

CURRENT STATUS OF DIFFERENTIATED INSTRUCTION COMPETENCY AMONG PRE-SERVICE FINE ARTS TEACHERS AT SELECTED UNIVERSITIES: A SELF-ASSESSMENT STUDY

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Received: April 22, 2026. Revised: July 1, 2026. Accepted: July 6, 2026.

Abstract. Differentiated instruction (DI) competency is an important pedagogical competency for pre-service Fine Arts teachers. This study examines their self-assessed DI competency and the perceived challenges associated with its development. A quantitative survey was conducted with 277 third- and fourth-year pre-service Fine Arts teachers from four universities in Vietnam. The self-assessment instrument comprised 14 observable indicators grouped into six competency components. Participants rated their overall DI competency at a moderate level. Relatively lower ratings were reported for designing differentiated lesson plans, implementing differentiated instruction, and assessing student learning through differentiated approaches. The results provide an empirical basis for identifying areas that require greater attention in Fine Arts teacher education and may inform the design of training and assessment activities aimed at strengthening DI competency.

Keywords: differentiated instruction competency; pre-service Fine Arts teachers; self-assessment; teacher education.

1. Introduction

The 2018 General Education Curriculum (GEC) defines differentiated instruction (DI) as an approach that responds to learner diversity by taking into account students' psycho-physiological characteristics, abilities, needs, interests, and career orientations, with differentiation increasing across grade levels (Ministry of Education and Training [MOET], 2018a). In Fine Arts education, this requires teachers to adapt educational plans to students' artistic aptitudes, physical conditions, age, and individual characteristics, while also considering differences in gender, ethnicity, regional and cultural backgrounds, and learning contexts (MOET, 2018b; Nguyen et al., 2022). DI is particularly relevant to Fine Arts because students differ in artistic ability, creative thinking, learning pace, and modes of expression. Teachers therefore need to adapt instruction and provide support suited to different learners. DI competency is also included in the program learning outcomes of the undergraduate Fine Arts Education program at Hanoi National University of Education (HNUE, 2022). Developing this competency is therefore part of preparing pre-service Fine Arts teachers to meet the requirements of the 2018 GEC.

DI competency has been identified as an important component of teacher competence and is reflected in pedagogical competency frameworks and program learning outcomes in undergraduate teacher education programs (Pham, 2020; Nguyen & Pham, 2026; Nguyen, 2018; Duong, 2018; Trinh & Mai, 2019). Research with both in-service and pre-service teachers has reported limitations in this area. Nguyen and Ngo (2025) and Do et al. (2020) found low levels of DI competency among in-service teachers, while Nguyen (2021) and Trinh and Mai (2019)

reported similar limitations among pre-service teachers. These studies indicate that DI competency needs greater attention during teacher preparation. In general, although DI and teacher competency have been widely studied, research focusing specifically on DI competency among pre-service Fine Arts teachers remains limited. This study therefore addresses two questions: (1) What is the current state of DI competency among pre-service Fine Arts teachers? and (2) What challenges do pre-service Fine Arts teachers perceive in developing this competency? To examine these questions, a quantitative survey was conducted with 277 third- and fourth-year pre-service Fine Arts teachers from four universities in Vietnam. The analysis focused on students' self-assessments of their DI competency and their perceptions of the challenges associated with its development.

2. Methodology

This study employed a quantitative cross-sectional survey design to examine DI competency among pre-service Fine Arts teachers in Vietnam. The study comprised four stages: participant selection, instrument development, data collection, and statistical analysis.

2.1. Participants

The participants were 277 third- and fourth-year pre-service Fine Arts teachers from four universities offering Fine Arts teacher education programs in Vietnam: Hanoi National University of Education (n = 85), the National University of Arts Education (n = 100), the University of Arts, Hue University (n = 45), and Saigon University (n = 47). Third- and fourth-year students were selected because they had completed core pedagogical courses and gained initial school-based practicum experience. Participants were recruited using proportional stratified random sampling by institution and year of study. The sample comprised 186 third-year and 91 fourth-year students, including 224 females and 53 males.

2.2. Research instrument

The questionnaire was developed based on the DI competency framework proposed by Nguyen and Pham (2026), which includes six competency components and fourteen observable indicators. It addressed two areas: (1) the current level of DI competency among pre-service Fine Arts teachers and (2) the perceived challenges affecting its development. The questionnaire was reviewed by experts to establish content validity before data collection. All items were rated on a five-point Likert scale ranging from 1 (very low) to 5 (very high). Mean scores were interpreted as follows: 1.00-1.80 = very low; 1.81-2.60 = low; 2.61-3.40 = moderate; 3.41-4.20 = high; and 4.21-5.00 = very high.

2.3. Data collection

Data were collected during the 2025–2026 academic year using an anonymous questionnaire administered to pre-service Fine Arts teachers at the four participating universities. Participation was voluntary, and respondents were informed of the study purpose before completing the questionnaire. Returned questionnaires were checked for completeness and consistency before analysis.

2.4. Data analysis

Internal consistency was examined using Cronbach's alpha, with coefficients above 0.70 considered acceptable. All six competency components met this threshold, and all items were retained for analysis. Descriptive statistics, including means and standard deviations, were used to examine DI competency across the six components and fourteen indicators and to identify perceived challenges. Independent-samples t-tests were conducted to examine differences in DI competency

by gender and year of study. All analyses were performed using IBM SPSS Statistics 27. Higher scores indicated higher levels of DI competency and greater perceived challenges, respectively.

3. Theoretical framework on differentiated instruction competency

DI has been defined in different ways in international and Vietnamese research, but most accounts share the view that instruction should be adapted to learner differences to improve learning outcomes. Tomlinson (2001) identifies content, process, and product as the main dimensions of differentiation, based on students' readiness, interests, and learning profiles. Smale-Jacobse et al. (2019) extend this view by emphasizing teachers' proactive role in planning, implementing, and evaluating adaptations in content, process, product, the learning environment, and instructional time. Pozas et al. (2020) describe DI as a flexible and coherent set of instructional practices that responds to differences in students' readiness, interests, learning styles, cultural backgrounds, and motivation. In Vietnamese research, DI is commonly understood as a pedagogical orientation in which teaching and learning are organized around differences in learners' abilities, interests, needs, and learning conditions to improve outcomes and promote educational equity (Ton, 2006; Nguyen & Tran, 2020). These perspectives suggest that DI rests on three main ideas: recognizing learner diversity, adapting instruction, and supporting each learner's potential. In this study, DI in Fine Arts education is understood as an instructional orientation in which teachers analyze differences in students' abilities, cognitive styles, learning needs, interests, and physical conditions, and then design, implement, and evaluate activities for individuals or groups in line with the intended outcomes of the Fine Arts curriculum.

Teaching competency is a core element of pedagogical competency and refers to the ability to perform teaching tasks effectively and address instructional problems through the flexible and creative use of professional knowledge, skills, and attitudes (Trinh & Mai, 2019). DI competency, from this perspective, refers to a teacher's ability to analyze learner diversity and to design, implement, and evaluate instruction in response to different student characteristics and learning needs (Nguyen & Tran, 2020). For pre-service Fine Arts teachers, this study defines DI competency as an integrated set of knowledge, skills, and pedagogical practices that enables them to organize differentiated teaching effectively in Fine Arts classrooms.

Studies have proposed different structures of DI competency. Coubergs et al. (2017) identify five core components: growth mindset, ethical orientation, flexible grouping, adaptive teaching, and alignment between instructional input and learner outcomes. Gheyssens et al. (2022) emphasize the integration of theoretical understanding and adaptive pedagogical practice. In Vietnam, Dinh et al. (2017) focus on learner analysis, curriculum design, and differentiated instruction, while Le (2016) proposes components related to learner assessment, instructional resource development, differentiated content design, teaching methods, and classroom management.

Specifically, Nguyen and Pham (2026) developed a DI competency framework specifically for pre-service Fine Arts teachers. The framework draws on the learning outcomes of Fine Arts teacher education programs, the Professional Standards for General Education Teachers, and the requirements of the 2018 General Education Curriculum, particularly the Fine Arts curriculum. It consists of six components that represent the professional requirements for implementing DI in Fine Arts education. This study adopts this framework as both its theoretical and assessment framework. The six components are: (1) conceptual competency in DI; (2) competency in analyzing learners and the Fine Arts curriculum; (3) competency in designing differentiated lesson plans; (4) competency in implementing differentiated instructional plans; (5) competency in assessing and evaluating student learning outcomes in a differentiated manner; and (6) competency in managing differentiated instructional activities. These components cover the knowledge, skills, and professional practices needed to implement DI in diverse Fine Arts classrooms.

4. Results and Discussion

4.1. Scale Reliability Testing

Data were collected using a structured questionnaire based on the DI competency framework developed by Nguyen and Pham (2026). As shown in Table 1, all six competency scales had Cronbach's alpha coefficients above 0.70, indicating acceptable internal consistency. The full scale also showed high reliability (Cronbach's alpha = 0.945), with corrected item-total correlations ranging from 0.736 to 0.889. All six competency components were retained for further analysis.

Table 1. Reliability coefficients of the DI competency scales (N=277)

DI competency scale	Items	Cronbach's Alpha
Conceptual competency in differentiated instruction	2	0.736
Competency in analyzing learners and the Fine Arts curriculum	2	0.819
Competency in designing differentiated lesson plans	4	0.888
Competency in implementing differentiated instructional plans	2	0.889
Competency in assessing and evaluating student learning outcomes in a differentiated manner	2	0.862
Competency in managing differentiated instructional activities	2	0.823

4.2. Differentiated instruction competency among pre-service Fine Arts teachers at universities based on student self-assessment

Among the 277 pre-service Fine Arts teachers surveyed, most considered DI competency important to their professional preparation. Specifically, 61.7% rated it as "very important" and 34.3% as "important," while only 3.6% selected "neutral." These responses show that students generally recognized DI competency as an important part of the pedagogical competencies required of Fine Arts teachers. This level of awareness provides a useful basis for organizing training activities aimed at developing the competency. In this study, DI competency was assessed through six components comprising 14 observable indicators. The results are presented in Table 2.

Table 2. DI competency of pre-service Fine Arts teachers based on self-assessment results

DI competency components	Mean	SD	Rank
Conceptual competency in differentiated instruction	3.10	0.803	3
Competency in analyzing learners and the Fine Arts curriculum	3.16	0.748	1
Competency in designing differentiated lesson plans	3.06	0.715	5
Competency in implementing differentiated instructional plans	3.07	0.736	4
Competency in assessing and evaluating student learning outcomes in a differentiated manner	3.04	0.788	6
Competency in managing differentiated instructional activities	3.12	0.778	2
Overall Mean	3.09	0.675	

The results in Table 2 show that the overall DI competency of pre-service Fine Arts teachers was at a moderate level (M = 3.09, SD = 0.675). This suggests that students had developed a basic understanding of DI and some initial capacity to apply it, but their competency had not yet reached a high level. The relatively small standard deviation also shows limited variation in students' self-assessments.

Of the six competency components, analyzing learners and the Fine Arts curriculum received the highest mean score ($M = 3.16$, $SD = 0.748$). This was followed by managing differentiated instructional activities ($M = 3.12$, $SD = 0.778$) and conceptual competency in DI ($M = 3.10$, $SD = 0.803$). These results show that students were relatively confident in understanding learner characteristics and curriculum requirements, both of which are important for planning differentiated instruction.

Lower scores were found in competencies more closely tied to classroom practice. Implementing differentiated instructional plans ranked fourth ($M = 3.07$, $SD = 0.736$), followed by designing differentiated lesson plans ($M = 3.06$, $SD = 0.715$). The lowest mean was recorded for assessing and evaluating student learning outcomes in a differentiated manner ($M = 3.04$, $SD = 0.788$). The pattern suggests that students had greater confidence in foundational knowledge than in applying DI through lesson design, classroom implementation, and assessment.

This pattern is consistent with previous studies reporting that pre-service teachers tend to show stronger conceptual understanding than practical teaching competency (Nguyen, 2021; Trinh & Mai, 2019). Smale-Jacobse et al. (2019) likewise note that effective DI requires more than recognizing learner differences; teachers must also be able to translate that understanding into adaptive planning, teaching, and assessment. The lower ratings for practice-oriented competencies may relate to the limited opportunities available in Fine Arts teacher education to apply DI in authentic teaching settings. Designing differentiated artistic tasks, managing studio-based activities, and assessing varied artistic products require both pedagogical knowledge and practical teaching experience. Teacher education programs therefore need to provide more opportunities for students to practice these competencies through methodology courses, microteaching, and teaching practicums.

4.3. Observable indicators and group differences in differentiated instruction competency among pre-service Fine Arts teachers based on student self-assessment.

Each DI competency component was examined through a set of observable indicators. Table 3 presents students' self-assessments of these indicators.

**Table 3. Observable indicators of DI competency among pre-service Fine Arts teachers
(Based on student self-assessment)**

Competency component	Observable indicator	Mean	SD
1. Conceptual competency in differentiated instruction	1.1. Knowledge of the theoretical foundations of DI	3.12	0.884
	1.2. Knowledge of the DI organizational process	3.09	0.811
2. Competency in analyzing learners and the Fine Arts curriculum	2.1. Analysis and classification of learners	3.14	0.779
	2.2. Investigation of the objectives, content, and required outcomes of the Fine Arts curriculum	3.19	0.837
3. Competency in designing differentiated lesson plans	3.1. Identification of lesson objectives appropriate to different student groups	3.04	0.846
	3.2. Design of differentiated instructional content	3.20	0.819
	3.3. Selection of methods, means, and organizational forms appropriate to the objectives, content, and needs of DI	2.99	0.800
	3.4. Design of instructional activities and learning tasks suited to DI	3.09	0.763
4. Competency in implementing differentiated instructional plans	4.1. Organization of instructional activities in a differentiated manner	3.13	0.820
	4.2. Guidance, direction, and adjustment of students' learning activities in accordance with a differentiated approach	3.03	0.763

5. Competency in assessing and evaluating student learning outcomes in a differentiated manner	5.1. Identification of appropriate assessment methods and design of assessment instruments suited to the topic/lesson and learners' competency levels	3.05	0.820
	5.2. Implementation of differentiated assessment of learning outcomes and evaluation of learner progress	3.05	0.854
6. Competency in managing differentiated instructional activities	6.1. Self-assessment and self-adjustment of one's own instructional practice	3.09	0.818
	6.2. Organization of self-directed learning activities and construction of a learning environment for learners	3.16	0.813

A comparison of DI competency among pre-service Fine Arts teachers by gender and year of study is presented in the following table:

Table 4. DI competency of pre-service Fine Arts teachers by comparative parameters

Parameters		N	Mean	SD	Levene's Sig	t	Sig.(2-tailed)	Cohen's d	Mean Difference
Gender	Male	53	3.22	0.734	0.198	-1.540	0.125	-0.235	-0.158
	Female	224	3.06	0.659					
Year of Study	3rd-year students	186	2.89	0.521	<0.001	-6.976	<0.001	-1.012	-0.618
	4th-year students	91	3.51	0.762					

Note: Mean difference pertaining to year of study was calculated as third-year minus fourth-year

Table 3 provides a more detailed view of DI competency across the 14 observable indicators. All indicators were rated at a moderate level, with mean scores ranging from 2.99 to 3.20. Relatively higher ratings were found for learner and curriculum analysis, particularly the analysis of curriculum objectives, content, and expected learning outcomes ($M = 3.19$), and the analysis and classification of learners ($M = 3.14$). These indicators relate to the initial stages of DI and suggest that students had developed a basic understanding of learner diversity and curriculum requirements.

Lower ratings were found for indicators more closely related to instructional decision-making and classroom practice. Students rated their ability to design differentiated instructional content relatively highly ($M = 3.20$), but reported greater difficulty in selecting appropriate teaching methods, instructional resources, and organizational strategies ($M = 2.99$), as well as in guiding and adjusting students' learning activities during instruction ($M = 3.03$). Both indicators related to differentiated assessment were also rated at a moderate level ($M = 3.05$), suggesting that assessment remained a challenging area.

Overall, the results suggest a gap between students' conceptual understanding of DI and their self-assessed ability to apply it in practice. This pattern is consistent with previous studies showing that pre-service teachers often demonstrate stronger theoretical knowledge than practical teaching competency (Nguyen, 2021; Trinh & Mai, 2019). Smale-Jacobse et al. (2019) likewise emphasize that effective DI requires teachers not only to recognize learner diversity but also to translate that understanding into adaptive planning, classroom implementation, and ongoing assessment.

In Fine Arts teacher education, this gap may be related to the specific nature of the subject. Fine Arts teaching places strong emphasis on creativity, individual artistic expression, and multiple acceptable learning outcomes. Students in the same class may differ considerably in artistic ability, visual thinking, creative experience, learning pace, and preferred media. DI in Fine Arts therefore involves more than adapting content. Teachers need to design differentiated artistic tasks, organize flexible studio-based activities, provide individualized guidance during the creative process, and assess varied artistic products using appropriate criteria. These demands require pedagogical knowledge, artistic expertise, and practical teaching experience, making DI competency difficult to develop through coursework alone.

The comparison in Table 4 showed no statistically significant difference between male and female students ($p = .125$). This suggests that gender was not associated with differences in self-assessed DI competency in this sample. A statistically significant difference was found by year of study. Fourth-year students reported higher DI competency than third-year students ($p < .001$), with a large effect size (Cohen's $d = -1.012$). This difference may reflect the greater amount of pedagogical coursework and practicum experience completed by fourth-year students. During school practicum, students had opportunities to observe experienced teachers, design Fine Arts lesson plans, organise classroom instruction, assess students' artistic products, and receive feedback from mentor teachers and university supervisors. Such experiences may have helped them connect theoretical knowledge with professional practice and develop the practical skills required for DI.

These results suggest that DI competency develops through both study and practice rather than through theoretical learning alone. Fine Arts teacher education programs therefore need to integrate DI not only into methodology courses but also into microteaching, studio teaching, school practicum, reflective practice, and competency-based assessment. Regular opportunities to apply DI in these settings can help pre-service teachers move from conceptual understanding to more effective classroom practice.

4.4. Challenges in developing differentiated instruction competency among pre-service Fine Arts teachers.

To further explore the development of DI competency, the study examined the challenges perceived by pre-service Fine Arts teachers. The results of students' self-assessments are presented in Table 5.

Table 5. Challenges in developing DI competency among pre-service Fine Arts teachers at selected universities (Based on student self-assessment)

No.	Challenges in Developing DI Competency	Mean	SD
1	Students lack confidence in organizing differentiated instruction	3.68	0.659
2	Students lack self-discipline and proactive engagement in learning and skills practice	3.60	0.677
3	Students' own teaching competency remains limited	3.55	0.661
4	Physical and material resources supporting DI competency development remain inadequate	2.95	1.036
5	Insufficient instructional materials and guidance resources on differentiated instruction	3.42	0.569
6	The capacity of supervising teachers and practicum mentors to guide DI implementation remains limited	3.53	0.641
7	Institutions have not adequately prioritized or invested in DI competency development	2.94	0.998
8	Institutions lack established criteria and standards for assessing the DI competency of pre-service Fine Arts teachers	3.58	0.690
9	Limited time allocated for DI practice	3.53	0.640

(Note: Maximum score = 5; Minimum score = 1)

As shown in Table 5, the challenges affecting the development of DI competency among pre-service Fine Arts teachers can be grouped into three categories: student-related factors, lecturer- and practicum mentor-related factors, and institutional factors.

Student-related factors received the highest ratings. Lack of confidence in organizing differentiated instruction was rated highest ($M = 3.68$, $SD = 0.659$), followed by insufficient self-discipline and proactive engagement in learning and professional skills development ($M = 3.60$, $SD = 0.677$). Students also rated their own teaching competency as limited ($M = 3.55$, $SD =$

0.661), while limited opportunities to practice DI were another notable constraint ($M = 3.53$, $SD = 0.640$). These results suggest that students may have acquired basic knowledge of DI but still lack the confidence and practice needed to apply it effectively. This is consistent with previous research showing that DI competency develops through repeated pedagogical practice rather than theoretical coursework alone (Smale-Jacobse et al., 2019; Gheysens et al., 2022).

Lecturer- and practicum mentor-related factors were also rated as important challenges. Students reported limited capacity among university lecturers and school-based practicum mentors to guide DI implementation ($M = 3.53$, $SD = 0.641$). They also noted insufficient instructional materials and guidance resources ($M = 3.42$, $SD = 0.569$), as well as the absence of clear competency standards and assessment criteria for DI competency ($M = 3.58$, $SD = 0.690$). These results show that competency development depends not only on students' own efforts but also on the quality of professional guidance they receive. In Fine Arts teacher education, where teaching often requires flexible responses to differences in students' artistic abilities, regular guidance and feedback from lecturers and practicum mentors are especially important.

Institutional factors received lower mean scores but still showed some influence. Students rated physical facilities and instructional resources for DI as insufficient ($M = 2.95$, $SD = 1.036$), while institutional investment in and prioritization of DI competency development were also rated relatively low ($M = 2.94$, $SD = 0.998$). The larger standard deviations for these two items indicate greater variation in students' perceptions of institutional conditions. Although these factors were rated lower than student- and lecturer-related challenges, they still shape the opportunities available for developing DI competency. Fine Arts teacher education, in particular, depends on appropriate teaching spaces, studio facilities, varied artistic materials, and digital resources to support differentiated learning activities.

Overall, the challenges identified in this study involve students, lecturers and practicum mentors, and institutional conditions. Addressing them requires coordinated action across these areas. Teacher education institutions should not only strengthen curriculum content related to DI but also improve specialized facilities, instructional and digital resources, competency-based assessment, and university–school collaboration so that pre-service Fine Arts teachers have more opportunities to apply DI in authentic teaching settings.

5. Conclusion

This study examined the current level of DI competency among pre-service Fine Arts teachers at four teacher education universities in Vietnam based on students' self-assessments. The results show that participants rated their overall DI competency at a moderate level. Learner and curriculum analysis received relatively higher ratings, while lesson planning, instructional implementation, and differentiated assessment were rated lower. The study also identified perceived challenges related to students, university lecturers, school-based practicum mentors, and institutional conditions. These results indicate that developing DI competency requires sustained support throughout teacher education.

The findings have several practical implications for Fine Arts teacher education programs. Universities need to combine theoretical instruction with a clear process for developing DI competency, supported by defined competency frameworks and assessment criteria. More opportunities for authentic teaching practice are also needed, together with stronger integration of DI into methodology courses and school practicums. Closer collaboration between universities and partner schools can further support this process. Investment in specialized Fine Arts teaching spaces, studio facilities, and instructional resources can also create better conditions for students to practise DI in realistic teaching settings.

The study is limited by its reliance on self-assessment data from third- and fourth-year pre-service Fine Arts teachers at four teacher education universities. It did not include classroom observations or perspectives from other stakeholders, such as university lecturers, practicum mentors, and in-service teachers. The findings should therefore be interpreted within these limits. Future studies could include broader participant groups and more institutions and examine the design, implementation, and evaluation of pedagogical interventions aimed at developing DI competency among pre-service Fine Arts teachers.

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Conflict of interest: The author declares no conflict of interest.

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