the festival.
> *Brandon*: This is cute! Haha!
> *Hayden*: Ahaha, just had a proud moment!
> *Brandon*: Hahah! WEW!
> *Indigo*: Ass YAAAYYY goo uss!!!

Celebrating achievement and making time to build morale and pride among the group became part of their ongoing procedural repertoire and, thus, the foundation of building a strong sense of 'know-why'. For the nascent entrepreneur, understanding why one should persist in a venture is a critical element.

In the YoungBlue programme, the entrepreneurial 'know-why' is evidenced in students' inspiration, enthusiasm and drive. These qualities were observed in voluntary thank-you emails and handwritten letters from teachers and students involved, as well as from questionnaires and social media messages and posts.

Through the availability of mentors and role models from DB, a YB participant often finds themselves working in a way they did not realise they could. YB performers are

empowered to take risks embodied in the creative process, leading to a boost in self-confidence to enact their ideas and publicly present their work. YBs are encouraged to suggest ideas then choose to adopt them or others. In the following quotes, students have shown to experience a greater sense of self-awareness, which is an important component in developing Know-why competency. In other words, students were beginning to make sense of their own entrepreneurial competency – abilities, resources, social networks and direction:

> It made me excited about learning the violin and gave me ideas for new directions with music. (YB participant 1)
>
> Since your workshop my confidence in playing has become heaps good I know longer feel scared playing my parts and I found your performance truly inspiring. (YB participant 2)
>
> DeepBlue inspired the school students to explore and appreciate a new genre of music while improving their confidence. (School teacher 1)
>
> I am emailing to say what a wonderful experience the String Ensemble girls had at your workshop. The girls were very privileged to be able to take part in such a program as they don't normally get access to such events. It was exactly the type of experience they needed to get them excited about their string playing and to see that it can be fun! Your show was truly electric – we all left on a high and the girls were still buzzing with enthusiasm the following Monday at school. Thank-you for accommodating our group and for providing such a worthwhile and enjoyable experience. (School teacher 2)

Both the student and teacher responses show how the YB approach encourages the participants to move beyond their comfort zones. This self-confidence informs the development of entrepreneurial attitudes and motives which can be seen as participants

discovering and acting on their newfound ‘direction’ with music. In most cases the availability of DB role models allows this growth in a supportive and inspiring environment.

Entrepreneurial enthusiasm, drive and motivation, another common ‘know-why’ trait, was observed in YB participants. In the quote below, a Melbourne school teacher refers to a group of students who were inspired by the DeepBlue approach and started their own ensemble:

> I thought you should know that this week [Band A] came in with THREE new arrangements (unheard of before – and especially as exams are next week). They are so fired up and they loved meeting you all. Toby is playing the cello Deepblue style!!! I can't stop him even though I know you will be horrified!! (School teacher 3)

The next time DeepBlue were in their town, the [Band A] students sought out work experience and extra performance opportunities. This self-directed behaviour, along with their own arrangements of three new pieces, is a strong reflection of the way their new enterprise was functioning, that is, developing self-direction through modelling. Growing and learning independently of curriculum is a strong indicator of developing ‘know-why’ competency.

Know-how

While in both our case studies the students were developing new skills, the two cases differed due to the ages of the students involved. These project management skills included setting goals and completing tasks, strategic planning, and interpersonal and communication skills.

The YMI students recognised that timely organisation was a major factor in executing project goals and that this involved not only personal organisation, but also clearly delegated jobs and responsibilities. In the early stages of the YMI start-up Hayden assessed YMI's ability to be organised:

> Cause we haven't had much time, we kind of just do it, and we don't think about it, um, and we don't arrange it, we just do it, that's what I've been fighting to change for the past six months, just getting everybody to do a specific thing, instead of everyone just running around doing something. (Interview)

In the second year of YMI, the students aimed to take their organisation skills to industry standard, and put in place clearly developed roles and responsibilities. This strategy led to an improved approach to organisation involving a more professional governance structure with clearly defined roles. The students had their project deadlines and schedules worked out much earlier, and met each deadline well in advance of the equivalent in previous years. This growing professionalism is evident in the Facebook excerpt below:

> *Tom*: Indigo, Faith updates on your roles would put my mind at ease (: Chris also.
> *Faith*: I've started contacting food, but no confirmations yet – I'll let you know when there are any. Hellhound hotdogs haven't gotten back to me :(so I'm still looking for a hotdog vendour…
> *Tom*: Okie doke, let me know if it's still not looking good at the end of the week and we'll have a chat about it.
> *Faith*: OK, sounds good.
> *Indigo*: Got 5 people keen to do photos…

These extracts provide evidence of the students showing greater organisational maturity in the way they approach their project goals and deadlines. Evident is a clear strategy to identify problems early, with established reporting methods that the students implemented to monitor how their project was tracking.

Participants involved in DeepBlue's educational programs all have access to vital 'behind the scenes' information of a professional production. Through this they gain valuable insights into the elements that go into producing a show and the problem solving that inevitably takes place. The key observations of the 'know-how' attribute found in YB participants are the unique imitative skills acquired while working with mentors, as well as skills learnt that are not generally taught in current music classrooms. The following quotes offer insight into the impacts on students who were given an opportunity to build and stage their own show. This included designing the narrative and story, right through to the production, costuming and staging of their performance:

> We are also deeply appreciative of the opportunity given to our son to act as stage manager due to an injury to his hand. He was very excited and keen and for a 12 yr old, I think he did a fine job. It has also opened up a whole raft of possibilities for him down the track re careers etc. (Parent 1)

> I liked the Summer school because it was more than just playing the music but had things like public speaking, stage-craft and movement. (YB participant 3)

In both of these extracts YB participants and parents demonstrate an awareness of the growing needs of musicians to be multi-skilled. These relevant, yet extra-musical skills acquired by the students are indicative of developing entrepreneurial 'know-how', in particular problem-solving skills and technical skills, which enable the musician to expand their opportunities and explore new contexts.

Know-who

Entrepreneurial 'know-who' competency can be described as a student's ability to mobilise their connections and networks to achieve goals, generate opportunities, gain access to new ideas and trends, and take risks, all which is important in fostering the entrepreneurial mindset.

In both cases students identified the value of building these social networks. As can be seen in the interview extract below, the YMI students were conscious of the social and cultural capital they generated through this:

> It's cool that I can write down on my resume that I've organized a festival and currently organizing a conference, and working with the industry like QMusic – just knowing that I have that support now (Tristan, YMI).

The students' developing entrepreneurial 'know-who' was not only evidenced explicitly in interviews, such as in the quote above, but also implicitly as seen in the 'Facebook' excerpt below. Here a student suggested that someone from YMI attend an event being hosted by another group of young people outside of the school:

> *Brandon*: Is anyone going to soundsesh tomorrow? If so, take a camera and take a few pics of the place. Would be interesting to see how they set the whole thing up. The two people are running it, Carly and Connie, have messaged me etc., and they are running it by themselves...just them two, but I wished them good luck and posted the event on the YMI page. Nice people.
> *Hayden*: I'm going, and I'll be saying hey…
> *Chris*: I should be there.

In this 'Facebook' excerpt it is possible to see strategic behaviour around networking, that is, development of entrepreneurial 'know-who'. The feature of interest in this excerpt is the idea of not only raising awareness of what their competition is doing, but also networking and learning from them. In this case, Soundsesh was promoted through the YMI networks, and YMI were able to acquire new 'know-how' and bring that back into their own community. In this way, mobilising social capital was a strategic move by the students in improving their own enterprise.

In contrast, YB students' understanding of the value of social interaction was more implicit. The 'know-who' behaviour was seen developing in a social context:

> It was an exciting experience, as I was able to meet new and old friends. (YB participant 4)

> It was great for Thomas to hang out with kids he didn't usually and establish new friendships. (Parent 2)

> It was a great opportunity for the children to mix with others who have similar musical interests and learn from so many specialist teachers. Really motivated and heightened levels of interest in music, keen to keep learning. (Parent 3)

These extracts emphasise both participant and parent awareness of the social and collaborative nature of music-making. The YB program has given students the opportunity to strengthen existing ties but to also create new ties. This is an important part of developing entrepreneurial 'know-who' competency. In particular these extracts show how new networks have provided opportunities for participants to accelerate their musical learning and increase their motivation. Aligning with a community of musicians also allows these young participants to refine their growing musical identity, and as such enhance their entrepreneurial 'know-why'.

While relying on existing personal networks (e.g., school concert band) is good for confidence building, it also presents an opportunity for students to hide behind their whole section and rely on others to carry the load. The YB program offers a context for risk-taking with less familiar concepts and people. This provides opportunities for growth and development, which are quite often implicit to the participants:

> Our Instrumental players while some, especially the yr 8s [Grade 8 students] were out of their comfort zone, the teachers were really surprised to see how kids stood up beyond what was expected and some kids usually in the background shone. (School teacher 4)

> I was in YoungBlue. It was the best day of my life! I was inspired by what you do. I have been on that stage a couple of times, but that time scared me. (YB participant 5)

DB itself is outward looking and explores new approaches using a business model called Blue Ocean Strategy (Mauborgne & Kim, 2005). This involves taking risks to create uncontested market space. This is an important feature of the DB YB program, which encourages the student to push beyond their comfort zone.

Know-when

Entrepreneurial 'know-when' is evidenced in an individual's ability to trust their intuition, and to recognise, seize or create opportunities that emerge at the right time. The YMI students in the Facebook excerpt below demonstrate their ability to recognise the chance to capitalise on an existing situation, in this case a potential useful partner:

> *Matt*: [BAND B] REPLIED!! These guys are so good! So we should definitely let them play? Btw (by the way), we should meet the manager, as he runs the Gold Coast Music Industry Association!
> *Sarah*: So he's asked me to call him tomorrow, when would be a good time to arrange a meeting?

While there was evidence that students recognised potential opportunities by networking with industry professionals, these 'discovered' opportunities were not always exploited. In most cases, these decisions can be attributed to lack of time due to school commitments and the heavy event management workload of the YMI team as reflected on by Ivan in the following interview excerpt:

> Strengths are we create a lot of opportunities, and our partners create a lot of opportunities for us, whether we take full advantage of those is one thing. I think that is really, well, it's difficult cause we're at school, and being at school you have other milestones as well.

In a sense, the students had reflected on what the group could achieve based on their individual commitments, were realistic about what was doable, and prioritised. Like any business, the students were constrained by their resources and, in particular, their lack of time. This is an example of the students developing a sense of entrepreneurial 'know-when': the ability to know when to exploit an opportunity, to know when the time is right for both the market and the organisation.

Research field notes from a YB Summer school programme suggested that students in a supportive, creative and collaborative environment were able to trust their intuition and seize opportunities. An example of this was demonstrated during the Summer school of 2012, when a small group of students who had met in the program collaborated to form a small group, practising together during lunch breaks and using the Summer school performance to launch their new ensemble.

In a more recent YB workshop a participant followed up in an email to his music teacher straight after the workshop finished:

> I've recently been in a couple DeepBlue concerts and thought, "Hey, why don't we have a go at that?" We have a bunch of electrical instruments (violins, violas, cellos and basses) and wireless packs and all these other things that aren't getting

> used. What I was thinking is that we could get a group together and play contemporary pieces and covers and arrangements of others and all this fun stuff. (YB workshop participant 6)

This student identified an opportunity to take initiative and create an opportunity. In this case, the student saw an opportunity to engage his teacher and peers, and mobilise existing resources. In particular the student recognised the appropriate time to act given that students and staff were feeling inspired and excited at the recent workshop.

Know-what

In this section we present evidence of what it is that students learned about working within the music industry; this particular section highlights how their work behind the scenes gave them a greater understanding of what it takes to be successful in the industry. The foci of this section include institutional facts, professionalism and industry expectations, exploring the realisations that the students came to, and the process of coming to these realisations.

Acquiring institutional facts are an important part of developing 'know-what' competency. In the Facebook excerpt below, YMI students have learned important issues regarding copyright after they used a band's original song as the soundtrack to a promotional video for their music festival:

> *Indigo*: Did you see the email from Over Ocean's [band] manager? Not cool, we need to be really careful about this stuff in the future.

> *Brandon*: Yes, and it's fine! Cause Matt had sent them a message last night anyway! So it was just bad timing in how we sent emails! All sorted! Did someone reply to them? If not, I will again.
> *Indigo*: We need to make sure we get permission before release.
> *Brandon:* We thought it was a creative commons licenced download as it was available for free on triple J [Australian radio station known for unearthing new bands]
> *Indigo*: Yeah, I dunno. That is something we should probably actually learn about…
> *Brandon*: …which we just did!
> *Indigo*: I mean like the legit technicalities…

Here we see that Brandon has not sought the correct permission for using another musician's song as an accompanying soundtrack to the film clip. As demonstrated in this excerpt, the students explicitly learned about copyright issues through their own errors. Lacking certain knowledge puts Brandon at the periphery of both the YMI and music industry communities, a risky place where mistakes can be made. However, through this experience (legitimate peripheral participation), he deepens his knowledge, which increases his competence and serves to move him further to the centre of the YMI community. This level of required knowledge is mostly beyond what YB students require for the programme, however both YMI and YB learned a great deal about the need to adopt a professional approach, which is embedded into the practices of both programmes with the age-old motto 'the show must go on'.

The YMI students became more aware of the industry environment, the structure of the industry, and the rules of participating therein; in other words, the industry 'do's and don'ts'.

This awareness played a significant role in their emerging understanding of professionalism. In the following Facebook excerpt below, Matt reports that with only two weeks to go before the Four Walls Festival, only four out of more than fifteen of the youth bands had returned their contracts, which included vital information required by the technical team for planning:

> *Matt*: Btw, only 4 bands have replied with stuff…WOO for them emailing back, hahaha!
> *Hayden*: Holy shit they are lazy, no wonder bands need managers…

In this excerpt, Hayden explicitly shares his understanding and growing appreciation of one less visible aspect of the music industry's structure: band management. The excerpt also shows Matt's frustration with the young bands not returning emails. This demonstrates a more nuanced understanding of what is required for participation in the music industry. It also makes students aware of a gap in music industry knowledge for young performers; in this case, the need to respond to an opportunity and to be professional and punctual as evidenced in Tristan's reflection below:

> It has shown me that with my own band you just have to be on the ball, cause I know that other people who were trying to organise an event, they'd just cut you if you're not like responding to emails, you're not just there waiting to be directed, you just have to be on the ball.

Through the process, they were able to experience first-hand the gaps in young people's music education and the consequences of these gaps. They were also able to acquire knowledge

of the music industry structure, its regulatory environment, and the various roles and careers available.

In YB, the notion of professionalism is experienced by the students first through observing their DB role models, and then through the opportunity of staging their own performance within a DB public show:

> I also really enjoyed watching the rehearsal and the sound check as I learnt so much about how deepblue do what they do. (YB participant 7)

> They (the students) especially enjoyed the comments from your director. It was great to hear about how to make it in the music industry and sustain a successful career. (School teacher 5)

The participants are initially asked to sit in the audience and observe DB in rehearsal and are able to communicate with the producers, directors and performers to ask questions and engage with the process before the workshop begins. This aids students understanding of the DB concept, how to act when you are on stage, through observation and imitation.

The participants involved in any of the YB programs take a substantial risk by getting up on stage and doing something beyond their learned experience. This challenge includes playing from memory while incorporating choreography, working with professional hands-on technologies, and all with the expectation of a highly energised and committed approach. In a public performance with an audience made up of strangers, friends and family, the participants learn a great deal about what it means to be professional, learning to be on stage at the right

time, how to act on and off stage, how to execute their creative ideas in public, how to regulate emotions and manage any fears or anxieties:

> The show was great – I never realised how much work must go into the Deepblue shows! Being able to learn about the lighting, setting, instruments, costumes and choreography-and then choosing our own! It was great! (YB participant 8**)**
>
> The concert looked like we had worked on it for ages! (YB participant 9)

In learning about the behind-the-scenes aspects of being a professional musician, the participants often learn about themselves as musicians and surprise themselves when they discover their own capabilities.

Conclusion

Wenger's social theories of learning in entrepreneurial contexts, offers educators practical approaches for moving beyond learning *about* entrepreneurship, to learning *for* entrepreneurship. In particular CoPs rely on the convergent interplay of competence and experience by allowing them opportunities to broaden their membership to include those who offer different perspectives and levels of expertise, such as industry partners and new members. This is relevant for entrepreneurs who need to develop a diverse range of social networks to gain access to new opportunities and resources. The tension created by overlapping various communities keeps a CoP perturbable and resilient at the same time, ensuring that the group remain fresh, innovative and sustainable. Wenger (2000) describes

three learning dimensions of CoPs, Mutuality, Enterprise and Repertoire. The learning environments in both cases enable students to interact meaningfully and also beyond to experts, learning how to contribute what they know, and connect with what they don't know. Students developed trust within their communities to be able to speak truthfully and feel comfortable addressing problems together. It is this ability to interact productively (Mutuality) that is fundamental to successful entrepreneurial 'know-what' and 'know-who'. Both groups developed a strong belief in what they were about, evident in the groups' desire to address gaps in their knowledge, and to remain open to new opportunities and directions. This shared enterprise is fundamental to entrepreneurial 'know-when', 'know-how' and 'know-why'. Repertoire is evidenced in the groups' desires and needs to enact all that they learn through reflection and feedback, on the development of common resources, artifacts, tools, stories, styles and routines in order to improve. This is fundamental to the entrepreneur.

Social learning values the lived experience of participation in the world. Legitimate peripheral participation, however, provides an approximation of full participation giving exposure to actual practice. Having both legitimacy and peripherality makes participation work. YB members are granted legitimacy as potential members of DB as they are required to perform in DB's public performance. These young people are given space to make mistakes, to experiment and test out their ideas as they imitate and learn from DB members. Some of the YB members have developed enough competence to be able to secure their own spot in a DB

show as a support act. The YMI members move in and out of the centre of the community depending on their role at the time when tackling high-profile public events involving budgets, venues, band managers, media and large scale logistics. There are complex problems to be solved, new and exciting ideas to adventure but no text books from which to learn this. It is only through their CoP and the overlapping of other communities within the industry that they are able to learn everything they need.

This study aimed to investigate how and what young musicians learn about the music industry through designs that were deliberately engineered to require collaboration with each other and industry partners, and that offered grounded, authentic opportunities that would create a need to develop a command of important skills and knowledge. In doing so, we distil our findings into a broader set of principles that arts educators can experiment with in both curricular and extra-curricular contexts.

1. Students acquire domain knowledge through engagement in authentic contexts to develop entrepreneurial Know-what.
2. Networking is fundamental to learning and developing entrepreneurial Know-who.
3. Reflection and self-feedback enable students to create effective strategies for action and improvement, and develop entrepreneurial Know-when and Know-how.

4. Students learn about industry professionalism, standards, and cultural practices by working in a variety of roles to develop entrepreneurial Know-what and Know-why.

5. Setting goals and completing tasks is fundamental to learning and developing entrepreneurial Know-how.

6. Effective interpersonal skills can enhance community learning and develop entrepreneurial Know-how.

7. Students learn about music career sustainability through engaging in, maintaining and renewing their own enterprise, thus developing entrepreneurial Know-why and Know-when.

While this work demonstrates an idealistic vision for the future of education, the reality is inevitably less optimistic. While our studies sit outside the formal curriculum, they offer a promising set of goals; however, the challenge for educators will be to determine how these approaches can be implemented within the formal structure and systematic constraints of schooling, if they continue to be governed by conventional templates. On the positive side, our studies have shown that school administrators and teachers are open to new learning environments that may effectively prepare young people for entrepreneurial careers within the creative industries.

In our experience of running these programs we acknowledge that the real spur for effective learning is the real-world context – a ticketed show that *must* go on incentivises both YoungBlue and YMI students.

References

Beckman, G. D. (2007). "Adventuring" arts entrepreneurship curricula in higher education: An examination of present efforts, obstacles, and best practices. *Journal of Arts Management Law and Society, 37*(2), 87-112. doi: 10.3200/JAML.37.2.87-112

Bennett, D. (2007). Utopia for music performance graduates. Is it achievable, and how should it be defined? *British Journal of Music Education, 24*(2), 179-189. doi: 10.1017/S0265051707007383

Bresler, L., & Stake, R. (2002). Qualitative research methodology in music education. In R. Colwell, C. P. Richardson & C. Music Educators National (Eds.), *The new handbook of research on music teaching and learning*. New York: Oxford University Press.

Brown, J. S., & Duguid, P. (2002). *The social life of information*. Boston: Harvard Business School Press.

Business Council Of Australia. (2007). *Restoring Our Edge in Education - Making Australia's Education System its Next Competitive Advantage.* Retrieved from http://www.bca.com.au/publications/2007-reports-and-papers

Cheung, C-K., & Au, E. (2010). Running a small business by students in a secondary school: its impact on learning about entrepreneurship. *Journal of Entrepreneurship Education, 13*, 45.

Creech, A., Papageorgi, I., Duffy, C., Morton, F., Haddon, E., Potter, J., De Bezenac, C., Whyton, T., Himonides, E., & Welch, G. (2008). From music student to professional: The process of transition. *British Journal of Music Education, 25*(3), 315-331. doi: 10.1017/S0265051708008127

Creswell, J. W. (2013). *Research design: qualitative, quantitative, and mixed method approaches*. Los Angeles, Calif: SAGE.

Deepblue. (2017). Retrieved from http://deepblue.net.au/

Drucker, P. (1985). *Innovation and entrepreneurship: Practice and principles*. London: Heinemann.

Froehlich, H. (2009). Music education and community: Reflections on" Webs of Interaction" in school music. *Action, Criticism, and Theory for Music Education, 8*(1), 85-107.

Hammersley, M., & Atkinson, P. (1995). Insider accounts: Listening and asking questions. *Ethnography: Principles in practice*, 124-156.

Hitchcock, G., & Hughes, D. (1995). *Research and the teacher: A qualitative introduction to school-based research*. New York: Routledge.

Hung, D. W. L. (1999). Activity, apprenticeship, and epistemological appropriation: Implications from the writings of.. *Educational Psychologist, 34*(4), 193-205. doi: 10.1207/s15326985ep3404_1

Johannisson, B. (1991). University training for entrepreneurship: Swedish approaches. *Entrepreneurship & Regional Development, 3*(1), 67-82. doi: 10.1080/08985629100000005

Jorgensen, D. L. (1989). *Participant observation: A methodology for human studies* (Vol. 15). Newbury Park, Calif: Sage Publications.

Kaarbo, J., & Beasley, R. K. (1999). A practical guide to the comparative case study method in political psychology. *Political Psychology, 20*(2), 369-391. doi: 10.1111/0162-895X.00149

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.

Leadbeater, C. (2000). *Living on thin air: The new economy*. London: Penguin.

Lindblom, S. (2009). *Audience connectivity in orchestral performances* (Doctoral dissertation, Queensland University of Technology).

Chan Kim, W., & Mauborgne, R. (2005). Blue Ocean Strategy: How to create uncontested market space and make the competition irrelevant. *Harvard Business School Press, Boston, MA*.

Middleton, K. W., & Donnellon, A. (2014). Personalizing entrepreneurial learning: A pedagogy for facilitating the know why. *Entrepreneurship Research Journal*, *4*(2), 167-204.

Ninan, A., Hearn, G., & Oakley, K. (2004). Queensland music industry trends: Independence day? (CIRAC, Trans.). Kelvin Grove, Qld: Queensland University of Technology.

Oakley, K. (2007). Educating for the creative workforce: Rethinking arts and *education*: Australia Council for the Arts. Retrieved from http://bit.ly/1xLDDB1

Pea, R. D. (1993). Practices of distributed intelligence and designs for education. In G. Salomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp. 47-87). New York: Cambridge University Press.

Radbourne, J. (2007). Business model for the 21st century orchestra. *British Academy of Management.* (Management research education and business success: Is the future as clear as the past?).

Rae, D. (2005). Entrepreneurial learning: a narrative-based conceptual model. *Journal of Small Business and Enterprise Development, 12*(3), 323-335. doi: 10.1108/14626000510612259

Rasheed, H. (2000). Developing entrepreneurial potential in youth: The effects of entrepreneurial education and venture creation. Florida: University of South Florida.

Riese, H. (2011). Enacting entrepreneurship education: The interaction of personal and professional interests in mini-enterprises. *Cambridge Journal of Education, 41*(4), 445-460. doi: 10.1080/0305764X.2011.624998

Roberts, P. (2006). *Nurturing creativity in young people: A report to Government to inform future policy*. Department for Culture, Media and Sport.

Temmerman, N. (2005). Children's participation in music: connecting the cultural contexts - an Australian perspective. *British Journal of Music Education, 22*(2), 113.

The Parliament Of The Commonwealth Of Australia, House Of Representatives, Standing Committee On Science And Innovation. (2006). *Pathways to Technological Innovation Report.* Retrieved from the Parliament of Australia website http://bit.ly/1vxWcbV

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, U.K: Cambridge University Press.

Winterson, J., & Russ, M. (2009). Understanding the transition from school to university in music and music technology. *Arts and Humanities in Higher Education, 8*(3), 339-354.

Yin, R. K. (2009). *Case study research: Design and methods*. Thousand Oaks, Calif: Sage Pub.

YoungBlue. (2017). YoungBlue. Retrieved from http://youngblue.net.au/

Young, L. (2015). *The report on small firms 2010-2015 by the Prime Minister's advisor on enterprise.* UK Government. Retrieved from http://bit.ly/1AkHuG7

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Music Learning Outcomes and Music Teachers' Expectations: Trialing an Adapted Music Curriculum for Students Aged 15-18 with Intellectual Disabilities in Hong Kong

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Abstract

Addressing a gap in the literature about the music learning outcomes of students with intellectual disabilities (ID), this study is designed as a qualitative multiple-case study. The

purpose of this paper is to investigate special schools music teachers' expectations of students' music learning outcomes and the observed music learning outcomes of students with ID. Seven cases are reported with a focus on special school music teachers' trialing the adapted music curriculum for Hong Kong students with ID. Data analysis confirms the possibilities for students with intellectual disabilities to achieve music learning outcomes in listening, performing and creating; Deno et al. (2001) that using curriculum-based measurements as growth standards can help scaffold students' learning outcomes; and Sutherland and Wehby (2001) that repeating opportunities for students to respond can produce positive behavioral outcomes. Further, this analysis supports both Colwell's (2013) view that many music teachers lack an understanding of the music abilities of students with special needs, and VanWeelden's (2007) findings that students with special needs remain a challenging area for music educators. A recommendation is made to address the conclusion that the potential promise of scaffolding tangible development in students with intellectual disabilities remains as yet unfulfilled.

Key words

Music: learning outcomes, teachers' expectations, adapted music curriculum, Hong Kong

Introduction

Music learning outcomes of students with special educational needs is an area of research that attracts very little attention in music education. As an experienced music teacher educator in Hong Kong, the author's observation is that while the educational policy of "one curriculum for all" is implemented in Hong Kong (EDB, 2017a), special schools music teachers might have hesitations regarding how such a policy can be implemented. In actual practice, music teachers need to know more about the possible music learning outcomes of students with intellectual disabilities so as to better inform their music curriculum planning in special schools for students.

Literature Review

This section provides a historical review that outlines how decades-past insights continue to shape our understanding of both "learning outcomes" and "intellectual disabilities". Reflecting a psychological perspective of the theories of cognitive, affective and motor-cycle development, Gagné (1984) differentiates five different categories of learning outcomes. These categories include intellectual skills (procedural knowledge), verbal information (declarative knowledge), cognitive strategies (executive control of processes), motor skills, and attitudes. From a general educational perspective, Spady (1988) succinctly describes educational learning outcomes as "visionary exit outcomes" that identify what we want

students to know and be able to do (p. 5).

Most of the research related to learning outcomes was done in the 1990s. This research found that successful implementation of outcome-based education requires significant changes across the curriculum, instruction strategies and assessment, as well as teachers' engagement with learner-centered curriculum development (Evans & King, 1994; O'Neil, 1993; Glatthorn, 1993). Most of the studies about students' learning outcomes are related to the beneficial experiences of implementing various outcome-based education models in schools' core subjects, such as reading and mathematics (Cowley & Williamson, 1998; Galton, 1995).

In the field of music education, there is some literature critiquing learning outcomes that are centrally set by policy makers. Livermore (1997) reported that Australian primary school music teachers complained about the diversity of music learning outcomes that made teaching and assessing difficult. Watson (1997) criticized that writing music learning outcomes had caused the subject to lose its integrity and become confused with other arts. In England, music educators in the 1990s cited the unfamiliar, newly introduced assessment descriptors (learning outcomes for assessment) of the National Curriculum as the cause of music teachers' frustrations (Cox, 1999), a situation exacerbated by the new requirement to teach "creative music" (Green, 1995). Subsequently, these descriptors were removed from the music syllabus of the National Curriculum. In the USA, Sandholtz et al. (2004) found that the

implementation of National Standards had lowered education standards across all subjects except reading and mathematics. Similar to the experience of music teachers in the UK, teachers in the USA also faced difficulties in implementing National Standards in their curriculum (Byo, 1999; Orman, 2002). Riverire (1999) found that music teachers in the USA were also worried about the National Standards that required students to achieve in tasks related to music composition. In summary, both research scholars and music teachers report negative views about the imposed implementation of outcome-based education in the music subject. Research about learning outcomes in the field of mainstream music education has diminished in the past decade.

In contrast to mainstream music education, the field of special education provides positive and ongoing interest in students' learning outcomes in inclusive classrooms. For example, the academic learning outcomes of students with learning disabilities reportedly improved in inclusive classrooms (Tremblay, 2012; Klingner et al., 1998; Elbaum, 1999). Deno and his associates (2001) found that using curriculum-based measurements to set growth standards for students with learning disabilities could help them to achieve better in reading. Elbaum and her associates (1999) found that alternative grouping strategies could improve the reading outcomes of students with learning disabilities. Furthermore, positive relationships were reported between the opportunities to respond to academic requests and behavioral outcomes (Sutherland & Wehby, 2001), as well as between career-related

experience and the employment outcomes of students with special educational needs (Benz et al., 2000).

Music has been used as a therapeutic medium for students with special needs (Patterson, 2003). Research studies about music learning of students with special needs usually focus on extra-musical outcomes. For example, music learning was found to have a positive impact on the holistic development of students with special educational needs, such as emotional control (McCavera, 1991), communication skills (Leung & Leung, 2012), social skills (Rickson, 2012) and cognitive processing (Portowitz & Klein, 2007). However, some music teachers have been found to hold negative attitudes towards teaching students with disabilities (Gfeller, Darrow & Hedden, 1990), some display low expectations in musical achievement of students with special needs (Scott et al., 2007), and some music teachers tend to include high therapeutic content (Ockelford, 2000). In summary, many music teachers lack an understanding of the music abilities of students with special needs (Colwell, 2013), and accordingly the development of music curriculum and instructional strategies for students with special needs remain a challenging area for music educators (VanWeelden, 2007). It requires concerted effort of music educators and researchers to further investigate music learning of students with special needs (Ockelford et al., 2002).

Analytical Framework

Good (2014) maps an interaction domino-effect between teachers' beliefs and perceptions of their students' abilities, which then molds how they interact with these students – an interaction that significantly impacts on these students' achievement. Reviewing the available evidence of experiment on teachers' classroom behaviors, Good (2014) shows that teachers' expectations have a self-fulfilling prophecy effect on students' academic achievement:

> Teachers who believe that students are capable often interact with them differently than they do with students believed to be less capable (p. 20).

In the context of Hong Kong, teachers' expectations of students may be influenced by the local culture. Hong Kong's hybrid culture has been shown to reflect both East and West traditions – an aspirational educational ideology inherent in traditional Chinese society alongside an education curriculum that is based on current western educational development (Sweeting, 2004). Combining these cultural influences, Hong Kong's education seeks to interpret "there is a single teaching, meant equally for all classes of persons" (Confucius: 15.39), as being in harmony with the current Hong Kong education aim of "one curriculum for all" (EDB, 2017a). Significantly however, the Confucian educational ideal does not hold the teacher as being responsible for academic success, but instead each individual student (Cheung, Randall & Tam, 2015). This view generates a highly competitive, aspirational view of education in which 'failure' is perceived as being the individual's responsibility and

repeated ‘failure’ will become the justification for negative discrimination. Intellectual disabilities are thus considered to be a cause for negative discrimination and family shame (Scior et al., 2010). In order to minimize ‘failure’, there is a traditional educational belief about repeated practice inherited from Confucius – “To study and at due times practice what one has studied, is this not a pleasure?” (Confucius: 1.1).

Purpose of the Study

The purpose of this study is address a current gap in the literature by analyzing data derived from observed music lessons in Hong Kong special schools. This analysis will focus both on the music learning outcomes of students with intellectual disabilities and their teachers’ expectations. It is hoped that results of this study can reflect current practice and issues when music educators are planning or adapting a music curriculum suitable for students in special schools or inclusive music classrooms. The specific focus of this study is the trialing of Hong Kong’s adapted music curriculum for students with intellectual disabilities aged 15-18. To address this study’s purpose this paper addresses two research questions:

(1) What are the observed music learning outcomes of students in elective music lessons of adapted music curriculum for students (aged 15-18) with intellectual disabilities?

(2) What are special schools music teachers’ expectations of students’ (aged 15-18) music learning outcomes?

Contextual background

Hong Kong's hybrid culture has been shown to reflect both East and West traditions – an aspirational educational ideology inherent in traditional Chinese society alongside an education curriculum that is based on current western educational concerns with 'inclusiveness' (Sweeting, 2004). Teachers' expectations of students reflect a combination of both Chinese and western ideologies. On one hand, Hong Kong's education seeks to follow the current Hong Kong education aim of "one curriculum for all" (EDB, 2017a), which aligns with the current curriculum trend in western countries as well as the harmonious view of Confucian ideology that regards the equality of educational opportunities (Confucius: 15.39). On the other hand, the local Chinese culture demonstrates a highly competitive and aspirational view of education in which 'failure' is perceived as being the individual's responsibility, in addition to the justification for negative discrimination of people with intellectual disabilities which is considered to be a cause for family shame (Scior et al., 2010).

Educational policies

There are three educational policies in Hong Kong that guide the education for students with intellectual disabilities: the extension of free education by three years (EDB, 2012), prioritizing 'inclusive' education (EDB, 2017b) and third, the introduction of "one curriculum

for all" (EDB, 2017a).

Prior to 2007 all Hong Kong students were entitled to receive free and compulsory education from age 6 to 15. Students with intellectual disabilities aged 6-15, were usually allocated to study in one of the 41 special schools: 14 provided for children with moderate intellectual disability, 11 provided for children with mild intellectual disability, six for children with mild or moderate intellectual disability while the remaining 10 special schools provided for children with severe intellectual disability (CHSC, 2017).

In 2007 this provision changed. First came the introduction of "12-year free education" to all students aged 6-18, including both mainstream students and those with special educational needs (EDB, 2017c). Second, the policy of 'educational inclusion' encouraged students with special educational needs to "receive education in ordinary schools as far as possible or in special schools when necessary" (EDB, 2017b). Following the implementation of these two policies, the placing of students with intellectual disabilities in specials or mainstream schools is now effectively decided by parental choice (Lian, Tse & Li, 2007).

A third policy change was the implementation of "one curriculum framework for all" (EDB, 2017a). This policy allowed teachers in special schools to adapt the official curriculum flexibly according to their students' abilities. The adapted curriculum in schools for students with mild level of intellectual disabilities usually follows the official curriculum closely (Poon-McBrayer & Lian, 2002), but the adapted curriculum in schools for students with

moderate to severe/profound intellectual disabilities usually focuses on educating students to function properly in daily life, neglecting other areas of learning (Lian, Tse & Li, 2007). This flexible curriculum implementation therefore allows variety across different special schools. In practice, this flexible curriculum implementation is entirely dependent on both the subject expertise and individual choice of each teacher and has been shown to reflect each teacher's educational beliefs, training and pedagogical preferences (Wong, 2015).

Music curriculum for students with intellectual disabilities

The official curriculum documents for schools in Hong Kong are designed for (1) students aged 6-15, the *Music Curriculum Guide (Primary 1 – Secondary 3)* (CDC 2003), and (2) students aged 15-18, the *Music Curriculum and Assessment Guide (Secondary 4 – 6)* (CDC and HKEAA 2007). Both documents share common targets, including "developing creativity and imagination", "developing music skills and processes", "cultivating critical responses in music" and "understanding music in context". Students are to attain these four common targets through performing, listening and composing activities (CDC, 2003, p. 12; CDC and HKEAA 2007, p. 6). Under the policy of "one curriculum for all", teachers in special schools may adapt the 'common' curriculum to suit their students' capabilities (EDB, 2017a). Accordingly, a *Supplementary Guide to the Music Curriculum and Assessment Guide for Students with Intellectual Disabilities (Secondary 4-6)* [*Supplementary Guide*] was

introduced for students, aged 15-18 with intellectual disabilities attending special schools in 2012 (EDB, 2015). This *Supplementary Guide* provides adapted learning objectives and instructional advice for music teachers to develop school-based adapted music curriculum. Echoing VanWeelden's findings (2017), the challenge of adapting music curriculum remains. In Hong Kong, music teachers do not have training in music education for students with special educational needs in specific (Wong, 2016).

Methodology

The methodology comprises that of a qualitative multiple-case study (Yin, 2014). To identify suitable case-studies, participants were recruited through a professional development program for music teachers within Hong Kong's 41 schools for students with intellectual disabilities. The professional development program, funded by the Hong Kong Education Bureau, consisted of three components: workshops supporting the design and implementation of the newly adapted music curriculum, school-based professional support and experience-sharing sessions. On completion, all program participants (n=85) were then invited to join, on a voluntary basis, a school-based professional support component. It was from this support component that this study derived seven qualitative multiple-case studies.

This research employed typical purposeful criterion sampling (Merriam & Tisdell, 2016) to select cases. To be selected, the participant should:

(1) Be an in-service music teacher in a Hong Kong special school that offers music as an elective for students age 15-18.

(2) Be willing to trial the new adapted music curriculum.

(3) Permit the researcher to observe his/her teaching the new adapted music curriculum in any two music lessons during the period of research (January – June, 2011). The choice of observed lessons is as selected by the participant.

From a population (n=85) only seven special schools music teachers consented to participate in this study (8% of the professional development program participants of workshops). This low uptake reflects both a reluctance of special school music teachers to open their classrooms for observation and their lack of confidence in their students' music learning outcomes. According to the author's observations, music teachers who participated in this study were more out-going in character and showed confidence in their instructional strategies as well as their students' work.

To protect participants' identities, pseudonyms (Amy, Betty, Candy, Diana, Eva, Flora and Gigi) are used. Profiles of these seven cases are shown in Table 1.

Table 1 *Profiles of the music teachers and their music classes being observed*

Case (Pseudonym)	Age	Sex	Education	Type of Students*	Class size
1. Amy	30+	F	B.A. in music; PGDE in music	Mild	9
2. Betty	30+	F	B.A. in music,	Mild	8

			PGDE in music		
3. Candy	35+	F	Teacher Cert. in Chinese Language & music	Mild	12
4. Diana	35+	F	B.A. in social science	Mild	13
5. Eva	25+	F	B.Ed in music	Mild	6
6. Flora	30+	F	B.Ed in music	Moderate	7
7. Gigi	35+	F	B.A. in social science	Moderate	10

*Students with intellectual disabilities in Hong Kong are allocated to special schools according to their IQ assessment. Mild grade intellectual disabilities: IQ 50-69; Moderate grade intellectual disabilities: IQ 25-49 (Hong Chi Association, 2010).

All seven participants were in the age range of 25-35 at the time of the study. They were all female. Six were degree holders, while Candy had a three-year teaching certificate. Five had trained as music teachers within mainstream schools, while Diana and Gigi held BA degrees in Social Science instead of music and had received no teacher-training. Among the seven schools where these seven participants taught, five were schools for children with mild intellectual disabilities, one school was for children with mild and moderate intellectual disabilities, and one school was for children with moderate intellectual disabilities. Among the 41 special schools for students with intellectual disabilities, only 28 of them offer music as an elective for students aged 15-18. These seven schools represent one-quarter of the special schools for students with intellectual disabilities that offer music as an elective for students at age 15-18. The class sizes chosen for observation ranged from six to 13 pupils.

Two music lessons were selected by each participant for observation and simultaneously video-recorded. The duration of every lesson was 40 minutes. Field notes, which focused on

students' music learning outcomes, were taken during each classroom observation. Each observed lesson was then followed by a post-observation interview. All interviews were audio-recorded. The language of instruction of all observed lessons and post-observation interviews was Cantonese – the most commonly used spoken language in Hong Kong. All interviews were then transcribed for coding with selected coded-verbatim being translated into English for report purposes.

Data Collection

Data collection includes music classroom observations. These observations were conducted by the author as a non-participant observer (Hammersley & Atkinson, 2007) and focused on documenting students' music learning outcomes. Face-to-face interviews followed a semi-structured guide to solicit music teachers' views on their students' observed learning outcomes. The interview guide covered areas such as teachers' education and experience, teachers' views on students' characteristics, teachers' reflections and expectations on students' music learning. The duration of each post-observation interview was around 45 minutes.

Data Analysis

Content analysis, within case analysis (Merriam & Tisdell, 2016) and cross-case analysis (Miles, Huberman & Saldana, 2014) were used to analyze the data of this study. All data were

analyzed according to the two research questions. Three major categories were generated: 1) the observed music learning outcomes of students in listening, performing and composing activities; 2) teachers' perceived strengths and weaknesses of students' music learning outcomes in listening, performing and composing activities; and 3) teachers' strategies for helping students to develop their music learning outcomes.

Findings

Participants' views on the music learning outcomes of students with intellectual disabilities are reported in the following seven case studies. Quotations cited are extracted from the interview data collected. The observed learning outcomes reported here refer to the learning outcomes that the majority of students achieved in the observed lessons. In reporting the observed learning outcomes, Table 2 summarizes five case studies of students with mild intellectual difficulties; Table 3 summarizes two case studies of students with moderate intellectual difficulties.

Table 2 *Observed music learning outcomes of students with mild grade intellectual disabilities*

Case	Listening	Performing	Creating
1. Amy	✓ Compare shapes, materials and timbre of music instruments, dynamics and articulation	✓ Sing with solfeggio	✓ Create body movement

	✓ Recognize familiar melody		
2. Betty	✓ Identify shapes and timbres of music instruments	✓ Sing with lyrics ✓ Play melodica ✓ Play desk bells ✓ Read colored music score	✓ Create body movement
3. Candy	✓ Identify shapes and timbres of music instruments ✓ Recognize familiar melody	✓ Sing with lyrics ✓ Play rhythm with percussion instruments	✓ Explore sound effects ✓ Re-arrange rhythm
4. Diana	✓ Recognize familiar melody ✓ Identify and compare timbres of music instruments, dynamics and tempo	✓ Sing with lyrics ✓ Read percussion score ✓ Play rhythm with percussion instruments	✓ Create ostinato rhythm
5. Eva	✓ Identify timbres of music instruments	✓ Sing with lyrics ✓ Play basic pulse with percussion instruments	✓ Create body movement

Table 3 *Observed music learning outcomes of students with moderate grade intellectual disabilities*

Case	Listening	Performing	Creating
6. Flora	✓ Recognize familiar melody ✓ Identify timbres of music instruments	✓ Play rhythm with percussion instruments	✓ Re-arrange rhythm patterns ✓ Re-arrange melodic patterns ✓ Create body movement
7. Gigi	✓ Identify timbres of music instruments	✓ Play rhythm with percussion instruments ✓ Sing with solfeggio	Nil

Case 1: Amy

Amy showed video excerpts of Tchaikovsky's "Swan Lake" and told the story in brief. She played two different versions of the "Swan Lake" theme, an original orchestral version as heard in the video and another version arranged for electronic sounds in pop music style. She

guided her students to sing the theme with solfeggio and to compare these two excerpts, including the use of timbre, dynamics, articulation and tempo. She also encouraged students to move with the music. Amy's students recognized the theme, remembered the name of composer, and the title of the theme. They could tell the differences in dynamics, timbre and tempo of the two versions of the "Swan Lake" theme. They enjoyed it very much.

Besides comparing different versions of "Swan Lake", Amy also guided her students to compare different versions of the Butterfly Lovers' Violin Concerto jointly composed by Chinese composers He Zhanhao and Chen Gang in 1959. Amy played the original version and told the story of the ancient Chinese tragedy that this work was based on. She guided her students to sing the main theme in solfeggio. After students became familiar with the theme, she played the recording of a version for Chinese instrumental ensemble consisting of the Erhu, Zheng, Yangqin and Dizi. Her students recognized the timbre, shapes and material of the instruments. They could tell the differences in timbre and articulation of the two different versions of the Butterfly Lovers' Violin Concerto. Some of her students compared the stories of "Swan Lake" and the Butterfly Lovers. Amy was very contented with her students' music learning outcomes in music listening and singing. Her students had difficulty singing accurately with lyrics and needed a lot of practice:

> My students are good at listening activities. They have training in music lessons ever since they entered the school at the age of six. Besides asking them to identify the musical elements in the music excerpts, we also encourage them to talk about their

> feelings and their ideas about music. Their ideas are very unique and creative. I'm very contented with their learning outcomes of music listening …We have singing activities in every music lesson and they sing well. They usually prefer singing Cantonese popular songs than singing traditional Chinese folk songs. They had difficulty to sing the lyrics correct. Singing in solfeggio may be easier for them. They needed more practice before they can sing the songs accurately.

Case 2: Betty

Betty's focus was on performing activities. She designed a wide range of performing activities for her students, including singing, melodica playing and dancing. Her students could recognize the titles of local Cantonese popular songs and could sing along with karaoke versions of Cantonese popular songs, though their intonation was not too accurate. When playing the melodica, her students could read music scores with colored notes which corresponded to the colored stickers on the keys of the melodica. She provided colored desk bells for students with weak finger mobility to play with their palms. With the help of PowerPoint slides that showed the colored-score, Betty's students could play the melody together with their melodicas and colored desk bells.

Before Betty taught her students to dance, she played an excerpt of a Chinese folk dance tune and guided her students to identify the sound of the Dizi (Chinese flute) that played the leading theme. She showed a video of a Chinese folk dance tune and asked her students to imitate the dance steps or create new dance steps that fit the beat. After watching the video, she played the recording of the Chinese folk dance tune and her students danced in front of mirrors. Some of her students could follow some of the dance steps while some moved freely

without following the music. However, all of her students enjoyed watching their images of dancing through mirrors.

Betty commented that her students were weak in music performance. In order to help her students to succeed in music performance, she employed colored scores and selected music with simple rhythm and shorter tunes:

> Some of my students can sing with words. Some of them have verbal disability and cannot sing. I'll teach them melodica or desk bells according to their finger mobility. They can read colored scores and can match with the keys of melodica with colored stickers and colored rainbow desk bells. Anyway, they are weak in rhythmic accuracy … I usually select very short tunes for my students to play on the melodica because they said that their fingers would feel tired when playing long melodies. I usually select very simple nursery tunes for them to play because those tunes are short and the rhythm patterns are very simple.

Case 3: Candy

Candy's students sang a local Cantonese popular song that had the same tune as a piece originally composed for the Zheng, a Chinese plucked string instrument. Her students also recognized the tune because it was frequently used on TV as background music. They sang along eagerly with Karaoke. Candy played an excerpt of the tune played by a Chinese instrumental ensemble. Her students recognized the shapes and sounds of the Chinese instruments used in the ensemble, including the Suona, Pipa, Yangqin, Erhu and drums. Candy guided her students to compare the instrumentation of the Cantonese popular song and the instrumental ensemble. Her students could tell the similarities (use of Chinese drums) and

differences (use of non-Chinese instruments) in instrumentation between the two pieces of music.

Candy's students liked the Chinese drums and she demonstrated how to make different sounds by striking different parts of the instrument. Her students followed her to try various drumming techniques with short rhythm patterns provided by Candy. Assisting with the computer software, she guided her students to rearrange short rhythm patterns for accompanying the Cantonese pop song. Some of her students sang along with the Karaoke, while some of her students played the rhythm pattern with the Chinese drum and other classroom percussion instruments. Her students made quite a lot of mistakes in performing activities, but all of them were very happy with their performance.

Candy was contented with her students' music learning outcomes in performing, listening and composing activities. She commented that her students were very supportive of their peers' performance and they were eager to create music with the computer software:

> As I expected, they needed to listen to the excerpt many times before they can get the answers. However, many of students can identify the musical characteristics of the piece. I'm happy that they were able to select percussion instruments to play their rearranged version of rhythm accompaniment for the song. They are quite weak in playing musical instruments. They were unable to get all pitches and rhythm correct. I had to practice with them many times before they can get it right. Students with ID are very supportive to each other they won't laugh at their friends even when they are making mistakes … They were very interested in arranging music with computer software though they might be uncertain of what to do at the beginning of the lesson. They like listening to the effect of their arrangement on the computer, though they couldn't perform the arrangement with real instruments. I think they can overcome the difficulty in future when they

become more skillful in using the computer software. I'm confident that they have the ability to create music. What really matter is time; they just need more time to think and do their work.

Case 4: Diana

In Diana's music lessons, she showed a portrait of Mozart and his told life-story with picture cards. Diana's students recognized the portrait of Mozart and could arrange the picture cards of Mozart's life-story in the correct order. When she played "Twinkle, twinkle little star" with colored-bells her students could recognize the tune and sang along with her. She guided her students to play colored bells with a colored music score. Diana played a recording of Mozart's 12 Variations in C Major 'Ah vous dirai-je, Maman' for piano, K. 265 and discussed the musical features of this piece with her students. Some of her students recognized the timbre of the piano; some noticed the changes in dynamics and tempo. Some said that this piece is a cradle song and could think about moon and stars while listening to it. All of them said that they liked the piece. Diana's students could recognize quarter notes and eighth notes. Diana guided her students to compose ostinato patterns with quarter notes and 2-eighth notes. They worked in groups to compose short rhythm patterns made up of quarter notes and 2-eighth notes. When Diana played the recording of Mozart's 12 Variations in C Major 'Ah vous dirai-je, Maman' for piano, K. 265, they played the rhythm patterns with classroom percussion instruments while listening to the recording.

Diana was discontented with her students' music learning outcomes. She commented

that her students always like dreaming and were weak in music achievement:

> It's difficult to keep their attention. They were not well-prepared for listening activities. Some of them like dreaming and did not respond to me. Whenever I tried to move on to talk about a bit abstract meaning of music, they didn't respond to me and made me very frustrating … I think they don't really know what they were doing when I asked them to compose rhythm pattern for accompanying the melody … I think they could not read music scores. I think they recognized the colors instead of the notes on scores.

Case 5: Eva

In Eva's music lessons, Eva prepared a microphone and background karaoke music for her students to sing Chinese folk songs and local Cantonese popular songs. Her students took turn to sing along with the microphone and the karaoke. While waiting for their turns, Eva's students danced and use classroom percussion instruments to tap the basic pulse along with their classmates' singing and the background karaoke music. In addition to singing, Eva guided her students to listen to the instruments used in the music background. Some of her students recognized the tone colors of some Chinese instruments, including the Erhu and the Guzheng.

Eva was satisfied with her students' music learning outcomes. She emphasized enjoyment in music learning. She commented that the lesson time was too short for students to enjoy music. Her emphasis on singing and dancing was perhaps her way to explain her negative belief in the musical ability of her students:

> My students like using microphone to sing along with karaoke. They could sing mostly

> accurately. They like dancing along with music. The lesson time was too short for them to enjoy. Lesson time was too short for me to try any creative work with my students. It's difficult to plan creative work for them … I don't think they can do that.

Case 6: Flora

Flora's students sang the same "greeting song" in Cantonese whenever they started a music lesson. Flora played the piano accompaniment for them. The greeting song was a very short melody, based on a major chord, which enabled the students to say "good morning" and give their individual names. After singing the "greeting song", Flora guided her students to review rhythm patterns. Her students used classroom percussion instruments to tap the rhythm patterns while Flora played recordings of music excerpts. Her students followed Flora to tap rhythm patterns. Flora let her students select their favorite percussion instruments. Her students recognized the sound of percussion instruments and could tell the names of the percussion instruments. Flora also played rhythm games with students and her students could recognize the rhythm patterns and picked out the correct rhythm cards. She also guided her students to re-arrange the rhythm cards or solfeggio cards and made new rhythm patterns or new short tunes. Flora also used computer software to assist students in selecting colored notes for making up melody. Flora played recordings of various music excerpts and her students recognized the tone color of the instruments and matched picture cards of musical instruments correctly. Flora encouraged her students to move freely with music whenever she played music recordings.

Flora commented that her students were weak in performing activities but enjoyed listening and composing activities, especially when they were assisted by information technology. She was contented with her students' music learning outcomes:

> My students are weak in performing music instruments. They seldom play accurately. They usually delayed a bit in rhythm. Some of my students could sing along with the music excerpts. Some are non-verbal, but I'm contented that they could express themselves through communication tools to show their answers. … They were eager to arrange the solfeggio cards to create short tunes. They were so happy after I played the tunes arranged by them. I'm not sure whether they really know what solfeggio means, but obviously they enjoyed arranging the cards and listen to the new tunes. They usually need a lot of time to think and need visual aids to help them understand the idea of rhythm and pitch. I found that using the computer to help them arrange colored pitches is a very effective way to help them in composing melodies. I usually video record their music movement and show it to them. I found that this strategy can stimulate them to think about how to create music movement.

Case 7: Gigi

Gigi taught her students to play and sing African drums and tunes in music lessons. She showed how to play the drums and also prepared PowerPoint slides to show the positions of hands. Her students took turn to play the drums. She also prepared costumes for her students to pretend to be rural Africans. She practiced call-echo songs with her students. After practicing the songs and drums for two lessons, her students recognized the names of the African drums that they played. They could sing the call-echo songs and echo Gigi's melodic and rhythm patterns.

Gigi was satisfied with her students' good levels of attention and music learning

outcomes. However, she commented that her students were weak in creative work and did not show much interest in improvisation:

> My students are mild ID. Most of them are autistic. They don't have much confidence in learning, but they responded very well when they sang the African call-echo song. I'm very contented with their singing. The tune was short enough for them to memorize. They were so attentive. Perhaps it's because they had to echo after my singing. I don't know whether they really know what a call-echo song is. They just follow. They have done what I expected. When I play call-and-response with them, it took quite a long time before they could respond with a different rhythm pattern. This African drum game is an elementary creative work for them to improvise rhythm pattern, but some of them could not get it at all. They just copy what I did. They didn't think much about what I expected them to do. It seemed that they were not very interested in this game.

Discussion

Discussion of the above data will focus on the "observed music learning outcomes" and "teachers' expectations of students' music learning outcomes, so as to address the two research questions.

Observed music learning outcomes

All participants trialed the adapted music curriculum for students with intellectual disabilities. Accordingly, the observed music learning outcomes are categorized according to the adapted music curriculum's three music learning activities: listening, performance and creativity.

Listening outcomes

Students with mild intellectual disabilities (Cases 1-5) could recognize familiar tunes, identify shapes, materials and timbre of music instruments, dynamics, tempo and articulation of music excerpts. Students with moderate intellectual disabilities (Cases 6-7) could recognize a familiar tune and identify timbres of some musical instruments.

Common across all seven cases was the key role of the teacher. Given sufficient learning scaffolding, such as repeated listening and questions for guided listening practice, these students were able to demonstrate music learning outcomes, such as recognizing familiar tunes and identifying timbres of instruments.

Performance outcomes

The observed performance activities included singing and playing classroom percussion instruments, desk bells and melodica. Students with mild intellectual disabilities who have verbal abilities can sing with solfeggio or lyrics, learn to sing by ear instead of reading music scores, and may be assisted to read colored music score or percussion score. Students with moderate intellectual disabilities. who were reported to be non-verbal, could not sing but could play percussion instruments: those with verbal ability sang with solfeggio.

Successful performance support strategies include using Karaoke and microphones to arouse students' interests in singing, reflecting students' music preferences when selecting

performing activities repertoire, and the use of colored music scores.

Creative outcomes

Observed creative activities include body movements, exploring sound effects and creating rhythm patterns. With the exception of Gigi's (Case 7) students, all the other cases produced creative outcomes e.g. music-inspired movements. For students with intellectual disabilities, including reading difficulties, the use of flash cards and computer software reportedly facilitated the accomplishment of simple tasks such as creating rhythm patterns.

As the above discussion illustrates, students with intellectual disabilities can demonstrate music learning outcomes if teachers provide them with adequate opportunities and appropriate adapted strategies. This phenomenon provides an encouraging response to Colwell's (2013) worry about music teachers' lack of knowledge in teaching students with intellectual disabilities. Additionally, the learning scaffold of repeated opportunities to respond, as reported above, can produce positive behavioral outcomes (Sutherland & Wehby, 2001). Perhaps this phenomenon can best be explained through the Confucian ideology that emphasizes the positive educational effect of repeated practice (Confucius: 1.1).

Teachers' expectations and students' music learning outcomes

These case-studies present teachers holding a spectrum of expectations which impact on both

the quality of their learning support and learning outcomes. For example, where a teacher voices high expectations, the evidence suggests this can produce both quality learning support and high learning outcomes:

> Amy (Case 1): My students are good at listening activities …Their ideas are very unique and creative. We also encourage them to talk about their feelings and their ideas about music. I'm very contented with their learning outcomes …

However, as high expectations become eroded, this reduces both the quality of support and learning outcomes:

> Betty (Case 2): As long as my students are happy, I don't have any specific expectations on their music achievements.
>
> Candy (Case 3): As I expected, they needed to listen to the excerpt many times ... They are quite weak in playing musical instruments ... They just need more time to think and do their work.
>
> Diana (Case 4): It's difficult to keep their attention ... I think they don't really know what they were doing
>
> Eva (Case 5): My students like using microphone to sing along with karaoke. They could sing mostly accurately. They like dancing along with music. The lesson time was too short for them to enjoy. Lesson time was too short for me to try any creative work with my students. It's difficult to plan creative work for them … I don't think they can do that.
>
> Flora (Case 6): My students are weak ... They seldom play accurately ... Some are non-verbal, but I'm contented that they could express themselves
>
> Gigi (Case 7): My students are mild ID. Most of them are autistic … They just follow … They just copy what I did.

As illustrated above, the evidence on one hand supports Good's (2014) statement about the effect of teachers' expectation on students' learning outcomes, i.e. when teachers hold high expectations on students' learning outcomes, they provide students with more opportunities and students have a greater chance to achieve teachers' expected learning outcomes. On the other hand, teachers' low expectations supports Colwell's (2013) view that many music teachers lack an understanding of the music abilities of students with special needs, together with VanWeelden's (2007) findings that students with special needs remain a challenging area for music educators.

Conclusion

Analysis of the data obtained from these seven case studies, comprising music teachers' trialing an adapted music curriculum for Hong Kong students with intellectual disabilities, focused on two research questions. Addressing the question "What are the observed music learning outcomes of students in elective music lessons for students (aged 15-18) with intellectual disabilities?", the analysis supports Good (2014) that students with intellectual disabilities in special schools are able to demonstrate music learning outcomes as their counterparts in mainstream schools. Furthermore, the learning scaffold of repeating opportunities for students to respond can produce positive behavioral outcomes (Sutherland & Wehby, 2001).

Addressing the question “What are special schools music teachers’ expectations of students’ (aged 15-18) music learning outcomes?”, the data analysis here supports Colwell’s (2013) view that many music teachers lack an understanding of the music abilities of students with special needs, as well as that of Scott and his associates (2007) about music teachers’ low expectations on students’ learning outcomes, and also VanWeelden’s (2007) findings that students with special needs remain a challenging area for music educators.

From such findings, the potential for music teachers to scaffold tangible development in students with intellectual disabilities is promising but perhaps not yet fulfilled. To fully realize this potential, further research may help focus teachers beyond such labels as ‘intellectual disabilities’ and so scaffold individual learning-support, thus enabling students to surmount their own current challenges. In addition to adding courses on music education for students with special educational needs in music teacher education programs, music teacher educators and policy makes should consider collecting more examples of adapted instructional strategies and curriculum design evidenced with corresponding music learning outcomes which may be helpful for music teachers to build up more reasonable expectations on music learning outcomes when developing adapted music curriculum for students with intellectual disabilities.

References

Benz, M. R., Lindstrom, L., & Yovanoff, P. (2000). Improving graduation and employment outcomes of students with disabilities: Predictive factors and student perspectives. *Exceptional Children*, *66*, 509-529.

Byo, S. (1999). Classroom teachers' and music specialists' perceived ability to implement the national standards for music education. *Journal of Research in Music Education*, *47*, 111-123.

Cheung, A. C., Randall, E. V., & Tam, M. K. (2005). Expanding the private school sector: government policy and private secondary schools in Hong Kong, 1988-2001. *International Journal of Educational Policy, Research, and Practice, 6*(1), 139-172.

Colwell, C. M. (2013). Simulating disabilities as a tool for altering individual perceptions of working with children with special needs. *International Journal of Music Education*, *31*(1): 68-7. Doi: 10.1177/0255761411433725.

Committee on Home-School Co-operation [CHSC]. (2017). Hong Kong Special Schools Profile 2017. http://www.chsc.hk/spsp/school_list.php?sch_kind_id=1

Confucius. Analects of Confucius. Translated by R. Eno. Retrieved from www.indiana.edu/~p374/Analects_of_Confucius_(Eno-2012).pdf.

Cowley, T., & Williamson, J. (1998). A recipe for success? Localized implementation of a

(flexible) National Curriculum. *The Curriculum Journal*, *9*(1), 79-94.

Cox, G. (1999). Secondary school music teachers talking. *Music Education Research, 1*(1), 37-45.

Curriculum Development Council [CDC]. (2003). *Music curriculum guide (Primary 1–Secondary 3)*. Hong Kong: CDC.

Curriculum Development Council [CDC] and Hong Kong Examination and Assessment Authority [HKEAA]. (2007). *Music Curriculum and Assessment Guide (Secondary 4 – 6)*. Hong Kong: CDC and HKEAA.

Deno, S. L., Fuchs, L. S., Marston, D., & Shin, J. (2001). Using curriculum-based measurement to establish growth standards for students with learning disabilities. *School Psychology Review*, *31*, 507-524.

Education Bureau [EDB]. (2012). Extension of Years of Study for Students of Special Education. Retrieved from http://www.edb.gov.hk/en/edu-system/special/policy-and-initiatives/extension-of-years-of-study/index.html

Education Bureau [EDB]. (2015). Senior Secondary Curriculum (ID). Retrieved from http://www.edb.gov.hk/en/curriculum-development/major-level-of-edu/special-educational-needs/ssc/index.html

Education Bureau [EDB]. (2017a). Special Educational Needs. Retrieved from

http://www.edb.gov.hk/en/curriculum-development/major-level-of-edu/special-educational-needs/index.html

Education Bureau [EDB]. (2017b). Special Education: Policy and Initiatives. Retrieved from http://www.edb.gov.hk/en/edu-system/special/policy-and-initiatives/index.html

Education Bureau [EDB]. (2017c). Special Education: Overview. Retrieved from http://www.edb.gov.hk/en/about-edb/policy/special/index.html

Elbaum, B., Vaughn, S., Hughes, M., & Moody, S. W. (1999). Grouping practices and reading outcomes for students with disabilities. *Exceptional Children*, *65*, 399-415.

Evans, K. M., & King, J. A. (1994). Research on OBE: What we know and don't know. *Educational Leadership*, March 1994, 12-17.

Gagné, R. (1984). Learning outcomes and their effects: Useful categories of human performance. *American Psychologist*, *39*, 377-385.

Galton, M. (1995). *Crisis in the primary school*. London: David Fulton.

Gfeller, K., Darrow, A.-A., & Hedden, S. K. (1990). Perceived effectiveness of mainstreaming in Iowa and Kansas schools. *Journal of Research in Music Education*, *38*(2), 90-101.

Glatthorn, A. A. (1993). Outcome-based education: Reform and the curriculum process. *Journal of Curriculum and Supervision*, *8*, 354-363.

Good, T. L. (2014). What do we know about how teachers influence student performance on

standardized tests: And why do we know so little about other student outcomes? *Teachers College Record*, *116*, 1-41.

Green, R. (1995). Primary school music curriculum courses – One solution. *British Journal of Music Education*, *12*, 113-125.

Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice* (3rd ed.). London; New York: Routledge.

Hong Chi Association. (2010). About Intellectual Disabilities. Retrieved from http://www.hongchi.org.hk/en_understand.asp#

Klingner, J. K., Vaughn, S., Hughes, M. T., Schumm, J. S., & Elbaum, B. (1998). Outcomes for students with and without learning disabilities in inclusive classrooms. *Learning Disabilities Research & Practice*, *13*(3), 153-161.

Leung, Y. T., & Leung, B. W. (2012). An exploration of the effectiveness of singing on English vocabulary learning for Chinese pupils with dyslexia. Paper presented at the International Society for the Music Education: Proceedings of the 19th International Seminar, Greece, July 12-14.

Lian, M. G. J., Tse, A. C. Y., & Li, A. M. C. (2007) Special Education in Hong Kong: Background, Contemporary Trends and Issues in Programs for Learners with Disabilities. *Journal of the International Association of Special Education*, *8(*1), 5-19.

Livermore, J. (1997). Promoting music in and across the curriculum. *Australian Journal of Music Education*, *1997*, 15-22.

McCavera, S. (1991). Music: Striking the right notes. *British Journal of Special Education*, *18*(4), 146-148. Doi: 10.1111/j.1467-8578.1991.tb00861.x.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation*, 4th ed. San Francisco, CA: Jossey-Bass.

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*, 3rd ed. Los Angeles, CA: Sage.

Ockelford, A. (2000). Music in the education of children with severe or profound learning difficulties: Issues in current U.K. provision, a new conceptual framework, and proposals for research. *Psychology of Music*, *28*, 197-217.

Ockelford, A., Welch, G., & Zimmermann, S. (2002). Music education for pupils with severe or profound and multiple difficulties – current provision and future need. *British Journal of Special Education*, *29*(4), 178-182.

O'Neil, H. (1993). Making sense of Outcome-based Education. *Instructor*, January 1993, 46-47.

Office for Standards in Education, Children's Services and Skills [Ofsted]. (2010). *The Special Educational Needs and Disability Review*. Manchester, UK: Ofsted.

Orman, E. K. (2002). Comparison of the National Standards for music education and

elementary music specialists' use of class time. *Journal of Research in Music Education*, *50*(2), 155-164.

Patterson, A. (2003). Music teachers and music therapists: Helping children together. *Music Educators Journal*, *89*(4), 35-38. Doi:10.2307/3399902.

Poon-McBrayer, K. F., & Lian, M. G. J. (2002). *Special needs education: Children with exceptionalities*. Hong Kong: Chinese University Press.

Portowitz, A., & Klein, P. S. (2007). MISC-MUSIC: A music program to enhance cognitive processing among children with learning difficulties. *International Journal of Music Education*, *25*, 259-271. Doi:10.1177/0255761407087263.

Rickson, D. (2012). Coming together: Collaborative efforts towards musical inclusion. Paper presented at the International Society for the Music Education: Proceedings of the 19th International Seminar, Greece, July 12-14.

Riverire, J. H. (1997). *California string teachers' curricular content and attitudes regarding improvisation and the national standards*. UMI Dissertation AAT 9835075.

Sandholtz, J. H., Ogawa, R. T., & Scribner, S. P. (2004). Standards gaps: Unintended consequences of local standards-based reform. *Teachers College Record*, *106*, 117-1202.

Scior, K., Kan, K.-Y., McLoughlin, A., & Sheridan., J. (2010). Public attitudes toward people with intellectual disabilities: A cross-cultural study. *Intellectual and Developmental*

Disabilities, *48*(4), 278-289. Doi: 10.1352/1934-9556-48.4.278.

Scott, L. P., Jellison, J. A., Chappell, E. W., & Standridge, A. A. (2007). Talking with music teachers about inclusion: Perceptions, opinions and experiences. *Journal of Music Therapy*, *44*(1), 38-56. Doi: 10.1093/jmt/44.1.38.

Spady, W. G. (1988). Organizing for results: The basis of authentic restructuring and reform. *Educational Leadership*, October 1988, 4-8.

Sutherland, K. S., & Wehby, J. H. (2001). Exploring the relationship between increased opportunities to respond to academic requests and the academic and behavioral outcomes of students with EBD. *Remedial and Special Education*, *22*(2), 113-121.

Sweeting, A. (2004). *Education in Hong Kong, 1941 to 2001: Visions and revisions* (Vol. 1). Hong Kong: Hong Kong University Press.

Tremblay, P. (2013). Comparative outcomes of two instructional models for students with learning disabilities: inclusion with co-teaching and solo-taught special education. *Journal of Research in Special Educational Needs*, *13*(4), 251-258.

VanWeelden, K. (2007). Music for the forgotten: Creating a secondary general music experience for students with special needs. *General Music Today*, *21*(1), 26-29. Doi:10.1177/10483713070210010107.

Watson, A. (1997). The language of the Australian Arts Curriculum: A loss of music integrity. *Australian Journal of Music Education*, 1997, 23-30.

Wong, M. W. Y. (2015). Adapting the music curriculum for senior secondary students with intellectual disabilities in Hong Kong: content, pedagogy and mindsets. *Music Education Research*, *17*(1), 71-87.

Wong, M. W. Y. (2016). Understanding professional development needs of Hong Kong special school music teachers. *International Journal of Continuing Education and Lifelong Learning*, *8*(2), 1-19.

Yin, R. K. (2014). *Case Study Research* (5th ed). Los Angeles, CA: Sage.

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Colorful Animals Party: A Study on the Design Concept and Effectiveness of Preschool Color Teaching Aids

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Abstract

This study focuses on the educational application and effectiveness of the "Colorful Animals Party" preschool color teaching aid, including the teaching process, color learning and perception, and affective domain. Empirical studies show that the educational significance

and concrete value of this preschool color teaching aid include: 1. Combining color education with art so as to enable preschool children to learn about colors through perception and games, including color identification, matching, categorization, and combination, thereby prompting positive performance and emotional attitude, such as happiness and concentration, and enhancing for the child the color-learning experience and efficacy; 2. Putting into practice the use of gaming strategy in preschool color education, so that in addition to the preset color concept game preschool children may also play freely by means of scenario building and role-playing; 3. Providing preschool educators with possible resources for the implementation of preschool color education and the formation of an aesthetic lifestyle; 4. Supporting preschool educators in the research and development of textbooks and teaching aids so color education can be integrated into the children's curriculum, and even their daily lives, so that color education affords opportunities for diverse manifestations and putting creativity into practice.

Key words

Colorful Animals Party, preschool color teaching aid, preschool color learning research, preschool color education, preschool color teaching

Introduction

Research background and purpose

Taiwanese public educator Yen (2011) once said that highly perceptive and empathetic talents are what the future anticipates. Positive artistic influences allow young people to stand out, no matter what profession they pursue, so the incorporation of aesthetics into education should be a matter of importance for the education system.

If aesthetic education is so important, why not start from the daily lives of preschool children? Beauty gives pleasure to the senses and soul (Ministry of Education, 2016). Jiang's (2006) feeling was that a child who cultivates aesthetics from a young age will grow up with the ability to always see beauty in life. Schiller proposed his view of aesthetic education in "On the Aesthetic Education of Man" (1967), believing that inspiring a sense for aesthetics was beneficial to the balanced development of human sensibility and reason, as well as beautifying and elevating human nature. This needs to be achieved through art education. Dewey (1980) also used art as experience as a means of explaining the core of art education, stating that it was embedded in meaningful experiences of human life. Fan (2003) and Lin also raised the importance of practicing aesthetics in life. From this we may see that constructing artistic experience connected to daily life may be a good way to cultivate aesthetic sense in preschool children.

Guo (2001) has stated that color is a key component of visual art. It has also been

pointed out that color education is the basis of citizen aesthetics (Guo, 2007). Every brightly colored food, utensil, piece of clothing, toy, or piece of scenery may evoke preschool children's color perception and preference. Preschool children's daily lives are interconnected with color. Chang (2001) observed preschool children's performances in color games and found that color may evoke learning in attitude, perception, and feelings. Color games may give preschool children interest and a sense of achievement. Chen, Wang, Chen, Chang, You & Huang (2016) created a colorful, interactive art installation and placed it in a kindergarten. It was shown to have positive effects in raising children's level of interest in color learning. Literature on the subject shows that other than the aforementioned studies, there are others that focus on color education for preschool children; only a handful focus on children's perception and preference of color (Li, 2009; Song, 2013; Lin, 2010; Chen, 2000; Zhao, 2004; Pan, 2008), demonstrating that there is still much room for further research. To sum up, the purpose of this study is to provide preschool children with the opportunity to learn about color and aesthetics through games in their daily lives. In the attempt to focus on one type of preschool children-friendly color teaching aid, "Colorful Animals Party", for empirical research and exploring its use and effectiveness, it is hoped that the teaching aid will provide preschool children with the experience of learning about color through games, and also enable preschool educators and parents looking to implement color education or make color teaching aids themselves to use it as a reference.

Research purpose and question

Based on the importance of color education, learning about color through life and games will affect children's learning effectiveness and interest in learning. In order to continue research efforts on preschool color education by previous researchers, the purpose of this study is to explore the application of the "Colorful Animals Party Preschool Color Teaching Aid "(hereafter shortened to "Colorful Animals Party") in teaching, and analyze how preschool children's recognition of and affection for colors is influenced through their use of teaching aids. To that end, the issues that this study wishes to explore include: How will the "Colorful Animals Party" be applied in the teaching process? How do preschool children engage in color learning and perception? What is the affective domain of preschool children as they use teaching aids? The analysis includes the situation in which "Colorful Animals Party" is used in teaching, and the preschool children's color learning and perception, as well as their affective domain.

Theoretical Framework of Preschool Color Teaching Aids

The theoretical framework in this section is intended to discuss the academic basis for creating the "Colorful Animals Party". Theories regarding preschool color teaching aids affect their planning and design, and the teaching aids directly affect preschool children's

perceptions and interest in learning about color. Therefore, the discussion will include concepts such as the meaning and strategy of color education, characteristics of preschool children developing color perception, and importance of teaching aids and games in preschool learning.

The meaning and strategy behind color education

Human life, activities, and customs are inseparable from the use of colors. Usage of color is even more complicated and urgent as society progresses and thrives (Wu, 1992). Uchida (1998: 14) once said: “Life is performed through colors”. Colors are used widely in daily life, and have profound effects (Lin, 1998); they are not only inseparable from our lives, but also a key component in creating visual art. Color is everywhere in our environment, whether it’s food, clothing, housing, transportation, entertainment, or work. The sceneries we see are never made up of a single color alone, but of two or more colors combined. Different colors side by side will influence one another, and create different visual effects. For example, contrasting colors will create a livelier visual effect, while coordinating colors show unity and stability. Different colors and combinations give us different visual impressions and feelings. The arrangement of homes, schools, restaurants, shops, and things like fashion choices, store signs and gift wrappings all give people different visual impressions and feelings according to their color combinations, which is why food culture worldwide strives for dishes that are

both tasty and visually appealing. From this we can see that our daily lives cannot function without color. Color enriches the meaning of life, even creating unique characteristics and tastes. Moeover, in all kinds of art displays we see an abundance of color. Color is a key component to visual art (Guo, 2001), and, as Lin (1998) stresses, it complements design in order to form perfect works of art.

It may therefore be concluded that color is the basis of citizen aesthetics (Guo, 2007); to be able to freely use colors, one must have knowledge and literacy of them. One must first learn the basic concepts of colors before being able to utilize them in life (Wu, 1992). However, when Lin (1998) examined China's art education, it was found that teaching materials tend to ignore the fundamental meaning of color usage in daily life, resulting in lives of the public that were often filled with disorderly "visual pollution." Color education should focus on integrating color with daily life, in so doing offering students abundant resources to learn about colors.

In the "Curriculum Outlines for Preschool Care-taking Activities" (hereafter shortened to "Curriculum Outlines") issued by the Ministry of Education (2016), aesthetic fields defined the content of aesthetic education. In this, the domain of affective teaching focused on letting preschool children have fun in aesthetic activities, allowing them to make positive connections with experiencing beauty, so that they were happy to participate in aesthetic-related activities. Art as a teaching medium includes all kinds of sensory exploration,

as well as creating or viewing and giving feedback on artworks. In terms of visual art, the focus lies in guiding preschool children to utilize their senses to engage in the exploration of forms of expression such as themes, lines, colors, shapes, and materials. It is the preschool educators' job to design scenarios that encourage aesthetics, and provide diverse sensory and artistic mediums, age-appropriate materials, and artistic activities, in order to stimulate interest and investigation on the children's part. Lin (2015: 3) proposed that: "Aesthetic education is letting preschool children continuously accumulate sensory feelings and experiences that touch the heart in daily life", stressing that aesthetic experiences accumulated in life would make appreciating beauty a custom in living and experiencing the world.

To sum up, color education is an important aspect of aesthetic education in the Curriculum Outlines, and can be implemented into children's daily lives. The intention behind the "Colorful Animals Party" is to create a color teaching aid for preschool children that is both aesthetically pleasing and pedagogically effective. The teaching aid should be easily set up in children's learning and living environments so that it may gradually cultivate their sense of artistic beauty and become a medium for learning about colors, thereby enabling preschool children to develop the basic concepts of color coordination and experience the beauty of colors through color games or playing with colorful objects. Next, the study will explore the development of color perception in preschool children and

systematically relate notions concerning color education and the creation of teaching aids.

Characteristics of the development of color perception in preschool children

According to Lowenfeld and Brittain (1957), preschool children are mostly in between the scribbling and pre-schematic stages of artistic development. Their artistic expression will progress from uncontrolled scribbling to gradually developing hand-eye coordination, and the images they produce will gradually evolve from undiscernible to recognizable objects or scenery. In terms of colors, the same authors also proposed that preschool children first use them unconsciously; they then use them to distinguish different visual meanings, before finally developing subjective color preferences. Since color preference stems from personal subjective thought, if preschool children can experience different color-learning games and use color to express emotions, the process could have a calming and clarifying effect on their emotions. Parson (1987) believed that color was very important to preschool children, especially intuitive feelings and joy evoked by colors. Wan (1998) analyzed the studies of multiple scholars regarding the development of color aesthetics, coming to the conclusion that preschool children not only start from learning the names of basic colors, but also prefer bright colors. They tend to use any color at hand, or enjoy scribbling with color, or experience the joy of playing with colors. The colors used and the object drawn have no direct connection.

To summarize, then, the preschool period is an important time for children to go from *feeling* colors to *knowing* them. Color educators should mainly broaden and make connections with the children's life experiences, offering preschool children a chance to experience combinations of colors and shapes. That is why, in "Colorful Animals Party", the researcher specifically created a thematic and comprehensive color learning environment using mostly highly-saturated colors, and planned fun and interactive games. The goal was to give children a more diverse color-learning experience, thereby inspiring their interest in and attention to colors.

The significance of games and teaching aids in preschool color and aesthetic learning

Rogers and Swayer (1988) stress that games and toys play a major role in preschool children's growth and development. Games are a part of every child's daily life; through playing with toys, children's personal growth in areas such as knowledge concepts, physical strength, interpersonal relationship, emotional expression, and creativity, develops (Liu, 1993). Anthropologists and educationists point out that education is probably the biggest function of preschool toys. Playing with toys helps preschool children deal with tasks, and boosts their confidence (Jiang, 1993). Mann (1996) also pointed out that toys are teaching aids in that both are things to play with that stimulate the imagination, as well as boosting social and mental development. Liu (1993) pursued a wider definition, adopting the

perspective that teaching aids and toys were two sides of the same coin: if a toy had educational meaning it counted as a teaching aid, while teaching aids should also have the characteristics of toys. In an educational setting, teaching aids allow preschool children to learn in a more effective and enjoyable way (Li, 2000). However, in order to achieve this effect, teaching aids must cater to children's development and needs (Lin & Zhang, 2011). To conclude, in a preschool child's world teaching aids are toys, and toys are teaching aids; both let the child develop in a balanced way through games.

Regarding the meaning of games, famous scholars such as Plato, Fröbel, Read, Dewey, Montessori, Decroly, Bruner, Vygotsky and Piaget have all touched upon the educational power of games. From the perspective of cognitive development, Piaget (1962) emphasized that play is an important way for children to comprehend the world, categorizing it into three developmental stages: sensorimotor play, symbolic play, and games with rules. Toddlers in the preoperational stage that are starting to use language and symbols to express the world from their own perspectives, in accordance with the characteristics of symbolic play, generally engage in dramatic, imaginative, and constructive play. Also, play is key to boosting both physical and mental learning, and development. The process of playing gives children hands-on experience and sensory exploration, in tune with Dewey's idea of learning through doing and Comenius's educational idea of learning through the senses. Montessori's (1937) famous dictum: "I hear and I forget, I see and I remember, I do and I understand"

reveals the effectiveness of “hands on” learning; in other words, compared to the observation and listening way of learning, games, operations, and exploration are more concrete and realistic learning experiences that will be more effective when teaching preschool children.

The “Curriculum Outlines” (Ministry of Education, 2016) also stress that preschool children naturally like games; through them they can spontaneously explore, operate, and discover while learning how to interact with people and uncover the meaning of the learning materials. Lesson plans should therefore take advantage of preschool children’s love of asking questions, exploring, and playing games, encouraging them to use their imaginations. The aforementioned studies by Chang (2001) and Chen et al. (2016) concerning preschool color education found that games and interactions aided the children’s color learning in terms of affective domain and effectiveness. However, while the first of the two studies observed that the learning environment in preschools employed “colorfulness” to create a lively atmosphere, it lacked an overall color scheme, with only some facilities and equipment being color-coded. Moreover, during the teaching process, the children’s color expression was limited by the materials given to them by the teachers. Add to these points the fact that the study was relatively dated and that although the color games were all planned in accordance with the themed preschool curriculum they were not implemented independently, there was ample justification for conducting more up to date research based on lesson plans and teaching within the framework of the new curriculum (Ministry of Education, 2016). As far

as the latter study is concerned, while the large interactive device that was designed using color was shown to have positive benefits, these are difficult to translate into popular use due to the large size of the art installation; it was thus hypothesized that preschool color learning could be better facilitated through the development of other teaching media. Even allowing for the presence of the two previous studies, there is a notable lack of research on color in preschool curriculum and teaching, the development of color teaching media, and related topics, questions that can all be explored via studies such as the current one.

To summarize the investigations made in the aforementioned literature, “Colorful Animals Party”, the color teaching aid being discussed in this study, takes into consideration preschool children’s need to learn about colors and their love of games. With interactive color games as the focal point, other important questions need to be asked: What sort of inspiration or growth could this teaching aid give preschool children? Could it be used to enhance the cultivation of children’s color perception and enable children to become more interested in learning? The point which this study, using color teaching aids as a medium, is trying to convey is that a cultivated sense of color may be used in daily life to build a visually appealing living environment, meaning that color education should be taught from a young age and integrated into the daily lives of preschool children. Games and children’s lives are interconnected; in a preschool child’s life, games are the best example of participation and learning through experience. Teaching aids are both fun and educational; therefore, teaching

aids designed with color education in mind represent a good solution to implementing color education in preschool children. The key to effectively teaching preschool children about color is making sure there are interesting color games that provide children with opportunities to interact and explore, and that these games are connected to the children's daily lives. This research thus focuses on creating "Colorful Animals Party", placing it in the living environments of preschool children, and enabling them get to know colors by enriching their learning experiences and exploring the fun of colors through playing games.

Research Design and Implementation

This research examines color education, preschool children's color perception development, and games and teaching aid theories, utilizing these elements as the basis for designing "Colorful Animals Party". Observation methods are employed to collect data on how the children play the games, the amassed data being analyzed in order to evaluate the effect and effectiveness that the teaching aid has on preschool children's color perception and affective domain. The research design and implementation were thus as follows:

Subjects and sampling

The subjects were 18 first-year kindergarten students hoping to use the "Colorful Animals Party" to raise their level of color perception and interest in learning. The research used

working time in the teaching schedule to visit the classes and observe the children playing the games in order to collect data.

Data collection methodology and tools

Miller (2008) analyzed the benefits of observation from an educational perspective, pointing out that observation is purposeful and organized. Observation should be done objectively, recorded, and used to infer more information. Through observation the researcher may see the actual behavior of the subject, learning how the subject's abilities are developed, the effectiveness of learning, and whether the teaching method used is suitable. According to Tsai (1987), the observation method is a method of scientific research. Through observation, researchers can understand the occurrence of phenomena or behaviors. The main reason this research employed the observation method was due to the consideration that preschool children might have limited oral expression abilities, thus making it hard to gather data through interviews or surveys. In order to be more objective, the researcher used natural, non-participatory, descriptive ways of recording observations. Observing, recording and gathering how the children interacted with the games while they played, then evaluating how well the children used the teaching aids and learned about colors through the analysis of observation data, was the specific methodology adopted.

Structured observation means to use concrete and clear observation items and recording

methods to observe, and record, research-related activity according to the stated research purpose. The data collected through structured observation is thus easily quantified and analyzed. Non-structured observation is the opposite, since it is a more relaxed method, lacking clear items of observation, and using descriptive language to describe the subject's behavior (Wang & Wang, 2011). The research design for the present study combined both structured and non-structured observation methods in a "Preschool Children Learning Observation Form" (hereafter shortened to "Observation Form"), its contents including clear observation items and descriptive records. The observation form was formatted in the following order: Type of Data- Game Theme- Child Number, e.g., Observation- Bear- 001, Observation= observation form, Bear=Bears Get Ready for Winter, 001= first child subject.

"Colorful Animals Party" included six games, and the researcher designed six observation forms according to the purpose of each game. Every observation form had three to four items, as demonstrated in Diagram 1, in order to collect data on preschool children's color learning situation and results. The observation form for "Bears Get Ready for Winter" mainly focused on whether the items collected by the children were really colors similar to brown; "Birds Build Nests" observed whether the children could successfully match the color of the bird nest stand to the bird nest; "Missing Bird Eggs" noted whether or not the children could successfully sort out the different colored eggs; "DIY Fish Cookies" and "Ducky Artist" recorded if the children were able to identify different colors from color-mixing cards;

finally, “It’s Fun to Line Up” focused on the ability of the children to line up the animals according to the lightness and darkness of colors. Every observation chart included a column for recording anecdotes, thereby allowing observers to record interesting incidents that occurred when the young children were using the teaching aids.

"Bear Gets Ready for Winter" observation items	"Birds Building Nests" observation items	"Missing Bird Eggs" observation items
• Whether the children put the item with the right color. • How many similarly colored objects the children found • How the children felt about playing the game	• The children may correctly match the color of the bird nest to the corresponding stand • The way the children operate the nests and stands • How the children felt about playing the game	• The children's choice of bird eggs • How the children sorted the bird eggs • Whether the children correctly sorted the bird eggs • How the children felt about playing the game
"DIY Fish Cookies" observation items	"Ducky Artist" observation items	"It's Fun to Line Up" observation items
• The children's chosen question and answer card • Whether the children understood correct color mixes • How the children felt about playing the game	• The children's chosen question and answer card • Whether the children understood correct color mixes • How the children felt about playing the game	• Whether children were able to differentiate the light and dark colors of the animals • The animals that the children played with • How the children felt about playing the game

Diagram 1 Structural Observation Items on the Observation Charts for Six Types of Games

Design and Creation of the “Colorful Animals Party”

Meaning and purpose

“Colorful Animals Party” was designed based on analyses conducted by Lowenfeld, Brittain

(1957) and Parsons (1987) on the important role color plays in the learning and development of young children, Piaget's (1962) proposition that using language and symbols to conduct symbolic play is a characteristic of children's pre-operational development, and the Curriculum Outline's (Ministry of Education, 2017) emphasis that preschool children should be given the opportunity to learn through autonomous exploration, operation, and discovery. The teaching aid primarily encompassed a teaching aid backpack that is easy to carry and store, and different colored animal-shaped objects such as brown bears, red birds, orange fish, yellow ducks, and green frogs. Each animal comes in five different tones of the same color. In terms of the contents of aesthetic learning, six interconnected games of increasing difficulty, which include color identification, matching, categorization, and combination, were designed using original stories about these five animals based on the learning indicators for the aesthetic field for children in the first year of preschool as defined in the "Curriculum Outlines" (Ministry of Education, 2016). As Diagram 2 shows, allowing young children to explore the beauty of the colors, forms, and textures of the teaching aids with their senses, undergo different aesthetic experiences, and enjoy the fun of using these teaching aids to play and create while learning about the basic concepts of color, can be seen as a continuation study of the large interactive art installation color education study conducted by the researcher and students in 2016, although the two studies differ in the appearance of teaching aids, the size of objects, and the improvements and advancement of color educational content.

The research can also be used in advanced color education.

Name of the game	Concept of color to learn	Animal protagonist	Storyline	How to play
"Bears Get Ready for Winter"	Identification of Similar Colors	Brown bear 	The bear is preparing for winter, we need to find something close to the color of the bear, so that it can spend a warm winter.	Guiding preschool children to the learning environment through original stories. First, identify similar colors, then find something close to the color of the bear's body, then put it in the bear's house.
"Birds Building Nests"	Color Identification and Matching	Red bird 	The mama red bird is about to hatch her eggs, please help her make a home.	First, stick the nests of birds of different colors onto the tree where there are pieces of Velcro, then begin engaging in color identification by placing birds into the nest with the same color.
"The Missing Bird Eggs"	Color Identification and Categorization		The red bird's eggs all fell under the tree, please help put the eggs back where they belong.	Sort the scattered and differently colored eggs into categories, then place them in the nest of the same color.
"DIY Fish Cookies"	Color Combination and Identification	Orange fish 	What color cookies do you want to feed the fish today? Try making it yourself!	First draw a mixed-color card, fold it in half and observe the mixed color, then identify and find the cookie card of the same color. Put both cards in the storage space, and pick the cookie of the same color to feed the fish.
"Ducky Artist"		Yellow duck 	What colored duck do you want to draw today? Which two colors made the color of this duck?	First take a single-colored duck card, then identify and find the card that will create the color on the duck once folded. Put both cards in the storage space.
"It's Fun to Line Up"	Identification of Light and Dark Colors	Five animals 	It's time for the animals to gather and exercise! How should the animals line up? Please help the animals line up by lightest color to darkest, or darkest to lightest!	Move each animal one by one to the grass field in the center, then identify and arrange them into lines according to their gradation in tone.

Diagram 2 Design Content of the "Colorful Animals Party" Children's Color Teaching Aid

Design and creative process

"Colorful Animals Party" is an extension of a former experiment using color interactive installation art to explore the implementation of preschool children's color education conducted by the researcher and students in 2016. As can be seen in Diagram 3, designing and coming up with the concept, confirming the core values and color education concept of the teaching aid, planning a rough sketch (followed by discussion and revision), finalizing the design, preparing suitable materials, and conducting another discussion and revision session, all had to be accomplished before it was completed. The first discussion and revision session focused on adjusting the core values and design of the teaching aid, as well as materials and connection between games; the second dealt with the effects of the teaching aid.

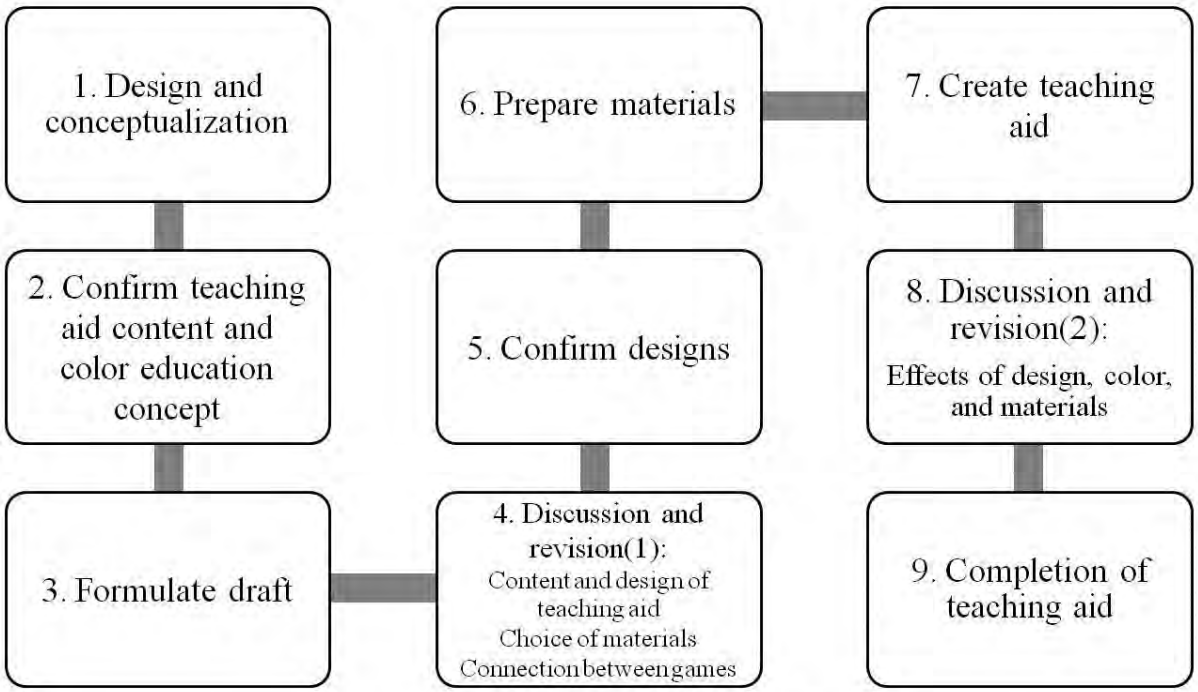

Diagram 3 "Colorful Animals Party" Design and Creative Process

Materials and techniques

The “Colorful Animals Party” comprises two main parts: a backpack and the animals. The backpack was made by molding and sewing, and colored with paint; the main materials used were cardboard, canvas, paint, magnets, and yarn. The animals were made with papier-mache and paint (using both wet and dry brush strokes); newspapers and tape were used first to create the basic shape, followed by napkins, glue, and paint to create the outward appearance.

Creative process

The creative process of “Colorful Animals Party”, as shown in Diagram 4, included 3D molding, layering the surface, drying, painting, and a final drying process.

	Creative Process		
Teaching Aid Backpack	Step1.→ Use canvas and cardboard to make the backpack design	Step2.→ Paint the backpack teaching aid and game environment, then use dry brush techniques for a layered effect.	Step3.→ After coloring, leave to dry for 2 to 3 days, and its finished.
"Backpack teaching aid"			

	Creative Process		
Animals Protagonist	Step1.→ Use newspapers and tape to form the shape of the animals.	Step2.→ Layer napkins onto the animal and coat with water-and-glue mixture, let dry for 1 to 2 days.	Step3.→ After painting the animals, leave to dry for 1 to 2 days
"Brown bear"			
"Red bird"			
"Orange fish"			
"Yellow duck"			
"Green frog"			

Diagram 4 Creative Process of the "Colorful Animals Party"

Teaching demonstration and data collection

As shown by Piaget's (1962) child play development and the "Curriculum Outline" (Ministry of Education, 2017) perspective on creating play scenarios, the act of "play" can help young children learn happily through hand-on experiences, with educators mainly playing the role of creating scenarios that are beneficial to children's aesthetic exploration and discovery. Based on these ideas, the education implementation plan of "Colorful Animals Party" includes four stages: 1. Building the children's motivation; 2. Guiding the children to make contact with and observe the teaching aids; 3. Helping the children understand the games and their rules, and; 4. Enabling the children to play the games.

The teaching demonstration of this research study was done in November 2015, and a total of 18 first year kindergarten students participated. 108 (100%) valid observation forms from six different games were collected and quantified for data analysis. The observation items were quantified, and the results and effects of the preschool color education inferred from the data. The descriptive part of the observation form, on the other hand, allowed the researcher to better understand the conditions and status of the children's color learning.

Results and Discussion

This research divided the findings of data analysis into two aspects for discussion: the application process of the teaching aid, i.e the children's process of using the teaching aid,

and the children's feedback from using the teaching aid.

The application process of "Colorful Animals Party"

The process of children handling the color teaching aids according to the aforementioned education implementation plan is illustrated in Diagram 5, as follows:

1. Advanced notice and inspiration of anticipation→	2. Viewing and teaching aid and developing curiosity→	3. listening to the story and learning how to play→	4. using and understanding the teaching aid
			

Diagram 5 Process of Preschool Children Using "Colorful Animals Party"

Tell children about the activities in advance, build up anticipation and motivation

Hofer (2006) noted that positive learning motivation was beneficial to the effects of education, meaning that encouragement is an important part of a teacher's job. Kember (2006) pointed out that teachers are responsible for encouraging students' learning motivation, and for exhibiting high expectations regarding their learning performance. This means that increasing motivation is the first step when conducting educational activities. Therefore, this research required that teachers verbally told the children about the activity in advance by

asking kindergarten homeroom teachers to help introduce this teaching aid experience so that children would harbor high expectations for the “Colorful Animals Party”.

Guide children to familiarize themselves with the teaching aids by exploring with their senses and thereby generate a sense of curiosity

Verbally guiding children to observe and touch teaching aids further increases their learning motivation. During this stage, children not only exhibit curiosity towards the teaching aids, but also discuss the composition of the teaching aids among themselves, such as the types of animals, colors, and features of the animals’ habitats.

Let children get to know the games and their rules through animal stories

This stage mainly consists of introducing the rules of the six games through animal stories. Researchers tell stories as they guide children to practice handling the teaching aids, and discuss with the children things they need to be aware of.

Young children engage in play and understanding, thereby gaining color learning experience

During this stage, children start playing the games, gaining color learning experiences and understanding in the process. How the children interacted with the “Colorful Animals Party”

color teaching aids is as illustrated in Diagram 6.

To summarize, the application process of “Colorful Animals Party” comprised four main stages: building motivation through telling the children about the activity in advance, providing them with the guidance necessary to explore with their senses, familiarizing them with the game and the rules, and, finally, playing the actual game. This process provided the children with step-by-step guidance on how to interact with this teaching aid from their initial expectations, their subsequent curiosity from contact leading to understanding the game, and actually playing the game itself. Simply providing young children with the teaching aids may not be enough; if they are used in the systematic manner described above, the desired teaching results should be achieved. The teacher thus plays an important role in the design of the teaching process.

Game activities	Operation
"Bears Get Ready for Winter"	    The children select colors similar to the color brown and put it in the brown bear's home.
"Birds Building Nests"	    The children matched the color of the nests, and placed nests and stands of the same color onto the tree.
"The Missing Bird Eggs"	    The children put the bird eggs scattered on the ground back in nests of the same color.
"DIY Fish Cookies"	    The children folded the color-mix card and observed the color it made, then found the same colored card, and fed the same colored cookie to the fish.
"Ducky Artist"	    The children first drew a one-colored duck card, and then found the color-mix card that would make the same color once folded.
"It's Fun to Line Up"	    The children lined the animals up in the center plains according to lightness and darkness of color.

Diagram 6 How Preschool Children Use "Colorful Animals Party"

Preschool Children's Behavior and Response to Using Color Teaching Aids

In this research, "Colorful Animals Party" was introduced into the children's learning environment so that they could enjoy the fun of engaging in color games and playing with colorful objects that stimulated their senses. As previously described, due to limitations in the ability of three-four year-old children to express themselves verbally, the observation method was the primary approach adopted.

How Preschool Children Behave When Playing the Games, and Effect of Color Education

Analysis was conducted depending on how the children played each game and the effect this had in terms of color education.

A. "Bears Get Ready for Winter"

The aim of "Bears Get Ready for Winter" is to teach children about similar colors and let them determine for themselves which colors are similar to brown. From observing game play, it was found that 83% of the children found all the objects similar to the color brown and placed it in the "Brown Bear" home, and that 17% of the children found a portion of the objects. It was therefore deduced that the children could identify similar colors through play; however, every child's ability to identify similar colors varied, so teachers should keep this in mind when conducting the lesson.

B. “Birds Build Nests”

“Birds Build Nests” aims to match colors. All of the children were able to stick the bird nest stand onto the tree and put in a nest of the same color. By analyzing how the children completed this game, it was found that they played this game according to their personal preference: 61% stuck the stand onto the tree first, then put in the corresponding nest; 33% chose to put up all the stands before putting in nests; and 5.6% used a mixture of the two methods. Different methods of play reflected the plurality of artistic creation and expression, which teachers should respect.

C. “Missing Bird Eggs”

The main task in "Missing Bird Eggs" is to sort out colors. The children should put the eggs back in the nest with the corresponding color. Studies showed that all of the children successfully sorted the eggs. When sorting the eggs, 72.2% of the children will put all the eggs of one color into its nest before moving on to the next nest, but the order of the colors selected varied from child to child, 27.8% took eggs regardless of color and placed them in the correct nests.

D. “DIY Fish Cookies” and “Ducky Artist”

Both “DIY Fish Cookie” and “Ducky Artist” require the children to learn to identify mixed

colors. Children studied how colors mix by observing color-mix cards made with cellophane. 61.1% were able to identify orange and green after mixing the colors, but only 61.1% could correctly identify purple. (One possible cause for this was that the color-mix card made with red and blue cellophane created a purple that was quite different from the purple of the cookie.) While on the one hand the research suggested that conducting further discussions pertaining to this issue could be beneficial, on the other the game provided children with the opportunity to change their answers, meaning that they could play over and over again in order to sort and correct their color-mixing results.

E. “It’s Fun to Line Up”

The purpose of “It’s Fun to Line Up” is to let children learn how to tell light colors and dark colors apart. When playing this game, it took the children a longer time to think about the task, but all were able to get the right answer. Each child chose to work with animals in a different order. For example, one child followed the order of fish, bear, duck, frog, and bird (Observation-Line-001); another, fish, frog, duck, bear, and bird (Observations-Line-006). When lining up the animals, each child should keep moving and correcting the order until he or she is satisfied (Observation-Line-001, 007, 010, 012); there was one child who completed the game with the teacher’s guidance and hints (Observation-Line-008) An interesting anecdote pertained to one preschool child who lined up all the fish and said, “They are

sleeping" (Observation-Fish-008); another child imitated the movement of the animals, like flying, swimming, jumping and walking, while lining up the animals (Observation-Line-001). From observing how the children engaged with the game, it was clear that they were able to use their imagination to make certain visual connections.

To conclude, "Colorful Animals Party" echoes the intentions of the Curriculum Outline (Ministry of Education, 2017) elements of aesthetic domain and understanding of the characteristics of play by providing children with a color learning experience wherein they play through sight and touch, learn concepts such as similar colors, sorting colors, mixing colors and light/dark colors, and experience the wonderful changes in colors. What's more, all six games that can be played with "Colorful Animals Party" allow children to express their subjectivity and play with the game pieces in different ways or orders, as well as to correct themselves through repeated game play in the process of learning about color perception.

Affected domain displayed by the preschool children

"Colorful Animals Party" provides children with a scenario for color exploration and play, thereby generating positive attitudes throughout the course of the games. It puts into practice the Curriculum Outline's (Ministry of Education, 2017) emphasis on educational principles such as "provision of sensory exploratory experience" and "planning of aesthetic scenarios for exploration". From what the preschool children displayed while using "Colorful Animals

Party", it appears that this color teaching aid is very attractive to them. Observation of the children's expressions and actions all showed them to be happy, curious, enjoying themselves, and other positive interests and affected domains. For example, one child said that sorting bird eggs (helping eggs finding their homes) was fun (Observation-Eggs-003); another said that it was fun to sort the animals into lines by color, and that they could play again and again (Observation-Line-006); yet another said they enjoyed making different colored fish food (Observation-Fish-018). Some children play-acted outside the way the six games were designed by using the animal objects provided, e.g., free role-play involving birds looking for insects (Observation-Egg-005), or fish and frogs playing hide-and-seek (Observation-Line-008), thereby demonstrating that this teaching aid has the potential to inspire spontaneous exploration in preschool children. It can thus be inferred from this that "Colorful Animals Party" can be used for independent play, a potential topic for future research.

Conclusion and Suggestions: Encourage Diverse Development and Application of Teaching Aids, to Further Innovation and Practice in Preschool Color Education

This main purpose of this study was to explore how the preschool children's color teaching aid "Colorful Animals Party" could be used as part of the teaching process, and its influence on children's color learning and perception as well as their affective domains as they play

with the teaching aid. To this end, the questions this study wished to explore included: How is "Colorful Animals Party" used in the teaching process? What is the staff of preschool children engaging in color learning and perception? What is the affective domain of children playing with the teaching aids? The aspects of analysis include: The status of preschool children playing with "Colorful Animals Party", their color learning and perception, and their affective domain.

The main purpose of this study was to try to understand the educational value of color teaching aids by exploring the practical application of "Colorful Animals Party" in the teaching process and the children's color learning, perceptions and affective domains through the use of teaching aids. This was to encourage diversity in the development and application of teaching aids, as well as increase innovation and improve actual practices in children's color education. Based on the findings and discussion, more profound conclusions and suggestions for follow-up research are as follows:

Color teaching aids inspire children's perceptions of color and interest in sensory learning

At a time when art and design are fundamental, aesthetic literacy is one of the crucial traits that our children must develop in order to stay competitive. We should therefore give children chances to cultivate a sense of aesthetics as part of their daily lives. Color not only draws

children's attention (not least because it appears in every aspect of life), it is also fundamental to visual aesthetics. Bearing the aforementioned related ideals about preschool color teaching aids in mind, this research created "Colorful Animals Party" as a color teaching aid especially for preschool children. The design incorporated game strategies, in the hope of bringing color education into the daily lives of children, and employed games as a means of enabling them to cultivate a sense of color.

For preschool learning, the use of teaching aids through playing games can stimulate children's mental and physical development (Liu, 1993), making learning more effective and fun (Li, 2000). Following and exploring the rules of the game can be seen as another form of learning. The "Colorful Animals Party" uses five different colored animals to attract children's attention, and designs color games with different teaching objectives using animals. It then systematically guides children step by step towards making contact and interacting with the teaching aid. It also uses color games with different teaching goals to give children a hands-on approach to learning about and perceiving color. According to the results of this study, this color teaching aid, to a certain level, enhanced the children's perception of color and interest in sensory-enabled learning. As a result, it may represent a viable option in terms of spreading color education.

Furthermore, when considering the application of teaching aids in teaching, the Ministry of Education's (2016) guidelines for aesthetic education include the index of using the five

senses to feel all kinds of beauty in life, thereby making it a mission for this color teaching aid to provide sensory exploration. Since senses form the basis from which learning takes place, so learning in turn helps to develop the senses. Comenius (1986) believed that the use of different senses was to stimulate learning, and that it was the responsibility of educators to promote the use of their students' sensory capacities. Montessori (1937) believed it was imperative that children receive sensory education from a young age: sensory education not only allows mankind to adapt to modern life, but it also promotes everyday practices. Lowenfeld and Brittain (1957) stressed that learning can only happen through the senses, that sensory experience is important to childhood development, and that it should be a continuous process. The stimulation of sensory capacities may specifically be encouraged through art education. Also, the "Colorful Animals Party" preschool color teaching aid provides other possibilities for art classes, letting preschool children learn about colors through sight and touch.

The central idea of aesthetic education within the Curriculum Outlines is that aesthetics should please the senses and soul (Ministry of Education, 2016). Based on the positive reactions of the preschool children after playing with the "Colorful Animals Party", it was clear that this color teaching aid not only helped them learn but was also pleasing to the eye and provided them with the space to freely explore. Consequently, this teaching aid not only serves the function of letting children learn about colors through games, but it also be placed

in a kindergarten classroom or a corner at home for children to passively view it or actively play and create in it at will. It also incorporates art education into the daily lives of children, thereby becoming a good way to cultivate their aesthetic appreciation. A good color teaching aid should not only be aesthetically pleasing, but also, as explained by Hicks (2004), provide an endless amount of games. This means that children should be allowed to use what they have learned while playing the color games as a basis to be creative, and, through these creative free-play experiences, cultivate their own aesthetic sense and values.

To sum up, this research uses color as the theme for designing and creating this preschool teaching aid. Its meaning and value lies in: 1. Encompassing both color education and art, prompting preschool children to learn about and perceive color through games, through approaches such as color identification, matching, categorization, and combination, and stimulating positive feedback and affective domain towards learning about colors, such as happiness and concentration, thus enhancing the learning experience and effectiveness; 2. Putting into practice game strategy in children's color education, other than the six designed games, children can also engage in creative free-play such as scenario building and role playing; 3. Proven a viable resource for educators, caretakers, and parents to implement color education for preschool children and create an aesthetic living environment. Other than what is mentioned above, animals are a subject many children are attracted to. The "Colorful Animals Party" teaching aid discussed in this research uses animals and their natural habitats

as a subject, and can also be used to teach children about animals as an added value to the teaching material.

Finally, since this research on the “Colorful Animals Party” and its effects contains some imperfections, what follow are some suggestions for future studies:

Improve the operability of “Colorful Animals Party”

In order to improve the operability of the “Colorful Animals Party”, tactics that the researcher came up with included: 1. Choosing less sticky paints to lessen the tackiness on the animals’ surfaces.; 2. Adding a drawing of a bird’s nest to the front of the stands used in “Birds Build Nests” in order to help the children recognize the right way to place it; 3. Choosing different materials for the cards used in “DIY Fish Cookie” and “Ducky Artist” in order to improve durability. In addition, the purple made by overlapping blue and red cellophane was different from the purple of the cookie, and should be improved upon.

Enhance the credibility of the study

The subjects of this research were 18 first year kindergarten students. This was only a preliminary study to test the effect of the teaching aid. In consideration of how preschool children between three and four years of age have limited capabilities in expressing themselves verbally, observational methods were mainly used to record how children

interacted with the teaching aids. Later studies could focus on enhancing credibility, with particular suggestions as follows**:** 1. Widen the range and sample size of subjects; 2. Collect more long-term data to see how children interact with the teaching aid and use the teaching aid to engage in free-play; 3. Interview educators, caretakers, and parents to collect feedback regarding the teaching aid, in order to improve upon the teaching aid.

Encourage further diverse display and creative implementation of preschool color education

By way of a continuation of the first conclusion, “Colorful Animals Party” may be used as a supplementary resource and teaching material for the teacher to engage in preschool children’s color education. It mainly combines sensory operating and the idea of learning through games, so that children may watch, touch, interact with it, and also freely create their own games. Its potential advantages include: gaming qualities, its educational possibilities, especially in terms of color, and its unique and handmade nature. It is also easy to store and carry. It is hoped that through the ideal and creative process, as well as the effectiveness of children’s reception of this color teaching aid, that educators and caretakers will be inspired to develop their own color teaching materials or handmade teaching aids, thereby bringing color education to preschool children’s classrooms and from there to their daily lives. Suggested pathways for subsequent researchers are as follows:

Expand the contents of the "Colorful Animals Party"

Using the "Colorful Animals Party" as a basis for extending color game content and objects, additional components, including more layers of light/dark colors on the animals themselves, the amount and types of animals, mixing up colors, and including color cards of different games, can all be considered.

Develop other teaching materials / teaching aids linked horizontally and vertically to this teaching aid

To further children's experiences of color concepts and applications, other teaching materials linked horizontally or vertically to this aid may be developed and tested. (The former term refers to using other themes that children will find interesting to create similar teaching aids; the latter, to providing further learning goals, such as designing environments in different tones and providing different colored objects for children to play with, in order to strengthen children's color matching experiences.) Preschool color education is an important issue, and its diverse representations rely on the concerted efforts of educators and parents, as well as their creative applications, so that color education may be more widely popularized and practiced within our everyday lives.

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References

Cai, B-T. (1987). *Educational research methodology*. Shtabook, Taipei City.

Chang, S-Y. (2001). *The application of color in Hsuan-Hsuan Preschool's Instruction* (Unpublished master thesis). National Taipei University of Education, Taipei City.

Chen, L-C., Wang, J-C., Chen, Y-W., Chang, T-Y., You, J-Y., Huang, C-W. (2016). Implementing color education in kindergarten - A case study using interactive installation art based on Eric Carle's concept of creativity. *The International Journal of Arts Education, 14*(1), 162-187.

Chen, J-X. (2000). Discussion of the connection between preschool children's color perception and cognitive development. Published in National Taiwan Arts Education Center (Ed.), the *2000 Color application and color science symposium proceedings* (pp. 8-22). Taipei City: Chinese Culture University, National Taiwan Arts Education Center.

Comenius, J. A. (1986). *Didáctica magna.* Madrid: Akal.

Dewey, J. (1980). *Art as experience*. New York, NY: Perigee. (originally published in 1934)

Fan, Q-F. (2003). Discussing preschool aesthetic education in the field of arts and humanities. *National education, 43*(6), 66-70.

Guo, B-Z. (2001). Finding beauty in the seasons of Taiwan- A subject on colors. In National Taiwan Arts Education Center (Ed.), *Art, humanities, new opportunities- Essays on revolutionizing visual arts education* (pp. 18-28). Taipei City: National Taiwan Arts Education Center.

Guo, Q-Y. (2007). Citizen's aesthetics should start with color education. *Taiwan Architecture*, *141*, 78.

Hicks, L. E. (2004). Infinite and finite games: Play and visual culture. *Studies in Art Education, 45*(4), 285-297.

Hofer, B. K. (2006). Motivation in the college classroom. In W. J. McKeachie, & M. Svinicki (Eds.), *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* (12th ed.)(pp. 140-150). Boston : Houghton Mifflin.

Jiang, L-L. (1993). Critical view of essays on preschool toys. *Academic Paper of Preschool Education, 2*, 61-76.

Jiang, X. (2006). *The awakening of beauty*. Taipei City: Ylib Publishings.

Kember, D. (2006). *Excellent university teaching.* Hong Kong: Chinese University Press.

Li, H-J. (2000) Benefits of homemade teaching materials- Introducing 3 DIY teaching materials. *Preschool Education Magazine, 116*, 57-60.

Li, W-Y. (2009) *A study on the color preference and temperament of preschool children* (unpublished master thesis). National Taiwan Normal University, Taipei City.

Lin, C-P. (2010). *A study on the color preference and emotion management of preschool children* (unpublished master thesis). National Taiwan Normal University, Taipei City.

Lin, M-J. (2015). *Kindergarten aesthetic education*. Taipei City: Psychology.

Lin, P-S. (1998). To interlink color and life with pictures-Teaching colors with living orientation. *Fine Arts Education Monthly*, *94*, 1-8.

Lin, S-Z., & Zong, Z (2011). *Design and application of children's instructional material*. Taipei City: Hung Yeh Publishings.

Liu, C-H. (1993). *Design and application of children's instructional material*. New Taipei City: Yang-Chih Books.

Lowenfeld, V., & Brittain, W. L. (1957). *Creative and mental growth, (3th ed.)*. New York: The Macmillan Company.

Mann, D. (1996). Serious play. *Teachers college record*, *97*(3), 446-470.

Miller, D. F. (2007) *Positive child guidance (5th ed.)*. Clifton Park, NY: Delmar Learning.

Ministry of Education. (2016). *Guidelines for preschool educare activity and curriculum.* Taipei: Ministry of Education.

Montessori, Mª. (1937). *El método de la pedagogía científica aplicado a la educación de la infancia en la "case dei bambini"*. Barcelona: Araluce.

Pan, Z-H. (2008). *The synesthesia experiment between image and sound example the research of children's color perception* (Unpublished master thesis). Shu-Te University, Kaohsiung City.

Parsons, M. J. (1987). *How we understand art*. New York: Cambridge University Press.

Piaget, J. (1962). *Play, dream and imitation in childhood*. New York: Norton.

Rogers, C., & Swayer, J. (1988). *Play in the lives of children*. Washington, D. C.: NAEYC.

Schiller, F. (1967). *On the aesthetic education of man, in a series of letters*. Translated by E. M. Wilkinson and L. A. Willoughby. Oxford: Oxford University Press.

Song, A. (2013). *Research for color image In different stages of early childhood* (unpublished master thesis). Kun Shan University, Tainan City.

Uchida, Y. (1998). Life and colors (translated by Tsai Hui-Zhen). *Fine Arts Education Monthly*, *94*, 9-16.

Wang, W-C. (1998). Study of color aesthetics in developmental stages- Looking back on relevant literature. *Fine Arts Education Monthly*, *94*, 23-32.

Wang, W-K., & Wang Z-H. (2011). *Education research methods* (14th Ed). Taipei City: Wunan Publishing.

Wu, R-F. (1992). *Color theory and practice*. Taipei City: China Color Publishing.

Yen, S. (2011). *Education should be different*. Taipei City: Bookzone Publishing.

Zhou, M-Y. (2004). *A study of the color perception on preschool children* (Unpublished master thesis). Shu-Te University, Kaohsiung City.

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Learning about Culture: Young Children Exploring Heritage in a Museum

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Abstract

Few studies of young children's learning have been undertaken in Asian museum contexts. Museums are neither popular as part of social life for Hong Kong families nor as a social

learning venue for preschool aged children. Though the Hong Kong early childhood curriculum claims to value the importance of cultural education, there is little emphasis on young children's learning in museums. This paper presents case study data generated through explorations of a group of young children's (aged 4-5 years) multiple visit experiences in the Hong Kong Heritage Museum, and provides an argument for the inclusion of museum excursions in early childhood education.

Key words

young children, museum learning

Learning in Museums: How are Young Children Enculturated?

There is growing research interest in young children's participation and learning in museum settings (e.g. Akamc, Yildirim & Ellez, 2017; Falk & Dierking, 2000; Hein, 1998; Hooper-Greenhill & Moussouri, 2000; Kindler & Darras, 1997; Piscitelli & Penfold, 2015). Only very few of these studies draw on young children's voices (e.g. Dockett, Main & Kelly, 2011), examining their conceptions about museums (Kindler & Darras, 1997). Studies of children's learning in museums are mainly undertaken in western English speaking countries where cultural institutions play a role in shaping social ideas about heritage, art, science and history.

Due to limited systematic studies about young children's visits to Hong Kong museums, a survey was undertaken to understand the use of museums in Hong Kong kindergartens (Piscitelli, Chak, Wong, Yuen & Ngan, 2008). Among the responses from 400 Hong Kong kindergartens, it was found that there is extensive use of museums by the early childhood education sector, especially for 5-6 year old children, and that these visits are mainly curriculum-related. More than two-thirds of the early childhood groups used the services of the tour guides (docents) at museums, but pointed out several limitations in the quality, availability and affordability of the touring service. While preschools and kindergartens in Hong Kong appear to have a significantly high rate of visitation to museums, little is known about the quality, impact and content of these visits.

In a series of observation based studies in various Hong Kong museums, we set out to examine the nature and quality of preschool children's experiences[1]. Our research was broad in its scope and included observations of young children's visits to all types of museums, including the Hong Kong Museum of Art (HKMA) (Wong & Piscitelli, 2017). At the HKMA, we examined the differences in dialogue with children when either a teacher or a docent led groups on their visitnicotine. Teachers used understanding about children's prior knowledge and interests to converse with children while docents used content-rich information about objects (p. 23).

Young children's museum learning may be facilitated in various ways, and each approach reveals inherent values about the relationship between children, the museum and adult guides. Museums may play a vital role in conveying information about culture, nature, science and art, but few of these sites are readily accessible to young children. Consequently, museums have developed programs to introduce children and their adult guides to their objects and experiences, often with the goal of attracting and retaining young visitors over a lifetime. Various models of practice have evolved over the past two decades to accommodate young children and their often inexperienced adult guides to gain skills and knowledge in using museums as places of learning, influenced by the social interaction theory of Lev Vygotsky (1978).

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Bowers (2012) conducted an online survey of American museums to investigate what museums are doing to accommodate very young audiences and found that there was little research and evaluation relating to very young audiences in traditional object-focused museums and very few staff with expertise in guiding very young visitors. Two common staffing patterns were found for leaders of early childhood groups visiting museums – either a museum teacher/docent led a group or a classroom teacher led the visiting children supported by an assistant teacher or a school recruited volunteer. Bowers (2012) found that museum staff were limited in their understanding of young visitors and suggested that "early childhood educators could share their expertise and provide insight on how to balance planning, preparation and implementation that results in effective learning experiences. In return, museum educators can provide their academic partners with opportunities for undergraduate and graduate students to study early childhood learning in museums." (p. 42). In reviewing the program model in the Newark Museum, Bowers noted that when supplying "pre-K teachers with pre-museum activity materials in advance, children are better prepared to make meaningful connections to museum experiences once they arrive" (p. 44).

Three main models of practice have been described including experiences led by: (1) teachers or parents who have a familiar understanding of children's prior knowledge and interests; (2) tours led by docents who have a content rich understanding of the collection; and (3) collaborative experiences whereby teachers/parents, docents and children explore

ideas together. Key to all of these models is social interaction. Piscitelli, Weier and Everett (2003) provide detailed examples on how adults support children's learning in museums through conversational strategies whereby children and adult guides take different roles in leading and responding to objects and experiences in museum settings. Yenawine (2018) suggested using dialogic methods such as Visual Thinking Strategies (VTS) to engage young children in meaningful conversation when discussing works of art or objects in museum setting. The strategies for dialogue include asking four key questions: (1) What do you see? What is going on? (2) What makes you say that? (3) What more can you find? (p. 61).

The effectiveness of having a pre-visit activity in a classroom (e.g. Anderson, Piscitelli, Weier, Everett & Taylor, 2002; McNaughton, 2010) and post-visit at school (e.g. Anderson et al, 2002; Carr, 2012) was highlighted as key to a beneficial and deep learning experience for young children. To deepen and strengthen children's museum-based learning, many have concluded that learning dispositions and lifelong learning habits in children are best fostered through multiple museum visits with intervening classroom lessons (Bell, 2011; Claxton & Carr, 2004; McNaugton, 2010; Piscitelli, Weier & Everett, 2003; Savva & Trimis, 2005; Terreni, 2015).

Andre, Durkson and Volman (2016) critically review theoretical and empirical studies about children's learning in various museums types from 1999 to 2012. They identified a framework with three main interaction styles for facilitating young children's learning in

museums: (1) Child – adults/peers (adults and children collaborate in discovery based tours with dialogue and conversation as the main learning tool); (2) Child – technology (children using technology applications [video, audio, computer] to make sense of objects in the museum); and (3) Child – environment (children using context clues to make sense of objects, including worksheets and labels). In all cases, scaffolding (interactively linking children's ideas with objects in personally meaningful ways) was highlighted as the most essential component within various forms of interaction in the museum.

In "museum-based learning experiences, children's agenda is often overlooked" (Anderson, Piscitelli & Everett, 2008: p.253). Too often, teachers and docents make decisions about what children will encounter, but it is recognized that children can, and should, make choices about their own learning agenda in the museum context, particularly around the content of their excursion, the time spent looking at various objects and exhibits and the mission of their visits. Weier (2004) recommends that children should take the lead in touring through museums, claiming that when children are given control during a visit, they make decisions about what they see and interrogate objects to gain knowledge through "self-directed inquiry" (p. 106).

Young children's learning in the Hong Kong Heritage Museum

To examine the situation for young children's learning and experiences in Hong Kong

museums, a series of studies were developed. The overall study included a survey on the use of Hong Kong museums by kindergartens (Piscitelli et. al., 2008), and two case studies on Hong Kong Museum of Art (Wong & Piscitelli, 2017) and the Hong Kong Heritage Museum. This paper focuses on the case study at the Hong Kong Heritage Museum. This case study aimed to establish practices which strengthen the potential for young children's learning in museums by:

(a) Documenting the characteristics of young children as learners in museums.

(b) Identifying social interactions which promote young children's learning in museums.

Methods

To examine young children's learning about heritage and culture, we developed a small-scale trial program for young children to visit museums, using a qualitative design including observations (video recorded, photos and field notes), in-museum audio and video recordings of children's conversations, document analysis (children's written and graphic work) and semi-structured interviews (children and teachers). A variety of tools were used to capture children's behaviors, including verbal and non-verbal languages, and their interactions with others (adults and peers). Over the course of the study, children's written works were collected and analyzed, including worksheets and drawings. Through the semi-structured interviews, both children and teachers reflected on their museum visits experiences. One

kindergarten volunteered to be involved in a special program of multiple visits to the Hong Kong Heritage Museum (HKHM). Ten children, aged 4-5 years, visited the Hong Kong Heritage Museum three times during a period of six months. Each of the visits was designed to gather rich information about the ways in which children experienced the museum and an interpretive approach was employed to understand children's knowledge and ideas about their museum visits. In this study, the research team acted as participant observers with children, teachers and docents.

Procedures

The first visit followed the usual practice of kindergarten groups visiting a museum, whereby the teacher paid a number of pre-visits to a targeted exhibition by joining public guided tours. Following this experience, the teacher prepared and led the children to the museum. This provided a baseline for observing standard practice for young children's museum visits. Based on the findings from the first visit, the research team and the teacher provided an intervention for the second visit to provoke possibilities for child-centered and docent-led approaches for children to experience the museum. Before launching the third visit, the research team hosted a meeting with museum staff and kindergarten teachers. The third visit arrangement was developed collaboratively whereby teachers and docents planned to work collaboratively with children to set the content and direction of the children's final visit to the

museum.

On each visit, the following information was collected: (1) Videotapes and field notes of the ways that the kindergarten teachers prepared the children in their classrooms for their museum visits and subsequent follow-up activities; (2) Videotapes and field notes of the entire visit process; (3) Videotapes, field notes, photographs and children's work samples relating to their learning about the museum and its collections; and (4) Interviews (audiotaped) with children, teachers and teacher aides.

Special permission was obtained from the museum to take photographs and videotapes for purposes of this study and ethical clearances were collected for the children's participation in the research.

The site of study: Hong Kong Heritage Museum

The Hong Kong Heritage Museum (HKHM) opened in 2000 and is currently the largest museum in Hong Kong. The museum was designed to provide comprehensive exhibitions on Hong Kong's history, art and culture. The HKHM's vision is to enrich and inspire by exploring the diverse cultures of Hong Kong and the world, and by promoting and preserving the vibrant cultures of Hong Kong. HKHM provides a diverse range of dynamic and interactive exhibitions and programs to engage visitors in enjoyable and educational experiences. There were 787,000 visitors in the financial year 2016/17 (Leisure and Cultural

Services Department, 2018).

This museum was selected by the kindergarten to match with their curriculum. The dates of visits were scheduled to accommodate the school calendar of the kindergarten.

Case Study: Young children's experiences at the HKHM

Visit 1: Learning about HKHM – preparation, excursion and follow up

This visit was arranged as an extension activity from the school curriculum under the learning theme of familiar household items, in this case – "Bowls". The T.T. Tsui Gallery of Chinese Art within HKHM was selected for the visit. This gallery contains works of art and antiquities ranging from ceramics and pottery sculptures to bronzes focusing on four aspects of life: food and drink, entertainment, belief, and animals. To prepare for the visit, the teacher attended several public guided tours where she learned more about the content of the exhibition and the history and cultural significance of the objects. The teacher then prepared an excursion plan for the children.

For the children, this was their first visit to HKHM. In preparation for the visit to the museum, the teacher talked about the name and location of the museum as well as the rules that go with visiting such places, such as "do not touch", "do not run", "do not eat or drink", and "do not shout".

As the first visit was closely related to the learning theme in the school curriculum, the

teacher had a specific pre-visit briefing session for the children. At the beginning, the teacher showed the children some bowls (those for daily use) with different colors, patterns and materials. The teacher invited the children to observe and discuss what they could see and describe about these bowls. For homework, the teacher asked the children to bring or draw a bowl from home as a learning task.

Upon their arrival at the HKHM, the teacher reminded the children of the name of the museum and the focus of the trip by asking questions. The teacher asked the children to try to read the Chinese characters of the T.T. Tsui Gallery of Chinese Art. Then she told the children that they were going to find the "do not touch" signage.

Teacher: We are now in the museum. This is the Hong Kong …
Children: Hong Kong Heritage Museum.
Teacher: There are lots of things in the museum. We have only one hour, we cannot see everything. So, what are we going see today?
Children: Bowls.

Figures 1 and 2 *Children were encouraged to read the written and graphic images on the signs in the HKHM*

When the group reached certain exhibit items, the teacher asked the children if this was their targeted object for the visit; if not, they were encouraged to continue searching. As the tour was led by the teacher, the children were very responsive. The children showed curiosity throughout the visit. The questions asked by the teacher were focused on appearance and kinds of objects.

Figure 3 *The teacher led the children by the sculpture at the entrance of T.T. Tsui Gallery of Chinese Art*

Figure 4 *The teacher managing "object centered learning" and "discipline" simultaneously*

As the teacher knew the children well, she could ask questions according to the

children's prior knowledge and experiences. The teacher led the children to observe and associate exhibits with the learning theme in the kindergarten. The children had limited options to discover their own interests in the exhibition. Instead, the teacher led the children to describe the exhibits and discuss their ideas about how they were made.

Figure 5 *The teacher and children examine a bowl together in the Hong Kong Heritage Museum*

Teacher: How about that bowl? How do you think how the pattern was made?
Patten: Paint on it.
Teacher: Any other ideas?
Owen: Stamp on it.

Some exhibition objects in the HKHM were set in low cabinets at the eye-level of

children; they were thus were more accessible and welcoming. The teacher asked the children to consult labels so they could discover information about the objects on their own.

On their return to school, the teacher further discussed with children about the exhibits in the gallery. Then the children were asked to make their own bowl with clay or playdough.

Figure 6 *Follow up lesson at kindergarten, where children made bowls from clay*

Visit 2: Docent-led excursion with a treasure hunt

The research team met with the teacher and museum staff to plan a different type of excursion whereby docents would guide children's learning at the HKHM. On the second visit, the children returned to the T. T. Tsui Gallery of Chinese Art with a docent to guide them. The focus was twofold: (1) a docent led tour to deepen children's understanding of objects held in the collection, and (2) children's personal self-exploration of the museum

objects. The docents were notified about the theme of the visit in advance. To accommodate a more personalized visit, the group of 10 children was split into smaller groups of 5 children each, and given a chance to experience two activities during the visit: a self-guided tour with a worksheet and a docent led tour.

To stimulate children to look for meaning in the exhibits, a worksheet was designed to seek children's interpretation of the symbols seen in the exhibition objects. Children were asked to make personal judgments about "the most gracious animal", the fiercest animal" and the "most special animal", and to draw these on their worksheet while they were in the exhibition area.

To start the second visit, the teacher led the children to the directory of the museum to introduce the various exhibition halls inside the museum, as a way of refreshing children's knowledge about the museum and its contents, and as a way of demonstrating way-finding in the museum.

Figure 7 *Visit 2 - Teacher looking at the directory with children*

The docent greeted the children at the door of T.T. Tsui Gallery of Chinese Art, then briefly introduced the rules inside museum (e.g. no running, no touching) and told the children to raise their hands if they had questions. The docent prompted the children about the theme of the visit, as seen in this conversation:

> *Docent*: Exhibits inside the T.T. Tsui Gallery of Chinese Art were things made hundred years ago, thousand years ago … Today we are going to look for something that cannot speak, but they can walk … What's that? They crawl with their four legs … what's that?
> *Nancy*: Turtle.
> *Docent*: Turtles only? Any other?
> *Sam*: Tiger.
> *Docent*: Any others? What do we call these overall?
> *Sam*: With two legs?
> *Youde*: How many legs? Dog?
> *Docent*: What are they called? With four legs … Dogs? We have a name for them all …
> *Ballie*: Tiger.
> *Patten*: Dog.

Docent: Put up your hand to answer ... What do you think?
Youde: Animals.
Docent: Yes. We are going to look for animals.

Looking at the first exhibit, the docent encouraged the children to observe.

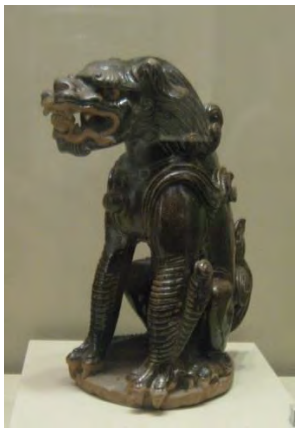

Figure 8 *The docent works with a group of children in front of a cabinet*

Figure 9 *Lion with dark brown glaze: Song to Yuan Dynasties (960-1368)*

Docent: Look at the one in the middle. What does it look like?
Sam: Why don't they make rabbit?
Patten: Lion. Mother lion.
Docent: That's right. It's a lion. It is a male lion. Look at its mane, it's like very long hair. How does it look from the side? What is in its open mouth?
Ballie: Teeth.
Nancy: Teeth.
Docent: Do you think it is friendly or fierce?
Children (Ballie, Nancy, Patten and Youde): Fierce.

Next, the docent asked the children to read the label and explained details.

Docent: The first two words are about the color. It should be green but it turned dark now. Can you read the other two characters?
Youde: Lion (獅子).
Docent: Yes, it is lion. Why did people in the olden days make these things? Do you

know what a burial object is?
Patten and Youde: I don't know.
Docent: Some of the stuff (burial objects) was used by people when they were alive. What is alive? We are alive, right? After many years, what happens to animals and people? Getting old and die. When people died, their families and friends, will bury all the things that the one who died liked with him.
Ballie: What is bury?
Docent: So, this lion was buried in the soil. This lion would protect the tomb, so that bad guys would not disturb the dead body. They were buried together, they are the burial objects.

The docent went through fifteen pieces of exhibits with the children, and asked the children to name the animals they had seen, e.g. lion, tiger, cat, camel, horse, rooster and ox. The teacher then introduced the treasure hunt to children. The docent stayed with the group and invited the children to approach her if they had any questions.

While children were exploring the exhibits to complete the worksheet, adults observed from a distance and offered support when children showed confusion, curiosity or desire for communication. Children were seriously looking for objects on their treasure hunt and identified animals both printed on objects and in three dimensional sculptural form.

Figures10 & 11 *Children drawing on their treasure hunt*

Figure 12 *During the treasure hunt, Sam asked the teacher to lift him so that he could look more clearly at the exhibit*

Figure 13 *One of a "Pair of Animal Mask Handles", Tang Dynasty (618-907)*

Figure 14 *"Pair of animal mask handles" drawn by Cherry as a fierce animal on her treasure hunt worksheet*

After seven minutes of walking around looking at objects, Sam eventually stopped in front of "Jar with applique dragon in qinghai glaze with brown splashes" and selected it as the most special animal. He drew and talked to himself:

Sam: Big eyes … BOM … many feet … pattern …
Adult: Why you think the dragon is the most special animal?
Sam: Because ... Other animals are not as long as it.
Adult: What else?
Sam: It can fly… it is as long as the pencil … longer than me … I like this dragon; it is colorful.

Figure 15 *Sam stops to draw a dragon in front of a cabinet of ceramic pieces*

Figure 16 *Jar with applique dragon in qinghai glaze with brown splashes, Song Dynasty*

(960-1279)

Sam joined the group late after he finished his drawing, and told the teacher "because I drew a dragon with many patterns - it took me sooo long to draw."

Figure 17 *Sam's most special animal – a dragon*

In concluding the visit, the teacher asked the children if they had further questions for the docent. Sam kept asking questions about the dragon, and stopped only when he had an satisfactory answer.

Sam: Why does the dragon have to be so long?
Docent: To fly.
Sam: I am asking why it has to be so long … and why does it have to fly?
Docent: Dragons fly in the sky ... In legends, the dragon is in the sky and is a huge and scary aminal.

Visit 3: Children's choice of exhibition hall

As the children were now familiar with HKHM, its code of conduct and some of its

collections, the final visit was structured to take advantage of the children's ideas and knowledge about the museum. To further balance the relationship between children's choices and the contribution from adult guides, children were consulted about the content and mission of the final visit and made three choices about where they could go and what they could see. The choices they made included 1) an exhibition of children's comic books, *The Children's Paradise*, 2) the Cantonese Opera Heritage Hall and 3) the T.T. Tsui Gallery of Chinese Art. In this paper, we provide an example of children's encounters with culture in the Cantonese Opera Heritage Hall.

Knowing that the children had some experience of reading the labels of the objects, the research team designed an activity book for each exhibition hall. The activity book was designed to lead the children to look at the exhibits in more detail and learn from the label description of the objects. Through this exercise, children could practise ways to gather information from museums and extend their observational learning skills. The activity booklet was seen as an inquiry-based learning tool. The last task in the booklet was an open ended enquiry based activity designed to encourage children to communicate their own thoughts towards objects in the museum.


Figures 18 & 19 *Children gathering information in the Cantonese Opera Heritage Hall exhibit with peers or supported by adult leader*

After twenty minutes of self guided exploration where the children explored the content of the Cantonese Opera Heritage Hall (see Figures 18 and 19), a docent conducted a more detailed guided tour with the children. The flow of the visit aimed to leave children space to raise their queries with the docent. At the entrance of the Cantonese Opera Heritage Hall, the children saw a reconstructed theatre in a bamboo shed inside and made some interesting observations and expressed their theories about the space.

Cindy: Is it now under renovation?
Docent: What makes you think that it is under renovation?
Cindy: Because there are many wooden sticks surrounding the stage …
Sam: No … it is for people … because they don't want the people fight, so they set up the fence. Then the people can queue here to go in to play.
Patten: Very noisy. Why so noisy?
Youde: I can still hear the noise.
Docent: Yes, very noisy indeed. It is because that there must be noises in the Cantonese Opera. In Cantonese Opera, people speak and sing with music. So there are lots of noises … In the olden days, people build the stage at an open space. They had to make very loud noise to let people know that there will be Cantonese Opera performance tonight.

Figure 20 *Cantonese Opera Heritage Hall Theatre entrance in a bamboo shed*

Post visit interviews – children and teachers

Multiple visits to the HKHM provided a rich and unexplored area for investigation with children and teachers working collaboratively to decode the content of the museum and its exhibits. Interviews with teachers and children revealed their growing understanding of the museum and its contents.

Children were interviewed several times during the project to provide their opinions about various aspects of the museum. Between the second and third visits, children were asked specifically to comment on the mission of their visits, and indicated that "the teacher wants us to come here to see different things". In discussing the difference between teachers and docents as leaders of their museum visit, most children said they enjoyed both visits but acknowledged that the docent "introduced us to lots of things that the teacher cannot because she does not know". All but one child indicated that they would enjoy returning to HKHM.

A post-project interview with 5 year old Youde illustrates the knowledge and attitudes he gained through his multiple visits to HKHM:

Researcher: We have been to HKHM three times, right?
Youde: Yes. I think it is quite fun. I want to bring my mommy here.
Researcher: Oh really? Why?
Youde: Because there is so much fun. And because if I come with my mommy, I am free to go everywhere.
Researcher: You are not free now, right? How?
Youde: Yes. Because only a few places to go.
Researcher: So you feel like you can come more often?
Youde: Yes.
Researcher: What is so fun here?
Youde: So many exhibition halls.
Researcher: What else?
Youde: Which one I like most? Cantonese Opera Exhibition Hall.
Researcher: Why?
Youde: Because I want to learn more about Cantonese Opera.
Researcher: What do you know about museums?
Youde: A museum has many exhibition halls showing different things … like bowls, animals, man, clothes and shoes…there must be some things in a museum … Not my stuff, because my clothes are ordinary, nothing special … Heritage Museum is about things from the olden days.
Researcher: Is museum a place for children? Do you want to come again?
Youde: Yes. Children have to learn many things in the Heritage Museum. It is a very quiet place. You need to look carefully for something special.

The teacher's interview reveals a different set of issues relating to learning in the museum. The teacher revealed that the kindergarten only takes the children to a museum once within children's three years of study in kindergarten. From her experience, she did not use the services of a guided tour from museum docents on previous visits. She found that many

museums only offer school guided tours in the morning, whereas her kindergarten usually arranges museum visits in the afternoon as it was a full day program. The teacher claimed that she preferred to guide children on her own as docents focused more on objects instead of interacting with children. She claimed that docents often had difficulties in holding children's attention and discipline.

To prepare for the first visit, the teacher said she visited HKHM three times. She found that she did not have sufficient understanding of the exhibits just through the labels, and was concerned she would not be able to answer the questions raised by children. When the teacher reviewed the first visit, she thought it was very teacher-directed and followed the teacher's interest, not the children's. She explained her decision-making process and said it was the principal's decision to visit HKHM and that teachers decided which exhibition halls to go. As other children from the kindergarten (5-6 year-old group) chose the exhibition hall about toys, her class was left with exhibits of "fashion", "Chinese painting" and "bowls". The principal suggested Chinese painting, but the teacher felt the Chinese painting exhibition was too vague and abstract for children. The teacher selected bowls, which was about housewares and three-dimensional objects.

The teacher aide agreed that multiple visits to museums were important to children. But she had great concerns on workload, from logistical organization to learning content. She said:

Teacher: I feel positive towards this project. Children are still enthusiastic after their

third visit. Each time, the children had new discoveries. They were actively participating and asked more questions than before. Their cognitive learning improved. The docent (at the Cantonese Opera Exhibition Hall) used story to explain the exhibits so the children can learn a larger concept. I think this is better than last two visits which only introduced the exhibits. This fits children's abilities … All the children asked questions. I am pretty surprised that the three boys stayed still to listen … I am now more aware of the continuity in children's learning. Children might have seen the grandparents singing Cantonese Opera. After the guided tour, the children know more about the stage and characters. Docents are more professional; as teachers, we would not be able to introduce this information. I found myself learning through the process. When the docent introduces exhibits to children, I learn as well.

Researcher: Who should lead children's visits?

Teacher: It depends on the exhibits and how much children know about it … We need to follow children's interest. If the docent is capable, the teacher could be the assistant.

Researcher: How could other teachers make the most of visiting museums with young children?

Teacher: The workload would be a great concern for teachers. The museum is far away from the kindergarten and planning such a visit takes a lot of time. Teachers need extra support to do this kind of work. If I take them there and let them go around on their own, it is meaningless. The school will only let the teachers to carry out these kind of visits if the teacher can bring meaningful learning for children. Teachers need support. Kindergarten teachers need to get information about exhibits well in advance so we can plan to take advantage of them.

Both teachers and children shared common views of their museum experience: they gained new knowledge, understanding and value of museums through the multiple visit program. They all expressed a desire to continue visiting museums.

Discussion

The children's first visit to the HKHM followed the conventional practice of a teacher led school visit whereby the teacher visited the site before the implementation of visit, linked the

visit to the school curriculum, and supported children's learning with pre and post visit activities (Anderson et al, 2002; Bowers, 2012; Carr, 2012). This type of museum visit followed traditional practice and supported findings from the survey done by the research team (Piscitelli et al, 2008). In the first visit, the teacher set her own agenda for the session and worked to the best of her capacity to acquaint her kindergarten children to the museum and its collection. Though the teacher introduced the signage in the museum and motivated the children to read the title of the exhibition hall and labels of the exhibits, learning about the museum and exhibits (objects) was limited to a single gallery space. The teacher encouraged the children to observe the exhibits and made associations utilizing visual thinking strategies (Yenawine, 2018). Learning was focused on the school curriculum related content. The first visit provided a baseline of information about standard practice when kindergarten teachers go to museums with classes of young children in Hong Kong.

The main interaction style in the first visit included children in conversation with peers and adults about objects (Andre, Durkson & Volman, 2016). Due to the limitations of the teacher's knowledge about objects, the conversations focused on superficial descriptions of colour, size, shape, form, functionality, as well as children's understanding of similar objects in their everyday environment. This type of conversation could be held anywhere – in the kindergarten, in the home, in a shopping center or in a public space. Children were engaged in the conversation and responsive to their teacher.

During the second and third visits, several social and activity-based supports were added to the children's experiences in the exhibition galleries: docent led tours utilizing visual thinking strategies (Yenawine, 2018), worksheets and activity booklets (Andre, Durkson & Volman, 2016; Piscitelli, Weier & Everett, 2003). These additional supports provided children with access to greater knowledge (via docent storytelling) and greater options for observation and analysis (via written replies on worksheets and activity booklets). Children showed enthusiasm and competency in exploring the museum on their own. Docents demonstrated ability to use visual teaching strategies (Yenawine, 2018) to involve the children in looking more carefully at objects, yet they had trouble with relating objects directly to children's personal lives and prior knowledge (Piscitelli et al, 2008). Though children revealed docent as knowledgeable person, they preferred to visit the museums with their teacher. Children were provided with time to make choices on their own (Anderson et al, 2002) and this led to intense interest in self-selected objects and deeper peer-adult interactions (Andre, Durkson & Volman, 2016).

While worksheets and activity booklets encouraged children to take a closer look at the museum and the exhibits, children's observation and questioning skills were improved through multiple visits. Children developed a holistic understanding and personal relationship with the museum (Piscitelli, Weier & Everett, 2003).

Teachers participating in this study agreed that children learn through multiple visits to

museums and that there were various ways to lead museum visits for children. Both the teacher and her assistant recognized that they needed support to extend children's knowledge following this visit.

Conclusion and Recommendations

In this case study, we learned that children enjoyed museum visits which provided active participation, time, story and choice. However, we noted also that teachers alone were unable to provide this type of visit experience due to their lack of training in museum-based learning. These experiences were value-add options that were provided not by the teacher, but in collaboration with docents and specially designed resources created by the research team.

Collaboration between schools and museums is an essential element of building successful programs for young visitors in several ways: collaborations between teachers and the museum in regard to planning, administration and resources; collaborations between docents and teachers in regard to the content of the curriculum and children's interests; and most importantly, collaborations between children and docents in relation to children's ideas, interests and knowledge. Such collaboration is readily achievable and highly desirable to maximize the benefits of young children learning about culture. Such collaboration meets also the notion of making good use of community resources in the new kindergarten curriculum guide (Curriculum Development Council, 2017). As Bowers (2012) indicates,

there is a real opportunity for early childhood educators to share their specialist knowledge of young children with museum personnel and to make meaningful connections between children and culture and, in the process, begin to build sustainable social capital.

References

Anderson, D., Piscitelli, B., & Everett, M. (2008). Children's Agendas: Young Children's Museum Field Trips. *Curator*, *51*(3), 253-273.

Anderson, D., Piscitelli, B., Weier, K., Everett, M., & Taylor, C. (2002). Children's museum experiences: Identifying powerful mediators of learning. *Curator*, *45*(3), 213-231.

Andre, L., Durkson, T., & Volman, M, (2016). Museums as avenues of learning for children: A decade of research. *Learning Environments Research* DOI: 10.1007/s10984-016-9222-9

Akamca, G. O., Yildirim, R. G., & Ellez, A. M. (2017). *An alternative educational method in early childhood: Museum education.* Educational Research and Reviews, *12*(4), 688-694. DOI:10.5897/ERR2017.3145

Bowers, B. (2012). A look at early childhood programming in museums. *The Journal of Museum Education*, *37*(1), 39-47.

Curriculum Development Council (2017). *Kindergarten education curriculum guide.* Hong Kong: HKSAR.

Dockett, S., Main, S., & Kelly, L. (2011). Consulting young children: Experiences from a museum. *Visitor Studies*, 14:1, 13-33, DOI: 10.1080/10645578.2011.557626

Hein, G. (1998). *Learning in the museum.* London: Routledge.

Hooper-Greenhill, E., & Moussouri, T. (2000). *Researching learning in museums and galleries 1990-1999: A bibliographic review*. Leicester: Research Centre for Museums and Galleries.

Kindler, A., & Darras, B. (1997). Young children and museums: The role of cultural context in early development of beliefs, attitudes and behaviours. *Visual Arts Research*, *23*(1), 125-141.

Leisure and Cultural Services Department. (2018). *Statistics report: Cultural services.* Retrieved July 2, 2018, from https://www.lcsd.gov.hk/en/aboutlcsd/ppr/statistics/cultural.html

Piscitelli, B., Chak, A. Wong, K. M. B., Yuen, W. K. G., & Ngan, S. F. (2008). The use of museums by Hong Kong preschools. *Hong Kong Journal of Early Childhood*, 7(2), 87-94.

Piscitelli, B., Weier, K., & Everett, M. (2003). Museums and young children: Partners in learning about the world. In S. Wright (ed), *Children, meaning making and the arts* (pp.167-192). Sydney: Pearson.

Piscitelli, B., & Penfold, L. (2015), Child-centered Practice in Museums: Experiential Learning through Creative Play at the Ipswich Art Gallery. *Curator*, 58, 263-280. doi:10.1111/cura.12113

Terreni, L. (2015). Young children's learning in art museums: A review of New Zealand and international literature. *European Early Childhood Education Research Journal*, *23*(5), 720-742.

Vygotsky, L. (1978). *Mind in Society: The development of higher psychological processes.* Cambridge, MA.: Harvard University Press.

Weier, K. (2004). Empowering young children in art museums: letting them take the lead. *Contemporary Issues in Early Childhood, 5*(1), 106-116.

Wong, K. M., & Piscitelli, B. (2017). New audiences for art: Lessons from visits of young children to the Hong Kong Museum of Art. *Asia Pacific Journal for Arts Education*, *16*(2), 1-30.

Yenawine, P. (2018). *Visual thinking strategies for preschool: Using art to enhance literacy and social skills.* Massachusetts: Harvard Education Press.