



Aesthetic Needs of In-Service and Pre-Service Secondary Music Teachers in Korea

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Abstract

Aesthetic experience plays a pivotal role in fostering innovative thinking and emotional growth. In educational contexts, teachers' engagement with aesthetic experiences contributes to instructional environments and enhances both their emotional well-being and the quality of music education. Aesthetic needs, which motivate individuals to seek and sustain aesthetic experiences, therefore warrant systematic investigation. This study examined the aesthetic needs of 88 in-service and pre-service secondary music teachers in South Korea, including 48 in-service and 40 pre-service teachers. The results indicated that female participants reported significantly higher levels of artistic needs and aesthetic needs in everyday life than males. In-service teachers also demonstrated significantly higher artistic needs than pre-service teachers. Participants with higher educational attainment reported significantly greater aesthetic needs related to built and natural environments. Artistic needs varied by age, with the highest levels observed among participants in their 40s. In addition, everyday aesthetic needs varied by teaching experience in a non-linear pattern, declining among teachers with 15–19 years of experience before recovering in the most experienced group. No statistically significant differences were found by undergraduate major, although participants majoring in composition reported slightly higher artistic needs than those in other majors. These findings indicate that the aesthetic needs of secondary music teachers are domain-specific, with each demographic factor associated with distinct subdomains rather than with aesthetic needs as a whole, supporting a multidimensional conceptualization of aesthetic needs. As the fulfillment of aesthetic needs may promote continued aesthetic engagement and support instructional quality, institutional support for teachers' aesthetic experiences is warranted. Furthermore, the results highlight the importance of intentionally integrating aesthetic education into teacher preparation and professional development programs.

Keywords: aesthetic needs, artistic needs, aesthetic needs in everyday life, secondary music teachers, music teacher education

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INTRODUCTION

Aesthetic experience is widely recognized as a core component of education, particularly in music education. In South Korea, the 2022 revised national curriculum identifies aesthetic sensibility

as a key competency and emphasizes the role of music in discovering aesthetic values and meanings (Ministry of Education, 2022a, 2022b). Previous studies have primarily examined the educational value of aesthetic experience in fostering students' holistic development, including emotional

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growth, creativity, and reflective thinking (Capponi-Savolainen & Kivijärvi, 2017; Hu, 2024; Kang, 2013). More recently, research has extended this focus to teachers, reporting that teachers' aesthetic experiences can transform pedagogical practices, enrich students' learning experiences, and foster creativity and critical thinking in classrooms (Albers et al., 2019; Yoo, 2014). Such experiences have also been shown to promote communication between teachers and students, encourage inclusive attitudes toward learners from diverse backgrounds, and shift instructional attention from outcomes to learning processes (Catalano et al., 2024). In addition, studies have suggested that the aesthetic quality of educational environments, beyond artistic activities themselves, can enhance teachers' aesthetic experiences and contribute to the sustainable development of education (Li et al., 2024).

Although a growing body of research has documented the effects and significance of teachers' aesthetic experiences, very few studies have examined the underlying motivational factors that drive them. In particular, there is a lack of empirical research examining teachers' aesthetic needs—understood as internal motivational forces for aesthetic engagement—and how these needs vary according to individual and demographic characteristics. No prior study has systematically investigated aesthetic needs among in-service and pre-service secondary music teachers from this motivational perspective. Therefore, this study aims to examine differences in aesthetic needs according to demographic characteristics among in-service and pre-service secondary music teachers in South Korea.

Beyond documenting group differences, this study addresses two theoretical questions. First, it examines whether teachers' aesthetic needs operate as a multidimensional construct, as suggested by Stecker's (2019) distinction among art, everyday life, and nature as primary contexts of aesthetic value and operationalized in the Aesthetic Needs Scale (Świątek et al., 2024). If demographic factors are differen-

tially associated with specific subdomains rather than uniformly with aesthetic needs as a whole, this would provide empirical support for the domain-specific nature of aesthetic needs among teachers. Second, by positioning aesthetic needs as a motivational antecedent of aesthetic experience, this study extends prior research on teachers' aesthetic experiences—which has focused on their effects—to the question of what drives such experiences in the first place.

THEORETICAL BACKGROUND

Aesthetic Needs: Concept and Related Terms

Maslow (1970) defined aesthetic needs as a fundamental psychological drive to pursue beauty, symmetry, simplicity, and order.

Building on this foundation, Furnham (2021) conceptualized aesthetic motivation as a complex psychological construct beyond a mere desire for aesthetic stimuli.

It encompasses cognitive and emotional aspects such as sensitivity, refined preferences, and creative self-expression. Related constructs frequently discussed in the literature include aesthetic preference, aesthetic sensitivity, and aesthetic experience. Aesthetic preference refers to an individual's tendency to evaluate certain aesthetic stimuli positively, and it is shaped by one's cultural context and prior experiences (Leder et al., 2004; Palmer et al., 2013). Aesthetic experience is an integrative interaction with works of art or the natural environments that generates emotional and sensory meaning (Dewey, 1934). Beyond simple appreciation or emotional response, aesthetic experience has been emphasized in educational contexts as a key mechanism of transformative learning that promotes critical thinking, reflection, and affective-cognitive change (Kokkos, 2010). Aesthetic sensitivity refers to the cognitive ability to perceive and evaluate subtle qualities and distinctions in aesthetic stimuli (Myszkowski & Storme, 2017).

Extending these perspectives, Stecker (2019) identified three primary contexts in which aesthetic value is sought: art, nature, and everyday life. He argued that aesthetic value emerges through interaction with moral, cognitive, and functional values. This suggests that aesthetic needs may span broader contexts, extending beyond artistic experiences to encompass everyday and environmental domains. Such contextual diversity implies that aesthetic needs are not uniform but are shaped by a complex interplay of environmental and individual factors. Indeed, previous research has noted that individual responses to aesthetic preferences and experiences result from the interaction between biological mechanisms and sociocultural environments (Jacobsen, 2006; Leder et al., 2004).

Significance of Teachers' Aesthetic Needs Inferred from Aesthetic Experience Research

Previous studies have reported that teachers' aesthetic experiences, attitudes toward aesthetics, and sensitivity to beauty positively influence their creative teaching practices, professional identity, and overall development as educators (Yoo, 2014; Kong & Chang, 2019; Li et al., 2024; Lin et al., 2022, 2023). Among these, Kong and Chang (2019) found that teachers' ability to savor aesthetic moments promotes aesthetic experience, enhancing creative self-efficacy and behavior. However, these studies have primarily focused on the effects of aesthetic experience, while empirical research examining teachers' aesthetic needs as an underlying psychological factor remains largely absent. Aesthetic needs, referred to as an internal human motivation to seek beauty, harmony, and order (Maslow, 1970; Furnham, 2021), are closely related to emotional well-being, self-actualization, and creativity (Diessner et al., 2018; Martínez-Martí et al., 2016). In this respect, empirically examining the levels and characteristics of aesthetic needs holds significant value for understanding teachers' intrinsic motivation and educational practice.

Background Influences on Aesthetic Dispositions: Theoretical Perspectives

Demographic factors such as gender, age, status, and educational level are closely associated with various aesthetic characteristics, including aesthetic sensitivity, preferences, and experiences (Cela-Conde et al., 2009; Eagly & Wood, 2012; Bourdieu, 1984; Brisson & Bianchi, 2022). Although these characteristics are conceptually distinct from aesthetic needs, they may underlie individuals' aesthetic responses. For example, Cela-Conde et al. (2009) suggested that neurological responses to aesthetic stimuli may differ by gender, while social role theory (Eagly & Wood, 2012) explains how gender-based expectations can influence aesthetic attitudes and interests.

Maslow's (1970) hierarchy of needs positions aesthetic need as a higher-order psychological need that emerges once more basic needs are satisfied, reflecting a transition toward more refined and self-directed motivations. Housen (1992) and Parsons (1987) emphasized that repeated and accumulated experiences contribute to the refinement of aesthetic sensitivity.

Bourdieu (1984) argued that cultural capital shapes individuals' access to and responses to artistic experiences, depending on social class, educational background, and cultural environment. Educational attainment, prior exposure to the arts, and opportunities for cultural consumption have been found to facilitate the development of aesthetic sensitivity and taste (Brisson & Bianchi, 2022; Gartus et al., 2020; Zhang et al., 2023).

Conceptual Framework and Hypotheses

Drawing on the theoretical perspectives reviewed above, this study proposes a conceptual framework in which three mechanisms link demographic characteristics to aesthetic needs.

First, social role theory (Eagly & Wood, 2012) posits that socialization into gender roles shapes individuals' interests and engagement patterns; because aesthetic activities have traditionally been socia-

lized as more congruent with female roles, women are expected to report higher aesthetic needs, a tendency that may be reinforced by sex-related differences in neural responses to aesthetic stimuli (Cela-Conde et al., 2009). This mechanism underlies H1.

Second, developmental accounts of aesthetic sensitivity hold that aesthetic capacities are progressively refined through accumulated experience (Housen, 1992; Parsons, 1987). Maslow's (1970) hierarchy suggests that aesthetic needs, as higher-order needs, become more salient as individuals attain greater personal and professional stability. Age, career stage, and teaching experience all index the accumulation of life and professional experiences—including repeated aesthetic engagement inherent in music teaching—and are therefore expected to be positively associated with aesthetic needs. Although a generally positive association is expected, developmental trajectories are not necessarily linear; career-stage demands and professional circumstances may produce fluctuations in how salient aesthetic needs are at particular points in the professional life course. This mechanism underlies H2, H4, and H5.

Third, Bourdieu's (1984) theory of cultural capital holds that educational attainment and specialized training provide the knowledge, dispositions, and access that facilitate aesthetic engagement (Brisson & Bianchi, 2022). Higher educational attainment and undergraduate training focused on artistic production (performance or composition) are thus expected to be associated with higher aesthetic needs. This mechanism underlies H3 and H6.

Based on this framework, the following hypotheses were proposed:

H1. Female participants will report higher aesthetic needs than male participants.

H2. In-service secondary music teachers will report higher aesthetic needs than pre-service teachers.

H3. Participants with higher levels of education will report higher aesthetic needs than those with lower levels.

H4. Older participants will report higher

aesthetic needs than younger participants.

H5. Participants with more teaching experience will report higher aesthetic needs than those with fewer years.

H6. Participants majoring in performance or composition will report higher aesthetic needs than those majoring in music education.

METHOD

Participants

This study was approved by the Institutional Review Board (IRB) of the author's affiliated institution and was conducted using an anonymous online survey administered via Google Forms. The survey link was initially distributed through the researcher's professional network and further disseminated as eligible participants voluntarily shared it with their colleagues. The first page of the survey included information on the study's purpose and relevant ethical considerations. Participation was entirely voluntary, and, given the survey's anonymous nature and the minimal risk involved, the IRB waived the requirement for written informed consent.

A total of 88 participants completed the survey, including 48 in-service and 40 pre-service secondary music teachers. Demographic characteristics of the participants are summarized in Table 1.

Survey Instrument

This study employed the 12-item Aesthetic Needs Scale (ANS) developed by Świątek et al. (2024; Cronbach's $\alpha = .89$). Although the original scale demonstrated reliability and validity, additional validation was necessary to ensure its applicability in the Korean context. A panel of experts, consisting of two music education professors and one secondary music teacher, reviewed the translated items for content validity, resulting in minor revisions to several items. Subsequently, an exploratory factor analysis was conducted to verify the factor structure of the Korean version, leading to the removal of Item 11 due to its low factor loading. Consequently, the final

Table 1. Characteristics of Participants

Factor	Group	N (88)	%
Gender	M	19	21.6
	F	69	78.4
Age	20-29	32	36.4
	30-39	25	28.4
	40-49	25	28.4
	50-59	6	6.8
Career stage	Pre	40	45.5
	In	48	54.5
Education level	≤BA	45	51.1
	≥MA	43	48.9
Major in undergraduate	Performance	46	52.3
	Composition	34	38.6
	Music education	8	9.1
	<5	4	8.3
Teaching experience (years) ^a	5-9	12	25.0
	10-14	12	25.0
	15-19	12	25.0
	≥20	8	16.7

Pre = Pre-service teacher; In = In-service teacher; ≤ BA = Bachelor's level (student or graduate); ≥ MA = Master's or higher (student or graduate). ^aIn-service teachers only ($n = 48$); percentages are based on $n = 48$.

Korean instrument consisted of 11 items.

Participants responded to each item using a 5-point Likert scale (1 = Strongly disagree, 5 = Strongly agree), and the survey took approximately 5–10 minutes to complete. The overall Cronbach's α for the scale was .797, with reliability coefficients for all subdomains exceeding .70.

The final version of the scale consisted of three subdomains adapted from Świątek et al.(2024): Artistic Needs(ANA), which refers to the desire for interaction with works of art; Aesthetic Needs in Everyday Life(ANE), which reflects the desire to cultivate aesthetic experiences in everyday life; and Aesthetic Needs Related to Built and Natural Environments(ANBN), which represents the desire for aesthetic engagement with built and natural surroundings. Sample items include: "I feel a strong desire to look at works of art or listen to music"(ANA); "The appearance and plating of food is important to me"(ANE); and "I enjoy observing the harmony in nature"(ANBN).

Data Analysis

The survey data were analyzed using SPSS version 29. Descriptive statistics were computed for each subdomain of aesthetic needs. Independent-samples t-tests were conducted for gender, career stage (in-service or pre-service), and educational level. For variables with more than two groups(i.e., age, teaching experience, and undergraduate major), Levene's test was first performed to assess the assumption of homogeneity of variances. Depending on the results of Levene's test, either a one-way ANOVA or Welch's ANOVA was conducted. Effect sizes are reported as Cohen's d for t-tests, and eta-squared (η^2) or omega-squared (ω^2) for analyses of variance, interpreted using Cohen's (1988) benchmarks ($d = 0.20, 0.50$, and 0.80 and $\eta^2/\omega^2 = .01, .06$, and $.14$ for small, medium, and large effects, respectively), with emphasis on practical rather than solely statistical significance. Because directional hypotheses were tested using one-tailed tests at $\alpha = .05$, 90% confidence intervals are reported for effect size estimates, consistent with the one-tailed decision crite-

tion. For the Welch-adjusted analysis, the effect size is reported without an interval estimate, as standard noncentrality-based confidence intervals assume homogeneity of variances.

RESULTS AND DISCUSSION

Descriptive Statistics of Aesthetic Needs Levels

Descriptive analysis revealed differences in mean scores across the three subdomains of AN. Among all participants ($n=88$), the highest mean score was observed in ANBN ($M=4.36$, $SD=0.58$), while the lowest was in ANE ($M=3.99$, $SD=0.58$). ANA fell between the two ($M=4.23$, $SD=0.55$).

Differences in Aesthetic Needs Levels by Gender

Independent samples *t*-tests revealed significant gender differences in two subdomains of aesthetic needs. Female participants scored significantly higher than male participants in both ANA (female: $M=4.29$, male: $M=4.04$; $t(86)=1.71$, $p=.045$, $d=0.44$, 90% CI [0.01, 0.87]) and ANE (female: $M=4.07$, male: $M=3.71$; $t(86)=2.47$, $p=.008$, $d=0.64$, 90% CI [0.20, 1.07]). The difference reflected a medium-to-large effect size for ANE and a small-to-medium effect size for ANA. In contrast, no significant gender difference was found in ANBN ($p=.148$) (see Table 2).

Differences in Aesthetic Needs Levels by Career Stage

One-tailed *t*-test results showed that in-service teachers scored significantly higher than pre-service teachers on the ANA (in-service: $M=4.33$, pre-service: $M=4.10$; $t(86)=2.05$, $p=.022$, $d=0.44$, 90% CI [0.08, 0.79]), indicating a small to medium effect size. No significant differences were found between the two groups in ANE and ANBN ($p>.05$). However, across all three subdomains, in-service teachers consistently showed higher mean scores than pre-service teachers, suggesting that career stage influences aesthetic needs (see

Table 2).

Differences in Aesthetic Needs Levels by Education Level

The analysis by educational level revealed a statistically significant difference only in ANBN ($t(86)=2.44$, $p=.009$, $d=0.52$, 90% CI [0.16, 0.88]). Participants with a graduate-level education reported significantly higher scores than those with an undergraduate education (Graduate: $M=4.51$; Undergraduate: $M=4.22$), indicating a medium effect size. No significant differences were found in ANA ($p=.160$) or ANE ($p=.091$). However, the graduate-educated participants consistently showed higher mean scores across all domains, suggesting a potential positive relationship between educational level and aesthetic needs (see Table 2).

Differences in Aesthetic Needs Levels by Age

Analysis by age group revealed a statistically significant difference only in ANA ($F=2.757$, $p=.047$, $\eta^2=.090$, 90% CI [.001, .171]). Participants in their 40s showed the highest mean score ($M=4.47$), and the results suggested a trend in which aesthetic needs increased with age, peaking in middle adulthood. In contrast, no significant age-related differences were found in ANE (Welch's $F=1.243$, $p=.320$) or ANBN ($F=1.340$, $p=.267$), indicating that age-related variation in aesthetic needs may differ by subdomain (see Table 3).

Differences in Aesthetic Needs by Teaching Experience

Among the in-service secondary music teachers ($n=48$), teaching experience showed a significant difference only in ANE (Welch's $F=3.265$, $p=.037$, $\eta^2=.130$). Teachers with 5–9 years ($M=4.19$, $SD=0.63$), 10–14 years ($M=4.13$, $SD=0.71$), and 20 or more years of experience ($M=4.17$, $SD=0.29$) reported higher ANE scores than those with less than 5 years of experience ($M=3.79$, $SD=0.38$). In contrast, teachers with 15–19 years of experience ($n=12$) showed a noticeably lower mean score

Table 2. Differences in aesthetic needs by gender, career stage, and educational level

Factor	AN	Group	M(SD)	<i>T</i>	<i>p</i>
Gender	ANA	M	4.04(0.65)	-1.710	0.045*
		F	4.29(0.52)		
	ANE	M	3.71(0.72)	-2.467	0.008*
		F	4.07(0.51)		
Career stage	ANBN	M	4.21(0.75)	-1.070	0.148
		F	4.40(0.52)		
	ANA	In	4.33(0.50)	2.045	0.022*
		Pre	4.10(0.60)		
	ANE	In	4.04(0.51)	0.800	0.213
		Pre	3.94(0.65)		
Educational level	ANBN	In	4.44(0.43)	1.385	0.086
		Pre	4.27(0.71)		
	ANA	≤ BA	4.17(0.59)	-1.001	0.160
		≥ MA	4.29(0.52)		
	ANE	≤ BA	3.91(0.60)	-1.344	0.091
		≥ MA	4.08(0.54)		
	ANBN	≤ BA	4.22(0.67)	-2.439	0.009*
		≥ MA	4.51(0.41)		

p* < .05Table 3.** Differences in aesthetic needs by age

Factor	AN	Group	M(SD)	<i>F</i>	<i>p</i>	η^2 (ω^2)
Age	ANA	20-29	4.06(0.61)	2.757	0.047*	0.090
		30-39	4.19(0.46)			
		40-49	4.47(0.54)			
		50-59	4.29(0.40)			
	ANE	20-29	3.84(0.64)	1.243	0.320	0.012
		30-39	4.08(0.32)			
		40-49	4.11(0.63)			
		50-59	3.96(0.73)			
	ANBN	20-29	4.25(0.69)	1.340	0.267	0.046
		30-39	4.31(0.55)			
		40-49	4.53(0.45)			
		50-59	4.50(0.46)			

re ($M = 3.75$, $SD = 0.20$). Meanwhile, the mean for teachers with less than 5 years of experience should be interpreted with caution due to the very small group size ($n = 4$). Although ANA ($F = 1.750$, $p = .157$) and ANBN ($F = 1.520$, $p = .213$) showed no significant differences, the overall pattern of ANE across experience groups was non-linear, declining among teachers with 15–19 years of experience before recovering in the most experienced group.

Differences in Aesthetic Needs by Undergraduate Major

Analysis by undergraduate major revealed no statistically significant differences across the three subdomains of aesthetic needs (ANA: $F = 2.578$, $p = .082$, $\eta^2 = .057$; ANE: $F = 0.548$, $p = .580$, $\eta^2 = .013$; ANBN: $F = 0.091$, $p = .914$, $\eta^2 = .002$). However, composition majors consistently reported relatively higher levels across all subdomains, particularly in ANA (Composition majors: $M = 4.47$, $SD = 0.36$; Performance majors:

Table 4. Result of Hypothesis Testing

Hypothesis	Supported?	Significant Domains
H1: Women will report higher aesthetic needs than male participants.	Partially	ANA, ANE
H2: In-service secondary music teachers will report higher aesthetic needs than pre-service teachers.	Partially	ANA
H3: Participants with higher levels of education will report higher aesthetic needs than those with lower levels.	Partially	ANBN
H4 Older participants will report higher aesthetic needs than younger participants	Partially	ANA
H5: Participants with more teaching experience will report higher aesthetic needs than those with fewer years.	Partially	ANE
H6: Participants majoring in performance or composition will report higher aesthetic needs than majoring in music education.	Not supported	-

$M = 4.11$, $SD = 0.52$; Music education majors: $M = 4.34$, $SD = 0.61$).

Summary of Hypothesis Testing Results

Hypotheses H1 through H5 were partially supported, as significant differences were observed in some subdomains of aesthetic needs. However, Hypothesis H6 was not supported. These findings suggest that the relationship between aesthetic needs and demographic factors is complex and may vary across specific subdomains under investigation (see Table 4).

A Multidimensional Interpretation of Gender Differences in Aesthetic Needs

In this study, female participants demonstrated generally higher levels of aesthetic needs than their male counterparts, with statistically significant differences observed particularly in ANA and ANE. These findings are consistent with prior research suggesting that women tend to engage more frequently in artistic activities and exhibit greater aesthetic sensitivity than men (Cela-Conde et al., 2009; McManus & Furnham, 2006; Polzella, 2000; Salkind & Salkind, 1997). Notably, studies have shown that women prefer realistic and expressive visual stimuli (Polzella, 2000; Salkind & Salkind, 1997), suggesting

that their aesthetic needs may be more responsive to concrete and representational forms of stimulation. However, further research is needed to clarify the nature of these associations. In addition, specific patterns of neural activation observed in women (Cela-Conde et al., 2009) suggest that biological mechanisms may partially explain the findings of this study.

However, aesthetic needs are not solely determined by biological factors; cultural influences reflecting traditional gender roles and societal expectations should also be considered, as Eagly and Wood (2012) posited in their social role theory. For example, gender-stereotyped preferences for specific musical instruments (North & Hargreaves, 2008) and gender differences in motivation for engaging in artistic activities (North et al., 2000) indicate that sociocultural environments may significantly shape individuals' aesthetic needs.

In contrast to previous studies that primarily focused on gender differences in aesthetic sensitivity or preferences, the current research is significant for empirically examining gender differences in teachers' aesthetic needs as a psychological motivation. Based on these findings, there is a need for tailored programs that foster

artistic experiences and enhance everyday aesthetic sensitivity, particularly to support the fulfillment of ANA and ANE among female teachers. At the same time, educational interventions are needed to reduce gender stereotypes and increase access to aesthetic activities for male teachers.

Educational Level, Major, And Cultural Capital in Aesthetic Needs

The finding that participants with higher educational attainment reported greater ANBN suggests that individuals' accumulated educational and sociocultural experiences may influence the development of aesthetic needs, in line with Bourdieu's (1984) conceptions of cultural and educational capital. Beyond simple aesthetic preference, aesthetic knowledge and fluency acquired through higher education play a critical role in deepening the quality of aesthetic experiences and promoting active engagement in artistic activities (Cotter et al., 2023). Therefore, it is necessary to provide school environments and activities that allow teachers to engage more deeply with the aesthetic qualities of built and natural surroundings, thereby better fulfilling their aesthetic needs related to external environments. More broadly, program developers may need to assess which domains of aesthetic needs are salient for a given teacher population before designing interventions, treating the aesthetic quality of school environments as a distinct target rather than assuming that art-focused programs will transfer to environmental aesthetic engagement.

Meanwhile, this study found no statistically significant differences in aesthetic needs between music performance and music education majors. However, the finding that composition majors exhibited relatively higher ANA supports previous research suggesting that curricula emphasizing creativity and originality may enhance aesthetic engagement (Gartus et al., 2020; Zhang et al., 2023). It is possible that the shared academic characteristics among music-related majors limited the extent of

observable differences in aesthetic needs. Furthermore, the small and uneven sample sizes across groups may have affected the reliability of the comparisons. Therefore, future research should more precisely differentiate the characteristics of each major and secure sufficiently large and balanced samples to examine aesthetic needs more thoroughly.

Developmental Changes of Aesthetic Needs: Age and Teaching Experience

The age-related pattern in ANA – rising with age and peaking among participants in their 40s – aligns with aesthetic development theories proposed by Housen (1992) and Parsons (1987), who argue that aesthetic sensitivity and evaluative capacity are gradually refined through accumulated experiences over time. Similarly, Lee (2022) emphasized that aesthetic experiences become richer and more profound during middle adulthood. These findings suggest that increased ANA in this age group may not simply result from aging per se. However, this increase may instead reflect a deepening process of internalizing and reflecting upon accumulated artistic experiences throughout life. Therefore, it is necessary to provide middle-aged teachers with opportunities for sustained artistic engagement and advanced professional development programs to support the continued cultivation of their aesthetic experiences.

A parallel pattern emerged for career stage: in-service teachers' higher artistic needs may be attributed to career stage and repeated engagement in educational activities. As teaching experience accumulates, it is plausible that teachers develop heightened sensitivity to aesthetic stimuli and an increased tendency to pursue aesthetic experiences.

Conversely, the lower artistic needs of pre-service teachers and the lower everyday aesthetic needs of novice teachers suggest that aesthetic needs should not be assumed to be fully formed at entry into the profession. Teacher preparation programs may therefore need to deliberately embed aesthetic experiences into the cur-

riculum—through structured engagement with live performances and exhibitions, arts-integrated coursework, and reflective activities in which pre-service teachers articulate their own aesthetic responses—positioning aesthetic engagement as part of professional formation rather than optional enrichment.

Similarly, the analysis by years of teaching experience revealed a non-linear pattern in ANE, declining among teachers with 15–19 years of experience before recovering in the most experienced group. This effect was substantial in practical terms, with teaching experience accounting for approximately 13% of the variance in everyday aesthetic needs ($\eta^2 = .130$)—a magnitude approaching Cohen's (1988) threshold for a large effect. This suggests that the repetitive and routine nature of music teaching may enhance teachers' sensitivity to aesthetic details in daily contexts. While some previous studies have reported a negative relationship between job tenure and aesthetic needs (Schell et al., 2011), others have highlighted the positive contribution of artistic engagement to emotional well-being and job satisfaction (Lampinen et al., 2006; Orr et al., 2019). In education, teachers' aesthetic involvement has positively influenced professional expertise and growth (Lin et al., 2022, 2023). In this context, the non-linear pattern of everyday aesthetic needs points to career-stage-differentiated professional learning: whereas early-career support may focus on building aesthetic habits, mid-career teachers may benefit from renewal-oriented opportunities—such as artistic residencies, teacher ensembles, or professional learning communities centered on shared aesthetic experiences—designed to restore aesthetic engagement, while the peak of artistic needs among teachers in their forties suggests a receptive audience for advanced artistic development opportunities.

Theoretical Implications

Three theoretical implications emerge from the present findings. First, the results provide empirical support for the

multidimensional structure of aesthetic needs among teachers. No demographic factor was significantly associated with all three subdomains; rather, each factor showed a distinct pattern of association—gender with artistic and everyday aesthetic needs, educational level with environmental aesthetic needs, age and career stage with artistic needs, and teaching experience with everyday aesthetic needs. Although this pattern should be interpreted as suggestive given the sample size, it is consistent with Stecker's (2019) contention that aesthetic value is sought in distinct contexts of art, nature, and everyday life, and with the three-factor structure of the Aesthetic Needs Scale (Świątek et al., 2024). This implies that aesthetic needs should not be treated as a unitary construct in research on music teachers, and that interventions targeting one domain may not generalize to others.

Second, this study extends theories of teacher motivation by identifying aesthetic needs as a measurable motivational antecedent of teachers' aesthetic engagement. Prior research has documented the effects of teachers' aesthetic experiences on creative teaching, professional identity, and well-being, but has left unexamined why teachers seek such experiences. By applying Maslow's (1970) and Furnham's (2021) motivational perspectives to secondary music teachers, this study locates aesthetic experience within a need-based framework, offering a starting point for models of music teacher development that incorporate aesthetic motivation.

Third, the converging pattern across career stage, age, and teaching experience—higher artistic needs among in-service teachers, artistic needs peaking among participants in their forties, and higher everyday aesthetic needs among teachers with 5–14 and 20 or more years of experience relative to novice teachers—is consistent with developmental accounts of aesthetic sensitivity (Housen, 1992; Parsons, 1987).

Notably, however, these patterns were not strictly monotonic—contrary to the steady increase predicted by the de-

velopmental mechanism in our conceptual framework. Everyday aesthetic needs declined among teachers with 15–19 years of experience before recovering in the most experienced group. Given the cross-sectional design, causal or developmental claims cannot be made; nevertheless, the findings suggest that aesthetic needs are not fixed dispositions but fluctuate across the professional life span, shaped by accumulated artistic experience and career-stage demands. This reframes the task of teacher education: rather than merely accommodating existing aesthetic needs, teacher preparation and professional development may play a role in cultivating—and at particular career stages, restoring—them.

Limitations and Future Research

Several limitations should be acknowledged. First, the sample size ($n = 88$) was modest, and some demographic subgroups were small: only 8 participants majored in music education, and the novice teaching-experience subgroup (less than 5 years) included only 4 teachers. The resulting reduction in statistical power makes it more difficult to detect differences that may actually exist; accordingly, non-significant results—particularly the absence of differences by undergraduate major (H6)—should not be interpreted as evidence of no difference. Mean scores in the smallest subgroups should likewise be regarded as unstable estimates.

Second, the sample was imbalanced in gender (69 female, 78.4%). Although this proportion broadly reflects the gender composition of the secondary music teaching profession in South Korea, the small number of male participants ($n = 19$) limits the precision of gender comparisons.

Third, participants were recruited through the researcher's professional network and subsequent voluntary sharing, which may have introduced self-selection bias; teachers with stronger aesthetic interests may have been more likely to participate, potentially inflating the observed levels of aesthetic needs.

Finally, as noted above, the cross-

sectional design precludes causal or developmental inferences regarding age- and experience-related differences. Future research should recruit larger and more balanced samples—particularly of music education majors and male teachers—employ longitudinal designs to trace how aesthetic needs evolve across teaching careers, and incorporate qualitative approaches to illuminate how teachers experience and fulfill these needs in their professional lives.

CONCLUSION

This study empirically examined demographic differences in aesthetic needs among in-service and pre-service secondary music teachers.

The findings revealed that aesthetic needs varied across several individual and sociocultural characteristics, including gender, career stage, educational level, age, and teaching experience. Previous research has emphasized that teachers' aesthetic experiences are closely linked to educational practice. These experiences are also shaped by internal motivations such as human needs, which positively influence emotional and psychological well-being.

Building on this foundation, the present study aimed to provide a more concrete and multifaceted understanding of music teachers' aesthetic needs. By extending the focus of student-centered aesthetic education into the context of teacher education, this study identifies three concrete directions for practice.

First, teacher preparation programs should embed aesthetic experiences into the curriculum as part of professional formation—through structured engagement with performances and exhibitions, arts-integrated coursework, and reflective activities on pre-service teachers' own aesthetic responses.

Second, professional development should be differentiated by career stage: building aesthetic habits for early-career teachers; providing renewal-oriented op-

portunities, such as artistic residencies, teacher ensembles, and aesthetic-experience-centered learning communities, for mid-career teachers; and offering advanced artistic development for teachers in their forties and beyond.

Third, because aesthetic needs proved domain-specific, such programs should be targeted to the artistic, everyday, or environmental domain most salient for a given teacher population, including attention to the aesthetic quality of school environments. Supporting teachers' aesthetic needs in these differentiated ways may, in turn, sustain the aesthetic engagement that enriches music classrooms.

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