

Music and movement in Hong Kong kindergartens: teachers' preparation, perceived usefulness, confidence, and readiness¹

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Abstract. Few large-scale studies have examined how prepared early childhood educators feel to teach music and movement to young children. This paper is part of a survey study conducted with 1.019 Hong Kong kindergarten teachers. We investigated their prior music and movement educational experiences (extracurricular activities, pre-service courses, in-service professional development), their perceived usefulness of such experiences, as well as their perceived confidence and readiness to teach music and movement in kindergartens. Differences according to teaching experience and educational qualifications were analyzed. Findings reveal the need to strengthen teachers' preparation in music and movement, especially among beginning educators. Limitations are discussed.

Keywords: Kindergarten Education; Music and Movement; Preparation; Usefulness; Readiness; Confidence; Teacher Education; Hong Kong.

Summary. 1. Introduction. 2. Literature review. 3. Goals. 4. Method. 5. Results. 6. Discussion. 7. References.

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1. Introduction

Music and movement is a key learning area in Early Childhood Education (ECE) curriculum frameworks around the world (Campbell & Scott-Kassner, 2019; Cremades, 2017). In both Western and Eastern countries, ECE teachers are expected to implement daily music and movement activities to allow young children to learn about other content areas, express and communicate their feelings, and unleash their creativity and imagination (e.g., Boletín Oficial del Estado [BOE], Real Decreto 1630, 2006), Curriculum Development Council [CDC], 2017; New York State Education Department [NYSED], 2019). Some activity types suggested to teachers involve singing, music listening and appreciation, responding to beats and rhythms with creative movement, body percussion, playing instruments, exploring timbre and sound effects, as well as improvisation and creation with sound and bodily actions (Bernabé Villodré, 2020; Young & Ilari, 2019). However, research shows that music and movement practices do not reflect these curriculum proposals in ECE settings, as reported in Western (Ersoy & Dere, 2012; Young, 2018) and Eastern countries (Bautista et al., 2018; Lau & Grieshaber, 2018). Indeed, pedagogical approaches tend to be reproductive and teacher-led, with teachers focusing mainly on singing routine and action songs, teaching about musical concepts, and rarely posing activities that involve free exploration, improvisation, or creation (Cheung, 2017; Rajan, 2017).

While evidence suggests that ECE teachers around the world need support to enhance the quality of children's music and movement learning experiences, few large-scale studies have examined how prepared teachers themselves feel to teach music and movement to children (Barrett, Flynn, et al., 2019; Burak, 2019; Kim & Kemple, 2011). This paper is part of a survey study conducted with a large sample of Hong Kong kindergarten teachers. We investigated their prior music and movement educational experiences—including extracurricular activities, pre-service courses, and in-service professional development (PD)—, their perceived usefulness of such experiences, as well as their

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perceived confidence and readiness to teach music and movement in kindergartens. The study draws on the theoretical framework of responsive PD in music education (Bautista et al., 2019), which is based on socio-constructivist theories and frameworks of culturally responsive teaching (Wlodkowski & Ginsberg, 1995). The central idea of our framework is that teachers' own *voices* should be the foundation of teacher education initiatives, as one of the critical features of effective PD is its degree of *coherence* with the needs, motivations, and preferences of educators themselves (Desimone & Garet, 2015).

2. Literature review

Most research on the topics investigated herein is qualitative and has been produced in Western countries, where ECE teachers typically have limited music and movement experiences prior to teacher preparation programs. For example, in a study conducted in Australia, few kindergarten teachers had previously participated in extracurricular music education, engaged in music-making in their personal time, or held formal music qualifications (Barrett, Flynn, et al., 2019). Western research has also documented the low provision and limited usefulness of pre-service music and movement courses. While some teacher preparation programs include only one compulsory course (Altinkaynak et al., 2012), others combine music and movement with other art forms (e.g., arts, drama, dance), or even integrate them as part of generic courses on creativity and self-expression (Suthers, 2008). In a study carried out in Greece (Koutsoupidou, 2010), teachers reported that university courses did not satisfy their expectations, as courses only focused on basic music elements and simple singing techniques. Participants lamented the lack of opportunities to learn how to play instruments, and especially to design and implement activities that foster children's creativity in the classroom. There are also programs in which no music and movement training is offered to ECE prospective teachers, among them countries such as the United States (Lenzo, 2014).

Regarding PD, also referred to as in-service training (Bautista et al., 2017), research shows that while music and movement is an area where ECE teachers need the highest level of support, the provision of specialized initiatives tends to be low around the world, as shown in the United States (Kos, 2018), England (Young, 2018), Australia (Yim & Ebbeck, 2011), Greece (Koutsoupidou, 2010), and in Asian societies such as Singapore (Bautista et al., 2016). In a relatively outdated study, Chan and Leong (2007) identified similar trends in Hong Kong. Overall, the low provision of music and music PD is due to factors such as the low importance attributed by educational policymakers and school administrators to this learning area, the limited number of local PD providers, the high costs of specialized music and movement training, and the impossibility to hire substitute teachers to cover for those attending PD (Bautista et al., 2021). The quality of PD has also been criticized by in-service ECE teachers, who commonly complain that training initiatives tend to be too theoretical and abstract, as well as sporadic and short, focusing on certain activities (e.g., song repertoires, musical games) at the expense of others (e.g., child-centered music activities, creativity), and not providing sufficient time for the practice of innovative classroom pedagogies (Rajan, 2017; Rodríguez & Álvarez, 2015; Young, 2018).

The limited exposure to music and movement educational experiences—including extracurricular activities, pre-service courses, and PD initiatives—, coupled with the limited usefulness of the opportunities available, have a series of negative consequences. Firstly, many ECE teachers do not sufficiently value the key role that music and movement plays in children's holistic development. In Australia, Barrett, Flynn, et al. (2019) found that ECE teachers were not able even to justify the inclusion of this learning area in the curriculum. Research has also shown that teachers' levels of confidence and self-efficacy in teaching music and movement to young children are comparatively lower as compared to other learning areas (Burak, 2019; Liao & Campbell, 2016), as they feel insecure about their own skills and pedagogical competencies (Neokleous, 2013). For example, in the context of Sweden, Ehrlin and Wallerstedt (2014) argued that while there is a need for generalist preschool teachers to implement music activities in the classroom, music education has scarce importance in teacher training curricula. This limited provision results in lack of confidence and readiness to teach music. Similarly, in a study conducted in Greece, Koutsoupidou (2010) found that generalist kindergarten teachers' lack of practical experiences in observing actual lessons resulted in low levels of confidence and self-efficacy in music teaching. The ultimate negative consequence, as mentioned above, manifests itself in classroom practices that are repetitive and reproductive in nature, characterized by frequent music and movement routines but little if any creativity-fostering activities (Bautista et al., 2018; Ersoy & Dere, 2012; Lau & Grieshaber, 2018). These practices limit children's learning experiences and thus their holistic development, reflecting a lack of awareness of what constitutes good music and movement education within ECE settings (Campbell & Scott-Kassner, 2019; Cremades, 2017; Young & Ilari, 2019).

3. Goals

This study contributes to the limited quantitative literature on ECE teacher education in music and movement, from the perspective of an Asian society: Hong Kong Special Administrative Region (China). Carried out with a large sample of Hong Kong kindergarten teachers, the study had two research goals:

- Goal #1 To investigate teachers’ prior music and movement educational experiences (including extracurricular activities, pre-service courses, and in-service PD) and the perceived usefulness of such experiences.
- Goal #2 To examine teachers’ perceived confidence and readiness to teach music and movement to young children.

For both goals, we analyzed differences in teachers’ responses according to two variables extensively used as comparison criteria and/or predictors in the ECE literature, namely teaching experience (Ansari & Pianta, 2019) and educational qualifications (Manning et al., 2017). Findings have the potential to inform teacher educators, PD providers, and educational policymakers about the needs of ECE teachers with different demographic profiles.

4. Method

4.1. Participants

Participants were 1,019 teachers (972 females, 39 males, eight did not respond) in charge of K1-3 children (3-6 years of age) in Hong Kong kindergartens (86.1% government-funded, 13.9% private). Note that the over-representation of female teachers and government-funded kindergartens accurately reflected the composition of Hong Kong’s kindergarten sector (Education Bureau, 2019). Age information was collected in brackets: 18-24 (16.9%), 25-34 (38%), 35-44 (21.5%), 45-54 (17.5%), 55+ (6.2%). Most participants (94.5%) had academic qualifications related to Education, Early Childhood, Psychology, or Special Needs. Based on the classification proposed by the Early Childhood Development Agency (2013), we formed three groups of teaching experience for analytical purposes: Beginning Teachers (less than 5 years) ($n = 312$ teachers, 30.6% of the sample), Experienced Teachers (5-15 years) ($n = 355$, 34.8%), and Advanced Teachers (more than 15 years) ($n = 352$, 34.5%). Regarding teachers’ highest educational qualifications, we classified the participants into three groups: Higher Diploma or Lower ($n = 316$ teachers, 31% of the sample), Bachelor’s Degree ($n = 417$, 40.9%), and Postgraduate Degree ($n = 286$, 28.1%). A Chi-square test of independence showed a significant association between teaching experience and educational qualifications, $\chi^2(4, n = 1019) = 108.529, p < .001$. Based on the adjusted residuals (± 1.96), proportions of teachers were significantly higher than expected in the three following combinations: Beginning Teachers with Higher Diploma or Lower; Experienced Teachers with Bachelors’ Degree; and Advanced Teachers with Postgraduate Degree (Table 1).

Table 1. Contingency table for teaching experience by highest educational qualifications.*

		Highest educational qualifications						Total
		Higher Diploma or Lower		Bachelor’s Degree		Postgraduate Degree		
Teaching experience		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
	Teaching experience	Beginning (less than 5 years)	163	51.6	97	23.3	52	18.2
Experienced (5-15 years)		64	20.3	183	43.9	108	37.8	355
Advanced (more than 15 years)		89	28.2	137	32.9	126	44.1	352
Total		316	100%	417	100%	286	100%	1,019

(*) Proportions of teachers statistically higher than expected are indicated in grey (adjusted residuals ± 1.96)

4.2. Materials

Data was collected as part of a larger research project focusing on music and movement in Hong Kong kindergartens. We designed a survey with items using various response formats—i.e. dichotomous (Yes or No), multiple response items (e.g., Tick all that apply), Likert scale items (3-point and 5-point Likert scales). The survey was structured into five sections:

- 1) Demographics (items 1-9). Data from these items have been reported above.
- 2) Prior music and movement educational experiences and self-perceived usefulness (items 10-23).
- 3) Perceived readiness and confidence to teach music and movement to children (items 24-27).

- 4) Music and movement classroom practices (item 28).
- 5) PD needs, motivations, and preferences pertaining to music and movement (items 29-37).

This paper focuses on Sections 2 and 3. For simplicity, the items analyzed herein are presented within the Results section, followed by the corresponding findings. A four-stage process was employed to ensure the survey's face, content, and ecological validity.

- Stage 1: Literature review. We conducted a detailed review of the literature on music and movement in kindergarten education, intended to identify relevant themes and research questions for the project.
- Stage 2: Pilot interviews. An exploratory interview protocol was designed. We conducted individual interviews with 71 kindergarten teachers, who were recruited using the convenience sampling method. Questions were asked verbally, with follow-up questions intended to better understand how teachers interpreted the key terms and constructs involved in the project (e.g., courses, informal learning experiences, PD, confidence, practices). These findings can be consulted in Bautista and Ho (2021).
- Stage 3: Preliminary version of survey and piloting. Based on teachers' responses and feedback during the interviews, the interview protocol was revised and converted into a short survey, which was set up on 'Qualtrics Online Survey Software' (<http://qualtrics.com/>). Qualtrics' Expert Review functionality was used to maximize the quality of the items (e.g., avoiding overly technical terms, vague or imprecise sentences, complicated syntax). We included several screening items in the survey, intended to identify and eliminate participants who responded inconsistently or randomly (Fowler & Cosenza, 2008). The first author piloted the Qualtrics survey with 15 teachers, who were asked to respond while continuously thinking out loud.
- Stage 4: Final version and survey translation. Based on the information gathered from teachers, minor modifications were introduced in the survey. Then, the second author translated it from English into Traditional Chinese and Simplified Chinese. To ensure translation accuracy, an external Research Assistant translated both Chinese versions back into English for comparison and enhancement. The three final versions of the survey (English, Traditional Chinese, and Simplified Chinese) were set up on Qualtrics.

4.3. Procedure

Ethics approval was obtained from the authors' university institutional review board. The email addresses of all kindergartens in Hong Kong were obtained from the official website of the Education Bureau⁴. We sent individual invitation emails to all kindergarten principals, including the project's information sheet and the school's consent form as attachments, as well as the hyperlink to the Qualtrics online survey. We requested principals to forward our email to all teachers in charge of 3 to 6 year old children in their kindergartens. Two follow-up emails were sent (one week and one month after the initial email, respectively), kindly asking principals to remind their teachers to complete the survey. Teachers were informed that the survey: (a) focused on their prior music experiences, PD needs, and preferences regarding music and movement; (b) was anonymous and confidential; (c) could be completed using their phones, computers, and/or tablets; and (d) was available in English, Traditional Chinese, and Simplified Chinese. Teachers were asked to provide informed consent to be able to take the survey.

4.4. Data analysis

The Qualtrics survey was active for one month, during which 1.128 entries were recorded. The data underwent a thorough data cleaning process. We eliminated 94 entries of the participants who took less than 4 minutes and 30 seconds to complete the survey (the minimum estimated time required). We also eliminated eight entries whose respondents did not sign the consent form, and seven entries whose respondents selected the option "I have no experience teaching children aged 3-6". This process resulted in 1.019 valid responses. Data analyses were carried out using IBM SPSS Statistics for Windows, Version 26.0. In both Goals #1 and #2, descriptive statistics (means, standard deviations, frequencies, and percentages) were performed to obtain a general overview of the data. We also performed non-parametric analyses (Chi-square tests of independence and Spearman's Correlation) and parametric analyses (One-way ANOVA, Welch's ANOVA, Post-hoc Tukey HSD, and Games-Howell tests). Finally, we analyzed the existence of differences in teachers' responses according to the two independent variables, namely teaching experience (with three levels: Beginning Teachers [<5 years], Experienced Teachers [5-15 years], Advanced Teachers [>15 years]), and educational qualifications (with three levels: Higher Diploma or Lower, Bachelor's Degree, and Postgraduate Degree). Only statistically significant differences are reported below.

⁴ Visit: <https://kgp2020.azurewebsites.net/edb/index.php?lang=en>

5. Results

5.1. Goal #1: Kindergarten teachers' prior music and movement educational experiences and perceived usefulness

We focused on three types of music and movement educational experiences: extracurricular activities, pre-service courses, and in-service PD. Regarding extracurricular activities, we asked questions pertaining to prior music and movement learning experiences, formal qualifications, and current engagement. Section 2 of the survey started by asking teachers, "Have you ever learned how to play a musical instrument, sing, or dance? (at least two years of training)". There were 55% teachers who said Yes ($n = 560$). A Chi-square test of independence revealed a significant association between educational qualifications and music and movement learning experiences, $\chi^2(2, n = 1019) = 12.131, p = .002$. Drawing on the adjusted residuals (± 1.96), the number of teachers with Postgraduate Degrees (41.8%) who responded "Yes" was higher than expected by chance, whereas the number of teachers from the Higher Diploma or Lower group (27.1%) was lower than expected. The 560 teachers with prior music and movement training were asked, "Do you have any formal qualifications in any musical instrument, singing and/or dance?". Only 323 teachers responded "Yes" (31.5% of the sample). They were also asked, "Do you currently play a musical instrument, sing, or dance in your own personal time?". Only 237 teachers responded "Yes" (23.3%).

Section 2 continued by asking participants about their participation in music and movement courses during pre-service teacher preparation programs, as well as the perceived usefulness of these courses. Teachers were asked, "Did you take any course/s related to music and movement in college or university?". There were 410 participants (40.2%) who said "No". A Chi-square test of independence revealed a significant association between teaching experience and participation in pre-service courses, $\chi^2(1, n = 1019) = 11.338, p = .003$. Based on the adjusted residuals (± 1.96), the number of Advanced Teachers (>15 years) who responded "Yes" was higher than expected by chance (38.6%), whereas the number of Beginning Teachers (<5 years) was lower than expected (28.1%). Teachers who had participated in pre-service courses ($n = 609$) were asked, "How useful was that course/s in terms of your music and movement teaching skills?" They were given a 5-point Likert scale, from Not Useful (which was computed as 1) to Extremely Useful (computed as 5). As indicated in Table 2, most teachers selected the option Moderately Useful. The resulting mean score was 3.09 ($SD = .91$).

Table 2. Perceived usefulness of pre-service courses.

	Count	Percentage (%)	% of total responses
Extremely Useful	35	5.7	3.4
Very Useful	164	26.9	16.1
Moderately Useful	238	39.1	23.4
Slightly Useful	163	26.8	16.0
Not Useful	9	1.5	.9
Total	609	100.0	59.8

A One-way Analysis of Variance (ANOVA) revealed a statistically significant difference for the variable teaching experience, $F(2, 606) = 18.029, p < .001$. Post hoc comparisons using the Tukey HSD test indicated that the mean scores for Beginning Teachers ($M = 2.91, SD = .87, p < .001$) and Experienced Teachers ($M = 2.92, SD = .92, p < .001$) were significantly lower than the mean score for Advanced Teachers ($M = 3.36, SD = .85$). In other words, participants with the lowest level of teaching experience rated their pre-service music and movement courses as significantly less useful. We performed a Spearman's Correlation analysis and found a significant positive correlation between teaching experience and perceived usefulness of pre-service courses, $r_s(607) = .215, p < .001$. This provided further evidence that the lower the amount of teaching experience, the lower the scores of perceived usefulness for pre-service courses.

Similar questions were formulated regarding engagement in music and movement PD. Teachers were asked, "Have you done any professional development (PD) related to music and movement?". Most participants ($n = 650, 63.8%$) responded "No". Chi-square tests of independence revealed significant associations between PD engagement and teaching experience, $\chi^2(2, n = 1019) = 99.960, p < .001$, and with educational qualifications, $\chi^2(2, n = 1019) = 15.439, p < .001$. The number of Beginning Teachers (<5 years) who responded "Yes" was lower than expected by chance (15.7%), whereas the number of Advanced Teachers (>15 years) was higher than expected (52.8%), based on adjusted residuals of ± 1.96 . Similarly, the number of teachers from the Higher Diploma or Lower group who responded "Yes" was lower than expected by chance (24.1%), and higher than expected in the Postgraduate Degree group (53.6%). Those teachers who had participated in PD trainings ($n = 369$) were asked, "How useful was that PD in terms of your music and movement teaching skills?". Most teachers selected "Very Useful", followed by Moderately Useful (Table 3). The resulting mean score was 3.41 ($SD = .81$).

Because Levene's test showed that the variances for this question were not equal, $p = 0.012$, we applied *Welch's* ANOVA. Results for the three groups of teaching experience were statistically significant, *Welch's* $F(2, 151.366) = 5.424$, $p = .005$. Post hoc comparisons using the Games-Howell test indicated that the mean scores for Beginning Teachers ($M = 3.22$, $SD = .73$, $p = .016$) and Experienced Teachers ($M = 3.29$, $SD = .90$, $p = .045$) were significantly lower than the mean score for Advanced Teachers ($M = 3.53$, $SD = .75$). Simply put, teachers with the highest level of teaching experience rated music and movement PD as significantly more useful. Moreover, we found a significant positive correlation between teaching experience and perceived usefulness of PD courses, $r_s(367) = .168$, $p = .001$. This indicated that the higher the amount of teaching experience, the higher the scores of perceived usefulness for music and movement PD.

Table 3. Perceived usefulness of music and movement PD

	Count	Percentage (%)	% of total responses
Extremely Useful	25	6.8	2.5
Very Useful	151	40.9	14.8
Moderately Useful	144	39.0	14.1
Slightly Useful	48	13.0	4.7
Not Useful	1	.3	.1
Total	369	100.0	36.2

Section 2 ended by asking, "Overall, do you think your pre-service and/or in-service training has been sufficient to prepare you to teach music and movement to children?". This question was presented only to those teachers who had participated in pre-service and/or in-service music and movement training ($n = 369$). A 5-point Likert scale was provided, from Definitely Not (1) to Definitely Yes (5). Neutral was the most frequently chosen option (Table 4). The number of teachers selecting negative choices was higher than for the positive. The resulting mean score was 2.20 ($SD = 1.04$).

Table 4. Sufficient level of preparation to teach music and movement to children.

	Count	Percentage (%)	% of total responses
Definitely Yes	8	2.2	.8
Probably Yes	102	27.6	10.0
Neutral	112	30.4	11.0
Probably Not	102	27.6	10.0
Definitely Not	45	12.2	4.4
Total	369	100.0	36.2

5.2. Goal #2: Kindergarten teachers' perceived confidence and readiness to teach music and movement to children

Section 3 of the survey started by asking, "When you conduct music and movement activities with children, what is your level of confidence?". Teachers were given a 5-point Likert scale, ranging from Very Low (1) to Very High (5). The most selected option was Medium, followed by High (Table 5). The resulting mean score was 3.09 ($SD = .70$).

Table 5. Confidence level in teaching music and movement.

	Count	Percentage (%)
Very High	23	2.3
High	206	20.2
Medium	643	63.1
Low	129	12.7
Very Low	18	1.8
Total	1019	100.0

The One-way ANOVA for the teaching experience groups was statistically significant, $F(2, 1016) = 23.523$, $p < .001$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for Beginning Teachers ($M = 2.89$, $SD = .68$) was significantly lower than both Experienced ($M = 3.10$, $SD = .71$, $p < .001$) and Advanced Teachers ($M = 3.25$, $SD = .64$, $p < .001$). Additionally, the mean score for Experienced Teachers ($M = 3.10$, $SD = .71$) was sig-

nificantly lower than for Advanced Teachers ($M = 3.25$, $SD = .64$, $p = .007$). To further investigate these differences, Spearman's Correlation was performed. A significant positive correlation was found between teaching experience and confidence level, $r_s(1017) = .214$, $p < .001$, showing that the lower the amount of teaching experience, the lower the confidence level in conducting music and movement activities with young children.

The survey then asked, "Are you able to design music and movement activities for children?". Teachers were given a 5-point Likert scale, from Definitely Not (1) to Definitely Yes (5). As shown in Table 6, most respondents indicated Probably Yes, followed by Neutral. The mean was 3.71 ($SD = .72$).

Table 6. Perceived readiness to design music and movement activities.

	Count	Percentage (%)
Definitely Yes	123	12.1
Probably Yes	506	49.7
Neutral	360	35.3
Probably Not	27	2.6
Definitely Not	3	.3
Total	1019	100.0

A One-way ANOVA revealed a significant difference among the teaching experience groups, $F(2, 1016) = 12.416$, $p < .001$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for Beginning Teachers ($M = 3.54$, $SD = .73$) was significantly lower than for both Experienced Teachers ($M = 3.77$, $SD = .72$, $p < .001$) and Advanced Teachers ($M = 3.79$, $SD = .70$, $p < .001$). Similarly, significant differences were identified among the groups of respondents with different educational qualifications, $F(2, 1016) = 6.582$, $p = .001$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the Higher Diploma or Lower ($M = 3.59$, $SD = .68$) group was significantly lower than for the Bachelor's Degree ($M = 3.74$, $SD = .75$, $p = .001$) and Postgraduate Degree ($M = 3.77$, $SD = .72$, $p = .022$) groups. These analyses indicated that teachers with the lowest level of teaching experience and educational qualification rated their perceived readiness to design music and movement activities significantly lower than teachers from the other groups.

Finally, Section 3 asked teachers, "Are you able to provide a variety of music and movement activities for children?". The same scale was used. The most frequently selected response choice was Probably Yes, followed by Neutral (Table 7). The mean was 3.58 ($SD = .73$).

Table 7. Perceived readiness to provide a variety of music and movement activities.

	Count	Percentage (%)
Definitely Yes	92	9.0
Probably Yes	462	45.3
Neutral	411	40.3
Probably Not	54	5.3
Definitely Not	0	.0
Total	1019	100.0

The One-way ANOVA for the teaching experience groups was statistically significant, $F(2, 1016) = 14.144$, $p < .001$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for Beginning Teachers ($M = 3.41$, $SD = .73$) was significantly lower than the means for both Experienced Teachers ($M = 3.62$, $SD = .74$, $p < .001$) and Advanced Teachers ($M = 3.70$, $SD = .69$, $p < .001$). Similarly, the ANOVA for the educational qualifications groups was statistically significant, $F(2, 1016) = 6.802$, $p = .001$. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the Higher Diploma or Lower ($M = 3.46$, $SD = .68$) group was significantly lower than then means for the other two groups, namely Bachelor's Degree ($M = 3.61$, $SD = .72$, $p = .018$) and Postgraduate Degree ($M = 3.67$, $SD = .78$, $p = .001$). In other words, teachers with the lowest level of teaching experience and educational qualification rated their perceived readiness significantly lower than teachers from the other groups.

6. Discussion

Goal #1 was to investigate Hong Kong kindergarten teachers' prior music and movement educational experiences, as well as their perceived usefulness of such experiences. Regarding participation in extracurricular activities, we found that only around half of our participants had learned how to play a musical instrument, sing, and/or dance for at least two years, and that teachers with lower educational qualifications were less likely to have had such prior experiences. This finding is consistent with trends identified in Western countries, such as Australia (Barrett, Flynn, et al., 2019) and

Greece (Koutsoupidou, 2010). Around a third of the sample had formal qualifications in musical instruments, singing and/or dance (e.g., ABRSM Grade 5 Piano, Royal Academy of Dance Grade 5), but only about a quarter engaged in these activities during their personal time. There is compelling evidence that teachers' active engagement in music and movement leads to positive beliefs about the educational value of this learning area and influences teachers' ideologies positively (Young, 2018), which in turn contributes to enhancing their sense of efficacy and pedagogical competencies (Burak, 2019). For these reasons, we argue it would be highly beneficial to provide Hong Kong kindergarten teachers with opportunities to participate in music-making and movement/dance activities, for both their own enjoyment and their professional growth. Such opportunities could be provided during protected time for school-based PD (Bautista et al., 2017).

Regarding pre-service training, we found that 40% of our sample was provided no music and movement courses, and that newer generations of kindergarten teachers had received less training than older generations. Participants who had received pre-service courses expressed that their usefulness was moderate, on average. Interestingly, usefulness scores were particularly low among Beginning Teachers. This suggests that colleges and universities should urgently revisit (and eventually modify) the curriculum design for these courses, to enhance their quality and practical applicability (Ekici & Bilen, 2010). Our findings reflect the limited and decreasing importance attributed to music and movement in contemporary teacher education programs (Fernández-Jiménez & Jorquera-Jaramillo, 2017), which is alarming because both research and official curriculum frameworks consider this learning area to be central to children's holistic development (e.g., BOE, Real Decreto 1630, 2006; CDC, 2017; NYSED, 2019). Similar trends in pre-service education have been reported in countries such as United States (Rajan, 2017) and Australia (Suthers, 2008), where the provision of music and movement courses is also clearly insufficient. A large-scale survey study conducted in Spain identified similar trends for Primary school teachers (Cremades & García, 2017), which reveals the widespread training shortage at various educational levels.

We found that only around one-third of our sample had participated in music and movement PD, and that provision of PD was particularly low among Beginning Teachers—precisely the ones who need it the most. These results mirror the landscape depicted in Hong Kong more than a decade ago by Chan and Leong (2007), showing that the provision of music and movement PD for kindergarten teachers has sadly not improved, just like in Western countries (Lenzo, 2014; Yim & Ebbeck, 2011). The lack of specialized PD is concerning, as music and movement is a learning area in which ECE teachers demand the highest level of support (Bautista et al., 2016). It is worth noting that our participants rated the usefulness of music and movement PD considerably higher than that of pre-service courses. Indeed, teachers who had participated in PD considered it to be very useful, on average. However, usefulness scores were significantly lower among more inexperienced teachers. Consistent with our theoretical framework of responsive PD in music education (Bautista et al., 2019), this result reveals the need to tailor in-service training initiatives to the specific needs, motivations, and interests of teachers with different profiles, with particular attention to Beginning Teachers.

Most teachers surveyed in our study had received no music and movement training whatsoever. In their case, training provision was null. Those who had received pre-service and/or in-service education in this area (around 30% of the sample) rated their level of preparation as somewhat insufficient. Thus, we argue that to enable Hong Kong kindergarten teachers to enact the official curriculum guidelines (CDC, 2017), it is imperative to provide them with more and better educational opportunities, be it extracurricular activities, pre-service courses, and/or in-service PD. Similar calls for more and better music and movement education for ECE teachers have been recently made in numerous Western countries, for example New Zealand (Anderson, 2005), Australia (Barrett, Zhukov, et al., 2019), United States (Lenzo, 2014), United Kingdom (Young, 2018), Turkey (Ekici & Bilen, 2010), and Spain (Cremades, 2017).

Goal #2 was to examine teachers' perceived confidence and readiness to teach music and movement to children. We found that participants' average level of confidence was medium, which clearly differs from findings in Western countries. As cited in the *Literature review*, Greek generalist kindergarten teachers' lack of practical experiences in observing actual lessons led to low levels of confidence and self-efficacy in music teaching (Koutsoupidou, 2010), while Australian ECE teachers' limited preparation made them feel unable to even value the benefits of music and movement in children's development and learning (Barrett, Flynn, et al., 2019). In contrast, Hong Kong teachers seem to show themselves as relatively confident and ready in music and movement, despite their lack of preparation, which may reflect cultural values and expectations, particularly the need to "save face" in Chinese societies (Gopinathan & Lee, 2018). This aligns with another Hong Kong-based study conducted by Ebbeck et al. (2008), where in-service ECE teachers showed high confidence in teaching music to young children, except for improvising and composing activities, areas in which they felt rather insecure. Nonetheless, we found that the lower the amount of teaching experience, the lower teachers' confidence level was in teaching music and movement to children. Similarly, while participants declared feeling relatively able to design and implement a variety of music and movement activities, we found that the lower their teaching experience and their level of education, the lower their self-perceived readiness in this learning area.

6.1. Conclusion

This study shows that many Hong Kong kindergarten teachers have had no prior music and movement education, whereas others have engaged in pre-service courses and/or in-service PD initiatives of moderate to considerable self-perceived usefulness. Despite their limited preparation, teachers feel relatively confident and ready to teach music

and movement to young children. However, statistical analyses have shown that teachers with lower experience and/or educational qualifications tend to feel more ill-prepared, critical with the usefulness of their prior training (if applicable), and insecure about their competencies to design and implement music and movement activities in kindergartens. In sum, given the high level of importance placed by Hong Kong's kindergarten curriculum framework on 'Arts and Creativity' (CDC, 2017), the study reveals the urgent need to strengthen teachers' preparation, confidence, and readiness regarding music and movement, especially among beginning educators.

6.2. Limitations and future research

Several limitations need to be considered. First, findings are based on a single data source, namely an online survey composed of closed-ended questions. This tool allowed us to recruit many participants, approximately 7% of the Hong Kong kindergarten teacher population (Education Bureau, 2019), providing our study breadth of respondents, rather than depth of responses. Therefore, it would be desirable to conduct further investigations based on complementary data sources (e.g., focus group discussions, classroom observations). Second, while the overall proportions of the various groups for teaching experience and educational qualifications adequately reflected Hong Kong's kindergarten teacher population, the subgroup of Beginning Teachers qualified with Higher Diploma or Lower was slightly under-represented in our sample (Education Bureau, 2019). This might be due to a variety of reasons (e.g., some school principals might not have forwarded the survey to Beginning Teachers; these participants may have decided not to participate in the research, given its optional nature; lack of time due to other commitments). Future studies should overcome this limitation. Finally, this study focuses exclusively on one Asian jurisdiction: Hong Kong. Similar studies should be conducted to investigate whether trends reported herein are generalizable to other Eastern regions.

6.3. Significance and implications

We consider this study to be significant for several reasons. At the international level, our findings may raise awareness about the importance of offering kindergarten teachers with much-needed support in music and movement (Fernández-Jiménez & Jorquera-Jaramillo, 2017). Indeed, policymakers and school administrators around the world should strengthen their training infrastructures, by ensuring that all ECE teachers (a) take compulsory music and movement pre-service courses, (b) participate in subsidized formal PD and receive official recognition for their participation, and (c) have protected times in their kindergartens to participate in informal PD (Darling-Hammond et al., 2017).

At the local level, the study offers insights that may contribute to further improve the responsiveness of Hong Kong's existing music and movement training initiatives, as well as the design of new ones, intended to enhance teachers' confidence and pedagogical quality in this area (Chan & Leong, 2007; Cheung, 2017; Lau & Grieshaber, 2018). Teacher educators and PD providers should also enhance the responsiveness of the music and movement educational experiences, materials, and/or resources offered to ECE teachers. More specifically, research suggests that building teachers' preparation, confidence and sense of readiness in music and movement requires activities that involve opportunities for skill practice (e.g., singing, playing, improvisation, composition, dance), lesson observation (both live and video-mediated), curriculum design and implementation, and collaborative working dynamics to exchange ideas and gain inspiration from different specialists (e.g., other fellow teachers, pedagogues, musicians, artists, curriculum designers) (Barrett, Zhukov, et al., 2019; Barry & Durham, 2017; Lenzo, 2014; Rajan, 2017; Shin, 2018). We believe these strategies would better equip ECE practitioners to maximize the impact of music and movement in young children's learning and development (Campbell & Scott-Kassner, 2019; Cremades, 2017).

7. References

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