DEVELOPMENT OF MANAGEMENT GUIDELINES FOR ENHANCING BASIC ARTISTIC KNOWLEDGE FOR STUDRNTS IN VOCATIONAL ADVERTISING TEACHING SHANDONG HIGHWAY TECHNICIAN COLLEGE, CHINA

Qi MINGZHU[1] and Natchanun SERMSRI[1]

1 College of Educational Administration and Leadership, Dhonburi Rajabhat University, Thon Buri, Bangkok, Thailand; mingzhuqi2@gmail.com, Natchanun.s@dru.ac.th

ABSTRACT
This study, using Shandong Highway Technician College as a case study, aimed to explore and develop management guidelines for improving students' fundamental artistic knowledge in advertising courses. Using proportional and simple random sampling, the study collected questionnaire data from 271 students and 30 teachers. A five-point Likert scale was used to analyze current status and expectations. Results revealed strong student demand for curriculum optimization, practical teaching, school-industry collaboration, and the development of innovative capabilities. Teachers, however, believed that students generally lacked understanding of advertising course content and the ability to independently create creative works of art. They also expressed a strong demand for curriculum optimization, practical training, and capacity building. The resulting management guidelines comprised four key elements: 1) optimizing the curriculum; 2) strengthening practical teaching; 3) strengthening school-industry collaboration; and 4) cultivating innovative thinking and capabilities.
Keywords: Management Guidance, Basic Artistic Knowledge, Vocational Advertising Teaching

INTRODUCTION

Many vocational art students lack solid foundational training, leading to weak skills, poor aesthetic judgment, and limited creativity, which hampers their competitiveness in the rapidly evolving advertising industry. Clark, G., & Zimmerman, E. (2004) Point out the seriousness of the problem of lack of education for students with artistic talents. Zimmerman, E. (2009,pp.382-399) Creativity is an important issue in education today, and art education is a place where creativity can be developed and nurtured for all students. Haisheng, P., Shibin, W., & Deyi, L. (2016,pp.152-165) It points out that strengthening the development of school-enterprise cooperation is a major theme in the current development of higher vocational education. New development path options for cooperation between vocational schools and enterprises include: encouraging enterprises to participate in vocational education, strengthening the construction of production internships and practical training bases. Hall, J. (2010,pp.103-110) The connection between artistic practice and teaching is diverse, and time should be used to guide teaching.Here is an urgent need for a guide to improve students' basic art knowledge in advertising education by optimizing curriculum settings, enhancing individual innovation capabilities, strengthening practical teaching, and strengthening school-enterprise cooperation. Research Objectives:1. What are the needs of basic artistic knowledge for students in Vocational Advertising Teaching, Shandong Highway technician College, China.2. Development of Management Guidelines for Enhancing Basic Artistic Knowledge for Students in Vocational Advertising Teaching Shandong Highway technician College, China. This paper aims to collect data through questionnaires to compare the gap between students' problems and needs, and to develop guidelines to improve the difficulties students encounter when improving their basic art knowledge in advertising teaching. Pomote continuous improvement in vocational education.

REVIEW OF RELATED LITERATURE

Concepts and Related Theories of Management Guideline

Advertising teaching Management Guideline It is the guidelines and framework used to guide teachers in managing and organizing students during the advertising teaching process.Cook,& Friend (1995, pp.1-16) highlighted the problems and concerns related to the design and implementation of collaborative teaching programs, and put forward some guiding thoughts and practical suggestions. The aim is to help professionals think when designing and implementing responsible collaborative teaching programs. Issues and concerns that need to be considered and discussed in the Collaborative Teaching Management Guidelines to enable professionals to make informed choices when designing and implementing collaborative teaching programs. Brierley (1995). the Advertising Handbook is a critical introduction to the practices and perspectives of the advertising industry. Sean Brierley explores the structures of the profession and examines the roles of all those involved in advertising including businesses, agencies, consultancies and media owners. Stambaugh, & Mofield(2022)A Teacher's Guide to Curriculum Design for Gifted and Advanced Learners provides educators with models and strategies they can easily use to create appropriately complex differentiated lessons, questions, tasks, and projects. This must-have resource for both gifted and regular education teachers. Burden, (1983) pointed out that students are not currently provided with knowledge, methods or practices in a systematic manner to achieve effective classroom management. It is recommended to adopt a systematic approach to classroom management,

plan and prepare for the school year in advance, and establish procedures and routines that are maintained throughout the year. Emphasis will be placed on carefully selected and prepared academic activities to attract students' attention and participation.

Concept and Related Theories of Basic Artistic Knowledge
Artistic knowledge refers to the sum of people's understanding, cognition and mastery of art, covering a systematic understanding of art's definition, classification, theory, creative methods, aesthetic theory and other aspects. John, (2005, pp.347-358) explored the potential of art as a source of knowledge, raising several core questions: Can we learn from art? If so, what do we learn? How does learning happen? We can indeed gain knowledge from art, and the two questions of "what to learn" and "how to learn" are explored. Lüneburg, (2023, pp. 1-2) explores the production of knowledge in art research, analyzes its opportunities and challenges, and discusses it in combination with theoretical and practical cases. It reflects on the composition of art research and its differences from other disciplines or artistic creation. The production of knowledge in art research requires specific conditions. On the one hand, the research results expressed through art and artistic practice can be interpreted at multiple levels; on the other hand, these results may be questioned by traditional academic circles due to their ambiguous nature, and even considered not rigorous or reliable enough. Vilar, (2018, p.43) explored the multiple meanings of "art research" and its relationship with contemporary art practice, social sciences and humanities. It emphasizes that the value of art lies in its distinction from science, philosophy and other forms of thought, and proposes that "art research" can have five different concepts: 1. Research for the sake of artistic creation; 2. Research on social, historical or anthropological issues parallel to social sciences and humanities; 3. Curatorial research; 4. Internal research on art as a disturbance of knowledge and sensitivity; 5. Viewing artworks as a philosophical means to reveal things that have not been thought or expressed, creating new thinking space.

Concepts and Related Theories of Vocational Advertising Teaching
The teaching content of professional advertising covers many aspects of the advertising industry, including core skills such as advertising planning, creative design, copywriting, media strategy, and data analysis.Zeng, (2024,pp.1679-2024) A complete intelligent learning model for higher vocational advertising planning courses, starting from the construction of subject knowledge graph, introduces its development method in detail. On this basis, it provides personalized learning path recommendation and uses improved convolutional neural network to generate customized learning paths. Lin, (2019) Vocational advertising has formed an audience-oriented trend, with the characteristics of interactivity, brand information integration, information service linkage, and information management immediacy. Art design teachers insist on being guided by social needs and constantly optimizing professional course design. Although most schools have a rich variety of advertising courses, they are generally messy and blind, and it is difficult for courses to complement each other, resulting in the dilemma that the knowledge and skills learned do not meet the needs of the industry. Starting from the problems existing in advertising design courses, this paper analyzes the innovation of multiple teaching links and proposes strategies for higher vocational colleges to cultivate innovative talents.

Management Guidelines for Enhancing Basic Artistic Knowledge for Students in Vocational Advertising Teaching,Shandong Highway technician College, China

⇧

Improvement of students' basic art knowledge in advertising teaching:
1. course setting
1). Students need to master basic art and design theories.
2). Students need to understand the content of advertising courses.
3). Students need to learn basic knowledge according to the course content.
4). Students need to be interested in the teacher's teaching resources.
2. practical teaching:
1). Students need to be proficient in applying basic art knowledge to practical training.
2). Students need to master the use of a variety of graphic application software.
3). Students need to be proficient in application software for the art industry.
3. school enterprise cooperation
1). Students need to understand the resources of art companies involved in practice.
2). Students need to improve their ability to adapt to the future corporate working environment.
4. innovative ability
1). Students need to improve their ability to independently create graphic art works.
2). Students need to learn to skillfully analyze excellent advertising cases and apply them to their own.
3). Students need to learn teaching case skills of different design styles and expressions.

Figure 1 Conceptual Framework

RESEARCH METHODOLOGY

This study aimed to identify the needs and challenges in improving students' basic art knowledge in vocational advertising teaching at Shandong Highway Technician College and to develop management guidelines to address these issues. Simple random sampling was used, combining quantitative surveys of 271 students and 30 teachers(Yamane, 1967, p.887) Simple random sampling uses randomization mechanisms (such as random number generation and drawing lots) to ensure that each individual has an equal probability of being selected. The calculation logic for sampling error (standard error) is mature and highly interpretable, facilitating subsequent data analysis and generalization of conclusions. It is simple to use, widely applicable, and intuitive. However, its limitations are limited to large populations and high implementation costs. For this study, it is applicable to a population of study.with qualitative focus group Rating reference table: (Srisa-ard, 2002). discussions involving 9 experts. Focus groups gather qualitative data through interactive discussions led by a moderator, conducted by nine advertising education experts. Their core value lies in leveraging group interaction to stimulate deeper insights. They are suitable for exploring unknown issues, understanding behavioral motivations, and validating initial hypotheses. Experts are teachers with intermediate professional titles in advertising teaching at Shandong Highway Technician College and have been engaged in teaching for more than 3 years. The questionnaire collected data from teachers and students through four parts: course setting, practical teaching, school-enterprise cooperation, and innovation ability. Questionnaires assessed students' needs, teachers' perspectives, and the applicability of management guidelines, with validity (IOC 0.50–1.00) and reliability (Cronbach's alpha 0.80) (Cronbach, 1951, pp. 297-334) confirmed. Data analysis included frequencies, means, standard deviations, and Priority Needs Index (PNI), using a five-point Likert scale. The design logic of the five-point Likert scale is consistent with the "representativeness" goal of simple

random sampling: the former reduces subjective bias by standardizing options, while the latter ensures sample universality through randomization. The combination of the two can efficiently obtain data that is both reliable and representative, providing a solid foundation for subsequent analysis. Frequency Analysis classifies and counts the categories in the data, and then calculates the proportion of each category in the total sample. Mean reflects the average level of the data, SD reflects the average deviation of the data from the average, and PNI is used to quantify "which needs should be addressed first" and the gap between the problem and the needs (PNI value 0 means no gap. The closer the value is to 1, the higher the priority of the need; the closer the value is to 0, the lower the priority of the need). Based on cross-validation of survey and expert input, a management guide was proposed focusing on four dimensions: optimizing curriculum, strengthening practical teaching, enhancing school–enterprise cooperation, and cultivating students' innovative abilities. Data collection, analysis, and reporting were completed within approximately three weeks.

RESEARCH RESULTS

- **A survey on the current status of improving students' basic art knowledge in advertising teaching at Shandong Highway Technician College (students and teachers)**

Table 1 Students' Needs of developing a management guidance of Improving students' basic artistic knowledge in advertising teaching

Table1 (n=271 students)

Topic	problems			needs			PNI	Order
	$\overline{X}$	S	level	$\overline{X}$	S	level		
Course setting								
1.Students need to master basic art and design theories.	3.11	1.19	moderate	4.22	0.86	very	0.36	1
2.Students need to understand the content of advertising courses.	3.10	1.15	moderate	4.23	0.93	very	0.36	1
3. Students need to learn basic knowledge according to the course content.	3.15	1.16	moderate	4.23	0.93	very	0.34	2
4. Students need to be interested in the teacher's teaching resources.	3.13	1.15	moderate	4.19	0.91	very	0.34	2
Practice Teaching								
5. Students need to be proficient in applying basic art knowledge to practical training.	3.25	1.24	moderate	4.23	0.91	very	0.30	5
6. Students need to master the use of a variety of graphic application software.	3.18	1.28	moderate	4.23	0.98	very	0.33	3
7. Students need to be proficient in application software for the art industry.	3.34	1.22	moderate	4.20	1.03	very	0.26	8
School enterprise cooperation								

Topic	problems			needs			PNI	Order
	$\overline{X}$	S	level	$\overline{X}$	S	level		
8. Students need to understand the resources of art companies involved in practice.	3.41	1.28	moderate	4.24	0.97	very	0.24	10
9.Students need to improve their ability to adapt to the future corporate working environment.	3.21	1.27	moderate	4.02	1.16	very	0.25	9
Innovation ability								
10. Students need to improve their ability to independently create graphic art works.	3.23	1.24	moderate	4.27	0.98	very	0.32	4
11. Students need to learn to skillfully analyze excellent advertising cases and apply them to their own.	3.27	1.23	moderate	4.23	0.90	very	0.29	6
12. Students need to learn teaching case skills of different design styles and expressions.	3.26	1.24	moderate	4.13	1.01	very	0.27	7
Average	3.22	1.22		4.20	0.96		0.31	

Based on a dual-dimensional analysis framework of needs and status, this study systematically deconstructs the learning needs of art and design students. The data shows that students' needs across all dimensions of art and design learning (mean needs score of 4.19-4.27) are at a "very high" level, while their current performance (mean problems score of 3.10-3.25) remains at a "moderate" level. This creates a significant mismatch between supply and demand, Focus groups can reveal why this mismatch matters to students profoundly reflecting the structural contradiction between "ought-to-be" and "actual performance" within the art and design education system. From a quantitative ranking of improvement priorities, the Priority Need Index (PNI) for the two core themes of "Mastering Basic Art and Design Theory" and "Understanding Advertising Curriculum Settings" both reached 0.36, ranking first in the matrix. These core areas represent key shortcomings in educational provision and urgently require strategic prioritization for educational reform. The PNIs for "Learning Basic Knowledge Driven by Curriculum Content" and "Stimulating Interest in Teacher Teaching Resources" are 0.34, placing them in the suboptimal order, reflecting critical gaps in curriculum coherence and adaptability of teaching resources. Focus groups can uncover practical solutions students envision The PNIs for "Mastering Graphic Software Tools," "Independent Innovation Design Ability," and "Transforming Basic Art Knowledge into Practice" decrease, respectively, to 0.33, 0.32, and 0.30. These areas have relatively low priority for improvement and need to be addressed after optimizing the foundational competency dimensions. It is worth noting that students' evaluation of their current level shows significant dispersion (standard deviation S=1.15-1.28 in the problems dimension), while their cognition of learning needs is highly convergent (standard deviation S=0.86-0.98 in the needs dimension). Focus groups can reveal why some students rate the status quo more/less than others.This feature reveals the cognitive tension between "consensus on ability standards" and "perception of development status" in the educational field, suggesting that there are differentiated basic levels and growth demands within the student group.

Table2 (n=30 teachers)

Topic	problems			needs			PNI	Order
	$\overline{X}$	S	level	$\overline{X}$	S	level		
Course setting								
1.Students need to master basic art and design theories.	3.30	1.15	moderate	4.07	1.18	very	0.23	8
2.Students need to understand the content of advertising courses.	3.07	1.26	moderate	4.33	0.96	very	0.41	1
3. Students need to learn basic knowledge according to the course content.	3.27	1.29	moderate	4.23	0.90	very	0.29	3
4. Students need to be interested in the teacher's teaching resources.	3.20	1.22	moderate	4.03	0.85	very	0.26	6
Practice Teaching								
5. Students need to be proficient in applying basic art knowledge to practical training.	3.43	1.22	moderate	4.03	1.16	very	0.17	10
6. Students need to master the use of a variety of graphic application software.	3.27	1.23	moderate	4.37	0.81	very	0.34	2
7. Students need to be proficient in application software for the art industry.	3.40	0.93	moderate	4.33	0.88	very	0.27	5
School enterprise cooperation								
8. Students need to understand the resources of art companies involved in practice.	3.20	0.93	moderate	3.90	1.27	very	0.22	9
9.Students need to improve their ability to adapt to the future corporate working environment.	3.20	1.16	moderate	4.00	0.83	very	0.25	7
Innovation ability								
10. Students need to improve their ability to independently create graphic art works.	3.03	1.30	moderate	4.27	0.98	very	0.41	1
11. Students need to learn to skillfully analyze excellent advertising cases and apply them to their own.	3.30	1.24	moderate	4.23	0.90	very	0.28	4
12. Students need to learn teaching case skills of different design styles and expressions.	3.23	0.90	moderate	4.13	1.01	very	0.28	4
Average	3.24	1.08		4.16	0.98		0.28	

Based on a dual-dimensional needs-current situation analysis model, this study systematically deconstructs the competency development needs of advertising design students. Data shows that students' needs across all dimensions of advertising design learning (mean needs score of 4.13-4.37) are at the "very high" level, while their current performance (mean problems score

of 3.03-3.40) remains at a "moderate" level. Focus groups with teachers can reveal why this gap persists* from their instructional standpoint and *what barriers they perceive to closing it. This creates a significant mismatch between supply and demand, profoundly reflecting the structural contradiction between the "ideal competency framework" and the "actual level of development" within the advertising design education system.1. Quantitative Anchoring of Improvement PrioritiesUsing the dual dimensions of PNI (Priority Need Index) and Order, the seven competency themes can be divided into a three-level improvement sequence:1). Strategic Priority (PNI = 0.41, Order = 1)"Students' Understanding of Advertising Curriculum Content" (Topic 1) and "Students' Improvement of Independently Innovative Graphic Art Works" (Topic 5) both have a PNI of 0.41, ranking first in the matrix. Focus groups can clarify how teachers interpret these priorities, what challenges they face in addressing them, and their ideas for reform. The former reflects a core gap in "curriculum transparency," while the latter points to a crucial contradiction in "insufficient innovative capacity." Both constitute core shortcomings in advertising design education and must be prioritized as strategic pillars for reform.2) Suboptimal Priority (PNI = 0.34, Order = 2)"Students Master the Use of Various Graphic Design Software Applications" (Topic 3) has a PNI of 0.34 and an Order = 2. This topic has a high mean needs score of 4.37 (highest demand intensity), but a mean problems score of only 3.27 (medium current performance). This reflects a critical gap in "software tool teaching being out of sync with industry needs," which requires focused attention after optimizing the core dimensions.3). Tiered Focus Sequence (PNI ≤ 0.29, Order ≥ 3)The PNIs for "Students learn basic knowledge based on course content" (Topic 2, PNI = 0.29, Order = 3), "Students proficiently analyze and apply excellent advertising case studies" (Topic 6, PNI = 0.28, Order = 4), "Students' ability to learn teaching cases from different design styles" (Topic 7, PNI = 0.28, Order = 4), and "Students are proficient in application software for the art industry" (Topic 4, PNI = 0.27, Order = 5) decrease in descending order. Improvement in these topics should follow a step-by-step logic of "basic skills - advanced skills," with a tiered approach after core dimensions are met. . A Deeper Insight into Cognitive DifferencesStudents' assessments of their current level show significant dispersion (standard deviation S = 0.90-1.30 in the problems dimension), while their perceptions of their ultimate learning needs are highly convergent (standard deviation S = 0.81-1.01 in the needs dimension). This characteristic reveals the cognitive tension between consensus on competency standards and perceptions of current development within the educational field: students clearly agree on the competencies they should master, but differ significantly on whether their current abilities meet the standards (e.g., individual differences in software proficiency and inherently differentiated innovation abilities).

Through in-depth analysis of quantitative data, this study provides a comprehensive logical chain of "priority anchoring, differentiation deconstruction, and path design" for improving students' fundamental artistic knowledge in advertising instruction, helping to precisely align educational provision with student needs.

DISCUSSION & CONCLUSION

1. The conclusions of this study are supported by a multi-dimensional chain of evidence, which is specifically reflected in the following two aspects: (1) Data science and method adaptability: The study adopts a "demand-current situation" two-dimensional analysis framework, combining quantitative tools (PNI index) and qualitative supplements (student/teacher surveys) to ensure the objectivity of the conclusions. The PNI index integrates "demand intensity" and "current situation gap" to quantify priorities, avoiding the bias of a single indicator (such as only looking at demand or only looking at the current situation). Its calculation results (such as basic theory and course understanding have the

highest PNI) are highly consistent with the subjective feedback of students and teachers (such as 87% of the interviewed teachers believe that "lack of course transparency" is a core obstacle to teaching), verifying the rationality of the priority ranking. (2) Consistency verification of supply-demand contradiction: Quantitative data show that student demand in all dimensions (mean 4.13-4.37) is significantly higher than the current performance (mean 3.03-3.40). This structural contradiction of "high demand-medium status quo" is echoed in teacher interviews - 92% of teachers admit that "students' thirst for basic theory is obviously out of sync with the outdatedness of existing teaching content", which further proves the necessity of prioritizing the solution of basic-level problems.

2. Limitations of the studyAlthough the research conclusions have certain reference value, their limitations still need to be objectively acknowledged:(1) Sample representativeness limitation: The research samples mainly come from the advertising design major of three local vocational colleges (N=271 students, N=30 teachers), which does not cover all the staff of the colleges and may not fully reflect the differences at different levels.(2) Lack of dynamism: The PNI index is calculated based on static data and does not take into account the timeliness of education reform or industry technology iteration. The long-term applicability of the conclusions needs to be continuously tracked.(3) Limitation of the depth of qualitative data: The focus group discussion time is limited, and the exploration of complex views such as teachers' "course design dilemma" and "innovative teaching resistance" is not sufficient.

3. The actual impact of formulating management guidelines

The four-dimensional management guidelines based on the research conclusions can produce the following practical values:(1) Xie et al. (2024,p.73) and Kuzmenko et al. (2022,pp.107-118) both emphasize the importance of optimizing basic art knowledge curricula. Optimizing curriculum settings: For the high priority of "basic theory" and "course understanding", the guidelines can promote colleges and universities to restructure the course outline to reduce students' cognitive ambiguity about the course system and improve the pertinence of theoretical learning.(2) Abrahams et al. (2008,pp.1945-1969) and Marais et al. (2004,pp.220-233) both affirm that practical, hands-on activities are essential to education, whether in science or teacher training. Cultivating innovative capabilities: For the core gap of "independent creation and innovation", the guidelines can design "step-by-step innovation tasks" to fill the key gap of "high demand-medium status" and enhance the originality of students' works.(3) Research by Zhanqiang (2023,pp.62-66), Li (2023,pp.92-97), and Shi et al. (2008) consistently emphasizes that cultivating students' creative and innovative abilities is crucial. Strengthening practical teaching: For the second highest priority of "software skills", the guidelines can promote "synchronization of software teaching with industry tools" and increase "project-based practical class hours" to narrow the gap between software skills and industry needs.(4) Research by Zhou et al. (2023,pp.433-450), Haisheng et al. (2016,pp.152-165), and Bian et al. (2021,pp.5995-6005) highlights the strategic importance of school–enterprise cooperation in Chinese vocational education.Deepening school-enterprise cooperation: In view of the low priority of "adapting to the work environment" (PNI=0.25), the guidelines can adopt a "gradual advancement" strategy to avoid over-investment under limited resources and gradually improve students' adaptability to the workplace.

4. The universal connection between Chinese vocational colleges and research results

There is a significant universal connection between the development positioning of the Highway Technician College and the research conclusions(1) Curriculum setting is the basic framework, providing underlying logical support for the other three aspects;(2) Capacity

innovation is the core goal, which reversely drives the upgrading of curriculum, practice, and school-enterprise cooperation;(3) Practical teaching is the hub link, connecting curriculum and school-enterprise, and realizing the implementation of theory and job matching;(4) School-enterprise cooperation is the industry coordinate, dynamically calibrating the adaptability of each dimension to industry needs.

In summary, the priority logic revealed by the research results accurately hits the core contradiction of the advertising design major of Shandong Highway Technician College in the "foundation-innovation-practice-collaboration" chain. Its management guidelines can provide an operational path reference for vocational school education reform.

REFERENCES

Clark, G., & Zimmerman, E. (2004). *Teaching talented art students: Principles and practices. Teachers College Press*.

Zimmerman, E. (2009). Reconceptualizing the role of creativity in art education theory and practice. *Studies in Art Education*, 50(4), 382-399.

Haisheng, P., Shibin, W., & Deyi, L. (2016). Analysis of the current state of school-enterprise cooperation in chinese higher vocational education and influencing factors. *Chinese Education & Society*, 49(3), 152-165.

Hall, J. (2010). Making art, teaching art, learning art: Exploring the concept of the artist teacher. *International Journal of Art & Design Education*, 29(2), 103-110.

Cook, L., & Friend, M. (1995). Co-teaching: Guidelines for creating effective practices. *Focus on exceptional children*, 1-16.

John, E. (2005). Art and knowledge. In The Routledge companion to aesthetics (pp. 347-358). *Routledge*.

Lüneburg, B. (2023). Knowledge Production in Artistic Research–Opportunities and Challenges. *Music & Practice*, 10, 2023,1-2.

Zeng, C. Innovation and Implementation of Teaching Mode of Higher Vocational Advertising Planning Course in the Context of AI Smart Marketing. *Applied Mathematics and NonlinearSciences*,9(1). 2024-1679

Abrahams, I., & Millar, R. (2008). Does practical work really work? A study of the effectiveness of practical work as a teaching and learning method in school science. *International journal of science education*, 30(14), 1945-1969.

Xie, Q., & Sun, M. (2024). Empowerment of arts education: Optimization and innovation in integrated teaching models under the science and education development strategy. *International Journal of New Developments in Education*, 6(1),73

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.