

The Relationships among Motivation, Learning Styles and English Proficiency in EFL Music Students

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Abstract

This paper reports a study on the relationships among motivation, learning styles and English proficiency in a Chinese context. 308 students who studied English as a foreign language (EFL) were sampled from seven departments in Xinghai Conservatory of Music. Quantitative data were collected through an on-line survey to address three questions: 1) Do music students have a particular learning style preference? 2) What are the relationships among motivation, learning styles and English proficiency? 3) How could EFL teachers better accommodate students' motivation and learning styles to improve their English proficiency? Nonparametric Kruskal-Wallis tests showed that music students varied a lot in their preferences of learning styles, thus problematising the practice of using one learning style to gloss over the preferences of music students. Correlation analyses demonstrated that a) motivation and English proficiency was moderately correlated; b) none of the learning styles was correlated with English proficiency, except that active students performed slightly worse in the final exam; c) students who favoured the visual style were found to be less motivated. In light of these findings, we discuss the methods of grouping students and revamping EFL course content from English for General Purposes to English for Specific Purposes for music students.

Keywords: learning styles, motivation, English proficiency, EFL, ESP

1. Introduction

College English is a mandatory course offered to non-English majors in all tertiary-level institutes in China. The course is meant to prepare students for international communication and enhance their career prospects, given the lingua franca status of English. However, when College English lessons are delivered, both students and teachers struggle along the way. For one thing, students are seated in a large classroom, chatting and fidgeting, paying little attention to teachers. For another thing, teachers are not aware that motivation, English proficiency and learning styles might be at odds with each other. To make matter worse, teachers are constrained by the institutional policies. They have little say in the class size, because different departments in a college vie for limited resources, and English lessons are not prioritised in the agenda.

When students from different majors are put together in a College English class, teachers need to understand how motivation, English proficiency and learning styles are interrelated (or not) in English learning. The literature shows that motivation plays an important role in language acquisition (Dörnyei & Skehan, 2003). If a student is motivated, (s)he is more likely to expend efforts, time and (cognitive) resources on language learning tasks. In face of occasional setbacks, (s)he is able to adjust the learning plan and proactively use the meta-cognitive strategies to cope with the difficulties (Dörnyei & Ushioda, 2011). The relation between learning style and academic achievement, however, is not that clear. Some studies found that students who favoured abstract thinking outperformed those who preferred concrete thinking in the science disciplines (Davies, Rutledge & Davies, 1997), and that reflective students were better in problem solving than active students (Hur & Kim, 2007). Despite this, many more studies disapproved the correlation between learning styles and academic performance (Demirkan & Demirbaş, 2010; Fleming et al., 2011; Gurpınar et al., 2010; Hsieh, Mache,

& Knudson, 2012; Wilkinson, Boohan, & Stevenson, 2014). As for the relation between motivation and learning styles, studies have shown that certain styles were positively correlated with L2 motivation, such as visual style (Al-Shehri, 2009) and auditory style (Kim, 2009), while kinesthetic style was found to be negatively correlated with L2 motivation (Kim & Kim, 2011).

While research on Chinese EFL students' motivation abounds (Gao, Wang, & Zhou, 2014; Xu & Case, 2015), very few studies address the relationships among motivation, proficiency and learning styles in a Chinese context. Wang (2007) described the learning styles of EFL students majoring in science, but did not discuss the relations between learning styles and other learner variables.

The current study examines the interrelation between motivation, English proficiency and learning styles, by focusing on music students. We purposefully sample music students, because their English needs are widely different from those in other areas of specialty (Wakeland, 2013). However, music students are still being taught the English for General Purposes (EGP), not the English for Specific Purposes (ESP) in the Chinese context. Besides, we single out the three factors because music students in China are usually grouped into different College English classes, based on their English proficiency, or motivation or learning styles. We hope this study will shed light on the relationships among these three factors, so as to provide empirical basis for the curriculum and course development for music students, who learn English as a foreign language (EFL).

2. Research Design

2.1 Research Questions

This study attempts to address the following research questions:

- 1) Do students majoring in music have a particular learning style preference?
- 2) What are the relationships among motivation, learning styles and English proficiency?
- 3) Given the institutional and policy constraints, how could EFL teachers better accommodate students' motivation and learning styles to improve their English proficiency?

2.2 Participants

As explained at the end of the Introduction section, we used a purposeful sampling technique to uncover the relationships among motivation, English proficiency and learning styles in music students. We administered the questionnaires to students in Xinghai Conservatory of Music (XCM), the Top 1 music academy in South China. Students involved were from seven departments in the institute, corresponding to seven fields of study. Originally, 332 freshmen students participated in the study, but after eliminating invalid or incomplete responses, a total of 308 students (aged from 17 to 22) were retained for the subsequent analyses. The demographic information of the sampled population was provided in Table 1.

Table 1. Demographic information

Field of study	Participants		Male		Female	
	n	%	n	%	n	%
Dancing	96	31.17%	15	4.87%	81	26.30%
Symphony	37	12.01%	14	4.55%	23	7.47%
Folk vocal	24	7.79%	5	1.62%	19	6.17%
Modern music	41	13.31%	24	7.79%	17	5.52%
Art management	50	16.23%	13	4.22%	37	12.01%
Music education	34	11.04%	5	1.62%	29	9.42%
Composition	26	8.44%	12	3.90%	14	4.55%
Total	308	100%	88	28.57%	220	71.43%

2.3 Research Instruments

This study is mainly quantitative. Students were asked to fill in an on-line survey in class and it took about 10 minutes to finish the survey.

The questionnaire was composed of three parts. The first part was about students' demographic information, and the second part was a 5-item 5-point Likert scale about students' motivation in learning English. In this study, we operationalised motivation as the efforts a student is willing to invest in learning English (Dörnyei & Ushioda, 2011, p. 4). The motivation scale was drafted by the second author and improved by the other two authors. These five items tap into students' motivated behaviors in learning English: reading English materials, doing extra

exercises, memorizing English words, signing up for English courses, and persistence in face of setbacks.

The third part was the Chinese version of Index of Learning Styles (Felder & Soloman, 1999), a 44-item forced-choice survey instrument. Four bipolar dimensions (active-reflective, sensing-intuitive, visual-verbal, and sequential-global) were covered in the instrument, each of which consisted of 11 items with dichotomous response options (Felder & Spurlin, 2005). We decided to use the Index of Learning Styles (ILS), because studies have found that ILS has good construct validity, discriminant validity (Platsidou & Metallidou, 2009), and test-retest reliability (Felder & Spurlin, 2005). In our study, we translated the English version of ILS into Chinese. The second and third author translated separately and three of us discussed the inconsistencies until a consensus was reached.

We used Cronbach's alpha to measure the internal consistency (i.e., the reliability) of a scale. For the motivation scale, the alpha value was 0.84, which means that the reliability is very good (Dörnyei & Taguchi, 2010). For the four dimensions in ILS, the alpha values are presented in Table 2. We compared the alpha values reported in other studies using ISL (in different languages), to contextualize the reliability of the four dimensions. As shown in Table 2, the current study observed a similar pattern: the first three dimensions had a moderate level of reliability (about 0.5), and the sequential-global dimension had a low reliability ($\alpha=0.38$). As explained by Tuckman (1999), Cronbach's alpha of 0.5 or greater is considered acceptable for instruments assessing respondents' attitudes and preferences, so we believe that the first three dimensions are acceptable in terms of internal consistency. As for the sequential-global dimension, the reliability was not good, but our analyses showed that this dimension did not yield any interesting finding, so the low reliability might not be an issue in our study.

Table 2. The reliability of ISL as compared to other studies

Studies	Language	Sample size	A-R	S-I	V-V	S-G
Current study	Chinese	308	0.49	0.54	0.56	0.38
Ku and Shen (2009)	Chinese	2,748	0.48	0.53	0.52	0.41
Platsidou & Metallidou (2009)	English	340	0.45	0.62	0.51	0.45
Litzinger et al. (2005)	English	572	0.60	0.77	0.74	0.56
Hosford & Siders (2010)	English	358	0.76	0.64	0.63	0.62
Samanci & Keskin (2007)	Turkish	381	0.43	0.54	0.59	0.32

Note. A-R: active-reflective; S-I: sensing-intuitive; V-V: visual-verbal; S-G: sequential-global.

English proficiency in this study was operationalised in two scores: the English score in the College Entrance Exam (CEE) and the English Final Exam (FE) score at the end of the first semester. Although it seems a bit redundant to use two scores to measure students' English proficiency, these two scores actually represent the proficiency at two time points: before students went to college and four months after they went to college. We asked for students' consents on our using the scores for research purposes, and then the scores were provided by the admission office in XCM.

3. Data Analysis

To answer our research questions, three rounds of data analysis were conducted. First, we checked the descriptive statistics of the variables in the questionnaire, to have a basic idea of how the data were distributed. Second, as some of the data were not normally distributed, we used the one-way analysis of variance test (Kruskal-Wallis) to find out whether there was a statistically significant difference among the seven majors, and then we performed post-hoc paired comparisons to locate the specific difference. The first and second rounds of the analysis enabled us to sketch out the profile of learning styles of music students, as compared to students in other majors reported in the literature. The analysis also informed us the homogeneity or the heterogeneity of the seven majors, thereby answering the first research question whether a particular learning style is preferred by music students. The final part of our analysis was the correlation analyses among motivation, English proficiency and learning styles, which answers the second research question.

3.1 Descriptive Analysis

The basic information of the seven variables is provided in Table 3. As can be seen, the English proficiency of the students was not satisfactory, with half of the students below average. The motivation level was also average, meaning that students were not driven in learning English. For the learning styles, it seemed that students had a preference for the visual style.

Table 3. Descriptive statistics of seven variables

Variables	n	Mean	Maximum possible	SD	Skewness	Std Error	Kurtosis	Std Error
CEE	285	71.34	150	19.34	-.28	.14	-.33	.29
FE	290	61.22	100	15.15	-.82	.14	.66	.29
Motivation	308	14.11	25	4.45	.07	.14	-.48	.28
Active	308	5.69	11	2.09	-.01	.14	-.11	.29
Sensing	308	6.37	11	2.11	-.29	.14	-.47	.29
Visual	308	8.12	11	2.02	-.43	.14	-.66	.28
Sequence	308	5.77	11	1.87	-.02	.14	-.31	.29

Note. Some of the students did not take the CEE or FE, so the sample size for these two is smaller.

To refine our understanding, we decided to look into the preference within each learning style dimension. Felder and Spurlin (2005) suggested that research on learning style difference should focus on students with moderate or strong preferences. Because of this, we focused on students who scored at least 8 (which indicated moderate preference) in one polar of a dimension. We summed the number of respondents in each polar and present the percentage in the last but one row of Table 4. As can be seen, this cohort of students was fairly balanced in the active-reflective and the sequential-global dimensions, with slightly more students endorsing the active or the sequential style. However, they tended to favour the sensing style over the intuitive style and visual over verbal. We compared our findings with those of Wang (2007), reported at the bottom of Table 4. As displayed, music students seemed to share a similar preference with science students in the active-reflective dimension, but music students tended to be more sensing, visual and sequential than science students. Because Wang's study and our study both focused on Chinese university students, we could rule out the influence of ethnicity and age. Therefore, we might conclude that music students have a stronger tendency to prefer visual, sensing and sequential learning styles than science students. But we suspect that this general description might not represent the true picture of different learning style preferences among music students. We, therefore, proceed to the second part of analysis to find out whether there is any significant difference among students from seven majors.

Table 4. Profile of learning styles compared

Preference level	A	R	S	I	V1	V2	S2	G
Moderate	43	37	86	27	107	5	54	31
Strong	13	5	16	4	91	0	4	3
Cumulative %	18.18	13.64	33.12	10.06	64.29	1.62	18.83	11.04
Wang's (2007) %	14	20	20	13	30	5	7	20

Note. A=Active, R=Reflective, S=Sensing, I=Intuitive, V1=Visual, V2=Verbal, S2=Sequential, G=Global.

3.2 One-way Analysis of Variance

Because not all of the variables had a normal distribution (See Table 3), we decided to use the nonparametric Kruskal-Wallis test to find out whether there was a significant difference among the seven fields of study, and then we used Mann-Whitney tests to locate the specific difference.

Table 5. Kruskal Wallis test

Variables	Chi-Square	p.
CEE	43.433	<.001
FE	51.916	<.001
Motivation	8.43	0.208
Active	21.117	0.002
Sensing	15.61	0.016
Visual	12.684	0.048
Sequential	7.289	0.295

As can be seen in Table 5, students did not differ in motivation or the sequential learning style, but they were statistically different in the English proficiency (both CEE and FE), the active, sensing and visual scales. Multiple Mann-Whitney tests were performed to find out which pairs were statistically different. As this process

produced a large number of data, in Table 6 we only provide the information for the paired comparison that was found statistically different.

Table 6. Mann-Whitney test

Variables	Z	p.	Paired comparison
CEE	-5.34	<.001	Dancing < Music Education
	-3.87	<.001	Dancing < Modern Music
	-3.74	<.001	Dancing < Symphony
FE	-4.68	<.001	Dancing < Modern Music
	-4.27	<.001	Dancing < Symphony
	-4.29	<.001	Dancing < Music Education
Active	-3.349	.001	Composition < Art Management
	-2.701	.007	Composition < Folk Vocal
Sensing	-3.107	.002	Composition < Art Management
	-2.673	.008	Composition < Folk Vocal
Visual	-2.57	.01	Composition < Folk Vocal

Students differed statistically in their English proficiency: dancing students were statistically less proficient than students majoring in modern music, symphony and music education. This suggests that students from the same institute vary greatly in their English proficiency. This poses great challenges to the practice of grouping students in English class according to their fields of studies, not their English levels. For instance, as informed by the statistical comparison, it would not be ideal to group dancing students with music education students, or symphony students, or modern music students. This would run the risk of demotivating some of the students, as they might regard the teaching content either too easy or too difficult.

As for the learning styles, the Mann-Whitney tests seemed to suggest that even though students were from the same music academy, the learning style preferences were by no means identical. This was especially true for students majoring in composition, who tended to be less active, sensing and visual than the folk vocal students and art management students. Therefore, we call into question the practice of comparing students by the broad disciplines they are studying in. For example, Litzinger et al. (2005) compared the learning styles of students majoring in education, engineering and liberal arts. We think that the hat “liberal arts” is too big for students from different areas of specialty, as in the case of our study. We found that no specific learning style could be generalized for the music students, because there was a significant variation among students from the seven fields of study. Therefore, we caution the risk of essentialism when we try to give a summative profile for students with a broad disciplinary denominator, such as science and liberal arts.

Given the varying learning style preferences, it is quite challenging for EFL teachers to teach about 100 students in a regular class. In this large class setting, it is more difficult to carry out small-group discussion, group presentations, or even in-class projects. Lecturing and highly structured drills (such as translation exercises) are easier to carry out in a large class. As we know, this teaching method is not helpful to accommodate students' preferences in processing information. For example, a large number of students favour visual stimuli over verbal ones. If an English teacher wants to engage his or her students, (s)he is justified to play a short video clip in class and get the message across through the visual input. However, students favouring the verbal learning style might think the teacher is taking the easy way out and trying to kill the valuable class time by force-feeding them a video. How can we strike a balance when students with different learning styles are simultaneously present? We will discuss this issue in detail in Section 4.

3.3 Correlation Analysis

To examine the correlation relation among the three factors, we performed the Spearman correlation analysis, the results of which are displayed in Table 7. It was found that English proficiency (both CEE and FE) was moderately correlated with motivation and that the visual learning style was negatively correlated with motivation ($r = -.156$, $p < .001$). It was noted that none of the learning style was correlated with English proficiency, except that the active learning style was negatively correlated with the scores in the Final Exam ($r = -.145$, $p = .014 < .05$). This might be due to the test design in the final exam, 60% of which was from the textbook, focusing on grammar and translation. These kinds of tasks tend to favour students with a reflective learning style.

Based on the previous findings, we may conclude that motivation is an important factor leading to the success of

English learning, while learning style has little to do with the proficiency. We argue that learning styles are domain-general, and what matter more are the domain-specific strategies. To illustrate this point, just imagine two students who share the same learning style preference: active over reflective. If student A knows how to get involved in English learning activities, such as practising spelling by playing scrabble, (s)he has a better chance than student B, who has no idea of what activities might help with the spelling retention. In other words, learning styles are about the preferences of receiving and processing information passively, but learning strategies are the active control students take to monitor the process of receiving and processing information.

Table 7. Spearman correlation analysis

Variables	CEE	FE	Active	Sensing	Visual	Sequential
Motivation	.292**	.199**	.035	-.036	-.156**	.025
CEE		.537**	-.051	-.004	.074	-.060
FE			-.145*	.032	.034	-.060
Active				.064	.208**	-.028
Sensing					.049	.219**
Visual						.034

Note. ** indicates statistical significance at $p < 0.01$ level; * indicates statistical significance at $p < 0.05$ level.

4. Discussion

The previous section has pointed out that students are very divergent in motivation, English proficiency and learning styles. We believe that two issues are of particular relevance for EFL teachers: grouping students and course content.

4.1 Grouping Students in EFL Classes

When we try to merge students into a teaching unit, we need to decide whether we follow the rule of homogeneity or heterogeneity. Research results show that group heterogeneity by mixing students with different learning styles is conducive to better performance (e.g., Alfonseca et al., 2006). On the other hand, research also attests to the fact that students in a homogeneous group based on the proficiency level significantly outperformed students in a heterogeneous group (Baer, 2003). When grouping EFL students into a large class, we posit that proficiency takes precedence of learning styles, because proficiency is correlated with motivation. Students with a similar proficiency level will have convergent needs of teaching content and pace. While the findings reported by Alfonseca et al. (2006) support mixing students based on their learning styles, we argue that this grouping method is plausible for group tasks involving a very small number of group members. For a large class with about 100 students (which is usually the case in College English classes), it is better to group students homogeneously, while in break-out sessions or group projects, we could mix them to develop their less preferred styles (Felder & Spurlin, 2005).

Table 8 summarizes the possible grouping assignment based on the quantitative analysis in the previous section. For the purpose of grouping students homogeneously, dancing students could not be grouped with students majoring in symphony, modern music, or music education, because their English proficiency differs greatly. In addition, composition students and folk vocal students are advised not to be put together in a large class, because their learning styles differ greatly.

Table 8. Summary of grouping variables

Field of study	Motivation	English Proficiency	Active	Intuitive	Visual	Sequence
Dancing	n.s.	1	1, 2	1, 2	1, 2	n.s.
Symphony	n.s.	2	1, 2	1, 2	1, 2	n.s.
Folk vocal	n.s.	1, 2	2	2	2	n.s.
Modern music	n.s.	2	1, 2	1, 2	1, 2	n.s.
Art management	n.s.	1, 2	2	2	1, 2	n.s.
Music education	n.s.	2	1, 2	1, 2	1, 2	n.s.
Composition	n.s.	1, 2	1	1	1	n.s.

Note. n.s. = non-significant; 1= students labelled by "1" could be grouped together;

2= students labelled by "2" could be grouped together;

1, 2= students labelled by "1, 2" could be grouped with students labelled by "1" or "2".

Currently, students from the seven departments in XCM are grouped as follows: symphony students and art management students; folk vocal students and music education students; composition students and modern music students; dancing students are stand-alone. Although this grouping does not incur some of the clashes we discussed earlier, we would say this is a lucky guess, because over half of the students have rather flexible styles, meaning that they could be put together in the first or the second group (see Table 8). Despite this, we believe that it is necessary to put into perspectives the three factors and come up with a better or optimal grouping scheme. We propose to group the students in the following manner: folk vocal students and art management students; dancing students and composing students; and finally, symphony, modern music and music education students are put together.

4.2 EFL Course Content

In light of the medium-to-low level of motivation and English proficiency, we believe that it is necessary to revamp the course content of College English from EGP to ESP. Faculty members of XCM have piloted a small-scale experiment on teaching English for music students. They shortened the EGP course by one quarter and replaced it with Music English. Table 9 outlines the themes, topics and language points covered in the Music English lessons. In this try-out, the faculty members were aware that they themselves were not music specialists, so they followed the advice by Wakeland (2013)—“being careful not to ‘cross over’ into teaching music content”. We believe that this ESP module is very relevant to students’ domain of specialty and they will be much more motivated because of the increased and perceived relevance.

Table 9. Outline of the music English

Themes	Topics	Language Focus
Music Genres and Forms	Symphony Sonata	How to describe the origin and etymology of a music genre
Chinese Music	The Butterfly Lovers’ Violin Concerto Guangdong music	Music terminologies in ESP contexts vs. in EGP contexts
Songs, Singers and Bands	I’ll be Home For Christmas Carpenter’s voice: The stuff of dreams	How to write a bio of a master, a singer, or a composer
Music Competitions & Awards	Music competitions Music awards	How to extend an invitation / welcome to a band or a performer
Music Schools and Colleges	The Curtis Institute of Music New England Conservatory	How to write a personal statement and fill in an application form

For the purpose of addressing students’ learning styles, at least one video clip is included for each unit to accommodate the visual style preference of music students. Despite this, in the try-out feedback, students commented that pictorial illustration should be included in the materials. For now, only texts are presented in the textbook. We believe that this verbal modality is at odds with students’ strong preference for visual modality. As a next step, pictorial illustration and multimodal resources need to be incorporated into the textbook, to motivate the students and to match their learning styles.

On a different but related note, as the active learning style is negatively correlated with the final exam scores, we believe that a balanced assessment method is needed. In addition to a pencil-and-paper exam, we will set students a final project as part of the assessment. Students choose one of the topics discussed in the outline (see Table 9) and give a group presentation of about 10 minutes. As class time is very limited for a large class, we ask students to film their group presentation, and submit their project work as a video file. This change is responsive to the active and visual preferences of music students.

5. Conclusion

This paper looks into the relationships among motivation, learning styles and English proficiency in a cohort of music students from seven areas of specialty. Correlation analyses found that a) motivation and English proficiency was moderately correlated; b) the visual learning style was negatively correlated with motivation; c) the active learning style was negatively correlated with the final exam scores in the first semester. One-way analysis of variance revealed that music students themselves differed statistically in learning styles and English proficiency, but not in motivation to learn English. Based on these findings, we propose that College English courses in Chinese conservatories need to revamp their grouping methods and course content. Homogeneous grouping based on English level is encouraged, while at the same time learning style differences among students need to be addressed. Course content could be swapped from English for general purposes to English for specific

purposes. We believe that these two pedagogical strategies will be able to motivate students and accommodate their varying learning preferences, ultimately contributing to their English proficiency.

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