

The Impact of Musical Rhythm on Academic Performance in Chengdu, China

Yang Boyan and Wei Hui-Suan

Abstract- For several decades, music educators have argued that students' performance in core courses is greatly impacted by their involvement in music classes. So, this study examines the impact of Musical Rhythm on Academic Performance in Chengdu, China. This study analysis the four research questions and based on that this study found the five (5) independent variables and that are the tempo, Smoothness of singing, Playing Percussion, Music Volume and Music Congruence. The moderate variables are the Performance level of Male and Performance level of Female. So finally output coming as the Students' Academic Performance (Dependent Variable). As well as this is the quantitative study and the collect data through the questionnaires and data analysis on SEM-PLS method. The sample of the study is the Undergraduates Students in Chengdu, China. The sample technique from the probability sampling and the stratified sampling technique. So the research questions are to determine level of students' academic performance among Undergraduates? what is the relationship between music rhythm ability and students' academic performance. Follow by explore influence of music rhythm ability on students' academic performance? what is the moderation effect between genders of music rhythm ability on students' academic performance? The data will be analyzed descriptively. SEM-PLS will be used to explored the correlation, the influence and the moderation effect among the variables samples will be used to Pilot Study.

Key Words: TEMPO, SMOOTHNESS, CONGRUENCE.

1. INTRODUCTION

1.1 Background of the Study

The primary focus of vocal music is the singing of one or more vocalists, whether accompanied by an instrument or sung some cappella (without an instrument). Singing but not prominently is called instrumental music, like music without singing (e.g. the silent women's choir inside the closing movement of Holst's symphonic opus *The Planets*). Some cappella is a term used to describe music that has no non-vocal instrumental accompaniment.

It is common for vocal music to have sung words known as lyrics, however there are presented a variety of vocal music that are presented utilizing non-linguistic syllables and sounds like musical sounds, such as the jazz scat singing style. Song is the general phrase for a brief article of vocal music, however aria or hymn may be used differently in different forms of music.

Music and Motivation in Learning

(Holmes & Hallam, 2017) Gouzouasis and colleagues found more than just evidence that music lessons boost academic achievement. A correlation between good marks

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in music lessons and good math grades was also found, which means that kids who obtained good grades in their music lessons were more likely to do well in arithmetic.

Students who studied instrumental music outperformed those who studied vocal music in terms of test scores. It is hypothesized by the authors that instrumental music education's higher cognitive demands lead to stronger cognitive development in these students.

The design of a program is the most important factor in determining not whether learners are encouraged to participate in learning during a course. But what can teachers do to make their courses more engaging for students? The Music theory of academic motivation is presented in this article as an answer to this question. Teachers can use the MUSIC model to guide them in making conscious choices about design of their own courses based on the current theory and research in the field of quality management. A few ideas are given to faculty members from various disciplines when they ask me how they can excite their pupils. But then when they ask for even more knowledge that they can learn and apply to their own courses quickly.

Music Involvement and Academic Performance

For several decades, music educators have argued that students' performance in core courses is greatly impacted by their involvement in music classes (Virginia Commission for the Arts, 1994; Music Educators National Conference, 1994a). Education in music can improve test scores, attendance, attitudes toward school and general academic accomplishment in an era of increased student accountability, funding cuts, the federal Neither Child Left Behind Act (NCLB), and strict state standards of learning, according to a number of educators (Eisner, 1998; Virginia Commission for the Arts, 1994). Students are able to link for themselves and others, transform the learning environment through arts integration products; adults in their lives are able to learn from their children's experiences; and students are able to challenge themselves in a new way, even if they are already considered successful. Educators believe that music education has the potential to reach a wide range of pupils who might not otherwise benefit from it.

Music and Research

(Music for all Foundation, 2014), Music education in America, on the other hand, is difficult to assess because trustworthy data on music courses is scarce. Many big school districts lack an agreed-upon standard for analyzing and evaluating music education data, as according Robert B. Morrison, President and C.E.O. for such Music with All Foundation Since the number of students enrolled in music classes and programs varies

widely from school to school, it is difficult to obtain comparative data. A multi-year effort by the Trustees of the company to collect data on access and participation is underway.

The collection of additional data on music education in public schools will continue well into the twenty-first century, as public school personnel will keep arguing for the preservation of effective, effective, and very often costlier arts education programs, as well as for their reduction or elimination. Arts professors, students, as well as families in state board meetings around the country are enthralled by the debates that take place there. "Arts degree not only cultivates creativity, self-expression, as creativity, but it also plays an important part in the development for critical thinking as well as problem-solving skills," say parents and arts advocates (PTA, 2015).

Music Education in China

Historically, China is an older civilized nation with a long history and a diverse collection of musical resources. Has more than 8000 year of documented musical history, and Chinese music started to be recorded as soon as the Chinese progenitors began to perform music and dances that were recorded. In addition to being wide and diverse, Chinese music is also one of a kind in the globe.

In the twentieth century, Chinese education musical education had to deal with the phenomenon known as "Western music spreading Eastward." The melodies of the 'School songs' movement were primarily derived from Europe, the United States, and Japan, but all of the lyrics were focused with anti-imperialism, anti-feudalism, and national preservation. Once Two German music instructional techniques and theories were fully embraced in China after the 1920s, local traditions were denounced on the grounds that they were a part of feudalism. The study modern composing techniques were influenced by the Western world, and we imported popular music like Hong Kong, Taiwan, the United States, and Europe during the 1980s.

As a result, intangible cultural heritage is having to suffer from an increasing number of negative impacts, oral cultural heritage and practices that have been passed down through generations are disappearing, their sustenance environment is deteriorating dramatically, and the work of protecting intangible cultural heritage is in a precarious state. There were approximately 4000 classic opera troupes in the country in the middle of the 1980s, according to official figures. Since then, the number has plummeted only to 2600 in 2003, with a fifth of those who had participated in that year having not done so in the previous year. In addition, the total number of appearances is diminishing. The current figure is 400,000,000, whereas the previous figure was 700,000,000 in 1985. The same is true for the number of people in the audience. Many traditional types of music and melodies, such as Qu, are on the verge of extinction. According to the Office of the Chinese State Council's Points of View on Strengthening Chinese Intangible Cultural Heritage Protection, many

new situations and problems have arisen as a result of the advancement of globalization and the sudden economic and social transition, such as the development and protection of the Chinese intangible cultural heritage, which is confronted with critical situations, and an increasing amount of impact has been imposed on the intangible cultural heritage.

1.2 Problem Statement

Back in 1971, the average elementary school student received two hours of weekly music instruction. Over the past several decades, rising test scores and accountability, more demanding coursework, improved literacy, and better science and math education in public schools have been expected by No Child Left Behind and strict local and state mandates, as well as limited finances. As a result, the average Chicago primary school student now receives minutes of weekly music instruction. Music education is continually being scrutinized in school systems for its purpose, efficacy, and financial value, as school boards across the United States struggle to meet mandated standards or risk losing allocated monies. As a result, music education in low-income areas has been entirely eradicated, but it has thrived in rich areas. Because of this, Rabkin and Redmond (2014) assert that there is a "enormous 'arts gap' in American schooling." In the 1990s, it was not uncommon for music education to experience a renaissance. These endeavors, however, were either ambitious or sensitive to greater trends in educational reform. Music proponents believe that educating children to play instruments will help them study in school. As a result, music supporters believe that music improves students' academic achievement. Legislators and other school policymakers must be convinced of the value of music education in order for it to be included in the core curriculum across the state and country (Rabkin & Redmond, 2014).

In this paradigm, students' cumulative grade point averages (GPAs) at the end of 12th grade are the final criteria for gauging academic success. Regardless of a student's course choices, the weighted overall grade point average (GPA) will be used to assess academic achievement.

Researchers differentiate between (a) situational interest (similar to curiosity), which has a short-term value, is activated by the environment, and is context-specific, and (b) personal interest, which has a long-term value for the individual, is activated internally, and is topic-specific. Measures of attention, retention, comprehension, more cognitive engagement, reasoning, goal-setting, learning approaches, major choice, and achievement are all positively related to subject matter interest. The reason for these successful effects is likely context-dependent, but many hypotheses have been investigated, including that involvement increases attention to task, interest allows students to access their extra extensive prior understanding, and interest frees up extra cognitive capabilities for task complexity by lowering the demands of trying to regulate effort on an uninspired task.

1.3 Research Objectives

1. To determine the music rhythm performance ability among Undergraduates
2. To determine the academic performance among Undergraduates
3. To determine the relationship between rhythm performance ability and academic performance among Undergraduates
4. To determine the influence between rhythm performance ability and academic performance among Undergraduates
5. To determine the moderation effect between gender of music rhythm ability on students' academic performance among Undergraduates

1.4 Significance of the Study

Students from all across the world believe that listening to music while studying or revising helps them 'focus better'. Some people even claim that they can't rewrite because it's too quiet when there's no music playing. The opposite is also true: some people need complete silence in order to concentrate and work properly when music is playing. As a result, the research of the link between music rhythm and academic performance is important.

According to a literature study, music instruction has had a significant impact on academic attainment during the past few decades. As far as academic accomplishment is concerned, Hodges and O'Connell say there are just five studies that have investigated the impact of music training on standardized tests, attendance, attitudes towards learning, as well as overall academic achievement. Music education had a positive impact on the academic performance of terms of three participants. Even though few research has addressed gender or race, the majority of studies have not. Research literature is roughly evenly split between studies that identified a strong association and those that found a weak or nonexistent relationship.

1.5 Research Question

1. What is the relationship between music rhythm ability and students' academic performance?
2. What is the influence of music rhythm performance ability on students' academic performance?
3. What is the moderation effect between gender of music rhythm ability on students' academic performance among Undergraduates?
4. What is the academic performance among Undergraduates?
5. What is the music rhythm performance ability among Undergraduates?

1.6 Research Hypothesis

HO: There is no significant relationship between music rhythm performance and academic performance

H1: There is a significant relationship between music rhythm performance and academic performance

HO2: There is a significant influence of music rhythm performance on academic performance

H2: There no significant influence of music rhythm performance and academic performance

HO3: There is no significant moderation effect between gender of music rhythm ability on students' academic performance

H3: HO3: There is a significant moderation effect between gender of music rhythm ability on students' academic performance

1.7 Limitation of the Study

The participants in this study are university music learners at a single university in China. A number of limitations inherent in the research methodology limit the capacity to generalize the findings to a community other than those that were analyzed in this study. First and foremost, it is crucial to highlight that music learners are chosen by themselves. Although instrumental musical (guitar, guitar, piano, orchestra and composition) both vocal music is included as research variables, the researcher has no influence over whatever music program or equipment the subject chooses. However, this study does not include any other instruments other those that are described above. Furthermore, the researcher has no influence over students' course choices (music or core topics) outside of the state-mandated courses, nor does she have any influence on content teacher assignments. In order to ascertain the individual effects that a certain teacher could have on the educational excellence of a given student, additional research must be conducted. Second, the school district under consideration has a freely accessible policy for all of its courses. If a student expresses an interest in the subject, he or she will not be denied admission in that course. Because there are limited charges associated with participation in music classes, such as instrument as well as uniform rental fees, none student is denied membership on the basis of financial inability to pay.

1.8 Terms and Definitions

Music Performance –

The act of making a musical performance It is the act of playing an instrument. A jam session is a spontaneous jazz performance. Vocalizing – the act of singing a song with your voice.

Undergraduate Students –

Students who have not yet earned a bachelor's degree from an accredited college or university. Example Sentences from Undergraduate Words Educate yourself on undergraduate studies by reading up on this topic.

Rhythm –

the order in which sounds are played back. According to its most basic definition, rhythm (Greek for "flow") is an orderly alternation of different elements. A song's rhythm is defined as the arrangement of many elements such as beat, tempo, and dynamics.

Variables of Rhythm

Beat —Regular pulse; a basic unit of length in musical time.

Accentuation refers to the use of a louder or longer pitch to emphasize one note over another.

Tempo – The rate or pace at which the musical pulse beats. Adagio (slow and deliberate) and vivace (rapid and frantic)

Measure —A rhythmic group or unit that comprises a defined number of beats, divided on the musical staff by bar lines.

Meter —The organization of beats into larger, specific patterns, notated as measures.

An upbeat beat is a weak beat that precedes the downbeat, which is the initial beat with the next measure. Upbeat beats are common in jazz.

Downbeat —The first beat of a measure, the biggest in any meter.

Dissonant chords upsetting of the meter or pulse through a brief change of the accent to a weak beat, or an offbeat.

Nonmetric — Music missing heightened awareness of beat or meter.

Age – Based on the rhythm age places a huge effect because when changing the age rhythm is changed on it.

1.9 Conclusion

The study is organized into a five-chapter dissertation structure. The opening chapter sets the scene for the study. The chapters also featured a brief introduction of music education in China, important words identified and defined, a problem statement and conceptual model, the study's significance, and research questions.

2. LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature that has been taken from relevant research associated with the problem addressed in this study. This chapter provide the empirical evidences and theoretical evidence of the research that related to the influence of Music Rhythm Performance Ability on Academic Performance among Undergraduates Students in Chengdu, China. Under the literature review, discuss the Empirical evidence and theoretical evidences to achieve research objectives.

2.2 Theoretical Framework

Those are the students that every teacher encounters. Those who are a nuisance in class. Many behavioral issues might lead a teacher to the end of their rope, such as speaking out of turn, bullying other students, and so on. (Brink, 2001) Having to deal with pupils like this on a daily basis may be quite upsetting for a teacher. Students who aren't getting enough help from their teachers may be to blame.

2.2.1 Social Cognitive Theory

(Stajkovic & Stajkovic, 2019) It is based on the premise that children learn by observing their peers' actions and behaviors. When a toddler observes a sibling respectfully ask for a gift and receives one, he or she may act on what they learned; nevertheless, if a teenager overhears a friend discussing how to crack a lock, they may not act on what they learned. Social learning theory has a major effect on how students and especially children learn, especially when it comes to violent conduct.

Attention. If a child isn't focused on the work, they won't be able to learn. It is easier for students to learn if they see something distinctive or different.

Retention. Internalizing information is how people learn. In the future, we can recollect this information when we need to think about the situation in just the same way that we observed it. We must be able to remember what we see in order to learn from it.

Reproduction. When the situation calls for it, we fall back on previously learned habits and information. Rehearsing how we answer can help us get better at it.

Motivation. To do something, one must first have the desire to do so. When we witness someone else praised or punished for their actions, it usually serves as our source of inspiration. We may be inspired to do or not do the same thing as a result of this.

2.3 Impact of Music on Brain

Numerous research has been conducted in regards to music's effect on the brain and how it stimulates and develops the human brain. (Dryden, 2018)

One person who thinks that this is true is Mithen. Mithen says that spoken language and music came from a "pre-language," or "musi-language," that came from primate calls and was used by Neanderthals. It was emotional but didn't have words as we know them (Mithen, 2015).

People say that our language evolved from a proto-language that was driven by gesture, was framed by music, and was made possible by more flexible anatomy, not just in the brain, but also in facial, pharyngeal, and laryngeal muscles. The bicameral brain, which is split into two parts, remained split, but the two parts worked together to coordinate the individual's life with the rest of the world. The left side was more focused on pointing and proposing, while the right side was more focused on urging and yearning (Trimble, 2018).

2.4 Music Performance with influenced by the Rhythm among Undergraduates Students

The personal rhythm of pacing can be altered by external auditory stimuli, depending on the chosen prototype. As a result of the above conversation, the following conclusion may be drawn about N: each of the participants ended up employing their own unique rhythm. Physical, spiritual, or emotional attributes would guide each woman's journey. No improvement or development could be noticed since they lacked the ability to sense the 10 second time span. For N, participants, the researcher's callout direction and

the test subject's personal rhythm had a mutual affect. Musical rhythm can guide us to a musical unit's interpretation and performance, according to individuals who assert this from their practical teaching experience.

2.4.1 Promoting the Music

Since the Rauscher, Shaw, as well as Ky investigation, mainstream media has overstated the Mozart Effect. A Mozart Effect industry has sprung up on the idea that music might improve a child's cognitive abilities. This experiment was widely reported in popular publications and newspapers, which led many people to believe that listening to music may help boost memory and intelligence (Corbett, et al., 2018). Consequently,

It didn't take long before music educators and business owners saw an opportunity to promote music in government universities while also making a quick buck.

(Law & Ho, 2014) Social harmony has played a significant role in fostering national unity, boosting the country's cohesion and encouraging friendships with neighboring countries in Chinese history. Confucius's teachings have dominated China's education system for centuries, resulting in a culture and morals that have remained consistent despite the country's stormy history (Huang, 1988).

2.5 Students Achievement with Music

(Dryden, 2018), Individual or modest instrumental teaching is common in many school instrument music programs. Children's Music Workshop, states that "this approach often produces tension between teachers and administrators." There is a widespread fear that pupils may fall behind in their studies as a result of losing out on class time due to the use of pull-out classes. A study conducted in Ohio in 1995 found that kids who took 30-minute string lessons twice a week scored much higher on their standardized tests than students who stayed in traditional classes. Researchers use the Cognitive Abilities Test (COGAT) to compare things between string versus non-string kids as fair as possible. 148 Hamilton, Ohio, fourth-grade string students were paired with a non-string kid who scored the same on the COGAT verbal component. The results of the Ohio Proficiency Test, taken by 296 students, were revealed in this study (OPT). Monitoring students' academic abilities were matched as nearly as feasible to the string kids' academic abilities.

2.6 Music, Education, and Gender Discrimination

Music and gender are not separate things. Gender roles in music can be learned not only from history, politics, and education, Green said. While gender and music are linked, gender should not be used as a factor when choosing a musical instrument, even though gender and music are linked. The choice of an instrument is based on a lot of things, like how you like the sound, how big you are, and how good you are at playing music. Also, social pressures play a big role in choosing a musical instrument. Parents, peers, and music teachers can all have an impact on a student's decision. Because of this, gender stereotypes play a role in which musical instruments people choose to buy or play. The instrument a young musician chooses

will determine what kind of experiences he or she will have as they learn more about music. In traditional ensembles, only certain instruments can play. Students who play flute or violin might not be able to join their school's jazz band, and a saxophonist might not be able to join the symphony orchestra. Gender stereotypes and gender bias play a big role in choosing musical instruments, especially for female musicians who want to play in a jazz band. This could put female musicians at a disadvantage when they think about their future careers.

2.7 Making music education a part of the core subject and promoting academic success

Students' academic performance can be considerably boosted by music training, according to a growing body of research. Nevertheless, throughout the last few years, there has been equal attention paid to the incorporation of the arts, notably music, into fundamental disciplines. Lesson instructors "allow students to be (Children's Music Workshop, 2018) active and to experience life directly and express oneself in ways that are most appropriate for the students" when music education is integrated into core courses (Corbett, Wilson, & Morse, 2018).

2.8 Music Tempo

The tempo of a piece of music can be described as the rate at which it is played. Composers can convey tension or relaxation through the use of tempi (tempos). The tempo can be compared to the speedometer on a car. BPM, or beats per minute, is a common unit of measurement for determining the tempo of music. You can hear 60 beats in a minute if you listen to the second hand of a clock, for instance (Nowak, 2014).

The speed limits posted on streets are written in Italian terms, so drivers can compare those to the speed limits posted on streets. These words, which are referred to as tempo markings, may appear in a piece of music at any point during the piece of music; however, they are most frequently found at the beginning of a section or at the beginning of an entire song. A wide range of tempos are represented by the tempo marks. So have a look at some of the most popular tempos and where they fall in relation to the range of 20 bpm to 208 bpm.

2.9 Music Volume

How loud or quiet a sound is determined by its volume. Vibrations in the air are what we refer to as sound. When a hammer strikes a nail hard, it creates a lot of vibration and, consequently, a lot of noise. When a nail is hammered gently, it produces a weak vibration and, as a result, a faint sound. There will be unwanted noises if the gain is increased, but the overall volume of the sound will increase as a result of the increase in the frequency of the signal. A louder volume will only result in a more pleasant sound because the signals that have been equalized will only get louder. (Law & Ho, 2014)

2.10 Music Congruence

(Christer, 2018) Certain mental states were elicited in customers based on the features of the stimuli. Congruence in musical stimuli and complexity in message stimuli were the two features of the stimulus. According

to a concept, some psychological states (Psychological Discomfort and Cognitive Load) could lead to emotional (Attitude towards Advertisement) and cognitive reactions.

Consumers' perceptions of the significance of background music in conveying a brand's message are referred to as "music congruence." Advertisements are more likely to be remembered if they include music. Incongruent music generates more attention and ad memory, according to the literature with empirical studies.

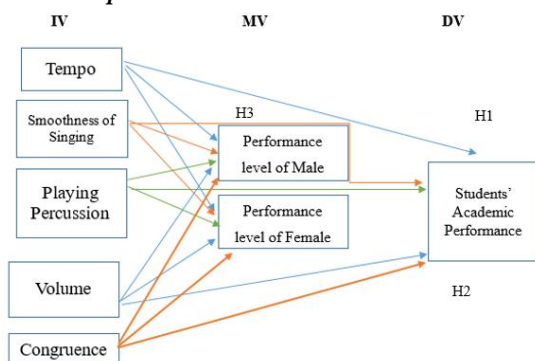
2.11 Playing Percussion

Drums, gongs, bells, cymbals, and rattles and tambourines are all part of percussion music. Percussion is another term for the instruments themselves. In contrast to other instruments, which are played or blown into, or have keys that are depressed to produce sounds, the percussion instruments are struck. A "hitting, a blow" is what the Latin term "percussion" denotes. Percussion, however, was first used to describe musical instruments in 1776, a fact that will surprise people who thought the term was coined during the era of jazz and rock 'n' roll (Babbie, 1990).

2.12 Smoothness of Singing

(Seneviratne & Leelanga, 2015) In a steady, connected tone, the voice shifts seamlessly from a lower chest voice to a higher head voice. There are no blemishes or holes. There isn't any pressure. It doesn't matter if the voice is loud or faint, high or low; it sounds the same. There are no distractions in the sound, making it a pleasant experience for the ears. It's impossible to copy. Nothing has been fabricated or added. The tone is relaxed and easy to listen to.

2.13 Conceptual Framework



Source; Develop by Researcher

Figure 1; Conceptual Framework

Ultimately, the conceptual framework, which is the informed and consolidated results presented in narrative or schematic form, reveals the study's position in relation to literature. Conceptual framework has been explained and clarified by numerous authors. As a result of combining several related concepts, a conceptual framework is created to help explain and better understand the phenomenon being studied (Imend, 2014). This suggests that a conceptual framework is a synthesis of many findings from the literature sources that have been

evaluated regarding the research, setting out the research agenda for greater understanding of the research aims.

2.14 Summary

The performance level of both males and females is examined as a moderate variable over the course of the study, which is founded on the conceptual framework. In addition to this, there is a void in the literature regarding the influence of the rhythm of music on academic performance in college students.

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses in detail, the methodology used in order to answer the research questions and objectives of the study. It is included with the research philosophy, research approach, research design, research strategy, method of data collection and data analysis tools.

3.2 Research Design

Qualitative research design is "a mean for exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (Creswell, 2009). The present study applied the qualitative research design as it is "ideally suited to answering question about the meanings, interpretations and explanations people associate with a particular phenomenon" (Seale, 1999). They are beneficial for gaining a holistic perspective of a particular phenomenon (Creswell, 2009). Many researches on problem of music education had adopted the qualitative research design. Followed the qualitative research design to understand Impact of Musical Rhythm on Academic Performance in Chengdu, China the phenomena extensively.

3.3 Research Philosophy

One of the four philosophies highlighted by (Creswell, 2009) was the Social Constructivist Worldview. In Social Constructivist Worldview, the assumption held is that the individuals seek the world they live and work. They develop subjective meaning which are varied and multiple, thus leading the researcher to look complexity of views relying on the participants' historical and cultural experience. The nature of the present study was exploratory as it attempted to evaluate the Impact of Musical Rhythm on Academic Performance in Chengdu, China. This justifies the reason as to why the researcher has applied the Social Constructivist Worldview to the present study as it is believed that an experience even in the same context would differ from one person to another and as the present study tries to evaluate Impact of Musical Rhythm on Academic Performance in Chengdu, China and to suggest recommendations for improvement, the said philosophy is believed to be the best suited in order to study a holistic aspect of the problems identified.

3.4 Population and Sample

When selecting a target population, it is important to be selective enough to exclude out participants who don't fit the study's requirements. Researchers and other stakeholder groups need a clear idea of the scope and size of the community they're studying, just as they do for any

other target demographic. The importance of such issues cannot be overstated when it comes to spending resources to investigate the research question and assuring its usefulness. Inclusion and exclusion criteria for study participants and study participants' organizations are clearly stated in the target population. As well as non-probability sampling method would be applied to the current research.

The population of a study represents the entire group of people, events or things of interest that the researcher desires to examine. The sampling frame is derived from the target population. This population's features must be operationalized based on research variables or qualitative experience before study findings can be reliably extrapolated to the intended audience (Elliott-Sale, 2019).

3.5 Data Analysis

Partial least squares structural equation modeling (PLS-SEM) is one of the most extensively utilized approaches of multivariate data analysis. Although earlier research has examined distinct features of PLS-SEM, nothing is done to describe the attributes of the many PLS-SEM statistical applications.

The level of students' academic performance among Undergraduates, analysis by descriptively, is the relationship between music rhythm ability and students' academic performance analysis by correlation, the influence of music rhythm ability on students' academic performance and the moderation effect between gender of music rhythm ability on students' academic performance, analysis by SEM-PLS method.

3.6 Pilot Study

"A small-scale test of the procedures and methods that will be employed on a larger scale" is what is meant by a pilot study (Creswell J. W., 2009). Pilot studies aren't intended to test intervention hypotheses, but rather to determine whether a proposed strategy can be implemented in a larger research and whether it is feasible and acceptable.

In here researcher take 30 research instruments for conduct the Pilot Study

3.7 Conclusion

The researcher examines the Impact of Musical Rhythm on Academic Performance in Chengdu, China, so the researcher has used primary data to conduct the study. Therefore, researcher used direct interview method for data collecting. To present the gathered information, researcher supposed to use descriptive manner. So, this chapter provides a clear idea about the scope of his study through the conceptual framework section. Finally, this chapter provide a detailed description about research design, method of data collection, and the way of data analyzing and the way of presenting the analyzed information, which is used to accomplish the study's requirement.

REFERENCES

Babbie, E., 1990. *Survey Research Methods (2nd edition)*. California: Wadsworth.

Brink, P. J. W. M. J., 2001. Basic steps in planning nursing research From question to proposal (5th ed. *Basic steps in planning nursing research From question to proposal (5th ed.*

Children's Music Workshop, 2018. Research on the relationship of music and other academic area. *Journal of Academic performance and Music*, 1(2).

Christer, B., 2018. Swedish music teachers in training and professional life. *International Journal of Music Education*, 3(2), p. 24.

Corbett, D., Wilson, B. & Morse, D., 2018. The arts are an "R" too. *Jackson, MS: Mississippi ARTS Commission*, 6(2).

Creswell, J. W., 2009. *Research Design; Qualitative, Quantitative and Mixed Methods Approaches*. California: SAGE Publications Ltd.

Dryden, N., 2018. The impact of instrumental music instruction on the academic achievement of fifth grade students. *Journal of Music education*, 6(3), p. 25.

Elkjaer, B. & Simpson, B., 2011. Pragmatism: A Lived and Living Philosophy. What Can it Offer to Contemporary Organization Theory?. *Philosophy and Organization Theory*, p. 8.

Elliott-Sale, K. E. A. E. A. S. S. E.-S., 2019. REDS (Relative Energy Deficiency in Sport): time for a revolution in sports culture and systems to improve athlete health and performance. *REDS (Relative Energy Deficiency in Sport): time for a revolution in sports culture and systems to improve athlete health and performance*.

Holmes, S. & Hallam, S., 2017. The impact of participation in music on learning mathematics. *London Review of Education*, p. 18.

Law, W.-W. & Ho, . W.-C., 2014. Music education in China: In search of social harmony and Chinese nationalism. *British Journal of Music Education*, 1(2).

Mithen, S., 2015. The Singing Neanderthals. *google scholar*, 8(2).

Music for all Foundation, 2014. *The sound of silence - The unprecedented decline of music*. [Online] Available at: <http://music-for-all.org/sos.html> [Accessed 6 September 2014].

Nowak, R., 2014. Problems in clinical trials go far beyond misconduct. *Science. Problems in clinical trials go far beyond misconduct. Science*.

PTA, 2015. *Parent involvement in promoting arts education..* [Online] Available at: https://www.pta.org/archive_artcile_details_1117567150_375.html [Accessed 2015].

Rauscher, F. H., 2013. Effects of piano, rhythm, and singing instruction on the spatial reasoning of at-risk children. *Proceeding of the European*, 2(1).

Saunders, M., Lewis, P. & Thornhill, 2016. An Overview of Research Methodology in Information System (IS). *Open Access Library Journal*.

Seneviratne & Leelanga, D., 2015. The Influence of Music Congruence and Message Complexity on the Response of Consumers to Advertisements. *Journal of Music Education*.

Stajkovic, A. & Stajkovic, K. S., 2019. Social Cognitive Theory. *Journal of Educational Theory*, pp. 18-22.

Trimble, R., 2018. Why Humans Like to Cry. Tragedy, Evolution and the Brain. *Oxford University Press*, 8(1).