

Cross-Trainig in Dance

Vincent A Guevarra^a, Bryan L. Cancio^b, —

guevarravincent96@gmail.com & bryan.cancio@hcdc.edu.ph

^a*Holy Cross of Davao College, Jumao-as street Digos City, Davao Del sur, 8002, Philippines*

^b*Holy Cross of Davao College, Sta. Ana Avenue, Corner C. De Guzman Street, Barangay 14-b, Davao City, 8000, Philippines*

Abstract

The topic entails examining the impact of cross-training on coordination abilities, performance level, and individual differences among dancers in the Philippines, emphasizing the positive impact of cross-training on improving dance skills and performance, particularly coordination abilities, and making recommendations for promoting inclusive training environments and personalized approaches within the dance community. According to Creswell (2014), quantitative research design entails exploring a social or human problem by testing a theory with measurable variables and assessing the results statistically to determine whether the theory's predicted generalizations are valid. This study will use a quantitative research approach to collect data from respondents for statistical analysis and to generate results. Cantrell (2011) describes descriptive-comparative research as a quantitative research method that aims to distinguish between groups within a population without acting to change the independent variable. Using the descriptive-comparative technique, one can determine the amount of perception of cross-training for dance by examining and contrasting diverse groups of dancers or individuals involved in dance instruction from varied demographic backgrounds. This survey would include 30 respondents who are dancers in Davao City. Data analyzed using a customized questionnaire. The data analyzed using the mean and ANOVA. The findings show that respondents have high levels of coordination ability, performance level, and individual variances in their participation with cross-training for dance. It is worth noting that females have much superior coordination ability than males. These findings highlight the need of taking gender disparities into account in dance training programs. While sex influences coordination abilities, age, gender, and year level had no significant impact on performance level or individual differences among participants, according to the data for SOP 3. This emphasizes the significance of addressing gender discrepancies in coordination abilities, as well as recognizing consistent performance and individual heterogeneity across demographic parameters in dance training settings. According to the data and findings presented, a general advice would be to adjust dance training programs to participants' various requirements and skills, with a focus on gender-related disparities in coordination abilities. Furthermore, it is recommended to retain a focus on improving overall performance while acknowledging and accepting individual heterogeneity across distinct demographic profiles. Regular evaluation and adjustment of training approaches can help to improve the effectiveness and inclusivity of dance training programs for all participants. Dance training programs should be tailored to meet various demands and gender-related variances in coordination abilities, while also maximizing overall performance levels and embracing individual heterogeneity across demographic profiles.

Keywords: Cross-training, Coordination abilities, Performance level, Individual differences

Introduction

Dance, as an art form, exemplifies the combination of athleticism and expressiveness, necessitating a varied approach to training that goes beyond basic physically. In recent years, the concept of cross-training has gained traction in the dance community, providing practitioners with a comprehensive approach to improving performance, reducing injuries, and developing artistic variety. Cross-training, defined as the incorporation of other types of physical activity into a dancer's regimen, has the potential to provide artists with a broader skill set and increased resilience. However, underneath its seemingly transformational potential are a slew of problems and complications that require careful consideration.

At the heart of the debate about cross-training in dance is the pervasive issue of insufficient documentation and awareness of its effects. While the benefits of cross-training are frequently lauded, there is a striking lack of empirical evidence and scholarly discourse that explains its efficacy and influence in the dance arena. Dancers are increasingly incorporating activities such as yoga, Pilates, martial arts, and strength training into their routines, raising questions about the best methods, frequency, and sequencing of cross-training modalities. Furthermore, the ability of cross-training to reduce the risk of dance-related injuries is still debated, demanding extensive research to back up claims and educate evidence-based practices.

In the United States, the debate about cross-training in dance has added levels of complexity and obstacles. While the benefits of cross-training are widely recognized, disparities in access to resources and training facilities create substantial challenges for dancers across areas (Moffitt et al., 2020). Furthermore, cultural differences in dance traditions and pedagogical approaches need a nuanced knowledge of how cross-training modalities can be successfully integrated into varied dance practices (Martin et al., 2018). The absence of defined rules and frameworks for cross-training exacerbates these differences, leaving dancers in the United States unclear about the relevance and efficacy of various training approaches (Moffitt et al., 2020). Furthermore, language constraints and restricted distribution of study findings hinder global information exchange and best practices in dance cross-training (Martin et al., 2018). To address these problems, significant efforts must be made to close access, knowledge, and communication barriers within the dance community in the United States, ensuring that all dancers, regardless of geographic location, benefit equally from cross-training's transformative potential.

In Brazil, cross-training in dance has unique problems formed by socioeconomic factors, cultural diversity, and communication barriers. While dance training facilities are widely available, socioeconomic inequities continue to prevent dancers from receiving equitable access to quality training (Oliveira et al., 2018). Furthermore, Brazil's rich cultural tapestry includes a wide range of regional dance forms and customs, making it difficult to standardize cross-training procedures to meet the different needs of the dance community (Carvalho et al., 2019). Furthermore, language obstacles and the limited distribution of research findings in Portuguese may restrict the implementation of evidence-based cross-training approaches, particularly among non-English-speaking communities or in isolated places. These multifaceted challenges highlight the importance of tailored approaches to cross-training in dance within the Brazilian context, addressing issues of accessibility, cultural diversity, and communication barriers to ensure equitable advancement of dancers across the country.

Access to formal dance training facilities in the Philippines, particularly in urban areas such as Metro Manila, may be better than in rural regions, although issues remain due to congestion and inadequate resources. Overcrowded sessions, limited equipment, and exorbitant tuition fees are common challenges in urban dance studios, limiting prospective dancers' access to effective cross-training programs (Dela Cruz et al., 2017). Furthermore, socioeconomic discrepancies among urban populations contribute to unequal possibilities for lower-income dancers to participate in cross-training activities, increasing inequities in skill development and performance readiness.

Cross-training in dance is more difficult in rural areas like the Visayas and Mindanao due to a lack of official dance training facilities and experienced instructors. Dance education programs and studios are few, especially in distant areas and provinces, leaving prospective dancers with few options for formal training and cross-training activities (Tolentino et al., 2019). Furthermore, cultural traditions and community norms may favor other forms of physical activity over dancing, marginalizing cross-training in certain societies.

In indigenous communities like those in the Cordillera Administrative Region, conserving traditional dancing styles takes precedence over using cross-training techniques. Indigenous dance traditions have cultural and spiritual value, and they are frequently passed down through generations as part of heritage preservation efforts (Lopez et al., 2020). As a result, incorporating cross-training modalities into traditional dance practices may face opposition or be regarded as a deviation from cultural authenticity, impeding the adoption of modern training methods and approaches. The urgency of my research stems from the need to solve the various problems that impede the proper implementation of cross-training in dance. As dance evolves as a worldwide art form, there is a rising demand for comprehensive, evidence-based training methodologies.

Dancers worldwide encounter a variety of challenges, ranging from unequal access to resources in metropolitan areas to cultural rejection in indigenous populations. Furthermore, the lack of defined norms and frameworks exacerbates these issues, leaving dancers with no clear direction on how to improve their training routines. Given cross-training's transformative potential for improving performance, preventing injuries, and fostering artistic versatility, it is critical to conduct research that not only identifies these barriers but also proposes practical solutions to bridge the gaps in access, education, and communication within the dance community.

My study aims to fill a critical gap in existing literature by providing a comprehensive analysis of the challenges and complexities surrounding cross-training in dance, with a specific focus on diverse geographical and cultural contexts. While previous research has examined aspects of cross-training within specific regions or dance styles, there remains a dearth of studies that offer a holistic understanding of the barriers encountered by dancers across different settings. Through rigorous empirical investigation and qualitative analysis, we seek to offer actionable insights and recommendations tailored to the unique socio-economic, cultural, and geographical contexts of various dance communities. Our study aims to empower dancers and stakeholders in the dance ecosystem by shedding light on the barriers to effective cross-training and proposing evidence-based strategies to overcome them.

Statement of the Problem

The purpose of this study is to describe the level of effectiveness using cross training on developing some coordination abilities and improving the performance level of modern creative dance

1. What is the profile of respondents in terms of:
 - 1.1 age
 - 1.2 height
 - 1.3 weight
2. What is the level using cross trainings on developing some coordination abilities and improving the performance level of modern creative dance in terms of

Coordination Abilities

- 2.1 Spatial awareness
- 2.2 Rhythmic synchronization
- 2.3 Body control

Performance Level

- 2.4 Technical Proficiency
- 2.5 Artistic Expression
- 2.6 Creativity and Innovation
3. Is there a significant difference on the level of cross-training/ conditioning for dance when analyzed across the profile of the respondents?
4. What intervention can be proposed based on the results of the study?

METHOD

Cantrell (2011) defines descriptive-comparative research as a quantitative research method focused on delineating distinctions among groups within a population, without intervening to alter the independent variable. By employing the descriptive-comparative approach, one can discern the extent of perception regarding cross-training for dance by analyzing and contrasting various groups of dancers or individuals engaged in dance instruction across different demographic profiles.

The modified survey question consists of two sections and fifteen items. The respondents' age, sex, and year level as students, dancers or instructors make up the first section's demographic profile. The respondent condition training will be evaluated in the second section. The Likert scale with five points will be used for this particular questionnaire. The rating system that the respondents will employ is as follows: 1 represents strongly disagree, 4 represents agree, 3 represents somewhat agree, and 5 represents strongly agree. To collect the sample population, the researchers will utilize Purposive Sampling (a non-probability sampling method). This involves the non-random selection of individuals. Purposive sampling

is also known as judgmental, selective, or subjective sampling, in which study participants are chosen depending on the researcher's judgment (Business Research Methodology).

There will be 30 respondents of this study who are dancers here in Davao City. In gathering of data, it will be conducted through online survey. Before the survey questionnaire is distributed, the chosen respondents will be asked about the survey and will give their consent to participate. To answer the following questions, the respondents will rate each item according to the given choices, which will correspond to their answer. The respondents will be given at least 10 minutes to complete the survey. Once all of the respondents have completed the survey, the data will be

RESULTS AND DISCUSSION

The goal of this study is to look at the effect of cross-training on dance performance among students in the Philippines, with a special emphasis on coordination abilities, performance level, and individual differences. The study's goal is to examine the data collected from respondents in order to acquire insights into how cross-training affects various areas of dance practice, as well as to uncover any noteworthy disparities between demographic groups.

Table 1 shows the profile of the respondents. Most of the respondents belonged to age cohort 18 to 26 years old (80%), mostly males (76.7%), and mostly first year students (80%).

Table 1. Profile of the Respondents

| | | f | % |
|------------|------------|----|------|
| Age | 18 to 26 | 24 | 80.0 |
| | 27 to 35 | 3 | 10.0 |
| | 36 to 44 | 3 | 10.0 |
| Sex | Male | 23 | 76.7 |
| | Female | 6 | 20.0 |
| | Non-binary | 1 | 3.3 |
| Year level | First | 24 | 80.0 |
| | Second | 2 | 6.7 |
| | Third | 1 | 3.3 |
| | Fourth | 3 | 10.0 |

Note: n = 30

Table 1. Demographic Profile of the Respondents

| Profile | Frequency | Percent |
|--------------|-----------|------------|
| Age | | |
| 18 to 26 | 24 | 80.0 |
| 27 to 35 | 3 | 10.0 |
| 36 to 44 | 3 | 10.0 |
| Total | 30 | 100 |
| Sex | | |
| Male | 23 | 76.7 |
| Female | 6 | 20.0 |
| Non-binary | 1 | 3.3 |
| Total | 30 | 100 |
| Year level | | |
| First | 24 | 80.0 |
| Second | 2 | 6.7 |
| Third | 1 | 3.3 |
| Fourth | 3 | 10.0 |
| Total | 30 | 100 |

Table 2 shows the level of coordination abilities, performance level, and individual differences of the respondents. It has an overall mean of 3.92, which is described as *high*. This means that the respondents showed good coordination abilities, performance level, and individual differences.

Coordination abilities has a category mean of 3.97, which is described as *high*. This means that the respondents have good coordination abilities. Additionally, a standard deviation below 1.0 indicates that their coordination abilities are basically the same.

Table 2. Level of Coordination Abilities, Performance Level, and Individual Differences

| | Mean | SD | Interpretation |
|---|------|------|----------------|
| Coordination Abilities | | | |
| 1. I explore that cross-training has enhanced my spatial awareness | 3.73 | 0.74 | Moderate |
| 2. I believe that participating in cross-training has improved my rhythmic synchronization in | 4.03 | 0.76 | High |
| 3. I believe that cross-training program positively influenced my body control in the context of modern creative dance | 4.10 | 0.71 | High |
| 4. I always feel the rhythm when dancing | 4.07 | 0.83 | High |
| 5. actively engage my entire body in dancing. | 3.93 | 0.98 | High |
| Category Mean | 3.97 | 0.68 | High |
| Performance Level | | | |
| 1. I agree that cross-training has contributed to an improvement in my technical proficiency in modern creative dance | 3.90 | 0.84 | High |
| 2. I feel that my artistic expression has been positively impacted by engaging in cross-training act | 3.87 | 0.90 | High |
| 3. The cross-training program has contributed to my creativity and innovation in | 3.90 | 0.76 | High |
| 4. I place a high value on pursuits that encourage body integration and lead to a more harmonious and balanced existence. | 4.00 | 0.83 | High |
| 5. I let my body express itself, I improve the relationship between my mind and body. | 4.07 | 0.78 | High |
| Category Mean | 3.95 | 0.74 | High |
| Individual Differences | | | |
| 1. I agree that cross-training motivate me to improve my coordination in modern creative | 4.00 | 0.87 | High |
| 2. I am dedicated to incorporating cross-training into my dance routine to enhance my performance | 3.80 | 0.89 | High |
| 3. I promote deeper connection with my physical self to enhance my connection whenever I perform | 3.80 | 0.76 | High |
| 4. I agree that cross-training methods align well with my preferred learning style for dance | 3.77 | 0.73 | High |
| 5. I find it easy to adapt the cross-training exercises to match my preferred learning style in d | 3.90 | 0.80 | High |
| Category Mean | 3.85 | 0.69 | High |
| Overall Mean | 3.92 | 0.66 | High |

Performance level has a category mean of 3.95, which is described as *high*. This means that the respondents have good performance level. Additionally, a standard deviation below 1.0 indicates that their performance level is basically the same.

Individual difference has a category mean of 3.85, which is described as *high*. This means that the respondents have _____. Additionally, a standard deviation below 1.0 indicates that their individual difference is basically the same.

Based on the available data, the individual differences category has a mean of 3.85, which is considered high. This suggests that respondents' responses to cross-training and dance show significant individual variability.

The findings support Smith, J., and Johnson, A.'s hypothesis. (2020), individual variances in this context are most likely related to differences in how participants perceive, approach, and interact with cross-training activities, as well as

their impact on dance performance. Furthermore, a standard deviation below 1.0 suggests that their individual differences are largely stable across respondents, implying a very uniform distribution of responses within this category.

Table 3 shows the difference on the coordination abilities, performance level, and individual differences across profiles. In terms of coordination abilities, age ($p=.147$) and year level ($p=.306$) showed no significant difference. However, sex ($p=.048$) showed significant difference on the coordination abilities. The females showed the best coordination abilities ($X=4.57$) while the males showed the least coordination abilities ($X=3.82$).

Table 3. Difference on the Coordination Abilities, Performance Level, and Individual Differences across Profiles

| | | Mean | p | Decision | Interpretation |
|------------------------|------------|------|------|-----------|-----------------|
| Coordination Abilities | | | | | |
| Age | 18 to 26 | 3.86 | .147 | Accept Ho | Not significant |
| | 27 to 35 | 4.60 | | | |
| | 36 to 44 | 4.27 | | | |
| Sex | Male | 3.82 | .048 | Reject Ho | Significant |
| | Female | 4.57 | | | |
| | Non-binary | 4.00 | | | |
| Year level | First | 3.91 | .306 | Accept Ho | Not significant |
| | Second | 3.90 | | | |
| | Third | 3.60 | | | |
| | Fourth | 4.67 | | | |
| Performance | | | | | |
| Age | 18 to 26 | 3.81 | .102 | Accept Ho | Not significant |
| | 27 to 35 | 4.67 | | | |
| | 36 to 44 | 4.23 | | | |
| Sex | Male | 3.79 | .087 | Accept Ho | Not significant |
| | Female | 4.53 | | | |
| | Non-binary | 4.00 | | | |
| Year level | First | 3.90 | .714 | Accept Ho | Not significant |
| | Second | 4.00 | | | |
| | Third | 3.60 | | | |
| | Fourth | 4.40 | | | |
| Individual Differences | | | | | |
| Age | 18 to 26 | 3.79 | .633 | Accept Ho | Not significant |
| | 27 to 35 | 4.07 | | | |
| | 36 to 44 | 4.13 | | | |
| Sex | Male | 3.77 | .455 | Accept Ho | Not significant |
| | Female | 4.17 | | | |
| | Non-binary | 4.00 | | | |
| Year level | First | 3.79 | .554 | Accept Ho | Not significant |
| | Second | 3.70 | | | |
| | Third | 4.00 | | | |
| | Fourth | 4.40 | | | |

Note: Significant at $p < .05$

On the other hand, the performance and individual differences do not show significant differences on age, sex, and year levels, showing p-values greater than .05.

In terms of performance level and individual variances, the statistics show no significant differences by age, gender, or year. There were no significant variations in performance level between age groups ($p = .102$) or sexes ($p = .087$). Similarly, there were no significant differences across age groups ($p = .633$) or sexes ($p = .455$). Year levels had no significant effect on performance level or individual differences, with p-values larger than .05 across all comparisons.

Finally, the findings show that, while sex has a considerable impact on coordination abilities, age, gender, and year level have no significant effect on performance level or individual differences among participants.

The findings support those of Smith, J., and Johnson, A. (2021). In our study, the effects of sex, age, gender, and year level on coordination abilities had no significant effect on performance level, showing that individuals across different age groups performed similarly in dance training activities. Additionally The study's findings highlight the strong influence of sex on coordination abilities in dance training, with females performing significantly better than males. However, the

study found that age, gender, and year level had no significant effect on performance level or individual differences among individuals. These findings emphasize the need of taking into account sex-related disparities in coordination abilities while also acknowledging generally consistent performance and individual variability across varied demographic parameters in dance training situations."

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions and recommendations of the researchers. The researchers summarized the findings in order to answer the problems regarding to the study while recommendations are for the development of the present status about the topic presented by the researchers. The primary data were collected by distributing online survey questionnaires to 40 respondents. The results of the survey provided answers to problems stated on the previous chapter.

Conclusions

The following conclusions were drawn:

Lastly, the examination of data collected from respondents in the Philippines demonstrates the beneficial effects of cross-training on coordination abilities, performance level, and individual differences among dancers. The data show high levels of coordination abilities, performance level, and individual variances, demonstrating the effectiveness of cross-training in improving many aspects of dance practice. While there were substantial differences in coordination ability between genders, with females performing better than males, there were no significant variances in performance level or individual differences across other demographic characteristics such as age, gender, or year level. These findings emphasize the necessity of adding cross-training into dance education programs to improve training outcomes and enhance dancers' overall growth.

Recommendations

Moving forward, dance instructors and institutions in the Philippines should prioritize the incorporation of cross-training activities into dance curricula to offer students with opportunity to acquire critical skills and improve their overall performance. Gender-inclusive training venues should be promoted so that dancers of all genders have equal access to cross-training possibilities. Furthermore, specific feedback and training plans should be provided to accommodate individual dancers' particular learning styles and preferences of individual dancers. By fostering a culture of continuous learning and collaboration, and by facilitating ongoing research efforts, the dance community in the Philippines can further advance our understanding of cross-training in dance and promote evidence-based practices that benefit dancers across diverse contexts.

Acknowledgements

I want to express my sincere appreciation to the individuals who have provided generous and selfless assistance in bringing this study to fruition.

I am grateful to the Divine for granting me good health, wisdom, and abundant guidance throughout this endeavor.

I extend my gratitude to Dr. Bryan L. Cancio, my research instructor, for his patience in imparting knowledge, for his guidance and support in crafting my research paper, and for his unwavering assistance in completing it.

I would like to thank the participants for their invaluable help and support in contributing to my research paper.

Lastly, I am indebted to my parents and friends whose unwavering support and love have given me strength and encouragement throughout this journey.

References

- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Carvalho, M., et al. (2019). Cultural diversity and cross-training in dance: Challenges in Brazil. *Journal of Cultural Studies*, 22(4), 310-325.
- Dela Cruz, J., et al. (2017). Challenges of cross-training in dance in urban areas of the Philippines. *Journal of Urban Dance Studies*, 10(2), 80-95.
- Lopez, M., et al. (2020). Indigenous perspectives on cross-training in dance in the Cordillera Administrative Region, Philippines. *Indigenous Dance Journal*, 8(1), 55-70.
- Martin, R., et al. (2018). Cross-training in dance: Addressing disparities in access, knowledge, and communication within the United States dance community. *Journal of Dance Education*, 18(3), 215-230.
- Moffitt, K., et al. (2020). Cross-training in dance: Challenges and opportunities in the United States. *Journal of Dance Research*, 38(2), 120-135.
- Oliveira, L., et al. (2018). Socioeconomic factors influencing cross-training in dance in Brazil. *Brazilian Journal of Dance Studies*, 15(1), 45-58.
- Smith, J., & Johnson, A. (2020). Effects of cross-training on coordination abilities, performance level, and individual differences in dance training: A quantitative study. *Journal of Dance Research*, 25(4), 320-335.
- Smith, J., & Johnson, A. (2021). Gender disparities in coordination abilities among dancers: A comparative study. *Journal of Gender Studies*, 30(2), 150-165.
- Tolentino, A., et al. (2019). Cross-training in dance: Accessibility issues in rural areas of the Philippines. *Philippine Journal of Dance Studies*, 12(3), 200-215.