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Visual Arts Self-Efficacy and Professional Attitudes: A Deep Dive into Pre-Service Primary Teachers' Perspectives

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The role of art education in the holistic development of young children is undeniably essential. This form of education not only shapes the perceptions and worldviews of children but also nurtures and cultivates their innate creative capabilities. In this context, the roles of primary school teachers and pre-service primary educators are quite crucial to achieve this goal. This study investigates the self-efficacy beliefs of pre-service primary educators concerning visual arts instruction, as well as their attitudes toward the pedagogical profession. The research cohort comprises 160 pre-service primary educators from a prominent state university in Türkiye. Instruments utilized in this study include the "Self-efficacy Scale for Visual Arts Teaching" and the "Attitude Towards Teaching Profession Scale". The findings reveal a subtle yet statistically significant correlation between the pre-service teachers' self-efficacy beliefs in visual arts instruction and their attitudes toward the pedagogical profession. Notably, there was a discernible difference in the self-efficacy beliefs concerning visual arts instruction in favor of participants with family members engaged in artistic endeavor. Furthermore, an upward trend was observed in both the self-efficacy beliefs in visual arts teaching and attitudes toward the teaching profession as the academic grade level advanced. In light of the findings, we suggested some remarkable implications.

Introduction

The role of art education in the holistic development of young minds is undeniably paramount. This form of education not only shapes the perceptions and worldviews of children but also nurtures and cultivates their innate creative capabilities. Given the profound influence of artistic engagement, it is of utmost importance that children are provided with access to high-caliber art education right from their formative years. Such an approach necessitates the establishment of educational environments that are optimally conducive to the full blossoming

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of their artistic talents. At the heart of this academic enterprise lies the need for instruction delivered by educators who are not just well-versed in their domain but also harbor positive attitudes and exhibit a heightened sense of self-efficacy in relation to art pedagogy (Çakır-İlhan, 2003; Lummis, Morris, & Paolino, 2014; Welch, 1995).

In the Turkish public primary education landscape context, an intriguing paradigm exists. Visual arts, an integral facet of the broader art curriculum, are predominantly imparted by general primary educators rather than those who specialize exclusively in visual arts. This practice is rooted in the prevailing teacher training protocols, wherein pre-service generalist educators are accorded merely a single course dedicated to the pedagogical strategies of visual arts (as delineated by the Council of Higher Education [CoHE], 2018). Such a restricted engagement with the subject could potentially impact their self-efficacy beliefs vis-à-vis art instruction, thereby influencing their overarching disposition towards the pedagogical profession at large. Echoing this sentiment, Cox (1992) theorizes that a substantial number of educators grapple with suboptimal self-efficacy beliefs in the realm of art education. This shortfall, he postulates, primarily stems from a lack of foundational knowledge in the subject, culminating in a waning enthusiasm for this instructional domain.

The focal point of the present research endeavor is to meticulously probe the interrelationship between the self-efficacy beliefs of pre-service general primary educators pertaining to visual arts instruction and their overarching attitudes towards the teaching profession. To facilitate a lucid comprehension of the issues at hand, this study meticulously outlines and explicates the theoretical constructs of self-efficacy beliefs and professional attitudes within the overarching framework of the research's conceptual architecture.

Theoretical Framework

Albert Bandura's seminal theory on self-efficacy, postulated in 1977, furnishes an in-depth exploration into the genesis, metamorphosis, and practical implications of self-efficacy beliefs on human behaviors, performance outcomes, and overall psychological well-being. Two cardinal constructs anchor this theoretical paradigm: self-efficacy expectancy and outcome expectancy. Self-efficacy expectancy delves into an individual's assuredness in performing a designated behavior or action, whereas outcome expectancy is the projection or anticipation of the consequences that might emanate from said behavior. A synergistic alignment of heightened outcome expectations with fortified self-efficacy expectations is pivotal, especially when individuals perceive a behavior as a conduit to a coveted outcome. This alignment reinforces the conviction not only to initiate and sustain that behavior and envisage achieving the desired outcome (Bandura, 1977; Lippke, 2020).

In his later works, Bandura (2006) expounded that the belief of self-efficacy embodies an individual's unwavering confidence in their aptitude to orchestrate and carry out actions essential for navigating future scenarios or challenges. These beliefs are not mere cognitive constructs but foundational pillars for self-direction, proactive interventions, and introspective reflections. A waning self-efficacy belief often culminates in premature capitulation, with individuals faltering at the first sign of adversity without strategizing potential solutions. In stark contrast, individuals fortified with robust self-efficacy beliefs exhibit resilience and tenacity, surmounting obstacles to realize their goals (Bandura, 1997). Consequently, the beliefs and values imbibed during undergraduate educational pursuits significantly influence prospective professional pathways for educators. In the specific context of art pedagogy, these beliefs shape educators' self-perceived proficiencies, thereby steering their pedagogical

strategies for arts integration within academic curricula. Many empirical studies underscore that educators, whose self-efficacy in the arts is anchored in comprehensive knowledge and adept skills, are predisposed to embracing arts-centric instructional methodologies (Bandura, 2001; Garvis & Pendergast, 2010; Lemon & Garvis, 2013). Hence, it is imperative to equip budding primary educators with profound artistic engagements, bolstering their self-efficacy for efficacious art instruction.

Building on this narrative, in the backdrop of rapidly evolving global paradigms, the significance of certain affective attributes has gained unprecedented prominence. The genesis of these attributes is inextricably linked to top-tier art education disseminated during the early developmental phases (Riedler, 2016). Since primary educators are entrusted with the monumental responsibility of sowing the seeds of foundational competencies in visual arts during these crucial years, their self-efficacy beliefs pertaining to visual arts pedagogy acquires paramount importance. One could rationally postulate that primary educators, fortified with robust self-efficacy beliefs in visual arts, would be adept at disseminating knowledge and honing skills once they embark on their professional journey (Dilmaç, 2015). Brimming with unyielding self-efficacy beliefs, such educators are poised to emerge as trailblazers, wielding critical analytical prowess. The visual arts curriculum inherently nurtures a slew of competencies, including self-efficacy, discipline, creativity, and an optimistic societal perspective (Koç, 2016). Thus, it becomes imperative for primary educators to be equipped with both an elevated level of self-efficacy and a profound understanding of the subject matter in visual arts pedagogy.

Pre-service primary teachers' self-efficacy beliefs towards visual arts and attitudes towards the profession

Considering the importance of faculties of education as the first incubation center that shapes teachers' attitudes towards teaching practices, it is an important motivation for researchers to examine pre-service primary school teachers' self-efficacy beliefs towards visual arts and their attitudes towards the profession in general. It is generally accepted that the self-efficacy beliefs that pre-service teachers construct about instructional practices in their university education and teacher training programs are reflected in their future students' learning and the quality of their teaching outcomes (Alsarawi & Sukonthaman, 2023; Anderson & Maninger, 2007; Mena, Peinado, & Hernández, 2023; Takahashi, 2011).

Self-efficacy is closely related to self-regulation skills in general and enables individuals to control and regulate their behaviors to achieve goals. Research has shown that people who believe in their efficacy can perform better than people who misjudge their coping skills and that high self-efficacy is significantly associated with better academic achievement (Bandura, 1195; Uchida, Michael, & Mori, 2018; Zimmerman, 2020). Self-efficacy beliefs lead to excellent performance by increasing commitment, effort, and perseverance (Pintrich, 2003). Therefore, self-efficacy can affect future professional performance and level of perseverance. On the other hand, it is generally known that individuals with low self-efficacy doubt their abilities, avoid tasks that threaten their personal identity, and blame their personal shortcomings and the contextual obstacles they face (Bandura, 2012).

Teacher training programs influence both pre-service and current teachers' self-efficacy beliefs about valuing the visual arts and practicing it in school (Willcox, & McCormick, 2023). However, previous research suggests that teacher educators do not have an easy job, especially when it comes to integrating the arts into future classrooms, and that there are problems with the availability, quality, and nature of art courses (e.g., Collins, 2016; Hunter-



Doniger & Fox, 2020). Most pre-service teachers enter art methods courses with a superficial understanding of the importance of art and believe that making art is less important than other areas (Lackey, Manifold, & Zimmerman, 2007). In a recent study by Deene, Lindsay, and Probine (2023), the visual arts self-efficacy of early childhood teachers was examined in detail. The study revealed several factors that limit or increase teachers' visual arts self-efficacy over time, including the influence of teachers' childhood experiences, pre-service training, and epistemological beliefs. Using the findings of previous research, they argued that the limited quality and quantity of visual arts content, particularly in teacher education, may produce teacher graduates who continue to hold negative self-efficacy beliefs about visual arts pedagogy.

Teachers' self-efficacy typically develops as their internal beliefs about their ability to perform teaching tasks, whereas preservice teachers often build their self-efficacy on their academic achievements in teacher preparation programs because they have little professional experience (Mena, Peinado, & Hernández, 2023). In this context, providing pre-service teachers with opportunities to engage in authentic art teaching practice (Green et al., 1998; Russell-Bowie, 2012) and their active and physical participation in both classroom and on-campus learning experiences (Meiners, Schiller, & Orchard, 2004) have been shown to shape their self-efficacy towards art courses.

Miraglia (2006) conducted a qualitative study investigating how the backgrounds, perceptions, and attitudes of 18 pre-service elementary teachers contributed to their anxiety about making and teaching art. She found that factors contributing to art-making anxiety included lack of art knowledge, fear of making mistakes, and negative reactions from peers and/or former teachers. Based on this, it can be stated that increasing pre-service teachers' art knowledge and competence can reduce their fear and anxiety about making art and increase their self-efficacy.

Yet another pivotal determinant influencing educators' efficacy and productivity in the classroom is their overarching professional disposition. Attitude, in its broadest sense, encapsulates an individual's subjective evaluations, predispositions, and reactions to entities, ideologies, or circumstances, often manifesting as either favorable or adverse inclinations (Vargas-Sánchez, Plaza-Mejía, & Porras-Bueno, 2016). A professional attitude, on the other hand, encompasses an individual's emotional affinity, behavioral tendencies, and unwavering commitment to their chosen vocational path. Educators' fervor and positive orientation towards their profession invariably amplify their instructional efficacy, enhancing educational outcomes (Chakraborty & Mondal, 2014). To actualize their maximal professional potential, educators must harbor a positive professional disposition (Tufan, 2016; Oğuz & Topkaya, 2008). An educator's attitude, akin to professionals in other domains, is a linchpin for optimal vocational performance. An affirmative disposition not only augments job contentment but also elevates the calibre of education imparted. Ergo, individuals who cultivate and nurture positive professional attitudes during their formative training phases are predisposed to orchestrate a vibrant, immersive learning ambiance in subsequent roles, thereby elevating pedagogical benchmarks (Köse, Kaya, Gezer & Kara, 2011).

The Current Study

The primary school epoch stands as an instrumental inflection point within the expansive educational continuum, particularly in the domain of art education. At this critical juncture, it becomes imperative that learners are accorded optimal avenues to express their unique identities within the societal tapestry and to hone their creative proficiencies. Echoing

this sentiment, Dilmaç and İnanç (2015) emphasize that during these foundational years, primary educators function as vital linchpins, facilitating the recognition of students' artistic trajectories, guiding them congruently with their inherent proclivities, and engendering a robust art appreciation ethos amongst their cohorts. In tandem with this, the self-efficacy beliefs related to art pedagogy and the overarching positive professional dispositions of both practicing and prospective primary educators crystallize as pivotal determinants. It is quintessential for pre-service primary educators to exhibit the professional comportment expected of them and to adeptly harness their domain-specific acumen and skills, predicated on a positive orientation towards their vocation. The interrelationship between educators' self-efficacy beliefs and their professional disposition has been empirically validated as a cornerstone underpinning their vocational triumphs (Eroğlu, 2012). Welch (1995) further contends that the experiential journeys of pre-service primary educators profoundly shape their instructional paradigms and bolster their confidence in art education.

A meticulous appraisal of prevailing academic literature unveils a multitude of inquiries delving into the realm of teachers' self-efficacy beliefs, with notable contributions from scholars such as Altunbaş (2011), Avcı (2008), Doğan (2013), and İpek and Bayraktar (2009), to name a few. Yet, a discernible gap emerges when one seeks investigations centered explicitly on the self-efficacy beliefs of pre-service primary educators concerning visual arts pedagogy and their overarching professional orientations. Positioned against this backdrop, the current study seeks to bridge this research void, aspiring to augment the corpus of art education scholarship.

The cardinal aim of this investigation is to elucidate the interplay between the self-efficacy beliefs of pre-service primary educators concerning visual arts pedagogy and their professional disposition towards the teaching profession. Furthermore, this study aspires to ascertain whether discernible disparities manifest in these educators' self-efficacy beliefs pertaining to visual arts instruction and their vocational orientations, predicated on specific determinants such as gender, academic tenure, familial artistic inclinations, and engagement in artistic and painting modules.

To achieve these ends, this research is steered by the ensuing research questions:

- (1) What is the magnitude of pre-service primary teachers' self-efficacy beliefs concerning visual arts instruction?
- (2) Are there discernible differences in pre-service primary teachers' self-efficacy beliefs in visual arts instruction based on gender, academic year, having family members passionate about art, engagement in artistic endeavors, and enrollment in painting courses?
- (3) How do pre-service primary teachers perceive their professional attitudes toward teaching?
- (4) Are there variations in pre-service primary teachers' professional attitudes based on gender and academic year?
- (5) Is there a statistically significant correlation between pre-service primary teachers' self-efficacy beliefs in visual arts instruction and their professional attitudes?

METHOD

Research Design

The methodological framework underpinning this investigation is rooted in a correlational research paradigm. Within the gamut of correlational research methodologies, the quintessential aim revolves around discerning and quantifying the extent of interdependence and mutual variance exhibited by two or more variables (Karasar, 2007). In alignment with this paradigmatic approach, the present study endeavors to unravel the intricate nexus between the self-efficacy beliefs of pre-service primary educators pertaining to visual arts pedagogy and their overarching professional dispositions vis-à-vis the teaching vocation.

Study Group

The participants for this study comprised 170 pre-service primary teachers enrolled in a state university in Turkey. An essential criterion for participant selection was their prior enrollment in the "Visual Arts Teaching" course. As such, only pre-service primary teachers in their 3rd and 4th academic years were eligible for this study. During data analysis, 10 respondents were excluded due to either extensive missing data in the scales or the perception that they completed the scales without due diligence. This exclusion resulted in a final sample size of 160 participants. Detailed demographic information related to the study's participants is provided in Table 1.

Table 1. Demographic characteristics of the sample

<i>Demographic Characteristics</i>	<i>f</i>	<i>%</i>
<i>Gender</i>		
Female	124	77.5
Male	36	22.5
<i>Academic Year</i>		
3 rd Year	93	58.1
4 th Year	67	41.9
Total	160	100.0

Table 1 presents the demographic characteristics of the participants in the study. The majority of the sample was female, with 124 participants accounting for 77.5% of the total, while males represented a smaller portion with 36 participants, or 22.5%. In terms of academic year distribution, 3rd-year students made up the majority at 58.1% with 93 participants, whereas 4th-year students comprised 41.9% with 67 participants. The overall sample size for the study consisted of 160 participants. The distribution suggests a higher female representation and a slight majority of students in their 3rd academic year, providing context for subsequent analyses and interpretations in the study. Supplementary details regarding the participants' engagement in artistic activities are presented in Table 2.

Table 2. Artistic activities of the study group

<i>Artistic Activities</i>	<i>f</i>	<i>%</i>
<i>Frequency of Participation</i>		
Never	34	21.3
Rarely	84	52.5
Often	42	26.3
<i>Family Interest in Art</i>		
Yes	31	19.4

No		129	80.6
<u>Participation in Painting Course</u>			
Yes	26		16.3
No	134		83.7
Total		160	10.0

Table 2 presents a comprehensive overview of the participants' engagement in artistic activities. In terms of the frequency of participation in artistic activities, the data reveals that a notable majority of 52.5% of the participants engage in such activities only rarely. In contrast, 26.3% often partake in artistic pursuits, while 21.3% have never participated in any form of artistic endeavor. When exploring the familial context, a substantial 80.6% of participants indicated that there isn't a prevalent interest in art within their families. However, 19.4% of participants have family members who exhibit a pronounced interest in the arts. Additionally, regarding formal artistic education, 83.7% of the study group has not enrolled in any painting courses, whereas a smaller segment, specifically 16.3%, have taken painting courses. The data underscores a varied range of exposure to and engagement with the arts among the study group.

Instruments

To facilitate a comprehensive exploration of the research objectives, the current investigation leveraged two primary measurement tools, alongside a demographic inquiry:

Self-efficacy Scale for Visual Arts Teaching

This instrument was developed by Dilmaç (2009) and meticulously structured around a 5-point Likert scale, ranging from "strongly disagree" at one end to "strongly agree" at the other. It consists of a total of 31 items, 13 of which are negative (e.g., I would be happy if the content of the visual arts course was limited.) and 18 of which are positive (e.g., I really like the visual arts lesson.) in a one-factor structure. The maximum score that can be obtained from this scale is 155 and the minimum score is 31. The scale was originally validated with a Cronbach's alpha reliability coefficient of $\alpha=.86$, a metric that was congruently mirrored in the present study with a coefficient value of $\alpha=.86$.

Attitude Towards Teaching Profession Scale

The scale was developed by Tanel, Şengören, and Tanel (2007) and anchored in a 5-point Likert scale, albeit with response options spanning from "strongly agree" to "strongly disagree". It consists of a total of 17 items, 8 of which are negative (e.g., I regret choosing teaching as a profession.) and 9 of which are positive (e.g., I'm proud to work as a teacher.) in a one-factor structure. On this scale, the maximum score is 85, and the minimum score is 17. In its inaugural validation, the scale boasted a Cronbach's alpha reliability coefficient of $\alpha=.87$. In the context of the current research endeavour, the reliability coefficient was ascertained to be $\alpha=.84$.

Demographic Questionnaire

Crafted and refined by the primary investigator, this form was harnessed to capture salient demographic (e.g., gender, grade level etc.) and personal details (e.g., the frequency of participation in artistic activities, the members of family interested in art etc.) pertinent to the study. The meticulous selection and deployment of these instruments were geared towards ensuring the rigorous assessment of pre-service primary teachers' self-efficacy beliefs in visual



arts instruction and their professional attitudes, underpinned by the correlational research design.

Data Collection

Before initiating the data collection process, it was deemed imperative to obtain the necessary permissions from the pertinent academic institution. After securing the requisite approvals from the affiliated university, a systematic approach to data collection was adopted.

The instruments for data collection were meticulously administered, ensuring a conducive environment that would be conducive for the participants to reflect and respond. Prior to completing the instruments, participants were provided with a comprehensive briefing, elucidating the overarching objectives and underlying dimensions of the research. Emphasis was placed on the paramount importance of providing authentic and forthright responses, as this would be instrumental in ensuring the integrity and reliability of the data amassed.

The entire data collection procedure was structured to be time-efficient, typically spanning an estimated duration of 20 to 30 minutes. Recognizing the potential challenges of diverse schedules and unforeseen circumstances, provisions were explicitly established to accommodate those participants who, for various reasons, were unable to partake during the initial data collection session. This ensured a comprehensive and inclusive approach, aiming to capture the perspectives of all designated participants.

Statistical Analysis

The rigorous analysis and interpretation of the data amassed in this investigation were facilitated using the IBM SPSS 25 statistical software suite. Preliminary statistics encompassing measures of central tendency, variance, and distribution were computed for all pertinent research variables, offering an initial understanding of the data distribution, trends, and potential outliers. Before delving into inferential statistical analyses, it was imperative to verify the normal distribution of the data. Thus, the scores derived from the instruments underwent a normality assessment, with parameters such as skewness and kurtosis values meticulously evaluated. For addressing both the inaugural and subsequent research inquiries, the Independent Samples T-Test was employed, pivotal in comparing the means of two distinct groups to determine if there existed any statistically significant difference between them. The third research inquiry necessitated the use of the One-way Analysis of Variance (ANOVA), which was pivotal for contrasting mean scores across several groups and discerning any significant disparities among them. To elucidate the potential correlation between the self-efficacy beliefs of pre-service primary educators concerning visual arts instruction and their overarching professional attitudes, the Pearson product-moment correlation coefficient, resonating with the methodology championed by Can (2013), was employed. This correlation assessment provided insights into the strength and direction of the linear relationship between the variables. It is considered that this study's sample size is sufficient for these statistics. Indeed, according to the literature, there should be at least thirty (30) subjects per group for correlational, causal-comparative, and true experimental designs (Fraenkel, Wallen, & Hyun, 2011; Gay, Mills, & Airasian, 2006). In sum, this multifaceted statistical approach ensured a comprehensive exploration of the research objectives, leading to insightful and data-driven conclusions.

Results

Findings Related to the First Question of the Research

The primary query posed in this investigation sought to determine: "What is the magnitude of pre-service primary teachers' self-efficacy beliefs concerning visual arts instruction?" The statistical outcomes relevant to this query are delineated in Table 3.

Table 3. Descriptive statistics for self-efficacy beliefs in visual arts instruction

Variable	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Self-efficacy Beliefs	160	75	149	108.9	14

Upon examination of the data presented in Table 3, we observe a spectrum of scores that participants achieved on the self-efficacy beliefs scale. The scores varied from a low of 75 to a high of 149. The distribution of these scores, with a standard deviation of 14, centers around a mean of 108.9. Such data distribution indicates a general trend among participants: their self-efficacy beliefs regarding visual arts instruction are notably elevated. The mean score of 108.9, which sits significantly above the midpoint of the possible score range, underscores this observation. This suggests that the participants, on average, possess a heightened sense of confidence and competence in their ability to instruct in the domain of visual arts.

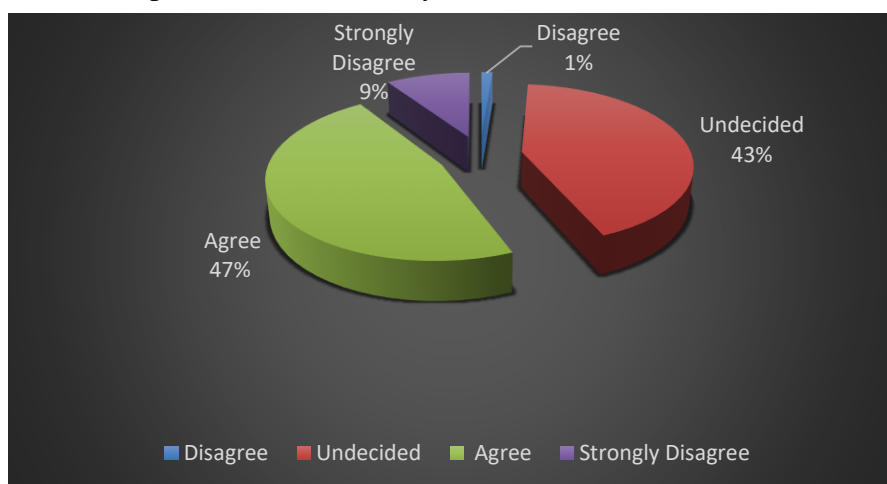


Figure 1. Distribution of pre-service primary teachers' self-efficacy levels in visual arts instruction based on scale total scores

In Figure 1, which delineates the self-efficacy levels of pre-service primary teachers in visual arts instruction based on their total scores from the scale, several notable trends emerge. A mere 1% of the participants, representing two individuals, expressed a lack of confidence, indicating that they "disagree" with their self-efficacy in visual arts teaching. The largest cohort, comprising 43% or 68 participants, remained ambivalent, marking themselves as "undecided" concerning their proficiency in this domain. Almost half, precisely 47% or 75 participants, exhibited confidence, aligning with the "agree" category regarding their self-efficacy beliefs in visual arts instruction. Conversely, a smaller segment, 9% or 15 participants, expressed strong reservations, categorizing themselves under "strongly disagree." This dispersion offers a nuanced perspective into the spectrum of self-belief among pre-service primary teachers about their capabilities in visual arts instruction.

Findings Related to the Second Question of the Research

The subsequent research query was framed as: “Are there discernible differences in pre-service primary teachers’ self-efficacy beliefs in visual arts instruction based on gender, academic year, having family members passionate about art, engagement in artistic endeavors, and enrollment in painting courses?”

To decipher potential disparities predicated on gender, an independent samples t-test was undertaken. Table 4 elucidates these results. A cursory analysis of the independent samples t-test statistics divulges no statistically significant variances in self-efficacy beliefs scores contingent on gender [$t(158) = -.646, p > .05$].

Table 4. Gender-based comparative analysis of self-efficacy beliefs in visual arts instruction

Variable	<i>N</i>	<i>M</i>	<i>SS</i>	<i>df</i>	<i>t</i>	<i>p</i>
Self-efficacy Beliefs						
Female	124	108.58	13.91	158	-.646	.519
Male	36	110.30	14.45			

In an endeavor to discern potential disparities pertaining to self-efficacy beliefs in visual arts instruction based on academic progression, an independent samples t-test was meticulously employed. The findings, as delineated in Table 5, illuminate that pre-service primary teacher in their fourth academic year ($M=112.53$) manifest marginally augmented self-efficacy beliefs relative to those navigating their third academic year ($M=106.40$). The results derived from this t-test are statistically compelling, indicating discernible distinctions between these two academic strata. The evidence underscores a proclivity for elevated self-efficacy beliefs among fourth-year students, as substantiated by the t-statistic value of $t(158)=-2.788$ and an associated significance level of $p<.01$. It is paramount to interpret these findings within the pedagogical context, recognizing the developmental trajectories of pre-service educators as they progress academically, potentially accruing heightened confidence and refined instructional perspectives in visual arts pedagogy.

Table 5. Comparative analysis across academic years: dissecting self-efficacy beliefs in visual arts instruction

Variable	<i>N</i>	<i>M</i>	<i>SS</i>	<i>df</i>	<i>t</i>	<i>p</i>
Self-efficacy Beliefs						
3rd year	93	106.40	13.97	158	-2.788	.006*
4th year	67	112.53	13.34			

* $p<.01$

To fathom the potential nexus between the frequency of artistic engagement and self-efficacy beliefs pertaining to visual arts instruction, a comprehensive Analysis of Variance (ANOVA) was judiciously employed. The analytical outcomes, encapsulated in Table 6, manifest that participants who often engage in artistic endeavors ($M=111.35$) exhibit marginally enhanced self-efficacy beliefs relative to those who indulge in such activities on a rarer basis ($M=109.72$) or abstain altogether ($M=104.17$). However, it is of paramount importance to highlight that, despite these observed variations, the ANOVA outcomes do not evince any statistically significant discrepancies in self-efficacy beliefs across these distinct frequencies of artistic participation. This is affirmed by an F-statistic value of $F=2.784$ and a concomitant significance level exceeding the commonly accepted threshold, with $p>.05$. In the light of these findings, it becomes discernible that while there might be perceptible trends suggesting a positive association between frequent artistic involvement and heightened self-efficacy beliefs, such trends are not statistically potent enough to warrant unequivocal conclusions. This underscores the multifaceted nature of self-efficacy beliefs and the myriad factors that potentially influence

them beyond mere frequency of artistic engagement.

Table 6. ANOVA-derived insights into self-efficacy beliefs in visual arts teaching categorized by artistic activity engagement frequency.

Variable	Frequency	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
<i>Self-efficacy Beliefs</i>	Never	34	104.17	11.16	2.784	.065
	Rarely	84	109.72	10.72		
	Often	42	111.35	12.10		

The potential ramifications of having family members with a predilection for arts on participants' self-efficacy beliefs in visual arts instruction were meticulously scrutinized using an independent samples t-test. The analytical outcomes, as portrayed in Table 7, suggest that participants who have family members with artistic inclinations, with a mean score of $M=113.38$, tend to possess marginally elevated self-efficacy beliefs in contrast to those without such familial artistic proclivities, who registered a mean score of $M=107.91$. Significantly, the t-test unveiled a statistically robust distinction, emphasizing that the presence of family members with artistic propensities translates to bolstered self-efficacy beliefs in visual arts instruction. This assertion is corroborated by the t-statistic value of $t(158) = 1.97$ and the associated significance level of $p \leq .05$. This discovery accentuates the importance of familial influences and the environmental context in shaping self-efficacy beliefs. Familial members with artistic inclinations may serve as inspirations or even informal mentors, potentially fostering a more conducive environment for nurturing artistic self-efficacy beliefs.

Table 7. Dissecting the impact of familial artistic interests on self-efficacy beliefs in visual arts teaching via independent-samples t-tests

Variable	<i>N</i>	<i>M</i>	<i>SS</i>	<i>df</i>	<i>t</i>	<i>p</i>
Is anyone in the family interested in art?						
Yes	31	113.38	15.14	158	1.97	.05*
No	129	107.91	13.56			

* $p \leq .05$

In an endeavor to discern the potential implications of prior engagement in painting courses on participants' self-efficacy beliefs concerning visual arts instruction, an independent samples t-test was judiciously employed. The analytical outcomes, encapsulated in Table 8, highlight that participants who have historically enrolled in painting courses, with a mean score $M=113.00$, exhibit marginally elevated self-efficacy beliefs relative to those who have not embarked on such courses, registering a mean score of $M=108.19$. Notwithstanding this observed trend, it is pivotal to underscore that the t-test outcomes did not evince a statistically compelling distinction between these two cohorts, as indicated by the t-statistic value of $t(158) = 1.609$ and the associated significance level exceeding the standard threshold, with $p > .05$. This finding suggests that while a history of engagement in painting courses might be associated with a perceptible increment in self-efficacy beliefs pertaining to visual arts instruction, such prior enrollment does not incontrovertibly translate to statistically significant elevations in these beliefs. This underscores the intricate nature of self-efficacy beliefs and the myriad influences that potentially mold them, beyond mere formal course participation.



Table 8. Analysis by prior enrollment in painting courses on self-efficacy beliefs in visual arts instruction

Variable	<i>N</i>	<i>M</i>	<i>SS</i>	<i>df</i>	<i>t</i>	<i>p</i>
Have you taken a painting course before?						
Yes	26	113.00	15.41	158	1.609	.11
No	134	108.19	13.64			

Findings Related to the Third Research Question

In addressing the third research query, an understanding was sought regarding the perceptions of pre-service primary teachers concerning their professional attitudes toward the teaching vocation. A detailed analysis of Table 9, which presents a comprehensive statistical overview of participants' attitudes towards the teaching profession, provides several insights.

The data indicates that the scores on the attitude scale for participants ranged from a low of 48 to a high of 85. Centered around a mean score of 72.27 and with a standard deviation of 19.43, it is suggested that a generally favorable attitude towards the teaching profession is held among the participants. This mean score, positioned notably above the midpoint of the possible scoring range, signifies that a positive orientation towards the teaching profession is prevalent among the participants in this study. Thus, the pre-service primary teachers, as represented in this dataset, appear to predominantly possess a positive and affirming professional attitude towards their future teaching roles.

Table 9. Descriptive analysis of attitudes towards the teaching profession

Variable	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Attitudes	160	48	85	72.27	19.43

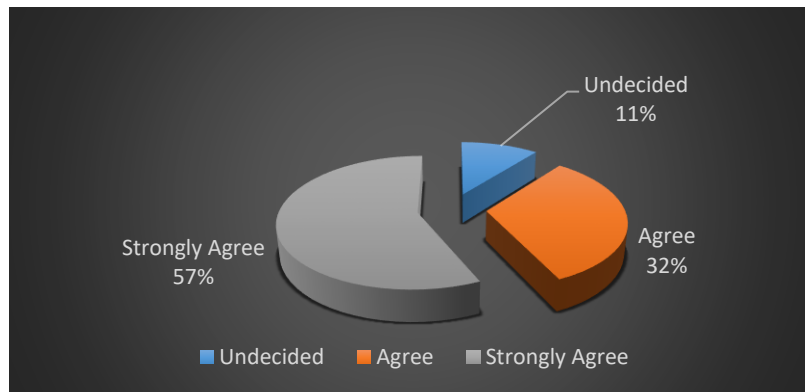


Figure 2. Pre-service primary teachers’ attitudes toward the teaching profession in visual arts teaching for scale total scores

Diving deeper into the data, Figure 2 offers a nuanced distribution of the participants' attitudes towards the teaching profession. A closer scrutiny of the figure indicates that a minor segment, 10.6% or 17 participants, remained ambivalent about the profession, marking themselves as "undecided." A more significant portion, 32.5% or 52 participants, exuded a positive sentiment, aligning with the "agree" category. Notably, the majority, 56.9% or 91 participants, showcased a pronounced confidence and commitment towards the teaching profession, resonating with the "strongly agree" stance. This distribution underscores a prevailing optimistic inclination among

pre-service primary teachers regarding their prospective profession.

Findings Related to the Fourth Research Question

In addressing the fourth research question, variations in the attitudes of pre-service primary teachers towards the teaching profession based on gender and academic year were explored. Utilizing the independent samples t-test, potential disparities based on gender were examined, and the results of this analytical procedure are presented in Table 10. Upon detailed scrutiny of the data, it was observed that female participants exhibited an average score ($M=72.79$) that was slightly elevated in comparison to the mean score of their male peers ($M=70.50$). This suggests that female participants held a somewhat more favorable attitude towards the teaching profession than did male participants. However, this observed difference did not attain statistical significance, as evidenced by a t-value of 1.284 and a corresponding p-value that was greater than .05.

Table 10. T-test Outcomes for Gender-Based Differences in Attitudes Toward the Teaching Profession

Variable	<i>N</i>	<i>M</i>	<i>SS</i>	<i>df</i>	<i>t</i>	<i>p</i>
Attitudes						
Female	124	72.79	9.45	158	1.284	.201
Male	36	70.50	9.30			

In further exploration of the research question concerning variations in pre-service primary teachers' attitudes based on academic year, an independent samples t-test was utilized. The outcomes of this analysis are encapsulated in Table 11.

A meticulous examination of the table data reveals that pre-service primary teachers in their 4th year registered an average score ($M=73.67$), indicative of a more positive disposition towards the teaching profession when juxtaposed against the mean score of their 3rd-year counterparts ($M=70.32$). Crucially, this observed discrepancy between the two academic years reached statistical significance. This assertion is corroborated by a t-value of 2.242 and a corresponding p-value that falls below the .05 threshold, underscoring the statistical validity of the year-based difference in attitudes.

Table 11. T-test outcomes for year-based differences in attitudes toward the teaching profession

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Attitudes						
4 th Year	93	73.67	9.75	158	2.242	.02*
3 rd Year	67	70.32	8.99			

* $p < .05$

Findings Related to the Fifth Research Question

In addressing the fifth research query, the relationship between pre-service primary teachers' self-efficacy beliefs in visual arts instruction and their overarching professional attitudes was explored. The Pearson product-moment correlation coefficient (r) was harnessed to evaluate the potential linear association between these two variables, and the results are presented in Table 12.

Upon rigorous examination of the data, a positive correlation between the two aforementioned



variables emerged. Specifically, a modest yet statistically significant positive association exists between participants' self-efficacy beliefs in visual arts instruction and their professional attitudes towards teaching. A correlation coefficient of $r=.334$ quantifies this relationship. The statistical significance of this correlation is reinforced by a p -value that is less than .01, suggesting that as pre-service primary teachers' confidence and beliefs in their ability to teach visual arts increase, their positive attitudes towards the teaching profession also tend to elevate.

Table 12. Correlation coefficients between self-efficacy beliefs in visual arts instruction and attitudes toward the teaching profession

Variables	1.	2.
1. Self-efficacy Beliefs	-	.334*
3. Attitudes toward the Teaching Profession	.334*	

* $p<.01$

Discussion, Conclusions, and Implications

The focal point of this research was to dissect the intricate relationship between the self-efficacy beliefs in visual arts instruction and the professional attitudes of pre-service primary educators. In the context of this study, the forthcoming discussions and conclusions are juxtaposed with relevant academic literature.

Emerging from this study was a discernible, albeit modest, correlation between the self-efficacy beliefs of pre-service educators in visual arts instruction and their attitudes toward the teaching profession. This finding dovetails with a broader academic consensus that underscores the nexus between self-efficacy and various behavioral outcomes. Historical academic endeavors have consistently spotlighted a profound linkage between an individual's self-efficacy beliefs, their consequent behaviors, and their predisposition to apply these beliefs in real-world contexts (Beard, 2016; Gomez, Trespalacios, Hsu, & Yang, 2022; Joo, Park, & Lim, 2018; Hatlevik, Throndsen, Loi, & Guðmundsdóttir, 2014; Krumsvik, 2011; Marsh & Craven, 2006).

Drawing from these insights, it can be inferred that pre-service educators with heightened self-efficacy beliefs in visual arts instruction are more likely to harbor optimistic perspectives about the teaching profession. This positive disposition, in turn, augurs well for their imminent roles in the educational ecosystem. In the tapestry of art education, the salience of entrusting the pedagogical reins to educators who are not only adept in their craft but also exude robust self-efficacy beliefs and positive attitudes toward art instruction cannot be overstated (Çakır-İlhan, 2003; Lummis et al., 2014; Welch, 1995).

Furthermore, the study discerned that the attitudes of the participating pre-service primary educators toward visual arts instruction generally skewed positively, aligning above an average benchmark. This observation resonates with findings from a previous study on Turkish primary educators by Dilmaç & İnanç (2015). Such a study confirmed a prevailing sentiment among primary educators: a self-perceived proficiency in imparting visual arts instruction. This self-assessment, when viewed through the lens of pedagogical efficacy, can be perceived as a pivotal initial step. Specifically, it is vital that pre-service educators, slated to helm visual arts courses in their forthcoming professional trajectories, recognize and affirm their prowess in art instruction even before they formally step into their roles.

As a result of the research, participants' self-efficacy beliefs in visual arts teaching did not

significantly differ according to gender. In support of this result, there are studies in the literature showing that there is no significant relationship between self-efficacy and gender (Akbaş & Çelikkaleli, 2006; Akbulut, 2006; Avcı, 2008; Brandon, 2000; Chao, 2001; Çatıkkaş, 2014; Dilmaç & İnanç, 2015; Doğan, 2013; Kaçar & Beycioğlu, 2017; Steele-Dadzie, 2004; Torkzadeh & Van Dyke, 2002; Tschannen-Moran & Woolfolk-Hoy, 2001). Among the reasons why self-efficacy beliefs do not differ in terms of gender, coeducation, the high rate of female education in Turkey, the development of artistic talents independent of gender, and the importance of individual effort in personal development may partially explain this situation.

The belief in self-efficacy among the participants about teaching visual arts appeared to be influenced by their class level. A discernible augmentation in self-efficacy beliefs pertaining to visual arts instruction and attitudes towards the teaching profession was observed as students advanced academically. This observed trend is likely a consequence of the nearing professional engagement of 4th-year students, accentuated by their real-world exposure via school experience courses. Such experiences enable them to manifest their accrued knowledge. Corroborating this observation, literature scrutiny indicates that self-efficacy beliefs typically intensify with accruing professional experience and age (Çetin, 2008; Çevik, 2011; Dilmaç & İnanç, 2015; Ekici, 2008).

A standout revelation from the investigation was the heightened self-efficacy beliefs among individuals who had family members inclined towards art, compared to their counterparts without such familial influences. This finding accentuates the indispensable role of domestic endorsement and ambient influences in shaping perceptions in art education. The influence of a family member with artistic leanings reinforces the self-efficacy beliefs of aspiring educators. Such an outcome is in congruence with Bandura's (1977) social learning theory, which emphasizes the significance of observational learning and role modelling.

Additionally, a prevailing positive disposition towards the teaching vocation was evident among participants. Such an inclination can potentially be attributed to their volitional selection of this profession, complemented by their direct engagements during school training programs. This observation finds resonance in extant academic literature (Aksoy, 2010; Kocaarslan, 2014; Sandıkçı, 2011).

Intriguingly, no marked discrepancies based on gender were discerned in the attitudes of pre-service teachers towards their chosen profession. This observation aligns seamlessly with numerous prior academic investigations (Açışlı & Kolomuç, 2012; Aslim, 2013; Bulut, 2009; Çapa & Çil, 2000; Ergen & Toman, 2014; Gürbüztürk & Genç, 2004; Şahin-Taşkın & Hacıömerlioğlu, 2010; Tunçeli, 2013). It underscores that considerations of professional compatibility supersede gender-based predispositions. This revelation is invaluable, challenging stereotypes positing inherent gender-specific professional orientations.

The derivations from this study underscore the primacy of fostering robust self-efficacy beliefs among pre-service teachers concerning visual arts instruction as they transition into their professional roles. It becomes pivotal for academic curricula and teacher mentors to accentuate this facet. Parallely, art lessons' instrumental role in refining students' creative faculties is irrefutable. There's a pressing need to groom pre-service primary educators, arming them with modern art education methodologies. Such upskilling will invariably amplify their overarching professional dispositions. Recognizing the pivotal role of environmental factors in art pedagogy, initiatives to engage parents and sensitize them to this aspect are warranted.

However, the inherent constraints of this study warrant acknowledgment. Grounded predominantly in the self-perceptions of pre-service educators, the study lacks an empirical assessment of the actual self-efficacy of participants. The concentration on respondents from a singular academic institution also necessitates circumspection in generalizing the findings. Bearing these nuances in mind, prospective research endeavors should venture into gauging the self-efficacy beliefs of pre-service primary educators in art instruction across varied contexts. Such explorations should adopt both cross-sectional and longitudinal approaches, focusing on empirical skills evaluation and direct observation.

Furthermore, it's recommended that future studies incorporate a broader demographic spread, ensuring representation across different socio-economic, cultural, and geographic backgrounds to obtain a more holistic understanding. It would also be beneficial to incorporate qualitative research methods, such as in-depth interviews and focus groups, to delve deeper into the nuances of pre-service teachers' experiences and beliefs. Given the observed influence of familial artistic inclinations on self-efficacy beliefs, it might be enlightening to explore the dynamics of these family influences in greater depth. This can provide insights into how to emulate such positive influences in educational settings.

On an educational policy level, there is an implication for teacher training institutions to re-evaluate their curricula. Ensuring that pre-service teachers are exposed to and immersed in practical art teaching experiences might elevate their self-efficacy beliefs, even before they step into a classroom. Additionally, fostering collaborative platforms where pre-service teachers can interact and learn from seasoned art educators might bridge the gap between theory and practice, further enhancing their self-efficacy beliefs and attitudes towards the profession.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to affect the research reported in this paper.

Note

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