

## **Factors Related to Musical Dictation Teaching Habits to School-Aged Children Among Independent Music Teachers**

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### **Abstract**

*Many school-aged children learn music in studio settings, and those lessons often include musical dictation. Nevertheless, we conducted most research about dictation w among college-level students. Therefore, we do not know how independent music teachers experience dictation with children. In this paper, we addressed four questions: (1) What are the sociodemographics of teachers who include dictation to their lessons? (2) Why do some teachers choose not to include musical dictation? (3) How often do teachers use strategies when teaching dictation? (4) Are there factors related to the use of those strategies? To get a portrait of the situation, we sent an online questionnaire to studio teachers working with children between 6 and 12 in the Province of Quebec, Canada. We asked them about their instrumental and aural skills teaching habits and their sociodemographic characteristics. Results show that dictation teaching is more common among piano teachers, more experienced teachers, and teachers affiliated with an examination board. We also discovered that the main reason to omit dictation is lack of time. Finally, we found that some strategies are more common among specific categories of teachers. In conclusion, we suggest studio teaching tradition could have a role to play in teachers' decisions.*

**Keywords:** Aural skills, strategies, children, musical dictation, independent music teachers.

## Introduction

Aural skills (AS) classes are part of the curriculum for many music learners at all levels of formal training (Chen, 2015). The classes usually include sight-singing (e.g., Fournier et al., 2019) and musical dictation (e.g., Buonviri, 2017). However, AS learning is challenging for many learners, at least for college-level students (Buonviri, 2015b). Indeed, when they begin college studies in music, many students have problems with music reading in general, which can become an obstacle to success in AS classes (Asmus, 2004). Consequently, since AS classes are mandatory in all postsecondary-level music programs across North America, we must find how to address this issue. One of the solutions to facilitate AS learning at this level is to give comprehensive pre-college instruction to young learners during their first years of music lessons (Powell, 2013). This solution is particularly relevant because AS is part of many young learners' instrumental and voice lessons. In fact, according to a survey of 1468 independent music teachers, the majority of them include some sort of ear training to their lessons (Upitis et al., 2016).

Moreover, AS can benefit music learners, for example, AS interventions could lead to instrumental sight-reading improvement (Mishra, 2014), musical dictation (MD) performance is correlated to sight-singing performance but also, while to a lesser extent, to instrumental and composition performance (Rogers, 2013). Despite its importance, research about AS teaching and learning to children is scarce, especially regarding musical dictation. Consequently, before we study MD with children, we must gain knowledge about adults doing MD, which will be the focus of the following section.

### ***Research on strategies used in musical dictations***

To gain a deeper understanding of AS development, some researchers have focused on strategies used by adult musicians (e.g., undergraduate and professional musicians) taking MD. In this section, we decided to include recent work as well as old studies, first to be able to build a complete list of MD strategies teachers can use, and second because recent research about MD pedagogy is scarce. Nevertheless, we acknowledge that the field's methods evolved considerably in the past decades, and this should be taken into consideration when reporting results.

According to Moreno and Brauer (2007), we can divide MD strategies into two main categories: primary (non-tonal), and secondary (tonal). We based primary strategies on the identification of fundamental characteristics of music, such as contour or intervals. Secondary strategies are more complex and imply an understanding of tonal relations; they use, for example, references to mode (major or minor), tonality, scale degrees, or underlying harmony. We will use this classification to describe past work about MD strategies.

In agreement with the results above, the few studies focusing on melodic dictation tasks have underlined the usefulness of tonal strategies. For example, using scale-degrees, which consists of using the note's function in the scale (either numbers or mobile-*do*) rather than its absolute pitch, seems to lead to good results. In a study exploring musical dictation strategies used by undergraduate students successful at MD, Buonviri (2014) noted that participants used scale degrees when solving musical dictations. Beckett (1997), Hoppe (1991), and Potter (1990) obtained similar results. Another tonal strategy found in the literature is to make frequent reference to theoretical notions; this strategy could also lead to better MD results (Buonviri, 2014; Cruz de Menezes, 2010).

Some researchers (Pembrook, 1986, 1987; Potter, 1990; Powell, 2013) studied strategies that we would not categorize as tonal or non-tonal. They instead described processes that students can apply to take musical dictation more efficiently. In this article, these kinds of strategies will be called procedural strategies. Some authors used this term in other disciplines in education, such as writing (Torrance, Fidalgo, & Robledo, 2015) and mathematics (Chrysostomou, et al., 2013). Pembrook (1986, 1987) tested if students who sang a dictation before writing could perform better. He concluded that this process had no effect on the memorization of the melody and, therefore, did not improve results. Buonviri (2019) drew a similar conclusion: in his study with undergraduate music students, participants who sang did not obtain better results.

Another strategy that we could consider as procedural is advising students not to write anything during the first hearing of a dictation. Nevertheless, according to Potter (1990) and Powell (2013), leaving the pencil on the table during the first hearing of a melody is not a strategy used by those who obtain good MD results. A similar conclusion was reached by Pembrook (1986), who observed that students who waited before taking a dictation did not perform better than their peers who started to write during the first hearing of the dictation. However, a more recent study using a similar design also suggests that neither waiting before writing or writing while the teacher plays influences dictation results, even when students use their favorite strategy between the two (Buonviri, 2017).

Other procedural strategies found in the literature are related to the order of the elements notated during the dictation. For example, some successful students observed by Buonviri (2014) preferred to write the rhythm first, while others chose to write the melody first. Beckett (1997) compared both approaches with students taking two-part melodic dictations. She observed that

writing the rhythm first led to better rhythm accuracy but did not lead to better pitch accuracy. Finally, Hoppe (1991) observed that those who wrote the rhythm above the staff had fewer good results than those who did not. Therefore, as stated previously, the participants who wrote scale-degrees above those rhythms obtained better results.

In addition to research about strategies' efficacy, some studies explored teachers' use of strategies. For this purpose, Paney and Buonviri (2014) conducted twelve interviews with Advanced Placement Music Theory (APMT) teachers. They generally disagreed with using songs to identify intervals. Such an approach does not consider the musical context, unlike tonal strategies like the use of scale-degrees or solfège syllables. Teachers also recommended using written theory knowledge to solve dictation tasks, as it allows students to "make sense of dictation melodies" (p. 401). Buonviri and Paney (2015) then studied the strategies used by APMT instructors to teach melodic dictation through a survey taken by 398 participants. Concerning tonal strategies, 56% of respondents said they suggested paying attention to the underlying harmony. Also, 49% reported suggesting their students write *sofège* syllables (mobile-*do*) or scale-degrees. They also mentioned some procedural strategies, such as paying attention to rhythm first (46%), paying attention to the pitches first (14%), listening before writing (58%), or writing while listening (42%). Finally, Buonviri (2015a) studied the effects of providing a preparatory singing pattern, and Paney (2016) studied the impact of directing the students' attention during a dictation. These two approaches did not seem to lead to better results. So far, these studies are the only insights regarding how practitioners teach MD to pre-college learners, and we did not find any studies regarding younger learners.

### *Opinions of practitioners regarding musical dictation (MD) strategies*

To complete our list of strategies teachers can use, we decided to explore professional literature, such as manuals, textbooks, and practice-oriented papers. We found many non-tonal strategies, such as using songs to identify intervals (Schlosar, 1993), linking emotions to chords (Zarco and Rouse, 2014), visualizing the notes on a staff (Benward, 1988; Schlosar, 1993) or a keyboard (Schlosar, 1993), or developing an inner tuning fork (Abramson and Reiser, 1994; Menut and Chépélov, 1993). Among all books quoted here, only the ones by Zarco and Rouse (2014), Menut and Chépélov's book are aimed at children.

Books from Abramson and Reiser (1994) and Karpinski (1990) both include arguments in favor of chunking, which consists of creating units of information to remember more elements. For example, during a dictation, it is possible to remember groups of notes as one element (e.g., a chord or a scale). Therefore, grouping parts of the melody into chunks would logically allow students to retain more notes. Because the use of this strategy requires a deep understanding of musical structures, we can consider that it fits the previously stated definition by Moreno Sala and Brauer (2007) of a tonal strategy.

Finally, procedural strategies were common in the surveyed literature. Examples include memorizing the whole dictation before writing it down (Benward, 1988), noting the rhythm before the melody (Benward, 1988), not writing anything during the first hearing (Benward, 1988; Karpinski, 1990), clapping or naming the rhythm to be transcribed (Benward, 1988; Karpinski, 1990), and singing the melody (Schlosar, 1993).

### *Purpose of the study*

In Quebec, as in many Western countries, instrumental music is largely taught in one-on-one studios in one-on-one settings. However, musical dictation teaching in this context is mostly undocumented. For that reason, we first needed to know what distinguishes teachers who include musical dictation to their lessons. Also, while some studies documented the strategies used in high school to teach melodic dictation (Buonviri & Paney, 2015; Paney & Buonviri, 2014), we do not have a similar insight for independent music teachers working with younger learners. Indeed, we do not know whether instrumental music teachers who include musical dictation in their lessons use strategies to facilitate musical dictation, which ones they use, and how often. Finally, we wanted to know if some factors (age, experience, instruments taught, affiliation to an examination board) were related to how often teachers used specific strategies. Therefore, this paper aims to document musical dictation teaching in answering the following research questions:

1. What are the sociodemographic characteristics of the respondents who declared teaching dictation? We hypothesized that respondents affiliated with an exam board would have a greater tendency to teach dictation. We also thought that as older teachers might be more represented among those boards, they would also tend to teach dictation more than younger teachers.
2. Why do some participants choose not to teach dictation? We expected that a lack of time would be the main reason not to teach dictation.
3. How often teachers use strategies while teaching dictation? We thought that when they worked with children, teachers would prioritize strategies that do not require an extensive

music theory background (e.g., clapping the rhythms to transcribe, visualizing the notes on an instrument, not writing anything at the first hearing of a dictation)

4. Is the frequency of use of strategies linked to some of their sociodemographic characteristics? We thought that teachers affiliated to an examination board would have a greater tendency to teach more complex strategies (using a scale-degree approach, chunking, being aware of the harmony underlying the melody), precisely because of the higher expectations that their students face.

## **Method**

### ***Data collection***

An online questionnaire – written in French – was created with LimeSurvey to collect information about teachers' habits. We piloted it with three teachers from different musical backgrounds (classical, pop, and jazz) to ensure questions' clarity. We sent it to 871 independent music teachers working in the Province of Quebec, Canada, whose contacts appeared on the database provided by the authors' university. This database included former students and participants in music education events. We also shared it through social media and sent a reminder two weeks later. One hundred fifty-nine teachers completed the questionnaire. We excluded 18 participants because they did not meet all of the inclusion criteria (teaching individually in Quebec to students between 6 and 12) or skipped the questions that could have allowed us to check if they met the criteria. The survey included questions about teachers' frequency of use of several melodic dictation strategies found in the scientific and professional literature. We showed some questions (for example, about musical dictation) only to participants who declared teaching aural skills. Because of that, the sample size may vary across questions. In

this article, the frequency of use of strategies means the strategies suggested by teachers to their students. The authors' university Ethics Committee approved the project.

### ***Sample description***

Among the 141 participants whose data were analyzed, the youngest was 15, and the oldest was 77 (mean = 40.33; median = 37, SD=14.40). The less experienced respondent had been teaching in a studio setting for one year, and the most experienced had been teaching in that setting for 55 years (mean= 18; median= 15, SD=12.55). Most people in our sample had postsecondary diplomas. 42.55% had a baccalaureate, and 42.55% had a master's degree. Furthermore, 1.42% has a high school diploma, 2.84% has another kind of diploma, and 1.42% chose not to disclose this information. Regarding instruments, 75.18% taught piano, and 17.73% taught a bowed string instrument. Finally, 56.74% declared an affiliation to an examination board.

### ***Analysis***

We analyzed data with *RStudio* (R Core Team, 2019), using the packages *car* (Fox & Weisberg, 2019) and *lsr* (Navarro, 2015). For the fourth research question, we treated Likert-type scales as continuous data. While this is a controversial topic, many authors suggest we can transform ordinal answers in numbers without risking invalid results (e.g., Harpe, 2015; Norman, 2010). For this exploratory study, we decided to follow that direction but interpreted the results with appropriate caution.

## Results

### *Sociodemographic characteristics of the respondents who declared teaching dictation*

Most of our participants (119) include aural skills to their lessons, and among those, 71 teach dictation. The youngest of that part of the sample is 20, and the oldest is 77 (mean= 42.56; median= 38.00, SD=14.29). The less experienced had been teaching in a studio setting for two years, and the most experienced had been teaching in that setting for 55 years (mean= 21.25; median= 19.00, SD=13.06). As for all our respondents, most of the teachers who include dictation have had access to higher education: 42.35% possess a baccalaureate, and 46.48% have a masters' degree. 8.45% have a two-year college degree (called *Cégep*, in Quebec), 1.41% has another kind of degree, and 1.41% chose not to disclose this information. Regarding instruments, 90.14% taught piano, and 8.45% taught a bowed string instrument. Finally, 70.06% declared an affiliation to an examination board.

We then compared teachers who include dictation to teachers who exclude dictation. First, a *T*-Test showed no significant difference for age between participants who teach dictation (mean=42.56) and others (mean=38.00), although it was close to significance ( $t(117)=-1.7386$ ,  $p=.08$ ). However, there was a significant difference in the number of years of studio teaching experience between participants teaching dictation (mean=21.25) and others (mean=15.77) ( $t(117)=-2.3832$ ,  $p=.02$ , *Cohen's D*=.4453).

Chi-square tests showed that piano teachers are more likely to teach dictation ( $X^2=15.139$ ,  $df=1$ ,  $p=.001$ ,  $V=.3597$ ), but that string teachers are less likely to do so ( $X^2=6.1944$ ,  $df=1$ ,  $p=.01$ ,  $V=.2301$ ). We also found that teachers affiliated to an examination board were more likely to teach dictation ( $X^2=28.672$ ,  $df=1$ ,  $p=.001$ ). However, nor piano teachers ( $X^2=1.8553$ ,  $df=1$ ,  $p=.1732$ ) nor string teachers ( $X^2=0.3284$ ,  $df=1$ ,  $p=.5666$ ) were more prone to report an affiliation

to an examination board. We finally used Fisher's Exact Test to see if the last degree obtained was related to dictation teaching but found no significant difference ( $p=.51$ ).

Furthermore, among the whole sample, it should be noted that unsurprisingly, age, and number of years of studio experience were highly correlated ( $r=.7465, p < .001$ ). Also, older respondents showed a greater tendency to report an affiliation with an examination board ( $t(126)=-2.9134, p=.004, \text{Cohen's } D=.5319$ ).

### ***Reasons not to teach dictation***

We asked participants who rarely or never taught dictation why it was the case. They could provide more than one answer. Table 1 displays the reasons not to teach dictation.

**Table 1**

*Reasons Why Studio Teachers Rarely or Never Include Dictation to Their Lessons*

Answers	Lesson length	Students' goals	Students' level	Students' negative attitude	Students' age	Parents' negative attitude	Other
<b>Freq.</b>	49	34	26	26	20	8	8
<b>% of answers</b>	41.18	28.57	21.85	21.85	16.81	6.72	6.72

Respondents who chose "Other" could develop their answers. Here are a few examples [translated from French by authors]:

"Some students do not come to group classes."

"Students do not take exams."

"Some students cannot (mental illness)."

"Some students are musically more limited."

### *Strategies used to teach dictation*

We asked participants how often they used specific strategies. We created a list of strategies gathered from scientific and professional literature and used it in the questionnaire.

Table 2 shows the distribution of answers.

**Table 2**

*Frequency of Use of Musical Dictation Strategies with Children by Independent Music Teachers*

Strategies	Frequency of use (%)					
	1. Never	2. Sometimes	3. Often	4. Very Often	5. Always	Missing
Writing the harmony underlying the melody	60.56 (43)	14.08 (10)	2.82 (2)	4.23 (3)	0.00 (0)	18.31 (13)
Memorizing the whole dictation before writing it	52.11 (37)	22.54 (16)	12.68 (9)	4.23 (3)	1.41 (1)	7.04 (5)
Being aware of the harmony underlying the melody	49.30 (35)	19.72 (14)	4.23 (3)	4.23 (3)	0.00 (0)	22.54 (16)
Not writing anything at the first hearing of a dictation	43.66 (31)	18.31 (13)	12.68 (9)	9.86 (7)	8.45 (6)	7.04 (5)
Liking songs to chords	36.62 (26)	23.94 (17)	11.27 (8)	11.27 (5)	2.82 (2)	18.31 (13)
Writing rhythm first, then melody	30.99 (22)	19.72 (14)	19.72 (14)	12.68 (9)	7.04 (5)	9.86 (7)
Developing an inner tuning fork	29.58 (21)	23.94 (17)	21.13 (15)	12.68 (9)	8.45 (6)	4.23 (3)
Visualizing the notes on an instrument	26.76 (19)	33.80 (24)	19.72 (14)	7.04 (5)	8.45 (6)	4.23 (3)
Visualizing the notes on the staff	26.76 (19)	22.54 (16)	18.31 (13)	15.49 (11)	9.86 (7)	7.04 (5)
Using a scale-degree approach	21.13 (15)	22.54 (16)	4.23 (3)	11.27 (8)	11.27 (8)	29.58 (21)
Writing melody and rhythm simultaneously	15.49 (11)	32.39 (23)	23.94 (17)	12.68 (9)	11.27 (8)	4.23 (3)
Linking songs to intervals	15.49 (11)	23.94 (17)	22.54 (16)	16.90 (12)	16.90 (12)	4.23 (3)
Writing melody first, then rhythm	15.49 (11)	25.35 (18)	12.68 (9)	14.08 (10)	25.35 (18)	7.04 (5)
Chunking	12.68 (9)	22.54 (16)	14.08 (10)	21.13(15)	15.49 (11)	14.08 (10)
Filling the intervals	9.86 (7)	18.31 (13)	25.35 (18)	29.58 (21)	15.49 (11)	1.41 (1)
Making constant relationships to theoretical notions	2.82 (2)	16.90 (12)	30.99 (22)	28.17(20)	19.72 (14)	1.41 (1)
Using emotions to identify chords	2.82 (2)	15.49 (11)	25.35 (18)	33.80 (24)	19.72 (14)	2.82 (2)
Singing the melody to transcribe	1.41 (1)	11.27 (8)	22.54 (16)	26.76 (19)	36.62 (26)	1.41 (1)
Clapping/naming the rhythm to transcribe	1.41 (1)	7.04 (5)	19.72 (14)	35.21 (25)	35.21 (25)	1.41 (1)

*Note.* Numbers in parentheses show how many participants chose the answer. Shaded cells display the most frequent answer for each strategy. Strategies are presented in order of prevalence, while ordering according to the number of participants who answered “Never”.

### *Relationships between sociodemographic characteristics and frequency of use of strategies*

We tested for links between sociodemographic characteristics and the frequency of use of strategies while converting answers in numbers from 1 to 5. We chose non-parametric tests over parametric tests: Kendall correlations for continuous variables because they were not distributed normally, and Wilcoxon Mann-Whitney tests for categorical variables because residuals were not distributed normally.

There was a positive relationship between respondents' age and the tendency to advise students to use a scale-degree approach ( $r_{\tau}=.2387, p=.0278$ ) and to write rhythm and melody simultaneously ( $r_{\tau}=.3129, p=.0007$ ). We observed a similar relationship with the number of years of experience (scale-degree approach:  $r_{\tau}=.2276, p=.0354$ ; write melody and rhythm simultaneously:  $r_{\tau}=.2786, p=.0025$ ). There was also a relationship between experience and the tendency to advise against writing while listening to the dictation for the first time ( $r_{\tau}=.2239, p=.0182$ ). Correlations between age, number of years of experience, and strategies are presented in Table 3.

**Table 3**

*Correlations (Kendall's Tau) Between Age, Experience, and Frequency of use of Strategies*

Strategies	M	SD	Age		Experience (years)	
			$r_{\tau}$	$p$	$r_{\tau}$	$p$
Writing the harmony underlying the melody	1.40	1.00	-.0151	.8881	-.0734	.4928
Memorizing the whole dictation before writing it	1.71	1.00	.1724	.0770	.1634	.0938
Being aware of the harmony underlying the melody	1.54	1.00	-.0126	.9078	.0054	.9604
Not writing anything at the first hearing of a dictation	2.15	2.00	.1825	.0543	.2239	.0182*
Liking songs to chords	1.97	2.00	-.1058	.3018	-.1240	.2280
Writing rhythm first, then melody	2.39	2.00	.0950	.3185	-.0006	.9952
Developing an inner tuning fork	2.44	2.00	.0393	.6695	-.0227	.8055
Visualizing the notes on an instrument	2.34	2.00	.0261	.7782	-.0400	.6666
Visualizing the notes on the staff	2.56	2.00	.0860	.3559	-.0005	.9955
Using a scale-degree approach	2.56	2.00	.2387	.0278*	.2276	.0354*
Writing melody and rhythm simultaneously	2.71	2.50	.3129	.0007***	.2786	.0025*
Linking songs to intervals	2.96	3.00	.1283	.1598	.1081	.2366
Writing melody first, then rhythm	3.09	3.00	.0817	.3803	.1130	.2249
Chunking	3.05	2.00	.0661	.4940	.0265	.7834
Filling the intervals	3.23	3.00	.0563	.5337	.0294	.7457
Making constant relationships to theoretical notions	3.46	3.00	-.0048	0.958	.0140	.8786
Using emotions to identify chords	3.54	4.00	-.1446	.1166	-.1428	.1216
Singing the melody to transcribe	3.87	4.00	.0162	.8608	.0564	.5410
Clapping/naming the rhythm to transcribe	3.97	4.00	.0169	.8554	.0090	.9231

Note. M=Mean; SD=Standard Deviation; \*:  $p \leq 0.05$ ; \*\*:  $p \leq 0.01$ ; \*\*\*:  $p \leq 0.001$

Piano teachers were more likely to tell their students to write melody and rhythm simultaneously ( $W=273.0, p=.0038, r=.345$ ) and to fill the intervals mentally ( $W=315.0, p=.006, r=.328$ ). They were less likely to tell them to develop an inner tuning fork ( $W=74.5, p=.0491, r=-$

.235). On the other hand, string teachers were more likely to recommend the development on an inner tuning fork ( $W=251.0, p=.0188, r=.28$ ), but less likely to tell students to link songs to intervals ( $W=94.0, p=.047, r=-.237$ ), and to fill the intervals mentally ( $W=97.0, p=.045, r=-.24$ ). Also, teachers affiliated to an examination board were less likely to advise against writing while listening to a dictation for the first time ( $W=163.0, p=.0484, r=-.235$ ). Table 4 shows detailed results.

**Table 4**

*Relationships between Instruments Taught, Affiliation to an Examination Board, and Strategies*

Strategies	Piano					Strings					Examination board				
	Mdn Y	Mdn N	W	p	r	Mdn Y	Mdn N	W	p	r	Mdn Y	Mdn N	W	p	r
Writing the harmony underlying the melody	1	1	58.5	.3079		1	1	103.5	.3079		1	1	164.0	.2504	
Memorizing the whole dictation before writing it	1	1	148.0	.4366		1	1	138.0	.7517		1	1	216.0	.3958	
Being aware of the harmony underlying the melody	1	1	71.0	.7799		1	1	85.0	.7799		1	1	142.0	.3257	
Not writing anything at the first hearing of a dictation	2	2	183.5	.3867		1	2	160.5	.6992		2	2	163.0	.0484*	-.235
Liking songs to chords	2	2	44.0	.6285		2	2	23.0	.7714		2	2	182.0	.5675	
Writing rhythm first, then melody	2	2	117.0	.9884		2	2	155.5	.7925		2	2	238.5	.5004	
Developing an inner tuning fork	2	2	74.5	.0491*	-.235	2	2	251.0	.0188*	.28	2	2	243.5	.7518	
Visualizing the notes on an instrument	2	2	154.0	.5152		2	2	204.5	.6315		2	2	322.0	.2189	
Visualizing the notes on the staff	2	2	116.5	.4046		2	2	213.0	.4091		2	2	247.0	.7178	
Using a scale-degree approach	2	2	143.5	.2592		2	2	106.5	.9183		2	2	141.5	.4821	
Writing melody and rhythm simultaneously	2.5	2.5	273.0	0.0038*	.345	2.5	2.5	129.5	.2294		2.5	2.5	225.5	.4499	
Linking songs to intervals	3	3	256.0	.1037		3	3	94.0	.0470*	-.237	3	3	204.5	.8134	
Writing melody first, then rhythm	3	3	92.0	.4080		3	3	147.5	.9597		3	3	206.0	.5660	
Chunking	3	3	109.5	.4511		3	3	215.5	.1809		3	3	164.5	.2219	
Filling the intervals	3	3	315.0	.0060**	.328	3	3	97.0	.0450*	-.24	3	3	220.0	.3457	
Making constant relationships to theoretical notions	3	3	230.0	.372		3	3	111.0	.0876		3	3	270.5	1.000	
Using emotions to identify chords	4	4	180.5	.5831		4	4	79.5	.0587		4	4	315.0	.1444	
Singing the melody to transcribe	4	4	152.0	.4171		4	4	174.6	.7556		4	4	326.0	.2837	
Clapping/naming the rhythm to transcribe	4	4	179.5	.8401		4	4	164.0	.5827		4	4	314.0	.3965	

Note. Mdn=Median, Y=Yes, N=No, W=Wilcoxon-Mann-Whitney statistic, r=Effect size; \*:  $p \leq 0.05$ ; \*\*:  $p \leq 0.01$ ; \*\*\*:  $p \leq 0.001$

## Discussion

Our first hypotheses were partially confirmed. Results confirm our assumption that there were sociodemographic factors at play regarding dictation teaching. Indeed, age was not related to dictation teaching, but the number of years of studio teaching experience was. However,

teachers affiliated to an examination board showed a greater tendency to teach dictation, and older teachers were more prone to be affiliated to an examination board. Moreover, instruments taught seem to matter, as piano teachers are more likely to teach dictation, and string teachers are less likely to do so. Interestingly, this is not because piano teachers are more represented among participants who declared an affiliation to an examination board. The dictation teaching tradition among piano teachers might, therefore, be independent of formal examination requirements.

Regarding our second hypothesis, as expected, lack of time (more precisely, lessons' duration) was a common reason our participants gave to justify not teaching dictation. However, participants often quoted students' goals (28.57%) as the reason they did not teach dictation, although we did not expect that factor to be so prevalent. We also learned that some teachers believe that students' level and capacities are limiting factors. Indeed, there seems to be a conception of what dictation teaching should look like, and what kind of students should pursue it: older, more ambitious, more motivated, and more naturally talented. Nevertheless, it also means that other learners might be left behind and not take advantage of the benefits AS can bring to their musical abilities (Mishra, 2014; Rogers, 2013).

Our hypothesis regarding the most used strategies was confirmed. The three most widespread strategies did not require any theoretical knowledge ("Clapping/naming the rhythm to transcribe," "Singing the melody to transcribe," and "Using emotions to identify chords"). On the contrary, our respondents rarely taught two strategies requiring more in-depth music theory knowledge ("Writing the harmony underlying the melody," and "Being aware of the harmony underlying the melody"). Besides, many participants did not disclose their teaching habits for those strategies. Furthermore, many answers were missing for other strategies requiring theoretical knowledge, especially for "Using a scale-degree approach" (29.58% did not answer,

which makes it the most common response), and "Chunking" (14.08% did not answer). Although we provided examples and explanations, this was probably not sufficient for teachers who were not familiar with these approaches.

Furthermore, strategies based on harmony ("Linking songs to chords," "Writing the harmony underlying the melody," and "Being aware of the harmony underlying the melody") were the least used by the teachers in our sample. Some research has stated that preschool children are not sensitive to harmony (Moog, 1976), and that harmonic perception improves after nine years old (Sloboda, 1986). However, five-year-olds can identify chord changes in simple progressions (Costa-Giomi, 1994) and can make major-minor distinctions (Costa-Giomi, 1996). The belief that children could not perceive harmony may have influenced programs and methods aimed at young learners, and thus impact the choices made by teachers.

It is also noteworthy that the strategies reported by teachers in our sample differ from those mentioned by Advanced Placement Music Theory teachers in the studies mentioned previously (Buonviri & Paney, 2015; Paney & Buonviri, 2014). It could be caused by the participants' students' age, but also by linguistic differences. Indeed, *mobile-do* is widespread among English speakers, but French-speaking musicians usually use *solfège* syllables to designate pitches, instead of using letters. It would be relevant to investigate whether using numbers is more laborious than using *mobile do*.

We inquired our last hypothesis, as teachers affiliated to an examination board did not teach more complex strategies significantly more often. Indeed, the only significant relationship we found was with the frequency of use of "Not writing anything at the first hearing of a dictation," which related to the procedure rather than theoretical knowledge. However, experience could lead some teachers to use more complex strategies, as both age and number of

years of studio experience were linked to the frequency of use of "Using a scale-degree approach." Both independent variables were also related to "Writing melody and rhythm simultaneously," also related to the procedure rather than theoretical knowledge. Finally, instruments taught were related to the use of some strategies, which might suggest there are "cultures" among studio music teachers (as suggested by MacIntyre and Potter [2014], for example). Indeed, piano teachers tended to advise students to "develop an inner tuning fork" less often than other teachers but tended to advise more often to "write melody and rhythm simultaneously," and to "fill the intervals." On the other hand, violin teachers were more prone to suggest students "develop an inner tuning fork," but less prone to suggest they "link songs to intervals" and "fill the intervals." They might also be using other strategies related to interval perception that we did not find in the scientific and professional literature.

### ***Limitations and future research***

The sampling method and the measurement tool limited the study. First, participants who chose to invest time in our survey might have been more interested in our topic, AS teaching, than most studio music teachers. Most teachers in our database had participated in pedagogical activities hosted by a university or pursued post-secondary studies. Consequently, it is possible that a lot of independent teachers, working in different contexts and sharing different points of view, could not be reached. Consequently, we cannot generalize our findings. Future studies should address this issue and first constitute a more representative pool of teachers, for example, in contacting every music school on a given territory.

Retrospectively, we realized a few imperfections in our questionnaire, even if it was previously piloted with three teachers from different musical backgrounds. Some questions were

not precise enough; for example, we asked about what instruments participants taught, without asking, among those, which instrument was their primary specialty. Also, no question was mandatory. We do not know if questions were skipped because of a desire for privacy, misunderstandings, or manipulation mistakes while completing the online survey. In-person interviews could have allowed us a deeper understanding of teachers' experiences, and we should consider it for future research.

We need to interpret the relationships between strategies and sociodemographic variables with caution. Converting the answers about frequency ("Never," "Sometimes," "Often," "Very Often," and "Always") into numbers (1 to 5) allowed us to use more robust analysis than if we treated them as categories (Harpe, 2015; Norman, 2010). However, we are aware that we cannot assume that the distance between answers is equal (Jamieson, 2004). However, we think it helped us gain a look at possible trends that we could explore in future studies. Relationships between performance and strategies used and taught would also be relevant to study, as they could lead to precise recommendations to teachers and examination boards.

Finally, further studies should also measure the impact of aural skills development in the enjoyment of musical activities, either formal or informal. So far, studies looked for relationships between aural skills and other abilities, such as instrumental sight-reading (Mishra, 2014), and between dictation and sight-singing (Rogers, 2013). It would probably be worthwhile to examine if aural skills performance is related to participation in musical activities, notably those requiring ear playing or transcription, and to check if some aural skills activities are more beneficial than others.

## Conclusion

This project aimed to document musical dictation teaching to school-aged children among independent music teachers in Quebec. Despite the study's geographical limitation, we think that the subject was relevant for anyone interested in aural skills teaching in studio settings. So far, most research about aural skills teaching (including dictation) was conducted among college-level learners. Our paper shows that musical dictation teaching is more prevalent among experienced teachers, piano teachers, and teachers affiliated with an examination board. We also learned that lack of time was an obstacle to musical dictation teaching. In some instances, only a specific type of learner (more motivated, more talented) takes musical dictations during their music lessons. Furthermore, teachers know and use a wide variety of strategies with their students, but strategies that do not require much theoretical knowledge are more common. Finally, age, experience, instrument taught, and affiliation to an examination board were linked to how often teachers suggested some strategies to students.

This paper is the first, to our knowledge, to document strategy use for musical dictation among independent music teachers working with children. Gaining knowledge about musical dictation teaching could impact how different kinds of learners can foster their aural skills and enjoy participating in musical activities even more.

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