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Research Article

Dance Literacy, Physical Fitness, and Motor Skills Development

Nomer V. Coralde*

Faculty of Graduate Studies, Naga College Foundation, Inc. City of Naga

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**Corresponding author:*
E-mail:
nomer.coralde@deped.gov.ph

ABSTRACT

This study investigated the influence of dance literacy program on the physical fitness and motor skills development of Grade 11 students at Dr. Lorenzo P. Ziga Memorial High School, Pasacao District, Division of Camarines Sur on 2023–2024. Grounded in Motor Learning Theory (2011), the study examined how dance literacy can enhance students' physical, social, and emotional development. The study also determined students' levels of physical fitness and motor skills development within gross and fine motor domains. The study also analyzed the relationships between dance literacy and physical fitness and between dance literacy and motor skills development. It employed descriptive-correlational research design with 53 Grade 11 students who were selected through total enumeration. The data utilized survey questionnaires and semi-structured interviews and were treated through mean, Pearson correlation and coefficient of determination. The findings showed that the students reached excellent levels of physical fitness in cardiovascular and muscular endurance while muscular strength was rated only at a good level since there was limited resistance trainings. In general, the students exhibited excellent level of gross motor skills but their fine motor skills remained at a good level. The results also revealed that there is no significant relationship between dance literacy and physical fitness and between dance literacy and motor skills development. The study suggests to integrate resistance trainings to strengthen the abdominal and back muscles and model the technicalities of intricate movements of hands and fingers like creating small cursive or zigzag strokes. Finally, the study proposed a dance literacy enhancement program further the physical and motor competence of senior high school students.

Keywords*: Dance literacy, Physical fitness, Motor skills development*

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Introduction

Background of the Study

The establishment of a structured dance literacy program is an effective capacity building initiative to achieve and maintain a healthy body and even a healthier mind. Among the students, it is a powerful tool to build muscles and enhance cardiovascular health for an excellent endurance. The undeniable physical benefits also bring reliefs in facing academic stress, peer pressure, and emotional struggles among the students through physical movements. Scientifically speaking, these physical movements release endorphin as the natural stress relievers of the body which in turn provides a sense of happiness, emotional stability and mental clarity among the students which can deliver positive impacts on their academic performance. Amidst these benefits, many tend to overlook the profound advantages of a well-structured physical literacy programs in schools. Hence, it is rare to see learners developing and keeping the habits in physical fitness nowadays.

It is proven by several studies that dance literacy has the capability to develop the competencies in of students in their physical, mental, social and emotional aspects as discovered by Astaire (2019) and Grove (2020). As a matter of fact, this progress can be even doubled specially when creativity is integrated in the dance fitness program. Furthermore, physical literacy programs can also enhance the motor competence and physical performance according to Moawad (2024), Aldemir (2014), Ross et al. (2014), and Anjos and Ferarro (2018). They also reported that the respondents improve their agility and coordination on top of their motor skills. Nonetheless, Akinci (2025) found these same findings from the hip-hop dance program implemented for 14 weeks as part of the daily physical activities among the adolescent girls.

In terms of physical development, many research confirm the psychological and cognitive benefits that dance can provide. As a matter of fact, Tao et al. (2022, 2024) stated that dance through dance, one can gain cardiovascular strength, endurance, motivation and emotional improvements. With these data, it is deemed that dance is an effective alternative to replace the common traditional PE activities facilitated among schools. Meanwhile, Baljon etl. (2021) and Beserra et al. (2021) discovered that dance has also the ability to facilitate instruction and learning concepts, problem-solving skills and increase classroom engagement in the learning set up. Additionally, dance can also serve as strong emotional support during social growth of through the development of their confidence, communication skills and teamwork among the participants. On top of these, dance may also be used to enrich the cultural awareness and the ability for creative expression of the dancer participants based on the study of Anttila and Nielsen (2019), Xue (2024); Melchior (2011) and Koff (2025). In terms of its long-term benefits in the physical, mental and social developments, there were recorded data among the secondary and vulnerable respondents as discovered by Williams (2025) and Tomescu et al. (2023).

In spite of these positive results, there is an alarming report from the World Health Organization (2019) on the decline in physical activity worldwide which they perceived as contributory factor to the uprising percentages of non-communicable diseases worldwide. This data calls for the promotion of the advocacies of the Sustainable Development Goal (SDG) 3 on good health and well-being and SDG 4 for lifelong learning and for quality education respectively. Hence, teachers should consider teaching approaches in the physical literacy to be aligned to both physical and cognitive aspects and to the socio-emotional needs of the students.

In the Philippines, dance is also an effective tool to enrich the culture awareness of the community and its engaging nature can encourage physical involvement among student. To achieve this, teachers may employ differentiated instruction (Diaz and Andal, 2024) along with different strategies to create collaborative learning environment. This pedagogical approach can lead to physical, emotional, and cognitive developments among the learners specially if it is coupled with their strong participation and high level of motivation. More so, this instruction can be more effective if it is assisted by technology (Aguelo and Aquino, 2023). So, schools may consider utilizing digital videos and e-materials to significantly increase

students' interest and performance. However, this study noted that there is a limited analysis on the direct effects of this program on the dance proficiency itself.

The integration of dance literacy in the Philippine Schools is legally supported by national policies as stipulated in the Republic Act 10533 (Enhanced Basic Education Act of 2013) directly mandates that:

> *SEC. 2. Declaration of Policy. — The State shall establish, maintain and support a complete, adequate, and integrated system of education relevant to the needs of the people, the country and society-at-large. Likewise, it is hereby declared the policy of the State that every graduate of basic education shall be an empowered individual who has learned, through a program that is rooted on sound educational principles and geared towards excellence, the foundations for learning throughout life, the competence to engage in work and be productive, the ability to coexist in fruitful harmony with local and global communities, the capability to engage in autonomous, creative, and critical thinking, and the capacity and willingness to transform others and one's self.*

With this provision, K-12 curriculum becomes a student-centered that embeds Physical Education and Arts as essential components for lifelong development of students. These students who earned these abilities are able to showcase and apply knowledge and skills in various contexts. To attain this goal, dance can be utilize to directly nurture these competencies along with PE and Arts to generally cultivate physical literacy and creativity.

Consistently, Astaire (2019) and Grove (2020) agree that dance literacy contributes to students' physical, cognitive, and socio-emotional development from across the global, national, and local contexts. These authors conceptualized dance literacy as a holistic paradigm to provide meaningful learning experiences while improving balance, and coordination, spatial awareness and creativity. More empirical evidences were also taken from the studies of Moawad (2024), Aldemir (2014), Ross et al. (2014), and Anjos and Ferarro (2018) who all claimed that there is essential progress in the agility, balance and motor coordination among the participants. On top of these, Akinci (2025) also added that dance as well contributes to the neuromotor development and motivation level among the adolescents.

As a whole, these international studies ultimately commend the multiple benefits that dance can offer but there were differences in the methodologies that they employed, including the duration of intervention implementation and the extent of the outcomes. This can be seen in the study of Tao et al. (2022, 2024) who specifically emphasize the outcomes on physiological and psychological aspects whereas Baljon et al (2021) and Beserra et al. (2021) focus on mental involvement and classroom learning. The interpretations of the results vary since they also had to consider the motivations the respondents manifested during the study.

These differences bring out the fragmented nature of the literature about dance literacy. Thus, as discussed, it is clear that there should be an integrated framework of dance literacy program. Nevertheless, in a local level, Dr. Lorenzo P. Ziga Memorial High School introduced dance routines and activities as part of the Physical Education and extracurricular programs to encourage active lifestyles among the students and teachers. However, this program is largely undocumented and the school had no systematic evaluations to monitor its effects and impact. Hence, just like many school programs. It did not also employ standardized curricula and assessments to measure its potential impacts on physical fitness and motor skills of the learners. Hence, this study delved into this lack of assessments to substantiate the limited data on the effectiveness of a structured dance literacy in school level.

Additionally, motor skill development is a foundation of physical literacy. It shapes balance, locomotion, coordination, and fine motor control that are required in complex activities such as dance. To support this, according to the Cleveland Clinic (2023) and Newell (2020), complete body activities can develop these skills specially when movements are purposeful and structured as shown in dance routines. However, their studies showed inconsistencies

in the use of assessment tools. Consequently, the outcomes were limited to be conduct a comparison across studies and therefore, it can hardly be used to draw and show strong conclusions from.

Aside from these physical benefits, dance literacy also contributes to social and emotional, motor development and performance of the participants. Several authors proved that structured dance activities also develop cardiovascular endurance, emotional and mental health (Limanskaya et al., 2021; Arfanda et al., 2022; Miller and Miller, 2017). Despite these documented benefits, may schools specially in the rural areas do not discover the effects and benefits of dance literacy in the Philippine contexts.

Looking at the synthesis of these literature, there is a clear research gap on utilizing standard assessment on the implemented dance literacy implemented. To address this gap, the present study evaluated the dance literacy program implemented at Dr. Lorenzo P. Ziga Memorial High School among the Grade 11 students. It specifically delved into the effects of the program on the physical fitness and motor skills development specially on the physical, social, and emotional competencies of the participants. More so, it analyzed significant relationships between dance literacy, physical fitness and motor skills within these aspects. The study filled in the limited data on the assessment and evaluation of the program conducted which was largely based on performance alone. Consequently, these findings served as the basis for developing the enhancement program for better holistic physical development of the students in this rural context.

Research Objectives

This study determined the influence of dance literacy program to improve the physical fitness and motor skills development of Grade 11 students at Dr. Lorenzo P. Ziga Memorial High School, Pasacao District, Division of Camarines Sur, School Year 2023-2024.

Specifically, it is anchored in the following objectives:

1. To identify the students' level of dance literacy in physical, social and emotional domains.
2. To determine the students' physical fitness level along with cardiovascular, flexibility, muscular strength and muscular endurance.
3. To identify the level of motor skills development along with gross motor skills, and fine motor skills.
4. To determine if there is a significant relationship between students' level of dance literacy and physical fitness components, and between students' level of dance literacy and motor skills development.
5. To propose a dance literacy project as enhancement program towards improvement of students' dance literacy, physical fitness, and motor skills development.

Scope and Delimitation

This study determined the level of influence of dance literacy on the physical fitness and motor skills of Grade 11 students at Dr. Lorenzo P. Ziga Memorial High School, Pasacao District, Division of Camarines Sur, during the School Year 2024–2025. It also examined the significant connection of students' knowledge and understanding of dance to their physical, social, and emotional aspects in relation to their physical fitness levels and motor skill development. Through close analysis of these relationships, the study identified areas weak areas in the students' physical, cognitive, and motor skills where dance literacy can be best applied into.

The respondents consisted of all 53 Grade 11 students who were enrolled in the school during the period of the study. They were selected through total enumeration and were coded R1 to R53 for ethical considerations. The study also assessed cardiovascular endurance, flexibility, muscular strength and muscular endurance as the composition of Physical fitness, while the study also dealt with the motor skills specifically the students' gross and fine motor skills. The study also utilized standardized assessments during the data collection and employed correlational analyses to determine the relationships and influence of dance literacy as results. Based on these findings, the study crafted a dance literacy enhancement program as comprehensive support for students' dance literacy, physical fitness, and motor skills development.

Despite its comprehensive focus, the limitations of the study fell on the factors that may have influenced the results which could be due to the specific population and school that were selected in the study. It did not also include other aspects such as creativity or expressive interpretation of the dance. The study did not also look into the impacts of dance literacy on the agility, balance and sports skills. Similarly, it did not cover the analysis of fine motor in more intricate contexts like in playing instruments and there were no recorded long-term retention of motor skills during and beyond the implementation of the school-based intervention period.

Assumptions

This study is guided by the following assumptions:

1. Grade 11 students exhibit varied levels of dance literacy in physical, social, and emotional aspects that influence their learning and performance in dance.
2. The students' physical fitness in cardiovascular endurance, flexibility, muscular strength, and muscular endurance vary from among the other participants that may have affected their response to the instruction of the dance routines.
3. The varying levels of students' gross and fine motor skills may influence their execution of coordinated and precise dance movements.
4. The implementation of dance literacy enhancement program together with the structured and concrete practice can significantly improve students' dance literacy, physical fitness, and motor skills.

Hypotheses

The study tested the following hypotheses:

Objective: Determine the significant relationship between students' level of dance literacy and physical fitness, and between students' level of dance literacy and motor skills development.

H_{o1}: There is no significant relationship found in between the students' level of dance literacy and their physical fitness domains.

H_{a1}. There is a significant relationship found between the students' level of dance literacy and their physical fitness domains.

$H_{o2:}$ There is no significant relationship between the students' level of dance literacy and their level of motor skills development.

$H_{a2:}$ There is a significant relationship between the students' level of dance literacy and their level of motor skills development.

Theoretical Framework

This study is based on key learning theories on the use of practice, real-world tasks to acquire and refine skills teachers' guidance as the key role in specific contexts. Mainly, this study is based on the Motor Learning Theory (Schmidt & Lee, 2019), Cognitive Apprenticeship Theory (Cakmakci et al., 2020), Situated Learning Theory (Kurt, 2021), and Experiential Learning Theory (Cherry, 2022). Together, these theories form a framework to design, implement and evaluate the dance-literacy program for students' holistic development.

Motor Learning Theory. Motor Learning Theory as formulated by Schmidt and Lee (2019) is a comprehensive framework on the acquisition of motor skills. This theory explains how these skills are refined and retained with structured practice and feedback. This theory believes on the importance and roles of repetition, practice and intrinsic and extrinsic feedback. It has also principles related to the cognitive, associative and autonomous stages of skill acquisition and how the individual differences impact learning performance. Additionally, this theory deals with the transfer of learning in related tasks and the retention of these skills over time. Accordingly, this transfer process requires consistent practice in sequences for a detailed understanding of students' gross and fine motor skills development. Hence, Motor Learning Theory has a direct relevance to the study conducted on the influence of a dance literacy program for the physical fitness and motor skills development among Grade 11 students. More specifically, the theory believes that locomotor, postures and manipulations skills are developed with structured dance sequences. This progress can be seen in the cognitive stage of motor learning during the initial dance instruction. During this stage, students

must apply cognitive process on how to execute the movements and the coordination in the dance routines. With consistency and repeated practice, students can refine their skills in timing, balance and movement precision specially when given guided feedback. Finally, students showcase their ability in to execute complex dance sequences and routines more efficiently in the autonomous stage where they integrate both gross and fine motor skills with less conscious effort.

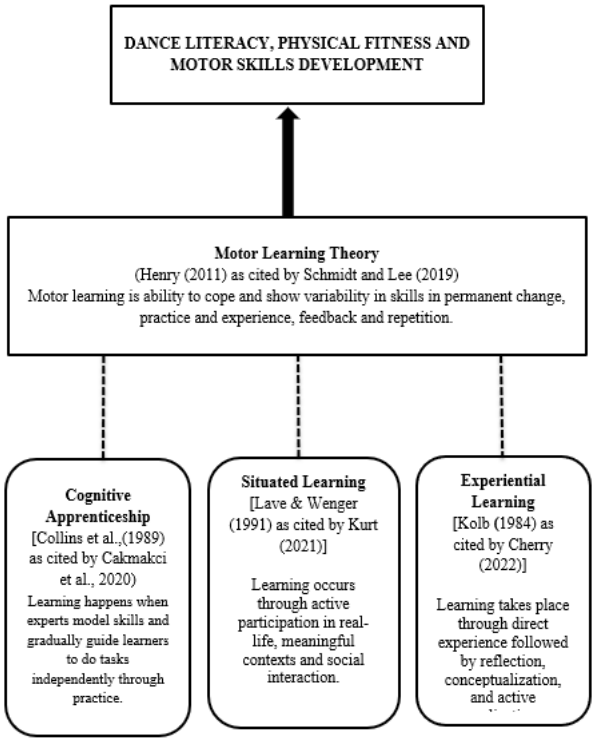

Figure 1. Theoretical Paradigm

Moreover, this study takes the principles of this theory on feedback and individualized instruction. The assessment results drawn from the study in line with literacy and physical fitness levels can be used by educators to create concrete guidance. These outputs can optimize learning, reinforce and correct movements, and address challenges and struggles with motor skills. In turn, this way, the components in physical fitness can be measured such as cardiovascular endurance, flexibility, muscular strength, and muscular endurance, as well as the gross and fine motor skills development. Furthermore, the transfer principle of this theory claims that the acquisition of the fundamental skills (motor skills) from dance literacy can be transferred and can be used in other physical activities or daily movements for overall motor competence.

In summary, Motor Learning Theory is the foundation to design, implement and evaluate a dance-literacy program for theoretical and practical principles. These principles can comprehensively examine the physical fitness, motor skills and the intervention whether it is well structured, systematic and capable of producing practical skill among the Filipino senior high school students.

Cognitive Apprenticeship Theory. The principles of the Cognitive Apprenticeship Theory can be used as bases in designing an effective learning environment along content, method, sequence, and sociology as the key dimensions (Cakmakci et al., 2020). These dimensions are the fundamental to fully grasp how cognitive apprenticeship takes place in in educational settings. Additionally, there are six core learning processes as a practical framework toward

mastery. These are modeling, coaching, scaffolding, articulation, reflection and exploration that guide students through the instruction and guided experiences facilitated by a teacher. The author further claims that learning process is enhanced the metacognitive processes are transparent and accessible to students through cognitive apprenticeship. This approach means that teachers should create engaging and real-world learning experiences as contemporary pedagogical strategies. Thus, cognitive apprenticeship can nurture an interactive learning environment where students can participate and develop their skills through collaboration (Kurt, 2021).

In the context of this study, cognitive apprenticeship theory is a strong theoretical foundation for dance literacy through mentorship, guided practice, and peer interaction for the holistic development of the students. Its principles can work hand in hand with the objectives of this study on the acquisition, development and refinement of skills movements. Nonetheless, according to Cakmakci et al. (2020), this framework showcases the potential of dance literacy to be an effective learning approach to acquire physical competence and social engagement.

Situated Learning Theory. Situated Learning Theory, as articulated by Kurt (2021), separates knowledge and practice in education as traditional practice. This theory originally came from Duguid, Brown, and Collins who criticize the abstraction of knowledge in public schools. They also assert that learning can be effective in various contexts through knowing and doing as interconnected tasks and not as separated ones. This interconnectedness have bases from psychology, sociology, cognitive science, and anthropology.

In the context of this study, as discussed by this theory, dance literacy should bear authentic and meaningful learning experiences as an intervention. The theory supports the idea that learning environment must engage the students with real-life concepts, problem-solving contexts and authentic experiences through the implementation of the dance literacy program. Hence, dance literacy intervention must integrate realistic and relevant tasks to encourage learners to think and act. Likewise, teachers should serve as coaches and models to scaffold information to assist problem-solving activities. These learning set up can facilitate discussion and reflection among the learners. As its name suggests, situated learning takes place in "in the situation," where students acquire and build knowledge within this context of the activity. Here, dance literacy must possess the integral part of the learning process with rich intervention in the actual contexts of the students to address the diverse needs of adolescent respondents on their gross and fine motor skills. The program should be crafted with tasks and routines to create a dynamic learning environment where culture and social skills are embedded for rigorous engagement.

Experiential Learning Theory. Meanwhile, Experiential Learning Theory of David Kolb and discussed by Cherry (2022) considers the holistic experience of the students as the central process of learning. Unlike, cognitive and behavioral theories, this learning framework recognizes the interconnectedness of cognition, environments and emotions to shape the learning journey. This dynamic learning process according to Kolb, learning takes place when experiences are transformed when learners play his role in their own learning.

The core of this theory on experiential learning are Abstract Conceptualization and Concrete Experience. There are also two modes of transforming experience that form a continuous cycle through active experimentation and reflective observation. The various learning preferences among the students determine in their approach in the learning process through experiential learning. Moreover, Kolb also identifies personal and contextual factors may influence the learning styles. In conclusion, Experiential Learning Theory by David Kolb fully explains the intricacies of experiential learning and thus becomes relevant to this study for physical literacy and motor skills development via dance literacy as an intervention

The emphasis of this theory matches with the experiential nature of dance literacy through actual execution and practice. In this scenario, students during the dance literacy program actively participate and engage in the physical activities. Here, learning can take place when students grasp, internalize and execute

new movements and skills. This Kolb's learning cycle showcase and reflects the formation of abstract concepts through body movement among the learners. In this case, teachers should consider individual learning styles a identified by Kolb to customize and implement necessary adjustments in the dance literacy program for better holistic development.

Conceptual Framework

The conceptual framework of this study holds dance literacy program as the independent variable as the primary intervention to enhance students' physical and cognitive capabilities. In this framework, the three major variables (physical, social and emotional domains) examined the critical outcomes and determined how structured dance instruction to the students' overall movement skills. In addition, the study evaluated the physical fitness components (cardiovascular endurance, flexibility, muscular strength, and muscular endurance) and see whether participation in the program resulted to measurable students' improvements. Furthermore, the study checked both the influence of the program on the motor skills development specifically on gross and fine motor skills and the skills in coordination and movement. Nevertheless, this framework holds that dance literacy alone does not necessarily result in significant physical improvements unless deliberate and structured movements are integrated in the program.

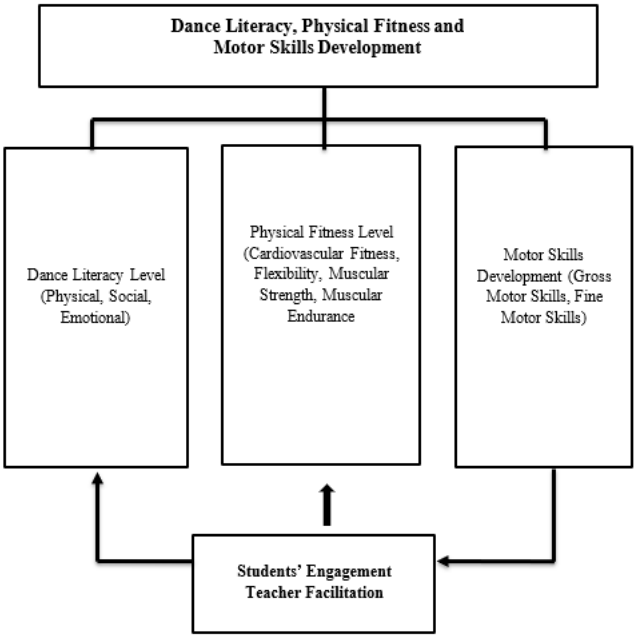

Figure 2. Conceptual Paradigm

At the same time, the framework recognized that the impact of the dance literacy program may vary within the respondents. It is noted that the learning acquisition is determined by the student engagement during lessons and the quality of teacher facilitators. These mediating variables may shape the strength the effect of the program and its outcomes. In particular, these factors are needed to turn the benefits of dance into concrete gains in fitness and motor skills performance thru structured and intense training. To illustrate this, the students who are highly engaged and received consistent instruction are more likely to achieve greater improvements than those who exhibit lower engagement and less feedback and experience.

Meanwhile, this framework also included control variables like age, gender, prior physical activity, and health status. These are necessary elements since they may influence students' levels of beginning abilities and responsiveness to the program as baseline data. Therefore, there are links between the dance

program and its results as literacy initiative and between the factors that may mediate or moderate the effectiveness of the intervention.

Definition of Terms

For understanding and clarification purposes, terms used in this study are defined conceptually and operationally.

Dance Literacy. Dance literacy includes fluency of movement and awareness of rhythm (Buck, 2020). In this study, this refers to the students' ability to perform and understand dance in terms of physical, social, and emotional aspects and the ability of the students to coordinate, be flexible, and show strength on their interaction and collaboration with others during the dance activities.

Physical Domain. The physical domain refers to the maturation of size, strength, and the refinement of both gross and fine motor skills (Thill, 2021). The term "physical domain" in this study refers to the development of size, strength, gross and fine motor skills, sensory abilities, and their practical application among Grade 11 students.

Social Domain. This word refers to one's capacity to participate in beneficial social networks that develop holistic well-being and optimal performance (Williams, 2015). Contextually, this term shall be used to pertain to respondents' capability to participate in positive social networks within their reach.

Emotional Domain. Emotional fitness refers to an individual's ability to recognize, understand, express, and manage emotions effectively. It also includes the capacity to reduce the intensity and duration of negative emotions, enhance positive emotions, and seek social support when necessary (Stephy Publishers, 2022). In the context of this study, this is the ability of the students to cope effectively with life and express emotions appropriately it maintains self-esteem.

Enhancement Program through Dance Literacy Project. An activity that refers to a structured intervention that is designed to improve or intensify existing programs or routines to achieve better health, fitness, or behavioral outcomes (Law Insider, 2020). More specifically, this study referred this as the set of activities to improve the literacy and fitness levels of the adolescent students in public schools.

Motor Skills Development. These types of skills describe the ability of the body to manage movement, with coordination depending on the seamless interaction of the brain, muscles, and nervous system, and these skills are fundamental for all physical activities (Kiikka, 2019). This word is contextually used to refer to students' ability to control movement which shows the coordinated interaction of the brain, muscles, and nervous system among Grade 11 students as used in the study.

Gross Motor Skills. According to Perez et al. (2020), gross motor skills entail performing movements that involve large muscle and postural groups, including actions of the entire body or significant body segments. The study utilized this term to refer to the skill of doing big movements that use large muscles and involve the whole body or big parts of it, observed among Grade 11 students.

Fine Motor Skills. As outlined by Cleveland Clinic (2023), fine motor skills refer to the small and precise movements performed by the hands, fingers, feet, and toes, enabling people to accomplish numerous everyday tasks. This word denotes the precise movements carried out by the hands and fingers so Grade 11 students perform various everyday tasks in the context of the study.

Physical Fitness Level. This term generally refers to an individual's overall physical condition with his strength, endurance, flexibility, and cardiovascular health (Caspersen et al., 2019). It covers different components in muscular strength, endurance, and flexibility, which contribute to overall well-being. In this study, fitness level is used to refer to the students' physical capabilities and their ability to perform physical tasks related to dance literacy.

Cardiovascular Fitness. According to Verywell Health (2021), cardiovascular fitness means that the heart, lungs, and blood vessels are able to supply oxygen

to muscles during sustained physical activity. In this study, this term refers to the capacity of the students to move in a sustained manner without the fatigue specially during the dance literacy routines.

Flexibility. This word refers to the ability of joints to move in a wide range of motion with no restrictions nor discomfort as defined by Alter (2018). In the context of this study, this word is the students' ability to stretch, bend and extend their limbs with ease.

Muscular Strength. This concept is defined as the force produced by muscles in a single effort of movement (Kraemer and Ratamess, 2017). In this study, this is the students' ability to jump, lift and other strong dance movements. This word also refers to their capacity to maintain control while dancing.

Muscular Endurance. As per McArdle et al. (2015) muscular endurance is ability of muscles repeat contraction over time without fatigue. For this study, this word can determine the extent of time the muscles can perform with extreme fatigue and the ability to sustain posture to complete the routines in the dance literacy tasks.

Methodology

This chapter explains how the research was carried out through its research design, the methods and instruments used for data collection and analysis while following the ethical considerations.

Research Design

This study employed descriptive correlational method of research. The descriptive method determined the students' dance literacy level in terms of physical, social, and emotional aspects. Through this method, the study described the students' fitness level along their cardiovascular fitness, flexibility, muscular strength, and muscular endurance. Finally, it evaluated the level of motor skills development in terms of gross and fine motor skills as well. Additionally, the study utilized this research method in proposing and drafting the enhancement program to further the physical fitness and motor skills development of the students. In support to this, the study of Han et.al (2022) explored the possible links between physical fitness, exercise behaviors, and self-efficacy among college students where the authors also applied descriptive method report participants' beginning characteristics and behaviors.

Meanwhile, the study also delved into checking the significant relationship between students' level of dance literacy and their physical fitness components and the students' level of dance literacy and their level of motor skills development, through correlational method. This same method also determined the extent of the influence of the students' level of dance literacy on physical fitness components and motor skills development. Through this same correlational analysis, Coe et al. (2024) examined associations among motor competence, physical activity, perceived competence, and aerobic fitness in adolescents and measured relationships between these several performance variables.

Respondents of the Study

This study was conducted to determine both the levels of dance literacy, physical fitness, and motor skills development among Grade 11 students at Dr. Lorenzo P. Ziga Memorial High School, Pasacao District, Division of Camarines Sur, during the School Year 2024–2025. Through total enumeration, the student involved the total Grade 11 population of 53 students which resulted to an N of 53 that represents 100% of the Grade 11 unit.

The study deemed total enumeration as appropriate since the total number of participants was manageable to obtain accurate and substantial data. More so, this sampling method minimized the bias that in turn increased the validity of the findings from the responses of the students. Finally, this approach strengthened the relevance of the results as springboard in planning further intervention programs.

Research shows that the competence in movement can result to higher yields in physical skills. Stodden et al. (2008) argue that motor skill competence can sustain physical activity from childhood through adolescence. Likewise, Barnett et al. (2016) finds that activity

levels and fitness can lead to gross motor competence. These studies are solid bases to measure physical literacy and motor skills for a comprehensive evaluation of the entire dance literacy program.

Research Instruments

The study used the following tools in the study to collect, interpret and provide more knowledge in reference to dance as a physical literacy program.

Research-made Survey Questionnaire. The researcher crafted a self-made survey questionnaire as the primary data collection tool. The author outlined the major variables in Part I to measure students' dance literacy through the indicators for physical, social, and emotional domains. This structure is supported by Barnett et al. (2016) who places strong emphasis on a multidimensional evaluation of motor competence.

Next, Part II presents the of physical components to assess students cardiovascular fitness, flexibility, muscular strength and endurance. According to Smits-Engelsman et al. (2021), these fitness indicators are aligned to the standardized measurement for fitness programs among the youth.

Lastly, Part III, as Barnett et al (2016) puts the relatedness of participation to the task to the motor competence of the students, the tool placed the indicators for this domain in the latter part. To measure these, the study employed a four-Likert scale with clear verbal interpretations per range. The scores that range from 3.26 to 4.00 for highest level of competence are excellent for dance literacy and for motor skills. Meanwhile, the scores between 2.51 and 3.25 are leveled as good or above-average level. For the satisfactory level or moderately developed covered the scores from 1.76 to 2.50 while needs improvements are from the scores between 1.00 and 1.75.

To validate the questionnaire, the author sough experts to ensure the clarity of the indicators as presented in the survey questionnaire. Accordingly, based on the Content Validity Index, the items were highly valid. Subsequently, the study proceeded to the dry run among the small group of students who were not part of the actual study. This process checked the reliability of the instrument. Apparently, Cronbach's alpha showed acceptable internal consistency of the survey questionnaire. Lastly, the study incorporated the results of the pilot test and the experts' feedback to further polish the tool prior to its final administration.

Semi-structured interviews. In addition, the study conducted semi-structure interviews to deeply recognize the effectiveness of the program. Grade 11 students and Physical Education teachers participated these interviews who relayed the perceived impact of the dance literacy and the grey areas that needed more refinement for better development along with dance literacy.

Procedures of Investigation

The data collection procedure was made sure to be systematic to gather accurate, reliable data to substantiate the answers to the objectives of the study.

Preparation of Research Instruments. The study initially prepared self-made survey questionnaire. This tool is made based on the indicators of movements discussed in the literature assessment of movement and motor development among the youth based on the study of DeVellis (2017). Mainly, instrument has three parts. Part 1 covers the indicators in physical, social, and emotional domains. Part 2 is for the indicators of cardiovascular endurance, flexibility, muscular strength and endurance while Part 3 is for the assessment of the motor skills development along gross and fine motor skills. Each of the indicators was rated based on a four-point Likert scale since according to Boat and Block (2015), this creates consistency and reduces biases in the responses.

Validation and Dry-Run. Physical Education and other educational research specialists validated the instrument. They checked on the relevance and clarity of the entire content. After which, the study proceeded to a pilot testing with Grade 12 students who were not part of the actual main study. This way, the author can refine any ambiguous items and assessed internal consistency based on the responses of the participants. The reliability analysis through Cronbach's alpha yielded a .80 which

interpreted as acceptable and reliable (DeVellis, 2017).

Administration of Research Instrument. After finalizing, the researcher coordinated with the school head and the Grade 11 advisers for a convenient schedule to collect data. The author administered the questionnaire to all 53 Grade 11 students with whom he explained the purpose, assured its confidentiality and walked them through the process for better and highly accurate responses.

Processing of Data. The data from ccompleted questionnaires were encoded and tabulated after checking. This prepared the raw data for statistical treatment to ensure the validity and reliability of the results. This process should go through the standard procedure as per Boat and Block (2015) to provide answer for the research questions.

Ethical Considerations

This study strictly safeguarded the participants' rights through the ethical principles. The author secured the integrity of the research process where the respondents were below 18 years old secured parental consent prior to the data collection activity. The consent forms that were distributed to the parents or guardians of the Grade 11 students, stated the purpose and the procedures of the study. The letter emphasized that the students may participate and could withdraw at any point. Hence, there was no coercion among the students to require them to participate and their grades would not affected once they refuse to finish their involvement.

To their identity as anonymous and confident in compliance with the Data Privacy Act of 2012 (Republic Act No. 10173), the study withheld the student names, addresses and other information that may identify the students. Instead, the study labeled each of the survey questionnaire with alphanumeric codes so responses can be untraceable to any specific students. Furthermore, the researcher stored the data and aside from him, only the thesis adviser had access to the information for the purpose of verification and analysis.

Since the study employed total enumeration of all Grade 11 students in the school, the process ensure that everybody was fairly and well represented to give equal opportunity as part of the study. In other words, there were no subgroups that were burdened no unfavored during the process. Moreover, the study followed the ethical guideline of research conduct to minimize potential physical and psychological harm or social risks to the participants. As part of the content validation and review, the author ensured that the items were age-appropriate and non-invasive to students' well-being.

To maintain its integrity, the researcher properly cited all the literature and reported accurate findings only to avoid plagiarism. There were no fabrication, manipulation, or even misrepresentation of data. The researcher also acknowledges the assistance from AI tools, specifically ChatGPT and Research Rabbit to better refine the narratives for excellent clarity and rational organization of the review of related literature, methods, and explanations and discussions of results. The author did not utilize the AI tools to generate raw data nor influence the interpretations of the statistical results. Ultimately, the author drew the conclusions based on the results and their implications towards the objectives of the study.

Data Analysis Techniques

The following statistical tool were employed to address the objectives of the study:

Mean. To answer problems 1-3, the study utilized weighted mean to determine the students' levels of dance literacy, physical fitness, and motor skills development. Through the weighted mean, the study gained the students' levels of the physical, social, and emotional domains under the dance literacy. Physical fitness levels in terms of cardiovascular fitness, flexibility, muscular strength were measured using the same statistical tool together and their motor skills development as Problem 2 and 3 respectively.

Pearson Product–Moment Correlation Coefficient (PPMCC). This statistical tool examined the potential significant relationships between variables. This statistical technique measured whether there was a strong or weak strength and direction of the relationship between the students' level of dance literacy and their physical fitness and between their level of dance literacy and motor skills development.

Concretely, PPMCC, determined the improvements in dance literacy may have corresponded with significant changes in physical fitness and motor skills performance among the students.

Coefficient of Determination. Meanwhile, the answers for Problem 5 was taken from the results using the Coefficient of Determination. It evaluated the extent to which dance literacy influenced the physical fitness and motor skills development. Nonetheless, this statistical tool measured degree of variation in students' physical fitness and motor skills development. This is further explained by the results on their level of dance literacy. Accordingly, the result analysis showed the strength of dance literacy as contributory factor to the overall effects of the implementation.

Modified ADDIE Model. Finally, the empirical bases for Problem 6 were generated from the Modified ADDIE Model. The dance literacy project proposal integrated the principles of this mode to even polish and augment the benefits of dance literacy to the physical fitness, and motor skills development of the students. ADDIE or the Analysis, Design, Development, Implementation, Evaluation model as framework model guided the development of the specific instructional activities based on the analysis of the current dance literacy and fitness and motor skills data. The design of the implementation and its evaluation are made sure to align to this model since according to Suherti et al (2023), ADDIE model is a significant framework to create a structure programs to address the learners' need before its implementation and evaluation.

Results and Discussion

This part of the paper presents the analyses of the effects of the dance literacy program on Grade 11 students' physical literacy and motor skills. The discussions include the interpretations of the results, their implications and relevance to the current available literature.

Students' Dance Literacy Level

Students' dance literacy level is their ability to engage in dance with their physical, social, and emotional capabilities. This involvement requires intricate skills to synchronize their movements with the music while they demonstrate muscular control and maintain stability during the performance. In terms of the social aspect, this literacy is a reflection of how strong is their ability to collaborate and communicate with peers to contribute to the group choreography. Emotionally, students must be able to handle their emotions and persevere during difficult routines and show support to struggling fellow dancers. Overall, it is the totality of the students' competence within the dance context.

Physical**.** The students' ability to show precision, control and endurance along with their movements is an indication of physical literacy. When students are able to synchronize their routines and movements with the music and become flexible with balance and muscle strength, one can conclude an excellent physical literacy level.

Table 1A shows the highest indicator was on the muscular control and endurance so students can maintain powerful posture and movement rated excellent at 3.74 mean. Mean the, ability to synchronize precise movements with the music was also excellent at 3.47. The lowest-rated indicator is the stability with the body while controlling complex sequences remained excellent at 3.26. Taken all these mean, the students' physical dance literacy averaged 3.50, interpreted as excellent.

Table 1A. Students' Dance Literacy Level in Physical Domain

Indicators	Mean	Int.	Rank
Maintain posture, execute movements with ease and power through muscle control and endurance	3.74	E	1
Show consciousness of the space to avoid collisions; adapt to different performance contexts.	3.72	E	2
Synchronize and execute precise movements with the music	3.47	E	3

Indicators	Mean	Int.	Rank
Exhibit a range of stretches and movements with ease.	3.30	E	4
Maintain and execute stability during complex dance sequences to show body control	3.26	E	5
Overall Mean	3.50	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

Generally, the results indicate that the students generally perform well in key physical aspects but should need to improve in flexibility. These skills can improve through training programs that integrate dynamic and static stretching exercises and strength and endurance training to enhance the stability and control of the students.

More specifically, based on these data, muscular control and endurance implies the strong physical strength and stamina are needed from the students to sustain complex dance movements. Positively, it also means that the respondents can maintain posture and execute movements with ease and power. The other strengths in synchronizing movements with music and a good range of movements are indications of their flexibility and precision in different dance sequences. Furthermore, although ranked lowest, the students still have an excellent ability in maintaining stability and control performing the complex routines. Generally, the results indicate that the students' dance literacy is generally and they should undergo more customized physical conditioning to achieve more balanced development in all the of their physical aspects.

Along with these findings, the study on the importance of spatial as revealed by Hüfner et al. (2021) show these skills could improve through trainings in balance as part of a literacy dance intervention. Several studies show that this ability in sensing the position of the body and its movement with balance as shown in ballet has an impact on the progress of the students' balance and coordination as stated by Chatzopoulos et al (2019). On the other hand, low mean in motion as indicated by the results suggests that flexibility training is vital for the execution of movements and to reduce risks and injuries according to Angioi et al (2024). However, a recent meta-analysis discovered that these strength programs have no direct impact on improving the flexibility, endurance and posture among the dancers as expressed by Yang et al (2025). Nevertheless, gaining strength does not equate to better flexibility and for this, flexibility training becomes more vital.

Social. This aspect covers the skills for collaboration and effective communication with peers which can be further seen in creating and establishing choreography and supporting struggling participants during rehearsals. This aspect also requires flexibility adapt to different ideas from among the choreographers to define dance styles. This learning environment of coping with inclusivity for all dancers polishes teamwork for a successful dance performance.

As shown in Table 1B, the students demonstrated an Excellent level of dance literacy in the social domain, with an overall mean of 3.65. The highest-rated indicator was the ability to work effectively with peers, cooperate in group choreography, and support one another during rehearsals ($\bar{x}$ = 3.74, Excellent). Indicators related to expressing ideas and feedback and showing consideration for others' ideas and respect for boundaries both obtained a mean of 3.72 (Excellent). The lowest rating is on taking initiative to give support to inexperience dancers although it was still considered as Excellent ($\bar{x}$ = 3.51).

Table 1B. Students' Dance Literacy Level in Social Domain

Indicators	Mean	Int.	Rank
Work and cooperate in group choreography, support struggling fellow dancers during rehearsals.	3.74	E	1

Indicators	Mean	Int.	Rank
Express in constructive dialogues with choreographers and fellow dancers.	3.72	E	2.5
Respect others' ideas and boundaries for a positive atmosphere	3.72	E	2.5
Flexible and adapt diverse dance style while working with different choreographers.	3.58	E	4
Offer guidance and support to inexperienced dancers as needed	3.51	E	5
Overall Mean	3.65	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

These results are an implication that the students possessed have well-developed social competence within the dance environment. There is a strong rating in teamwork when navigating group dynamics to achieve performance goals. This indicator implies that dance is collaborative in nature of dance, hence social skills improve.

Schupp (2015) mentioned that the explicit way of teaching collaboration enhances interpersonal abilities of the students not only within the dance context. However, since dance has not yet yielded uniform benefits and effect, teachers must contextualize these positive outcomes of collaboration in dance. Likewise, Rabinowitch and Knafo-Noam (2015) noted that on top of these benefits, the emphasis should be placed in cooperation not on the competition to encourage total participation.

In spite students' Excellent levels in both social dance literacy ($\bar{x}$ = 3.65) and physical literacy ($\bar{x}$ = 3.50), the study found that dance literacy is not a significantly predictor of motor skills development. This mean that the non-significant finding suggests that strong social and mental engagement in dance does not translate into measurable motor skill development. One possible explanation of this is that motor skills development is not a mere exposure to dance activities alone since it requires repetitive and structured practice.

Hence, it is recommended that integrate guided practice sessions with mentors and good dancers to model correct movements among the inexperienced dancers while keeping the positive group dynamics. Additionally, dance instruction should integrate intentional and repetitive drills to bridge the gap between literacy and motor performance. Future research may further examine how this instructional design can impact the relationship of dance literacy and motor skills development among senior high school students.

Emotional. The emotional aspect of dance literacy is the students' way of connecting with their emotions and thoroughly express with movements. This effective way of conveying emotions can engage and connect with the audience during their performances. Nevertheless, this ability to recognize this strength is a sign of their excellent level of self-awareness.

Table 1C shows the emotional indicators in students' dance literacy. As shown, the highest mean is on the indicator of love for dance with 3.74 and is described as excellent. A middle-ranked skill was the students' ability to empathize and support fellow dancers (3.51/excellent). The lowest indicator was their understanding of their strengths and weaknesses while their perseverance in overcoming challenges was 3.28 but is still an excellent one. As overall mean, the students' emotional engagement averaged 3.45, and is excellent.

Table 1C. Students' Dance Literacy Level in Emotional Domain

Indicators	Mean	Int.	Rank
Exhibit love, enthusiasm and dedication during dance practice and performance to inspire others to commit to the dance routines	3.74	E	1

Indicators	Mean	Int.	Rank
Empathize and support fellow dancers with their emotional needs inside and outside the dance practice.	3.51	E	2
Convey emotions effectively through dance movements to create deeper connection with the audience.	3.42	E	3
Understand one's strengths and weaknesses and seek more growth opportunities.	3.28	E	4.5
Persevere and maintain positive attitude and motivation regardless of setbacks.	3.28	E	4.5
Overall Mean	3.45	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

In a capsule form, the strong ability of the respondents to empathize and convey their emotions indicated their excellent in emotional skills. However, the slightly lower score in perseverance is indicative that a number of students may need additional support to develop resilience Here, mentorship is necessary to help maintain motivation during setbacks. Based on these findings, it is recommended to implement mentorship programs to assist students build and strengthen their resilience through the dance curriculum.

In line with these findings, the Cognitive Apprenticeship theory (Cakmakci et al., 2020) clearly declared that authentic learning can take place with the presence of experts. The guidance from experienced dancers can serve as a strong framework of collaboration and teamwork for emotional and cognitive growth.

However, some studies have critical perspectives regarding the benefits of collaborative way of learning. For instance, Primas et al (2017) found that the group work or peer mentoring cannot guarantee the equivalent emotional growth or skill development. The reason is traced to the types of power dynamics within the dance context not to mention the unequal participation among the participants. In this scenario, the marginalized and the less confident students may acquire limited benefits of the effectiveness of the collaborative learning approach.

Dance literacy. This summarizes the physical, social, and emotional competencies of the students in reference to their strengths and areas for improvement within these dimensions.

Table 1D is presents the overall students' dance literacy levels in social, emotional, and physical aspects. With the highest mean of 3.65, social literacy ranked the as highest ranked aspect and is interpreted as Excellent. Physical literacy follows next with an average weighted mean of 3.50, interpreted as Good. In contrast, Emotional literacy is placed third with its slightly lower average weighted mean of 3.45 but still described as Excellent. As per the average weighted mean is 3.53, this placed the students' general dance literacy at the excellent level.

Table 1D. Summary of Students' Dance Literacy Level

Aspects	Mean	Int	Rank
Physical	3.50	E	1
Emotional	3.45	G	2
Social	3.65	E	3

Note. Scale range and corresponding verbal interpretations are as follows: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

These results suggest that students are in their strongest skills in social interactions during the dance. In addition, the excellent physical fitness improvements of the students

are propelled by their solid physical engagement to cope with the challenges in control, endurance and coordination demanded by the dance routines. Relatively, the lower score in emotional literacy necessitates some additional support in managing emotions which imply that there must be strategies to enhance emotional engagement for a more balanced development in these domains.

These findings are also consistent with previous of Whitehead (2014) who claims that physical literacy covers physical competence, social and emotional engagement. Similarly, Edwards et al. (2017) found that the integration of physical education programs significantly enhances students' overall physical literacy with guided social interaction and collaborative learning set up. Furthermore, the results support the Cognitive Apprenticeship Theory by Cakmakci et al. (2020) on the importance of expert guidance.

Thus, in dance education, instructors should model proper techniques and appropriate emotional expressions. They should also scaffold ways before the students to help them progress with their physical, social, and emotional skills. This mentorship that integrates technical skill in emotional and interpersonal growth enhance the overall impact of dance literacy.

Students' Physical Fitness Level

Excellent students' physical fitness is necessary to perform, maintain proper poises, prevent injuries and sustain focus and energy during the entire activities.

Cardiovascular Fitness. Being the key component, cardiovascular fitness checks the efficiency of the heart and lungs and the circulatory system. These systems ensure that there is sufficient delivery of oxygen to the muscles during sustained the dance literacy movements. This way, students can maintain energy, rhythm, and coordination while executing routines without much fatigue. If well done, this indicates better health and stamina.

Table 2A shows burning calories has the highest weighted mean (3.83) for overall cardiovascular health or Excellent while the increase of lung function and oxygen intake has a mean of 3.74 and has a verbal interpretation of excellent. The lowest mean fell on the indicator of intervals of activities in high-intensity and lower-intensity periods for better cardiovascular conditioning scored 3.66, excellent. Generally, the average weighted mean of 3.74 confirms an excellent cardio-vascular fitness among the participants.

These data suggests that students perform at an Excellent level in all the indicators of cardiovascular fitness where calorie burning notched as a way of weight management.

Table 2A. Students' Physical Fitness Level in Cardiovascular Fitness

Indicators	Mean	Int.	Rank
Burn calories as part of weight management for cardiovascular health.	3.83	E	1
Increase heart rate improve heart health and endurance.	3.77	E	2
Challenge the respiratory system toward better lung function and oxygen intake.	3.74	E	3
Sustain movements over time to enhance cardiovascular endurance.	3.70	E	4
Incorporate intervals between high-intensity movements and lower intensity for better conditioning of cardiovascular state.	3.66	E	5
Overall Mean	3.74	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

This is followed by challenging the the respiratory system and secure ample oxygen intake. The lowest-rated indicator but remains as excellent is their ability to incorporate tasks in the high-intensity intervals and lower-intensity periods for better cardiovascular functioning.

In light of these results, schools should implement dance sessions as regular part of the physical education classes. Here, teachers can craft routines with rhythmic movements and patterns and embed the interval trainings to further boost cardiovascular fitness. This way, the students may acquire and enjoy the health benefits of dance. Ultimately, the students may develop habits for heart health and general wellness.

Keogh et al. (2009) show that dance significantly improves cardiorespiratory fitness. They found the evidence among the older adults which proves the effectiveness of dance regardless of age groups. Likewise, Merom et al. (2016) report that dance routines reduce mortality rates due to cardiovascular diseases. According to them, dance is more effective more than walking and some other forms of exercise. These studies support the current results on cardiovascular health benefits of dance. In addition, the findings reflect Kolb's Experiential Learning Theory. This can be seen when students learn best through the concrete experience that they are exposed to that encouraged their active involvement.

However, some studies are more cautious on the efficacy of dance for improving cardiovascular fitness. Murrock and Groulx (2015) found that the cardiovascular improvements were modest and inconsistent among the participants with varied fitness levels at the beginning of the program. They added that dance does not yield significant gains in this aspect when intensity, frequency and the program structure is limited.

Flexibility. Flexibility is the efficient way of movement. It is essential in the stretching movements during the dance that can help increase balance and reduce the likelihood any injuries.

Table 2B. Students' Physical Fitness Level in Flexibility

Indicators	Mean	Int.	Rank
Reach, bend, and stretch to increase flexibility over time.	3.64	E	1
Adopt activities for balance to reduce risks of falling through controlled motions.	3.49	E	2
Include stretching at the beginning or end of the session to enhance flexibility of target muscles	3.43	E	3
Incorporate mobilities of joints to enhance flexibility and reduce potential risks and injuries.	3.34	E	4
Dynamic stretches of muscles within some ranges motion for better flexibility.	3.15	G	5
Overall Mean	3.41	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

Table 2B presents the students' physical fitness in flexibility. Firstly, the highest-rated indicator is the reaching, bending, and stretching movements to increase flexibility, with a weighted mean of 3.64 and is interpreted as excellent. Meanwhile, stretching sequences with the specific muscle groups which scored 3.43 (Excellent). Finally, the lowest mean is on the stretching and lengthening of the muscles withing the range of motion with a mean of 3.15 (Good). The average weighted mean of 3.41 indicates that the respondents generally achieved a high level of flexibility through dance exercises routines.

The results indicate that students excel in steady exercises through reaching, bending, and stretching and they performed stretching more effectively with the targeted muscle development. However, dynamic stretching being the lowest suggests that students may find these types of movements to be more challenging. Generally, the students have a high level of flexibility and should focus more on gaining flexibility trainings to improve mobility and safe movements

In addition, these findings echo studies for developing flexibility through dance as an effective medium. Quin et al. (2015) reports that

continuous dance patterns with dynamic and static stretches integrated in the routines can increase flexibility. Likewise, Kassing and Jay (2020) explain that flexibility gained from dance strengthens mobility, and lowers the risk of falls specially among the elderly. These receive support from the Situated Learning Theory (Kurt, 2021) which states authentic learning context help student to effectively learn more. In other words, flexibility techniques when applied within real dance routines and not as isolated drills can help students acquire skills functional skills.

It should be noted as that some research dance is not reliable in contributing to the flexibility of the all the participants specially among the inexperienced ones. Adult recreational dancers showed modest and statistically non-significant improvements in flexibility based on a study conducted by Berger and Hossner (2018). They traced that the dance program had no consistent stretching routines. It also focused more on choreography skills and performance instead of flexibility training. In other words, the dance classes that exclusively focus on technique, style and performance with no systematic routines stretching and flexibility drills may not yield the expected flexibility benefits.

Muscular Strength. This key component of physical fitness is essential to perform powerful movements with control and precision. Hence, the development of muscular strength is vital so dancers can execute powerful and graceful performance.

Table 2C presents the students' muscular strength. The highest-rated indicator is on the execution of greater movements with a weighted mean of 3.32 or excellent. This is followed by the resistance through squats, lunges, and jumps using the body weight has a a mean of 3.25 and the lowest is on achieving stability for stronger abdominal and back muscles received a mean of 2.87 and both have verbal interpretations as good. The average weighted mean of 3.12 indicates that the muscular strength among the students is generally at a good level.

Table 2C. Students' Physical Fitness Level Muscular Strength

Indicators	Mean	Int.	Rank
Shows muscular strength with greater movements.	3.32	E	1
Utilize the body's weight as resistance in squatting, lunging and jumping to strengthen muscles.	3.25	G	2.5
Incorporate dynamic movements using multiple muscles simultaneously	3.25	G	2.5
Involve resistance against external objects to improve in muscular strength.	2.91	G	4
Require stable engagement of abdominal and back muscles.	2.87	G	5
Overall Mean	3.12	G	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

Based on these results, the students displayed strongest performance using their muscular strength with the major sets of muscles. Meanwhile, their moderate performance was seen with squatting, doing lunges, and jumping using the bodyweight as resistance exercises. The lower performance fell under establishing the core strength with the abdominal and back muscles to show control in dance. These findings show that the students have a good foundation in muscular strength and should be provided with resistance exercises to achieve greater heights in muscle strength.

These results also correspond to the study of Quin et al. (2015) who reported that dance literacy through the body weight has the capability to enhance muscular endurance. In addition, Kassing and Jay (2020) explain that the strength earned in dancing is dependent on the intensity and frequency of movements with resistance training. In addition, Situated Learning Theory (Kurt, 2021) that states the authenticity

of learning contexts produces higher learning acquisition. To simply explain this in the context of dance literacy, real dance performances is the application of students' skills and learning from the program.

Based on these explanations, teachers should integrate more resistance tasks to the dance programs. They may consider using resistance bands, weights, and other body movements to keep the sessions engaging. Looking ahead, researchers may study the long-term effects of these intense muscular training to different age groups with varying fitness levels.

However, Shepard (2014) complicates the fact that dance automatically enhances muscular strength. According to this author, physical activity interventions like dance showed inconsistent or limited benefits when the training is not progressive. The author also noted that the training volume and its frequency and intensity may defy expected gains in muscular strength.

Muscular Endurance. The excellent ability of muscles to do repetitive tasks over an extended period of time without fatigue determines the extent they can reach in performing dance movements repeatedly.

Table 2D. Students' Physical Fitness Level in Muscular Endurance

Indicators	Mean	Int.	Rank
Repeat movements for extended periods.	3.89	E	1
Engage muscles in slower paces for an extended time to develop endurance.	3.77	E	2
Challenge muscles in continuous movement to over time.	3.75	E	3
Increase the duration and intensity of the exercises that involved sets of muscles.	3.62	E	4
Execute high repetitions of kicking, jumping, or arm movements.	3.55	E	5
Overall Mean	3.72	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

Table 2D shows the indicators for the students' physical fitness level in muscular endurance. The indicator with the highest mean is on the repetition of movements in extended time with a mean of 3.89 or excellent. Following this is the continuous movements to challenge and engage the muscles with a mean of 3.77 (excellent). Falling lowest is the high repetitions of kicking, jumping, or moving the arms with a mean of 3.55 (Excellent). This physical fitness earned the average weighted mean of 3.72 or excellent level of muscular endurance.

In light of these results, it is clear that the students posed the ability to sustain muscle activities during the entire dance routines. As a matter of fact, they maintain this endurance during the repetitive sequences and specially during the slower paces yet continuous movements. These sequences specifically demand prolonged engagement of the target muscles of the students. The consistent high scores among the indicators show that dance activities have given the students the necessary stamina to get through the longer sessions without fatigue or noticeable decline in their performance. Hence, these results imply that the dance literacy program improve the students' ability to handle intricate dance routines with rigor and vitality as needed in dance.

Beyond these observations, these findings places dance as a strong contributor to the overall fitness of the students. The earlier Kassing and Jay (2020) argue that dance brings out stamina but to achieve higher levels of muscular strength, there shall be more additional strength work. On a deeper level, these results resonate with the principles of Cognitive Apprenticeship model theory as discussed by Cakmakci et al (2020) where students build skills most effectively withing real contexts coupled with the guidance of an instructor or teacher. Thus, teachers should provide progressive routines, demonstrate precise techniques and give immediate feedback so students can quickly absorb and reapply what they learn directly right in their performances.

Overall physical fitness levels. Table 2E is a summary of students' overall physical fitness levels in dance literacy. As shown in the table, the students has an excellent overall level of physical fitness in all aspects as evaluated with means of 3.50 and above. It is recorded that the highest fitness level is the cardiovascular strength with 3.74 mean and is excellent. This was followed by muscular endurance with a mean of 3.72 and is also an excellent rating. Flexibility placed third with the mean score of 3.41 and also interpreted as excellent. In contrast, the muscular strength placed only at the good level with the lowest mean score of 3.12.

Table 2E. Summary of Students' Physical Fitness Level

Aspects	Mean	Int	Rank
Cardiovascular	3.74	E	1
Muscular Endurance	3.72	E	2
Flexibility	3.41	E	3
Muscular Strength	3.12	G	4

Note. Scale range and corresponding verbal interpretations are as follows: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

These results suggest that students possess strong muscular endurance. This capability sustained their effort throughout physical demands of the dance routines. Moreover, this ability is also responsible in performing the repetitive and continuous movements that eventually developed their stamina and muscular control even more. Being able to do all these, the students' engagement in dance also equipped them with precision, and confidence as shown in their overall dance performance.

Therefore, it is recommended that schools integrate progressive dance programs with more structured, repetitive and continuous in design and structure. This way, the students' energy and stamina may improve with these training in both high and love intensity. They should be given guidance as well through modelling and demonstrations. Foremost, the consistent monitoring of their progress may help the teachers re-structure or re-align dance frequencies and routines to optimize the benefits of the program.

More evidently, Maurya and Mahajan (2014) and Kaouri et al. (2023) also discovered the improvements in muscle endurance through dance routines. Likewise, Sivvas et al. (2015), Marosz et al (2022) all confirm that consistent repetition of dance movements increases the total functionality of the body. Locally, Lacasan and Lacasan-Nagba (2023), Gabunilas et al (2024) found out similar patterns in the context of the Philippines. They found cardiovascular endurance has significant link to muscular fitness and cognitive power. However, Van den Berg et al (2019), Aguelo and Aquino (2023) also mentioned that the dance program should employ performances that vary in intensity and duration to upgrade physical gains. Nevertheless, Shearer et al (2018), Cairney et al (2019) and Dance Aotearoa NZ (2019) strongly attest that this kind of physical literacy program is an effective way to build the overall physical fitness of the school students.

Level of Motor Skills Development

The study also evaluated the gross and fine motor skills development among the Grade 11 students. The study conducted an in-depth analysis of the students' progress in their coordination, balance and precision.

Gross Motor Skills. When the large muscles of the body are used to run, jump and balance, the body creates and achieve strong balance amidst these physical activities. These controlled movement is equivalent to strong stamina.

Table 3A presents the students' gross motor skill development among the student participants. With the weighted mean of 3.72, the students had an excellent ability to dance and maintain dance activities over time. The coordination of the body parts as used in dancing has obtained a mean of 3.49 and is also excellent. Ranked as lowest among the indicators,

the ability to change direction rapidly has shown a mean of 3.52. This ability is verbally interpreted as good but the overall mean of this aspect is described as excellent.

Table 3A. Level of Motor Skills Development in Gross Motor Skills

Indicators	Mean	Int.	Rank
Sustain physical activity over time.	3.72	E	1
Maintain stability during physical routines.	3.70	E	2
Use different parts of the body more efficiently.	3.49	E	3
Extend physical force during movement.	3.40	E	4
Change direction quickly while control is maintained.	3.23	G	5
Overall Mean	3.51	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

The results carry the implications that the strongest gross motor skill is the ability to sustain energy in doing the physical dance routines over time. While doing these, the students were also excellent in changing steps quickly while coordinating their body parts. However, to display smoother performance, students work more on the skills in changing direction quickly while still in control of their body. Nevertheless, students have received a excellent level of acquire gross motor skills.

In line with these findings, students should be exposed to more customized dance exercises for speed and adaptability skills acquisition. Those quick transition may be challenging but can train the students with speed to develop their coordination and balance.

Gallahue and Donnelly (2014) assert that the cornerstone of motor leaning rely on the stability and coordination of body as overall physical competence. Moreover, Cratty (2015) considered the coordination and agility skills training challenge the neuromuscular control. Once acquired, one is equipped with the skills to move in a way that he does not cause himself and other any injuries.

Yet, in a systematic review with the random controlled trials, McDonough et al (2020) found that majority of studies reported revealed that children gained motor skills with this kind of intervention but the other 20% showed different results. This subset of trial showed insignificant effects on the participants. In cases like these, it is vital to secure guidance from the experts to facilitate the dance instruction in a way that it can promote motor learning so the effectiveness of dance literacy is guaranteed.

Fine Motor Skills. Small movements of the all the muscles of the hands, fingers, and wrists comprise these skills. They execute more intricate movement and require more controlled movements.

Table 3B. Level of Motor Skills Development in Fine Motor Skills

Indicators	Mean	Int.	Rank
Precise control in small movements using fingers to grasp.	3.43	E	1
Synchronize hand movements with the what one sees	3.30	E	2
Complete tasks or manipulate small objects with precision.	3.21	G	3
Hold objects firmly with the fingers and hands.	3.00	G	4
Repeat finger movements with speed and accuracy.	2.94	G	5
Overall Mean	3.18	G	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

Table 3B shows that the precision and control in using the fingers to grasp has a weighted mean of 3.43 and is interpreted as excellent. An intermediate skill is the ability to synch the

hand movements with what one sees within the place and has a mean of 3.30. The lowest mean is on the repetition of quick and accurate movements of fingers with the mean of 2.94 and interpreted as good. In general, the overall performance of the students in fine motor skills is considered as good with 3.18 as the overall mean.

The implications of these results state that the students were excellent at detailed and controlled hand movements that can be seen when grasping. This is also evident in synchronizing with the visual cues while dancing. They have the ability to create intricacies with the small muscles but needs help in strong control when gripping so they can execute precise hand movements.

Nevertheless, teachers should incorporate activities that entail hand to eye coordination, finger exercises, and grasping to help them strengthen not only speed but control. These finer and more precise movements for control can add more details in the dance choreography for more graceful performance.

This study found support with the findings of Gabbard (2021). The author asserted that fine motor skills can support handwriting and object manipulation as cognitive and motor skills tasks. Similarly, Sugden and Wade (2019) said that the frequent using of the fine motor muscles can improve the small muscles. So when teachers deliberate show hand and finger movements during dance routines, students are given the opportunities to internalize the techniques. This way, they can gradually improve their control and precision with their small muscles for more detailed dance tasks.

Thus, to address this gap in fine motor skills, teachers or dance mentors should focus to model how to perform more intricate movements. Hence, it is helpful to demonstrate how to do circular wrist rotations and sharp wrist snaps. With hands, dance movements can look like students trace shapes or symbols in the air according to the tempo of the music. Additionally, students can also improve intricate dance movements as if making cursive and zigzag motions with their fingers and wrists for a hand to eye coordination as well.

Level of Motor Skills Development. This proficiency in gross and fine motor skills effectively states the abilities of the students to perform precise dance routines with confidence.

Table 3C is the summary of motor skills development among students through dance literacy. In terms of gross motor skills, students achieved a mean of of 3.51, which is interpreted as excellent and this indicator ranked first. Meanwhile, fine motor skills is leveled as good with a mean of 3.18. The Grand Mean stands at 3.345 and is also interpreted as excellent.

Table 3C. Level of Motor Skills Development

Indicators	Mean	Int.	Rank
Gross Motor Skill	3.51	E	1
Fine Motor Skills	3.18	G	2
Grand Mean	3.34	E	

Note. Scale range and corresponding verbal interpretations: 3.26–4.00 = Excellent (E); 2.51–3.25 = Good (G); 1.76–2.50 = Satisfactory (S); 1.00–1.75 = Needs Improvement (NI).

Through the dance literacy program, the gross motor skills have improved. This time, they can move with significant amount degree of stability and coordination and control. In contrast, the slightly lower mean score for fine motor skills points to areas that require further refinement in precise and intricate movements. In general, the pattern shows that the students already perform well in both skill areas and additional training to achieve precision with fine motor skills could further elevate their overall motor performance.

Accordingly, the students have a strong foundation in motor and gross skills. These abilities are needed to create well-coordinated and balanced dance movements. The lower level of fine motor skills, however, are for further improvement specifically with small and precise movements. Thus, literacy program should offer learning opportunities to improve

the students for more technical skills in dance performance.

In a broader context, Gallahue and Donnelly (2014) stressed out that well-designed physical activities in dance classes definitely polish the motor skills. Likewise, Gabbard (2021) explains that this kind of well-planned physical literacy program has large contributions to the motor skill growth of the participants.

Beyond these observations, Kassing and Jay (2020) argue that additional strength trainings are necessary to challenge the physical fitness specially the muscular strength. Another study conducted with 6–7 year-old children showed the implementation of dance intervention that lasted for 8 weeks has improved some cognitive functions. Amazingly, the study has no record of improvements in terms of the motor competence among the participants. Nevertheless, the author expressed that short-term dance programs as embedded in the instruction may not be a reliable intervention to address weak motor skills. Hence, Rudd et al (2021) noted that the design, duration and the instructional approaches employed within the program should be sufficient.

To achieve these, future physical education programs must contain dance routines with direct influence on the ability to create more detailed and precise dance movements. Teachers should introduce the technicalities of doing more controlled hand gestures and intricate dance sequences to challenge both the coordination and control of the participants for overall motor competence.

Relationship Between Students' Level of Dance Literacy and Physical Fitness Components; and Between Students' Level of Dance Literacy and Motor Skills Development

It is vital to check whether there is a link between the students' dance knowledge or dance literacy to their physical fitness and motor skills. Plainly, this study, checked if being better at dance movements means being physically fit as well. This is to concretely see the impact and influence of dance literacy program to the physical development of the respondents.

Table 4 presents the results of the relationships between students' levels of dance literacy and physical fitness. The data reveals that there is no statistical significant correlations between dance literacy and the physical fitness components since all p-values are greater than 0.05. Additionally, most of the r-values fall within the negligible correlation range (±0.00 to ±0.30) and this is an indicator of weak relationships. For Physical Dance Literacy, the correlations with cardiovascular fitness (r = –0.15), flexibility (r = 0.08), muscular strength (r = 0.11), and muscular endurance (r = –0.09) are all negligible and not significant as well. In terms of Social Dance Literacy, the presence of high negative correlation with muscular strength (r = –0.77) remains not statistically significant (p = 0.58). Therefore, the study cannot interpret this a reliable relationship.

Other associations in cardiovascular fitness (r = –0.17), flexibility (r = 0.11) and muscular endurance (r = 0.15) all remain negligible. In reference with the Emotional Dance Literacy, its correlations with the cardiovascular fitness (r = –0.08), flexibility (r = 0.20), muscular strength (r = 0.21) and muscular endurance (r = 0.04) also show negligible relationships. Thus, these results lack statistical significance.

Table 4. Relationship Between Dance Literacy and Physical Fitness

Dance Literacy	Physical Fitness	r-value	Int.	p-value	Int.
Physical	Cardiovascular	-0.15	NC	0.30	NS
	Flexibility	0.08	NC	0.55	NS
	Muscular Strength	0.11	NC	0.43	NS
	Muscular Endurance	-0.09	NC	0.52	NS
Social	Cardiovascular	-0.17	NC	0.23	NS
	Flexibility	0.11	NC	0.45	NS
	Muscular Strength	-0.77	HPC	0.58	NS
	Muscular Endurance	0.15	NC	0.29	NS

Dance Literacy	Physical Fitness	r-value	Int.	p-value	Int.
Emotional	Cardiovascular	-0.08	NC	0.57	NS
	Flexibility	0.20	NC	0.15	NS
	Muscular Strength	0.21	NC	0.13	NS
	Muscular Endurance	0.04	NC	0.75	NS

Note. p ≥ .05 = Not significant (NS); p < .05 = Significant (S). Interpretation of correlation coefficients is as follows: ±.90–±1.00 = Very high positive/negative correlation (VHPC); ±.70–±.89 = High positive/negative correlation (HPC); ±.50–±.69 = Moderate positive/negative correlation (MPC); ±.30–±.49 = Low positive/negative correlation (LPC); ±.00–±.29 = Negligible correlation (NC); 0 = No correlation.

Considering these figures, dance literacy cannot be considered as a strong predictor of the students' physical fitness performance. In short, the skills acquired by the students in physical movements and creativity of expression of the dance steps and even the acquired social-emotional competence do not necessarily produce improvements in cardiovascular endurance, flexibility, muscular strength, or muscular endurance or physical fitness.

Thus, this disconnect is an implication that factors behind the intensity of trainings and the frequency of dance sessions and the variety of fitness exercise play a crucial role in producing total physiological benefits. It could also imply that dance activities may not be sufficient to stimulate all the systems to cope with the physical trainings for more intended fitness development.

Quiroga Murcia et al. (2014) strongly emphasized that dance literacy program should be coupled with exercise routine. Similarly, Kassing and Jay (2020) pointed out that muscular development typically requires additional conditioning through more challenging routines that directly sharpen the coordination and efficiency of movements.

Hence, dance literacy programs should incorporate aerobic routines with continuous dance sequences. These can be performed from a moderate going to vigorous intensity for certain period of time for better cardiovascular endurance. The flexibility, the program should employ dynamic stretching such as leg swings and arm circles and other similar exercises during warm-up.

Relationship Between Dance Literacy and Motor Skills Development

Table 5 are the results on the relationships between dance literacy in Physical, Social, and Emotional domains and the motor skills, specifically gross and fine motor skills.

For Physical Dance Literacy, the study found no significant correlation with either gross motor skills (r = –0.05, p = 0.72) or fine motor skills (r = 0.00, p = 1.00) since both p-values exceed 0.05 and these are classified as not significant. Similarly, Social Dance Literacy shows negligible relationships with gross motor skills (r = 0.12, p = 0.39) and fine motor skills (r = –0.19, p = 0.18). Again, these are not significant. Lastly, Emotional Dance Literacy has a moderate negative correlation with gross motor skills (r = –0.33) and a p-value of 0.02, but despite this lower p-value, the result is still interpreted as slightly significant. Its correlation with fine motor skills (r = 0.07, p = 0.63) is not significant.

Table 5. Relationship Between Dance Literacy and Motor Skills Development

Dance Literacy	Level of Motor Skills	r-value	Int	p-value	Int.
Physical	Gross	-0.05	NC	0.72	NS
	Fine	0.00	NC	1.00	NS
Social	Gross	0.12	NC	0.39	NS
	Fine	-0.19	NC	0.18	NS
Emotional	Gross	-0.33	LNC	0.02	NS
	Fines	0.07	NC	0.63	NS

Note. p < .05 = Significant; p < .01 = Slightly significant; NS = Not significant.

As a whole, these results are a large indicator of the varying levels of motor skills development the students possess. It can also be taken from these data that the students show high performance in certain components of dance literacy. However, their gross and fine motor skill scores do not reveal the same level of proficiency. More specifically, gross motor skills received higher ratings than fine motor skills. In this scenario, there is variability that exists in the different indicators of motor competence.

Nonetheless, these findings state that the level of students' dance literacy does not directly predict their progress in motor skills. Even though, dance literacy indicates students' knowledge and awareness of patterns of movements and their rhythm and timing, the results suggest that these alone are insufficient to see concrete progress in gross and fine motor performance.

This disconnect may be explained by the nature of motor skill. Motor skill acquisition is all about repetition of dance movements in a progressive and challenging manner and not mere exposure to the concepts of movements. In other words, the frequency of execution leads to better muscle memory which makes the dance routines more efficient. In contrast, dance literacy instruction is about helping the students understand the movements and the manner of creative expression. These do not make up intense proactive to improve motor skills proficiency. In addition, there is a limiting factor in terms of the differences in the intensity and duration of dance activities. Apparently, when dance sessions emphasize choreography, and synchronization of movements, this may create fewer opportunities for repetitive practicing of the motor tasks.

In line with the repetitive practice, Gallahue and Ozmun (2014) attested that motor skill acquisition depends on these rather than general exposure to dance movements. Logan et al. (2018) further noted there is a substantial development in motor skills through more structured drills. Likewise, Lakes et al. (2013) who also the current findings further noted that dance literacy alone is insufficient to drive significant changes in motor skills. Interestingly, Hebert and Gervais (2008) found that the improvements in balance and coordination among children in dance classes remained stagnant over time. The authors recorded that dance practice, had the program failed to incorporate supplementary tasks for strength and flexibility training, the children might not have progressed further.

Thus, general dance practice must be complemented by motor skills exercises to be sufficient to develop full motor competence. These tasks shall enhance balance and strength and fine hand coordination is also addressed. As a result, students are better not only with dance awareness but also in actual execution with their motor skills.

Proposed Enhancement Program through Dance Literacy Project

This study proposes a targeted approach that bridges the gap between knowledge and physical fitness skills development. This Enhancement Program in Dance Literacy is designed to simultaneously promote concepts of dance literacy and measurable physical fitness and motor skills development.

Analysis Phase (1st Month). The Analysis Phase is scheduled for one month and is allotted to review and interpret the key findings of the study in the context of the school. These results revealed that students have reached excellent levels of dance literacy and proficiency in the components of physical fitness and motor skills. More so, statistical analysis states that dance literacy had weak influence of the physical outcomes among the respondents. Nonetheless, existing dance instruction must substantiate not only the conceptual understanding but also upgrade the muscle condition through repetitive and strength trainings.

This phase also gives the school administrators, PE teachers and coordinators the opportunity to evaluate the result of the assessments to identify weak areas and determine gaps in the aspects and domains of physical fitness. Once done, they can realign the intervention program to address the students' needs with the standard performance and objectives of the existing curriculum. Eventually, the author can finalize his needs assessment reports to serve

as bases and guidance in crafting the intervention implementation plan.

Design Phase (2nd-3rd Months). The Design Phase spans two months to translate the identified learner's needs into structured literacy strategies. A key focus of the dance literacy is to achieve deeper mastery of dance concepts and techniques for better performance skills. Thus, the workshop includes lessons guides for a step-by-step pedagogical approach in demonstrations and executions. This also include strategies for peer teaching and other support systems and feedback and evaluation plans. Hence, dance teachers and PE coordinators should work in collaboration with the principal to design this material with concise dance lesson plans, classroom observations checklists and performance rubrics.

Simultaneously, this phase integrates a more stable system and physical fitness routines into every dance session. These are warm-up routines and cool-down activities that shall progress toward more progressive strength drills to build cardiovascular endurance and flexibility and muscle stamina. These shall be done in repetitive manner to stabilize coordination and balance. The program shall conduct periodic fitness checks to measure progress and tend the grey areas of improvements. These processes shall be documents through fitness assessment results, teacher reports and student portfolios.

Most specifically, the phase is intentionally designed for motor skill development. Thus, there shall be drills to target balance, agility, and precision on top of the main dance activities. Teachers are expected to provide immediate to guide the students and reinforce better and correct movements. These feedback should be recorded in skill checklists and observation tools to serve as baselines in measuring the progress.

Development Phase (4th – 6th Months). The Development Phase is implemented over three months. This period is designed for capacity building and full program implementation. To do this, there should be teacher in-service training in integrating motor skill drills from warm up to cool down routines into the dance instruction. This training will also assist the teachers to properly manage peer coaching sessions and the distribution of instructional resources. The school heads and senior teachers should oversee the degree of implementations of these activities to ensure comprehensive implementation. Their monitoring activities should also cover checking the records of training attendance, reports from peer mentoring sessions and the feedback from classroom implementation.

In addition, the program also addresses the need for a conducive learning environment and instructional resources. Hence, schools are encouraged to acquire mats, resistance bands, simple weights and mirrors as vital equipment. They should also lead the redesigning of the available spaces to provide the students with safe place for more efficient movement. Foremost, it is significant collaborate with local government units and parent–teacher associations to seek support with the resources the school is incapable to provide. Finally, these resources must be recorded in the inventories as verification mode including the classroom inspections and teacher feedbacks. The feedback from these activities shall measure the effectiveness of the entire program.

Resource Allocation and Procurement. The acquisition of the instructional equipment shall follow the implementing school procurement procedures. Maintenance and Other Operating Expenses (MOOE) can finance the low-cost and durable items such as resistance bands, exercise mats and the likes. The mirrors and space design that may require higher financial allotment may be supported by the local government unit or the parent–teacher association contributions. To implement these, the school will prepare a simple activity proposal and procurement plan that indicates the intended purchases and their corresponding financial expenditures. These proposed purchases must comply with DepEd guidelines and must be aligned with actual instructional needs. Once acquired, the teachers must keep an updated inventory and utilization log to monitor proper use and maintenance of these school resources.

Overall, the Dance Literacy Enhancement Program proposal shall be conducted within 6 months during the school year to secure concrete yields in physical fitness. Above all, the

school should monitor and evaluate this program for a purposeful practice and sustainable implementation for students' holistic physical and motor development.

Conclusions

1. Grade 11 students have strong dance literacy in social and physical and emotional aspects, but fell short in dynamic stretching and strength training for a balanced dance literacy level.
2. Dance literacy improved cardiovascular endurance, flexibility and muscular stamina but students have lower muscular strength due to the absence or lack of resistance drills in the movements and choreography.
3. Dance literacy effectively developed gross motor skills in coordination, agility and stability, but fine motor skills in executing small movements using the hand and fingers remained weaker since there were no specific movements to improve intricate movements.
4. Dance literacy alone does not significantly influence physical fitness nor predict motor skills development; more structured training is essential to complement the benefits of dance literacy into more concrete and measurable fitness and motor skill progress.

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NVC

Recommendations

1. Integrate the combination of strength trainings for flexibility and endurance. Support emotional skills management through journaling and peer support system. Offer diverse dance styles and choreography to boost execution skills, spatial awareness and creativity.
2. Integrate exercises and high-intensity intervals using body weight during the dance sessions to improve muscular endurance, and cardiovascular fitness. Include core body exercises and resistance activities for strength gains.
3. Provide modelling and demonstrations of intricate hand and finger movements together with the large dance routines to address the need for more refined fine motor skills. These can be done by moving the hands or fingers in a cursive or zigzag manner and other intricate movements along with drills to grip and improve hand to eye coordination for better choreography and coordination.
4. Systematically combine resistance training, flexibility drills, and cardiovascular workouts with dance instruction. Include high-intensity intervals, strength-focused choreography, and varied motor drills to support cognitive and physical growth.
5. Examine and re-examine the impacts of different dance styles and their durations and intensities to record the improvements in

strength and coordination in long-term period.

6. Teachers should include resistance exercises in dance sessions where they gradually increase in intensity and complexity to challenge target muscles and physical performance for better results.
7. Deepen dance literacy through professional development workshops and in-service trainings among the teachers. Increase teamwork and collaboration among the participants by peer mentoring and feedbacking.
8. Conduct implementation and instructional resources monitoring to ensure that the equipment are safely secured.
9. Monitor progress through lesson observations, fitness tracking, and student portfolios to facilitate more informed adjustments based on the assessment data.
10. Make dance as tool to bridge the gap between dance literacy and physical proficiency for overall student growth among schools.

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Appendix A

Letter Seeking Permission to Conduct the Study

CECILIA ANDREA C. APOLINARIO, Ph D
Public Schools District Supervisor
Pasacao District, Division of Camarines Sur

Sir:

The researcher respectfully seeks your approval to conduct the study *"Dance Literacy, Physical Fitness and Motor Skills Development"* among Grade 11 students of Dr. Lorenzo P. Ziga Memorial High School for the School Year 2023–2024.

The study will assess students' dance literacy, evaluate their fitness, and measure their motor skills and the relationships between these variables to propose an enhancement program to improve students' physical competence. The study will utilize survey questionnaires and semi-structured interviews to collect data. It also uphold the confidentiality of the participants who will be encouraged to join voluntarily.

I am looking forward for you kind approval and support for the conduct of this research.

Thank you very much.

Respectfully yours,
(SGD) NOMER V. CORALDE
Researcher

Noted:

(SGD) DR. FAUSTO C. ROMERO JR.
Dean, College of Arts and Sciences

Recommending Approval:

(SGD) DR. JOSEPHINE FRANCIA R. VILLANUEVA
Dean, Graduate Studies Division

(SGD) DIONNE O. RABEJE
School Head, Dr. Lorenzo P. Ziga Memorial High School

Approved:

(SGD) CECILIA ANDREA C. APOLINARIO, Ph D
Public Schools District Supervisor

Appendix B

Parental Consent and Student Assent Form

NAGA COLLEGE FOUNDATION, INC.

City of Naga

GRADUATE STUDIES

February 4, 2025

Dear Parent/Guardian and Student,

Please be informed that you are son/daughter is invited to participate in a research study on **"Dance Literacy, Physical Fitness and Motor Skills Development"** that shall examine how dance literacy program may influence students' physical fitness, motor skills development.

His/Her voluntary participation shall include joining in the dance activities and answering survey questions. Since, participation is voluntary, she/he may withdraw at any time without penalties. Please be assured that all the information will be confidential and the activities shall be safe although they may cause minor muscle soreness.

Thank you for your cooperation.

Nomer V. Coralde
Teacher Researcher

_____

Parental Consent Statement:
I have read and understood the information above. I give permission for my child, _____ (Student Name), to participate in this study. I understand that my child may withdraw at any time.
Parent/Guardian Name: _____
Signature: _____
Date: _____

_____

Student Assent Statement:
I have fully read and understand this endeavor and I sign up to permit my son/daughter to participate in this study where she/he can also withdraw from any time she/he wishes to.
Student Name: _____
Grade/Section: _____
Student Signature: _____
Date: _____

Appendix C
QUESTIONNAIRE
NAGA COLLEGE FOUNDATION, INC.
City of Naga

GRADUATE STUDIES

February 4, 2025

Dear Students:

I am conducting a study on **"Dance Literacy, Physical Fitness and Motor Skills Development"** to explore the influence of dance literacy on the physical literacy and motor skills among the senior high school students like you. Your participation is highly valuable so we can better improve our school programs in physical fitness. Rest assured that your involvement is voluntary and all information you will indicate will be treated strictly confidential and will be used solely for academic purposes. Your participation will not in any way, affect your grades or academic performance.

Thank you for your cooperation.

Nomer V. Coralde
Teacher Researcher

DEMOGRAPHIC PROFILE

Name: (*Optional)*_____ Grade/Section:_____ Age: _____

----------**Survey Questionnaire**

Direction: Please read each question carefully and respond honestly using the provided scale. Ensure all items are answered.

Dance Literacy	Indicators	4	3	2	1
Physical	1. Demonstrate the ability to synchronize movements with music, to execute precise steps.				
	2. Exhibit a range of motion to be able to perform stretches and movements with ease.				
	3. Display muscular control and endurance to maintain posture and execute movements with power.				
	4. Maintain stability while executing complex dance sequences, to show control over their body's center of gravity.				
	5. Demonstrate an understanding of the space around them to avoid collisions and adapt to different performance environments.				
Social	1. Work effectively with peers, cooperate in group choreography and support one another during rehearsals.				
	2. Express ideas and feedback clearly during rehearsals and contribute to constructive dialogue with choreographers and fellow dancers.				

Dance Literacy	Indicators	4	3	2	1
	3. Show consideration for others' ideas and boundaries and foster a positive atmosphere within the dance community.				
	4. Take initiatives in group settings, offering guidance and support to less experienced dancers when needed.				
	5. Demonstrate flexibility in working with different choreographers and adapt to diverse dance styles to contribute to a dynamic dance community.				
Emotional	1. Convey emotions effectively through movement to connect with the audience on a deeper level during performances.				
	2. Demonstrate an understanding of their strengths and weaknesses as a dancer and seek opportunities for growth and improvement.				
	3. Persevere through challenges and setbacks in order to maintain a positive attitude and motivation to overcome obstacles.				
	4. Show empathy, understanding and support towards fellow dancers with their emotional needs both in and out of rehearsals.				
	5. Exhibit a genuine love for dance, display enthusiasm and dedication in their practice and performance to inspire others with their commitment.				

Legend: 4-Excellent, 3-Good, 2-Satisfactory, 1-Needs Improvement

II. Physical Fitness	Indicators	4	3	2	1
Cardiovascular Fitness	1. Increase heart rate to promote cardiovascular health and improving endurance.				
	2. Challenge the respiratory system, leading to improved lung function and oxygen uptake.				
	3. Engage in rhythmic and sustained movements to enhance cardiovascular endurance over time.				
	4. Incorporate intervals of high-intensity movements followed by periods of lower intensity to effectively improve cardiovascular conditioning.				
	5. Facilitate calorie burn to aid in weight management and promote overall cardiovascular health.				
Flexibility	1. Include dedicated stretching sequences at the beginning or end of the session to target specific muscle groups to enhance flexibility.				
	2. Incorporate movements that mobilize joints to enhance flexibility and reduce the risk of injury.				
	3. Enhance balance and stability and reduce the likelihood of falls and improve overall functional movement.				
	4. Involve dynamic movements that stretch and lengthen muscles promote flexibility and range of motion.				
	5. Require movement for reaching, bending, and stretching to contribute to increased flexibility over time.				

II. Physical Fitness	Indicators	4	3	2	1
Muscular Strength	1. Utilize the body's own weight as resistance and strengthens muscles through movements like squats, lunges, and jumps.				
	2. Require core stability and engagement to lead to improved strength in abdominal and back muscles.				
	3. Incorporate dynamic movements that engage multiple muscle groups simultaneously				
	4. Involve resistance against gravity or external objects, leading to improvements in muscular strength.				
	5. Movements require greater muscular strength to execute leading to ongoing strength gains.				
Muscular Endurance	1. Involve repeating movements for extended periods.				
	2. Include segments of continuous movement to challenge muscles to maintain performance over time.				
	3. Structured to progressively increase the duration and intensity of the exercises.				
	4. Include slower-paced segments where muscles remain engaged which contribute to muscular endurance development.				
	5. Involve high repetitions of specific actions, such as kicks, jumps, or arm movements, enhancing muscular endurance.				

Legend: 4-Excellent, 3-Good, 2-Satisfactory, 1-Needs Improvement

Motor Skills Development	Indicators	4	3	2	1
Gross motor skills	**1.** The ability to maintain stability during physical activities.				
	2. The capacity to use different parts of the body together smoothly and efficiently.				
	3. The level of physical force exerted during movement.				
	4. The ability to change direction quickly and effectively while maintaining control.				
	5. The ability to sustain physical activity over time.				
Fine motor skills	**1.** Precision and control in small, detailed movements, such as using fingers to grasp objects.				
	2. The ability to synchronize what you see with your hand movements.				
	3. The capacity to hold objects firmly with the hands.				
	4. The speed and accuracy of repetitive finger movements.				
	5. The precision to complete tasks like writing or manipulating small objects.				

Legend: 4-Excellent, 3-Good, 2-Satisfactory, 1-Needs Improvement

Appendix D

Expert Content Validation Checklist

Instructions: Read each of the items and rate them according to their relevance and clarity using the 4-point scale. Circle or tick the appropriate rating and provide comments if needed.

4 – Excellent / Highly Relevant **3 – Good / Relevant** **2 – Satisfactory / Somewhat Relevant** **1 – Needs Improvement / Not Relevant**

Domains	Indicators	4	3	2	1	Comments / Suggestions
Dance Literacy – Physical	1. Demonstrate ability to synchronize movements with music, to execute precise steps					
	2. Exhibit a range of motion to perform stretches and movements with ease					
	3. Display muscular control and endurance to maintain posture and execute movements with power					
	4. Maintain stability while executing complex dance sequences					
	5. Demonstrate understanding of space to avoid collisions and adapt to different environments					
Dance Literacy – Social	1. Work effectively with peers and cooperate in group choreography					
	2. Express ideas and feedback clearly during rehearsals					
	3. Show consideration for others' ideas and boundaries					
	4. Take initiatives in group settings					
	5. Demonstrate flexibility in working with different choreographers					
Dance Literacy – Emotional	1. Convey emotions effectively through movement					
	2. Demonstrate understanding of strengths and weaknesses as a dancer					
	3. Persevere through challenges and setbacks					
	4. Show empathy and support towards fellow dancers					
	5. Exhibit genuine love for dance and display dedication					
Cardiovascular Fitness	1. Increase heart rate to promote cardiovascular health and improve endurance					
	2. Challenge the respiratory system, leading to improved lung function and oxygen uptake					
	3. Engage in rhythmic and sustained movements to enhance cardiovascular endurance over time					
	4. Incorporate intervals of high-intensity movements followed by periods of lower intensity					
	5. Facilitate calorie burn to aid in weight management and overall cardiovascular health					
Flexibility	1. Include dedicated stretching sequences targeting specific muscle groups					

Domains	Indicators	4	3	2	1	Comments / Suggestions
	2. Incorporate movements that mobilize joints to enhance flexibility and reduce injury					
	3. Enhance balance and stability to improve overall functional movement					
	4. Involve dynamic movements that stretch and lengthen muscles to promote range of motion					
	5. Require movements such as reaching, bending, and stretching to increase flexibility over time					
Muscular Strength	1. Utilize the body's own weight as resistance through squats, lunges, jumps					
	2. Require core stability and engagement for abdominal and back strength					
	3. Incorporate dynamic movements engaging multiple muscle groups simultaneously					
	4. Involve resistance against gravity or external objects to improve muscular strength					
	5. Execute movements requiring increasing muscular strength for ongoing gains					
Muscular Endurance	1. Perform repeated movements for extended periods					
	2. Include continuous movement segments to challenge muscles over time					
	3. Structured to progressively increase duration and intensity					
	4. Include slower-paced segments where muscles remain engaged					
	5. Involve high repetitions of actions (kicks, jumps, arm movements) to enhance endurance					

Instructions: For each item, rate according to relevance and clarity using the 4-point scale. Circle or tick the appropriate rating and provide comments if needed.

4 – Highly Developed

3 – Proficient

2 – Developing

1 – Not Developed

Motor Skills Development	Indicators	4	3	2	1	Comments / Suggestions
Gross Motor Skills	1. Maintain stability during physical activities					
	2. Use different body parts together smoothly and efficiently					
	3. Apply appropriate physical force during movement					
	4. Change direction quickly while maintaining control					
	5. Sustain physical activity over time					

Motor Skills Development	Indicators	4	3	2	1	Comments / Suggestions
Fine Motor Skills	1. Demonstrate precision and control in small, detailed movements					
	2. Synchronize visual input with hand movements					
	3. Hold objects firmly with the hands					
	4. Perform repetitive finger movements with speed and accuracy					
	5. Complete tasks requiring precision, e.g., writing or manipulating small objects					

Appendix E
Computation Table
Validity

Content Validity Scale / Basis of Interpretation

INDEX / VALUE	INTERPRETATIONS
I-CVI ≥ 0.78	Item is considered content valid (Polit & Beck, 2006)
0.70 ≤ I-CVI < 0.78	Item requires revision or review by experts
I-CVI < 0.70	Item is not content valid; should be discarded or revised
S-CVI/Ave ≥ 0.90	Overall scale is excellent in content validity
0.80 ≤ S-CVI/Ave < 0.90	Overall scale is good; minor revisions may be needed
S-CVI/Ave < 0.80	Overall scale is poor; substantial revision required

A. Dance Literacy

Domain	Number of Items	Acceptable I-CVI Range	S-CVI/Ave
Physical	5	0.80 – 1.00	≥ 0.90
Social	5	0.80 – 1.00	≥ 0.90
Emotional	5	0.80 – 1.00	≥ 0.90
Overall Scale	**15**	—	**≥ 0.90**

B. **Physical Fitness**

Component	Number of Items	Acceptable I-CVI Range	S-CVI/Ave
Cardiovascular Fitness	5	0.80 – 1.00	≥ 0.90
Flexibility	5	0.80 – 1.00	≥ 0.90
Muscular Strength	5	0.80 – 1.00	≥ 0.90
Muscular Endurance	5	0.80 – 1.00	≥ 0.90
Overall Scale	**20**	—	**≥ 0.90**

C. **Motor Skills Development Questionnaire**

Component	Number of Items	Acceptable I-CVI Range	S-CVI/Ave
Gross Motor Skills	5	0.80 – 1.00	≥ 0.90
Fine Motor Skills	5	0.80 – 1.00	≥ 0.90
Overall Scale	**10**	—	**≥ 0.90**

Interpretation:

All items met the minimum acceptable I-CVI of 0.80, and all scales achieved an S-CVI of at least 0.90, indicating excellent content validity.

Reliability Testing
(Dry-Run / Pilot Testing)

Cronbach's Alpha (α) was used to determine internal consistency.

Alpha Value	Interpretation
≥ 0.90	Excellent
0.80 – 0.89	Good
0.70 – 0.79	Acceptable

Reliability Summary Table

Instrument	Number of Items	Cronbach's Alpha (α)	Interpretation
Dance Literacy	15	0.87	Good to Excellent
Physical Fitness	20	0.84	Good
Motor Skills Development	10	0.82	Good

Appendix F

Table of Raw Data of the Participants' Responses

		R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	R21	R22	R23	R24	R25	R26	R27	R28	R29	R30	R31	R32	R33	R34	R35	R36	R37	R38	R39	R40	R41	R42	R43	R44	R45	R46	R47	R48	R49	R50	R51	R52	R53	
Dance Literacy	**Indicators**																																																						
Physical	1. Demonstrate the ability to synchronize movements with music, to execute precise steps.	4	4	3	4	4	4	4	3	4	3	4	2	3	4	2	3	4	4	4	2	3	4	4	4	4	4	2	4	3	4	4	3	4	4	2	3	4	4	2	4	4	2	4	4	4	4	3	3	3	4	3	4	3	0.472
	2. Exhibit a range of motion to be able to perform stretches and movements with ease.	3	4	4	3	3	4	4	4	3	3	2	3	3	2	4	3	4	3	4	2	4	3	3	4	3	4	3	3	4	1	3	4	4	3	4	3	4	3	3	4	4	3	4	4	4	4	3	2	3	2	3	3	4	3	0.302
	3. Display muscular control and endurance to maintain posture and execute movements with precise.	4	4	4	4	4	4	4	4	3	3	4	4	4	4	4	3	4	3	3	4	4	4	4	2	3	4	4	4	4	3	4	4	4	3	2	4	4	4	3	4	4	4	4	4	4	3	4	4	4	4	4	4	4	3.736
	4. Maintain stability while executing complex dance sequences, to show control over their body's center of gravity.	4	4	3	4	4	4	3	3	3	4	4	3	3	3	4	4	3	4	3	3	3	4	3	3	4	4	2	3	2	4	4	4	3	3	3	2	4	4	3	4	3	4	3	2	4	4	3	3	3	1	4	3	1	3	3	2.864
	5. Demonstrate an understanding of the space around them to avoid collisions and adapt to different performance environments.	2	4	4	4	3	3	4	4	3	4	4	3	4	4	4	4	3	3	4	4	4	3	4	4	4	4	4	4	4	3	4	4	4	4	4	4	3	4	4	4	4	4	3	3	4	4	4	4	4	4	4	4	3	3.717
		3.4	4	3.6	3.8	3.6	3.8	3.8	3.6	3.2	3.4	3.6	3	3.4	3.4	3.6	3.2	3.6	3.6	3.6	3	3.6	3.6	3.6	3.6	3.6	3.6	3.2	3.2	3.8	3.2	3.8	3.6	3.8	3.4	2.6	3.6	4	3.6	3.4	3.8	3.6	3.2	3.6	4	3.8	3.2	3.2	3	3.4	3.6	3	3.6	3.4	3.498
Social	1. Work effectively with peers, cooperate in group choreography and support one another during rehearsals.	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	4	3	3	4	3	4	3	4	4	3	3	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	2	4	4	4	4	3	2	4	4	4	4	4	3.736
	2. Express ideas and feedback clearly during rehearsals and contribute to constructive dialogue with choreographers and fellow dancers.	4	2	4	4	4	2	4	3	4	4	4	4	4	3	4	3	4	4	4	4	4	4	3	4	4	4	3	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	3	4	3	3	3.717
	3. Show consideration for others' ideas and boundaries and foster a positive atmosphere within the dance community.	4	4	4	4	4	4	4	4	4	2	4	4	2	2	4	4	4	2	4	4	2	4	4	3	4	4	4	4	4	3	4	4	4	4	3	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3	3.717
	4. Take initiatives in group settings, offering guidance and support to less experienced dancers.	3	3	4	4	4	4	4	3	4	4	4	4	3	4	4	4	4	3	3	4	4	3	2	4	4	4	2	3	4	2	2	4	4	1	3	4	4	1	4	4	4	3	3	4	3	4	4	4	4	4	4	4	4	3.569
	5. Demonstrate flexibility in working with different choreographers and adapt to diverse dance styles to contribute to a dynamic dance community.	2	4	3	3	4	4	2	3	4	3	4	3	4	4	4	3	4	3	4	1	4	4	3	4	4	4	4	3	3	4	4	4	4	3	4	4	3	3	4	3	3	4	3	4	4	4	4	4	4	4	4	4	4	3.595
		3.4	3.4	3.8	3.8	4	3.6	3.6	3.4	4	3.2	3.8	3.8	3.4	3.4	4	3.6	3.8	3	3.8	3.2	3.6	3.6	3.2	3.6	3.8	3.6	3.4	3.6	3.8	3.4	3.6	3.6	4	3.2	3.6	4	3.8	3.2	3.6	4	3.8	3.8	3.2	3.8	3.6	4	3.8	3.6	3.8	3.8	4	3.8	3.6	3.653
Emotional	1. Convey emotions effectively through movement to connect with the audience on a deeper level during performances.	4	3	3	4	3	4	4	2	2	4	4	3	4	4	3	3	4	4	2	3	4	4	3	2	4	3	4	4	4	4	1	3	3	1	4	4	4	4	4	3	3	4	1	4	4	4	4	4	4	4	4	3	3	3.415
	2. Demonstrate an understanding of their strengths and weaknesses as a dancer and seek opportunities for growth and improvement.	4	3	4	4	4	2	3	3	4	4	2	4	3	3	4	1	4	1	4	2	4	3	3	4	1	2	4	1	4	3	3	4	1	4	2	4	3	4	3	4	4	4	4	3	4	4	4	4	4	3	4	4	4	3.283
	3. Persevere through challenges and setbacks in order to maintain a positive attitude and motivation to overcome obstacles.	4	3	3	4	2	4	3	4	2	4	3	3	4	2	4	2	4	3	4	2	4	1	4	3	4	3	4	3	4	4	3	3	1	4	3	4	3	4	4	4	4	1	3	4	4	1	2	4	4	4	4	4	4	3.283
	4. Show empathy, understanding and support towards fellow dancers with their emotional needs both in and out of rehearsals.	4	4	4	4	4	4	4	3	3	3	4	4	4	2	4	4	2	4	4	3	2	4	4	4	3	3	4	4	4	1	3	3	4	4	4	4	4	3	3	4	4	4	4	2	3	1	3	4	4	4	4	4	4	3.369
	5. Exhibit a genuine love for dance, display enthusiasm and dedication in their practice and performance to inspire others with their commitment.	4	4	4	4	4	4	4	4	4	4	4	4	2	3	4	4	4	4	3	4	2	4	4	4	4	4	3	4	4	4	4	2	4	4	4	4	3	3	3	4	4	4	4	3	3	4	4	4	4	4	4	4	4	3.736
Gross motor skills	1. The ability to maintain stability during physical activities.	2	4	4	3	4	4	4	3	4	4	4	2	4	4	4	3	3	4	4	4	3	4	4	3	4	4	4	3	4	3	4	4	4	3	4	4	3	4	4	3	4	4	4	4	4	4	4	4	3	4	4	4	4	3.636
	2. The capacity to use different parts of the body together smoothly and efficiently.	4	3	4	4	4	3	4	4	4	2	4	4	4	2	4	4	4	2	4	4	4	4	2	4	4	2	4	4	4	4	4	4	4	2	4	4	4	3	4	4	2	4	4	4	2	3	2	3	4	3	4	2	3	3.491
	3. The level of physical force exerted during movement.	4	4	4	3	3	4	3	3	4	4	3	3	4	3	3	4	3	3	4	3	3	4	3	3	4	2	4	3	3	4	4	3	3	4	4	3	3	4	3	3	4	3	2	4	3	3	4	2	4	3	4	4	3	3.396
	4. The ability to change direction quickly and effectively while maintaining control.	2	2	4	4	1	2	4	4	4	1	4	1	4	4	4	4	3	4	4	3	3	4	4	4	3	3	4	4	2	4	4	4	3	4	4	4	3	1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3.226
	time.	4	4	4	2	4	3	2	4	4	4	3	4	4	4	3	4	4	3	4	4	3	4	4	3	4	4	3	4	4	3	4	4	4	3	4	4	4	3	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	3.717
Fine motor skills	1. Precision and control in small, detailed movements, such as using fingers to grasp objects.	4	4	3	3	3	4	4	4	3	4	4	3	4	4	4	4	3	4	3	3	4	3	3	4	3	4	4	4	4	3	3	3	3	4	4	4	3	3	4	3	4	3	4	3	0	2	4	3	3	1	3	3	4	3.434
	2. The ability to synchronize what you see with your hand movements.	4	2	4	4	3	4	4	2	3	2	4	4	4	4	3	3	4	4	4	3	3	3	4	2	4	3	4	3	4	3	4	2	4	3	4	3	4	1	4	4	4	3	3	4	3	3	3	3	3	3	3	3	3	3.362
	3. The capacity to hold objects firmly with the hands.	2	4	1	4	2	4	4	4	2	2	4	1	4	2	4	1	2	4	3	3	4	3	3	4	3	4	3	4	3	4	3	4	3	4	3	4	1	4	1	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3
	4. The speed and accuracy of repetitive finger movements.	4	3	4	2	4	3	3	2	2	3	4	2	2	3	2	4	3	3	2	4	3	1	4	3	2	3	3	4	4	3	2	3	3	1	4	3	3	3	1	4	3	1	3	3	4	3	2	4	3	3	3	4	4	2.943
	5. The precision to complete tasks like writing or manipulating small objects.	4	2	4	2	4	4	4	2	4	3	4	3	4	3	3	4	1	4	3	4	3	4	3	4	3	4	3	3	4	3	2	4	3	4	3	4	1	3	1	4	3	2	4	3	3	3	1	4	3	4	3	4	4	3.209

Appendix G

Computations of the Significant Relationship Between the Students' Level of Dance Literacy and Physical Fitness Components; and Between Students' Level of Dance Literacy and Level of Motor Skills Development

Correlations

		Physical	Cardiovascular
Physical	Pearson Correlation	1	-.146
	Sig. (2-tailed)		.296
	N	53	53
Cardiovascular	Pearson Correlation	-.146	1
	Sig. (2-tailed)	.296	
	N	53	53

		Physical	Flexibility
Physical	Pearson Correlation	1	.084
	Sig. (2-tailed)		.550
	N	53	53
Flexibility	Pearson Correlation	.084	1
	Sig. (2-tailed)	.550	
	N	53	53

		Physical	Muscular Strength
Physical	Pearson Correlation	1	.111
	Sig. (2-tailed)		.431
	N	53	53
Muscular Strength	Pearson Correlation	.111	1
	Sig. (2-tailed)	.431	
	N	53	53

		Physical	Muscular Endurance
Physical	Pearson Correlation	1	-.091
	Sig. (2-tailed)		.516
	N	53	53
Muscular Endurance	Pearson Correlation	-.091	1
	Sig. (2-tailed)	.516	
	N	53	53

		Social	Cardiovascular
Social	Pearson Correlation	1	-.167
	Sig. (2-tailed)		.233
	N	53	53
Cardiovascular	Pearson Correlation	-.167	1
	Sig. (2-tailed)	.233	
	N	53	53

		Social	Muscular Strength
Social	Pearson Correlation	1	-.077
	Sig. (2-tailed)		.583
	N	53	53
Muscular Strength	Pearson Correlation	-.077	1
	Sig. (2-tailed)	.583	
	N	53	53

		Social	Muscular Endurance
Social	Pearson Correlation	1	.149
	Sig. (2-tailed)		.286
	N	53	53
Muscular Endurance	Pearson Correlation	.149	1
	Sig. (2-tailed)	.286	
	N	53	53

Correlations

		Emotional	Cardiovascular
Emotional	Pearson Correlation	1	-.080
	Sig. (2-tailed)		.567
	N	53	53
Cardiovascular	Pearson Correlation	-.080	1
	Sig. (2-tailed)	.567	
	N	53	53

Correlations

		Emotional	Flexibility
Emotional	Pearson Correlation	1	.199
	Sig. (2-tailed)		.154
	N	53	53
Flexibility	Pearson Correlation	.199	1
	Sig. (2-tailed)	.154	
	N	53	53

		Emotional	Muscular Strength
Emotional	Pearson Correlation	1	.213
	Sig. (2-tailed)		.125
	N	53	53
Muscular Strength	Pearson Correlation	.213	1
	Sig. (2-tailed)	.125	
	N	53	53

		Emotional	Muscular Endurance
Emotional	Pearson Correlation	1	.044
	Sig. (2-tailed)		.752
	N	53	53
Muscular Endurance	Pearson Correlation	.044	1
	Sig. (2-tailed)	.752	
	N	53	53

		Physical	Gross Motor Skills
Physical	Pearson Correlation	1	-.050
	Sig. (2-tailed)		.721
	N	53	53
Gross Motor Skills	Pearson Correlation	-.050	1
	Sig. (2-tailed)	.721	
	N	53	53

		Physical	Fine Motors kills
Physical	Pearson Correlation	1	.000
	Sig. (2-tailed)		.998
	N	53	53
Fine Motor Skills	Pearson Correlation	.000	1
	Sig. (2-tailed)	.998	
	N	53	53

		Social	Fine Motor Skills
Social	Pearson Correlation	1	-.186
	Sig. (2-tailed)		.183
	N	53	53
FineMotorSkills	Pearson Correlation	-.186	1
	Sig. (2-tailed)	.183	
	N	53	53

		Emotional	Gross Motor Skills
Emotional	Pearson Correlation	1	-.331*
	Sig. (2-tailed)		.016
	N	53	53
Gross Motor Skills	Pearson Correlation	-.331*	1
	Sig. (2-tailed)	.016	
	N	53	53

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Emotional	Fine Motor Skills
Emotional	Pearson Correlation	1	.067
	Sig. (2-tailed)		.633
	N	53	53
Fine Motor Skills	Pearson Correlation	.067	1
	Sig. (2-tailed)	.633	
	N	53	53

Appendix H
Interview Transcriptions

Question 1. Can you explain which dance, physical, or motor skills you feel most confident in or struggle with, and why you think these skills are stronger or weaker for you?

Student 1: Sir, uhmm… I think pinaka-comfortable ako sa *balance at coordination… kasi mas madali talaga kapag sabay kami ng grupo, ramdam mo na yung flow ng steps*, ahhh… pero sa *flexibility, medyo mahina pa ako kasi di masyado ma-extend yung legs ko, lalo na sa high kicks*, sir.

Student 2: Uhmm, my strongest is keeping rhythm… kaya ko sumabay sa *music, pero sa mabilis na turn at spin, nadadapa talaga ako minsan*, sir, nakaka-hiya nga.

Student 3: Sir, I think okay ako sa *jumping at movement sa floor… magaling ako dyan*, ahhh… pero an *fine motor skills ko, dai pa kaya, lalo na sa maliliit na galaw ng mga kamay*, sir.

Student 4: Uhmm… kaya ko sir, memorize choreography pretty fast… kaya ko tandaan *mga steps agad*, pero kapag mahaba ang routine, *napapagod talaga ako, lalo na sa rehearsal*.

Student 5: Ahhh, I feel strong sa *expressing emotions sa dance… naipapakita ko talaga an nararamdaman ko sa performance*, sir, pero an *physical strength ko, minsan inconsistent, lalo na sa jumps at lifts*.

Student 6: Sir, coordination is easier for me… nguni't *dai ko kaya mag-jump o mag-hold ng position ng matagal*, uhmm… nakakapagod talaga.

Student 7: Uhmm… I excel sa *partner dances… kaya ko sabayan yung partner ko*, pero sa solo lalo na kung mabilis ang beat, medyo hirap ako, sir, medyo na-stress nga.

Student 8: My stamina improved a lot, sir… kaya ko mag-dance ng *matagal without stopping*, ahhh… pero an *detailed hand movements, lalo na fingers, hirap talaga*.

Student 9: Sir, flexibility is strong sa akin… kaya ko mag-stretch at *leg lifts, uhmm… pero kapag mabilis ang steps, hirap talaga ako mag-adjust*.

Student 10: Uhmm… I feel confident *making big moves*, sir, pero ang *speed at accuracy ng hand movements, medyo nahirapan talaga ako, lalo na sa fingers*.

Question 2. Can you share experiences you encounter during practice or performance where you show your strengths or you find challenging?

Student 1: Sa last group performance, sir, I didn't fall kasi may *balance napo ako. But the high kicks, halos madapa ako, eh*. Napaka challenging!

Student 2: During rehearsal, I kept the beat, sir. Wag lang talga sa *spin kasi nadadapa ako minsan, nakakatense nga, eh*, uhmm… kasi iba yung timing.

Student 3: Last week, sir, tumalon ako sa stage without falling pero sa *hand gestures sa finale, medyo hindi precise ang galaw ko.*

Student 4: Uhmm… I remembered all the choreography, sir. At kapag *long routines na,* napapagod ako, lalo na kapag paulit-ulit. Nakaka drain sya.

Student 5: Sir, sa *solo performance, ang galing kong magpakita ng emotions*, pero yung *strength ko sa jump at lifting, hindi sya consistent*.

Student 6: I could dance well with my partner, sir. Pero sa *mga jumps,* kailangan ko pa po ng practice.

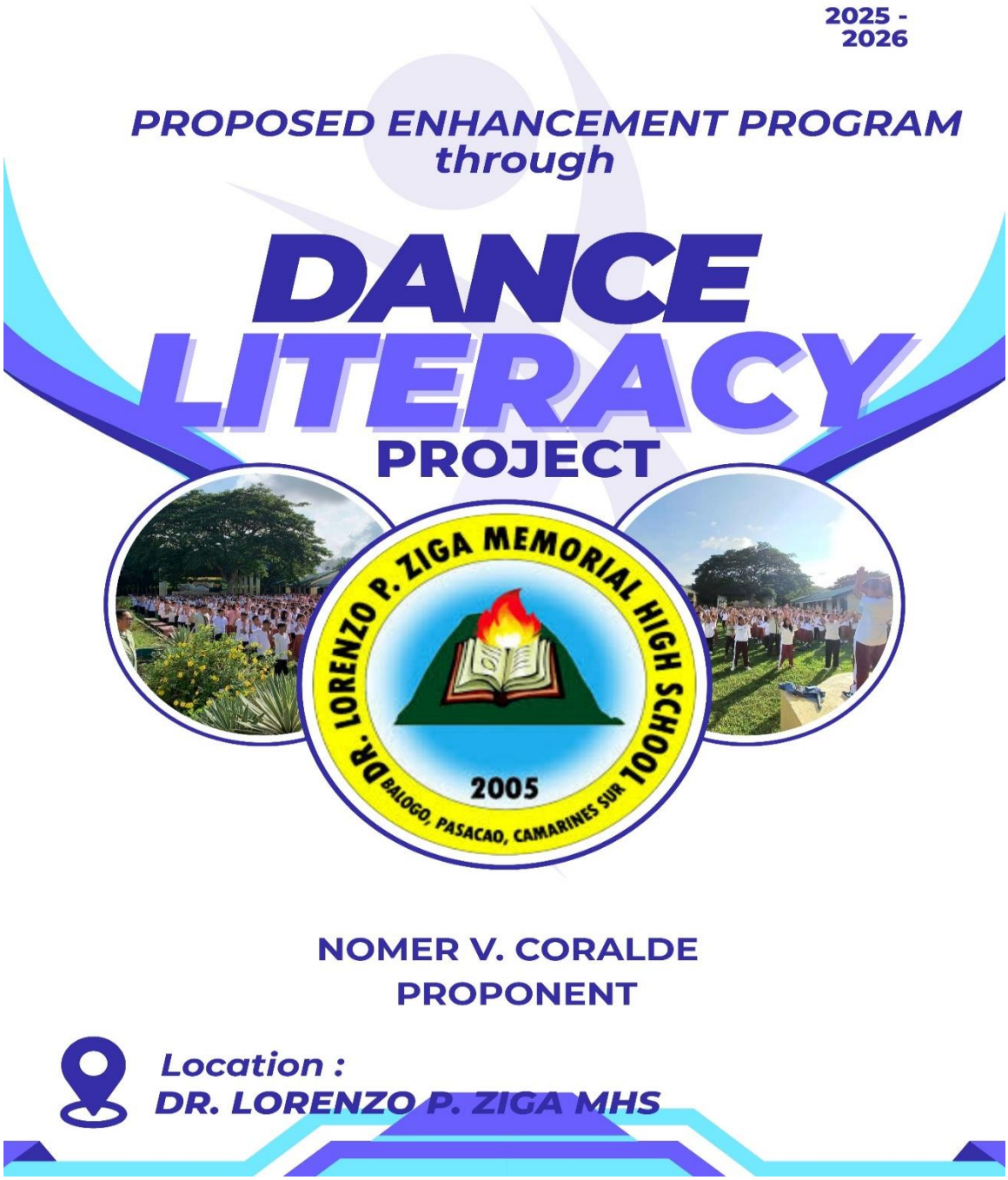
Student 7: Uhmm… sa *solo at fast music, madali akong malito, Sir, lalo na kapag mabilis na ang steps*. Nakakapagod and nakaka-frustrate siya.

Student 8: During 10-minute choreography, sir, medyo may energy pa. Pero dun sa *hand gestures, nahihirapan talaga ako kasi parang antigas ng galawan ko.*

Student 9: Sir, I tried to do splits pero hindi kaya. Wag na lang. Tapos kapag *mabilis ang steps, nahihirapan akong mag-adjust*. So, kailangan ko pa talaga ng practice.

Student 10: During rehearsal, sir, strong ang moves ko hindi ako magaling sa *fingers at small hand movements*.

Appendix I
Proposed Enhancement Program
Dance Literacy Project



A. Project Title	**Dance Literacy Project**
B. Schedule of Implementation	June – March 2026
C. Proponent	Nomer V. Coralde
D. Participants / Cooperating Agency	Dr. Lorenzo P. Ziga Memorial High School
E. Overview, Rationale, and Objectives	This project implements a holistic approach to promote healthy lifestyles among students, aligned with DepEd Memorandum 402, s. 2009 (Implementing the DepEd Physical Education and Health Program). It aims to empower students with knowledge, skills, and habits for a healthy lifestyle through weekly dance literacy sessions. The objectives are to promote physical activity, healthy eating habits, and enhance awareness of overall wellness and a healthy lifestyle.
F. Goal, Scope, and Beneficiaries	The goal is to empower students for a healthier tomorrow by promoting physical activity and overall wellness through dance literacy. This aligns with DepEd's initiative to foster students' health and well-being. **Beneficiaries:** Students of Dr. Lorenzo P. Ziga Memorial High School.

G. Work Program / Activities

Timeline	Activity
June 2026	Drafting of proposal
July 2026	Submission of proposal for school head's approval
July 28, 2026	Launching of Project
August 2026 – March 2027	Weekly Dance Literacy Activities severy Monday

Implementation Framework

Aspects	Objectives	Strategies	Required Personnel	Means of Verification
Dance Literacy	Improve students' mastery of dance concepts, techniques, and performance skills.	- Conduct workshops on basic and advanced dance techniques. - Develop clear lesson guides with step-by-step demonstrations.	- Dance teachers - PE coordinators - School heads	- Lesson plans - Classroom observations - Dance performance rubrics
Physical Fitness	Strengthen cardiovascular endurance, flexibility, strength, and muscular endurance through dance.	- Integrate warm-ups, conditioning drills, and cool-downs into dance classes. - Schedule regular fitness checks.	- PE teachers - Fitness coaches - School health officers	- Fitness assessment records - Teacher progress reports - Student fitness portfolios
Motor Skills Development	Enhance gross and fine motor skills alongside dance practice.	- Include balance, agility, and precision exercises. - Use skill-specific drills.	- Dance instructors - Motor skill specialists - Classroom aides	- Motor skills checklists - Observation forms - Student skill ratings

Aspects	Objectives	Strategies	Required Personnel	Means of Verification
Teacher Capacity Building	Equip teachers to link dance literacy with fitness and motor training.	- Conduct in-service training. - Organize peer coaching. - Provide resource materials.	- School heads - Senior dance/PE teachers - Curriculum planners	- Training attendance - Peer mentoring reports - Lesson reviews
Learning Environment and Resources	Provide suitable facilities and materials for dance and fitness.	- Secure equipment (mats, mirrors, bands). - Redesign safe movement space.	- School admins - Local officials - PTA	- Resource inventories - Layout inspections - Teacher feedback

H. Reporting and Evaluation

Reporting will include:

- Photo documentation
- Narrative report
- Financial report