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Musical software in the teaching-learning of Music students of the National University of the Altiplano Puno

Software musical en la enseñanza-aprendizaje de los estudiantes de Música de la Universidad Nacional del Altiplano Puno

Renzo Favianni Valdivia Terrazas [a]
0000-0001-8222-3264

Wilber Cesar Calsina Ponce [b]
0000-0001-9094-7684

Benjamín Velazco Reyes [c]
0000-0003-2780-786X

Universidad Nacional del Altiplano, Puno, Perú.

[a] rfvaldivia@unap.edu.pe
[b] wcalsina@unap.edu.pe
[c] bvelazco@unap.edu.pe

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Abstract

Music software have revolutionized the way musicians nowadays develop their musical practice in terms of composition, musical arrangements and orchestration, that is why in the present research the objective was set; to determine the influence of music software in the teaching-learning process of music students at the Nacional University of the Altiplano in Puno. The approach was quantitative, being the design quasi-experimental and applied instruments such as pre-test, and post-test, for the collection and analysis of data, resulting in students have new skills in the process of composition, musical arrangements and orchestration, using the Sibelius and Finale software, compared with traditional techniques; It is concluded that there is a significant influence of the use of the Sibelius and Finale software in the teaching-learning process of the students; since it was observed that there was improvement in the development of the abilities in composition, musical arrangements and orchestration.

Keywords: composition; musical arrangements; musical software; orchestration; teaching-learning.

Resumen

Los softwares musicales han revolucionado la manera de cómo los músicos en la actualidad desarrollan la práctica musical en cuanto a la composición, arreglos musicales y orquestación, es por ello que el presente estudio se planteó como objetivo; determinar la influencia de los Software musicales en el proceso de enseñanza-aprendizaje de los estudiantes de música de la Universidad Nacional del Altiplano Puno. El enfoque fue cuantitativo, siendo el diseño cuasi experimental y se aplicó instrumentos como el pre test, y post test, para la recolección y análisis de los datos, teniendo como resultado que los estudiantes tienen nuevas aptitudes en el proceso de la composición, arreglos musicales y orquestación, utilizando los Softwares Sibelius y Finale, en comparación de las técnicas tradicionales; Se concluye que existe influencia significativa del uso de los Softwares Sibelius y Finale en el proceso de enseñanza-aprendizaje de los estudiantes; ya que se observó que hubo mejora en el desarrollo de las capacidades en la composición, arreglos musicales y orquestación.

Palabras clave: Arreglos musicales; composición; enseñanza-aprendizaje; orquestación; softwares musicales.

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Introduction

Music is one of the most intimate creative expressions of being, since it is part of the daily activities of any human group both for its aesthetic enjoyment and for its functional and social character (Dammers, 2012). In addition, music identifies us as beings, as groups and as culture, both by identity roots and by geographical location and historical epochs (Bannerman & O'Leary, 2020). It is an undeniable and irreplaceable aspect of humanity that determines us as such (Rolando & Alvarado, 2013).

In music, as well as in other academic activities, technology has been dynamizing the teaching-learning process, since, until a decade ago, in composition, arrangement and orchestration skills, it was necessary to turn to a specific group of musicians so that they could interpret the works and validate them; a process that was streamlined and revolutionized these skills, with the appearance of software for editing and reproduction and others for scores - Sibelius and Finale (García and Pelayo, 1995).

Likewise, music software has provided new resources, such as access to playback of a wide repertoire, performers' work, access to scores, etc. In recent years, new tools are used to create, edit and reproduce scores online (Hormigos, 2004). A composer of music by means of a computer using software can focus on composinge without worrying about the tedious difficulties involved in importing data into a graphic notation program. It is also possible to generate information such as markings, dynamics and articulations the same that appear in the score (Rodriguez, 2012).

The most commonly used formats for exchanging musical information today are limited because they represent music as flat, rigid event streams or as raw audio signals without any structural information about the content. (Tsang & McCracken, 2004). Such files can only be listened to in a linear fashion, reused and manipulated in a manner determined by a target application, such as a digital audio workstation. (Chan, Jones, Scanlon, & Joiner, 2006).

Tejada & Pérez-Gil (2016) the EMOLab music software, helps in music learning, especially in the perceptual processes of rhythm and melody discrimination, in the symbolic association processes of the Western musical notational system and in the musical memory processes due to two factors: a) the integration of auditory and visual information presentation modes; b) a design founded on basic principles of music education.

Another important aspect of music learning is the Internet, which has entered the music education classroom to stay. The immediate response to finding information on the Internet, wanting to watch a video or trying to share that information is a step forward that has no possibility of going back. In turn, there are technological tools such as computers, digital tablets and smartphones, software and applications make teaching and learning music much more meaningful, motivating and effective (Herrera, 2016).

The benefits will reach the students and thus music education (Smith, 2009). The importance of technological integration to the learning process is proven, whose educational aid has great potential due to the multiple possibilities and advantages it offers (Barry, 1992). All this should serve as element that can be shared with others in the classroom, however, a thorough evaluation and critical analysis of everything to be done should be carried out (Haning, 2015). Feeling attracted or even overwhelmed by all this new universe may be easy, but everything is not valid. You must check beforehand and learn what you want to bring to the classroom (Tejada, 2009).

Feeling attracted to or even to or even overwhelmed by this new universe of tools may be easy, but not all of these are appropriate for the classroom. You must evaluate the software beforehand and decide what you want to bring into the classroom.

The application of the musical software Sibelius and Finale was developed in order to improve the teaching-learning of music students at the Universidad Nacional del Altiplano Puno.

For the above mentioned, the objective that directed the research is determined in the influence of music software in the teaching-learning process of music students at the National University of the Altiplano Puno, for it is considered indicators such as; music theory, auditory training, visual and auditory recognition, which are pillars in the formation of music students.

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Theoretical framework

The music

Music has always accompanied the human being, since ancient times expressing emotions, feelings and even rituals, becoming a way of conceiving the world. The most significant dimension of music is its functionality within a given social context, this is done by integrating it into a cultural scenario that generates and determines the communicative role that music has in the life of the individual. Although there are many definitions for music, there is no precise statement of what the term means. Imagine two of the most traditional and simple ones for Garcia & Pelayo, (1995): The art of making sounds pleasing to the ear and the art of rationally and logically connecting a coherent combination of sounds and stillness using the basic principles of melody, harmony and rhythm.

The first one defines the musical phenomenon as something pleasing to the ear, which implies that manifestations that uncomfortably combine sounds cannot be called music. While the second one does not mention whether such a combination should be pleasant or not, but simply emphasizes that for a manifestation of sound to be understood as music, certain elements must be used, especially melody, harmony and rhythm. Both definitions are exclusive and anachronistic in relation to the current musical reality (Campos and Restrepo, 2002).

Main components of music

The form and structure are the organization of ideas of any musical composition, this set of ideas is that can determine the so-called musical form therefore uses important elements to reach this end such as sound as the raw material of musical art, and from here, music uses four main elements that help the composer to make music (Zimmermann, 2005). These elements are: rhythm, melody, counterpoint and harmony:

(a) Rhythm: it is an ordered principle of sounds. It should not be confused with the beat. (Ariza & Cuthbert, 2010). Rhythm has not been invented by man, since it is an element that exists by itself and is present in nature, in the change of the seasons, in the tides, in the flow of blood, in breathing, musical rhythm is the combination of binary and ternary movements (Agar, 2003). b) Melody: it is a succession of sounds with musical sense, ordered by rhythm. Melody and rhythm are like the two sides of the same coin, both being essential for music to exist (Chen, 2012). c) Counterpoint: system of musical composition based on using several (two or more) melodic lines independent of each other, simultaneous, sounding at the same time, and where all sounds have the same importance (Naughtin, 2017). d) Harmony: system of composition that was established in the "17th century". It uses several sounds that sound at the same time, but with one being the main one and the rest subordinate to it (Irene, 2016).

Generalities about musical skills

Musical skills are divided into two groups: auditory skills (the melodic elementary tube, the melodic and harmonic ear of music, the absolute ear and the inner ear) and technical skills (Borbonet, 1996). The melodic ear is for sustaining and reproducing a sung melody. The harmonic ear plays a role in chords and all types of polyphonic music.

The ability to recognize and distinguish between different musical styles is essential for developing aural and musical skills. However, this task can be difficult for music students, particularly for non-experts (Huovinen & Rautanen, 2020).

Music software

The increased presence of technology in music education classrooms has coincided to some extent with the increased presence of popular music in musical spaces (Wise, Greenwood, & Davis, 2019) "The use of educational software is of great importance because it is conducive to the development of learning, that is, the use of tasks, structured and guided activities that provide students with a well-defined task, as well as the resources that allow them to perform them" (Canales, 2006, p. 9). For the specific case of music software, students must understand compositional spacing to study comfortably, especially with newly arranged songs and correct visualization of musical connotation (Julia et al., 2019).

The use of music software is not only in academic institutions, more to the contrary it also enters popular music ensemble spaces, despite lack of access to technology and/or faulty hardware (Powell, 2019).

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Sibelius Software

It is a score editor, i.e., a complete (computer) program for writing, performing, printing and publishing music scores. It was created by the company Sibelius Software, currently bought by Avid Technology and is designed for all kinds of musicians, from students and teachers to professional composers (Siamancas, 2017).

The process of creating songs with Sibelius is relatively fast, in one month, one can create nine songs that were quite varied in both melody and rhythm (Anders & Inden, 2019). The melodies of the created songs are recorded directly into the computer, and can be evaluated and modified directly according to the creator's wish (Julia et al., 2018). Modeling music theories "from scratch" is a complex task, generic music constraint programming systems have been proposed that predefine the basic components needed to model a variety of music theories (ER, 2016).

Finale Software

It is a complete program for writing, performing, printing and publishing music scores. It was created by the company MakeMusic. It is designed for all kinds of musicians, from students and teachers to professional composers. It is the most important program in a series of sheet music editing programs for Microsoft Windows and Mac OS X. Finale is the most popular music notation program on the international market (Siamancas, 2017).

Virtual instruments today have a wide variety of uses and range from digitizing audio samples of real instruments to recreating new virtual instruments that do not exist (Psenicka, 2016). Virtual instruments help music composers to compose music easier and faster, they also provide composers with new ideas and concepts for traditional music composition (Yun & Cha, 2013).

The use of music controllers has potentially facilitated the introduction of traditional musical instruments in the digital age to students (Julia, Iswara, & Supriyadi, 2019). The task of producing accurate, clear, and readable printed music for orchestral musicians has become much faster and easier with digital technology (Naughtin M., 2017).

There are processors such as Saxon 8.4 XSL that is used to create the final SVG output using the backend stylesheet. Score SVG is set up as a web-based application using the new Java Web Start technology, which allows a Java application to read and write files on a client system (Bays & Zhu, 2015).

Materials and methods.

The research responds to the quasi-experimental design considering the pre-test and post-test groups. According to the purpose it is applied; since applied research contributes with techniques or methods to solve concrete problems, as is the case of the present study (Hernández, Fernandez, & Baptista, 2014).

Techniques and instruments

The research technique used was the survey to obtain information from the pre and post-test groups; likewise, the technique of documentary analysis of books, theses, articles relevant to the research was used. The research instrument was the questionnaire for which the software was previously used in classes, the instrument applied focused on the opinions of the students of the Music Program of the Universidad Nacional del Altiplano de Puno before and after the intervention with the Software Sibelius and Finale, the valuation of data by closed items was considered.

Population

The population is constituted by 275 students of the Music Program of the Universidad Nacional del Altiplano de Puno, taking the following inclusion and exclusion criteria.

a. Inclusion.

- Students of the Music Program
- Students who agree to participate in the program.

b. Exclusion

- Students who do not wish to be part of the research.
- Students who have absolute hearing

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Sample

For the selection of the sample, we used non-probabilistic sampling because the population is selected under certain criteria of convenience, only a pre-established number of people for 15 students of the Music Program of the Universidad Nacional del Altiplano de Puno.

Data collection

According to Arias (2004), "this point describes the different operations to which the data obtained will be subjected" (p. 99). By virtue of this, the analysis was taken into account; it was carried out to characterize the situations and express the quality of the research findings, considering the answers that cannot be expressed quantitatively and the interpretative analysis; this was carried out according to the variables in order to evaluate the results in a partial way, which facilitated the global understanding of the information, to issue critical judgments and conclusions.

The application of the survey was carried out in several sessions, according to the time available to the research subjects. Care was always taken to ensure that the instrument was applied in an environment where not much tension was detected, in order to avoid a variation in their attitudinal responses. Analyzing the independent variables Musical software is? the dependent variable in teaching-learning.

Once the evaluation data were collected from the research subjects, we proceeded to analyze and interpret the data in a systematization matrix, in a spreadsheet.

Results and discussion.

Results of the application of the pre-test on the musical abilities of the students of the Music studies program.

Table 1.
Visual Recognition.

	Deficient		fair		Good		Total	
Recognizes Visually	Fi	%	Fi	%	Fi	%	Fi	%
Families of instruments of the orchestra	10	67%	4	27%	1	7%	15	100%
Electric instruments	11	73%	3	20%	1	7%	15	100%
Instruments and sound objects in the environment	10	67%	5	33%	0	0%	15	100%

According to Table 1 in relation to the Pre-test: visually recognizes, 67% of the students have a Deficient level, in relation to the indicator: visually recognizes families of instruments of the orchestra, while for the indicator electric instruments and Instruments and sound objects of the environment there is a result of a deficient level in 73% and 67% respectively. A musical instrument is a system for producing one or more pleasant tones. Musical instruments are used by their performers to transfer the symbolic notation of a musical composition into corresponding sounds. A musical instrument consists of the combination of one or more resonant systems capable of producing one or more tones and means to excite those systems that are under the control of its players. Musical instruments can be classified according to the categories listed in the table and how the sound is produced. (Eumus, 2020)

Table 2.
Auditory Discrimination.

	Deficient		Fair		Good		Total	
Auditory Discriminates	Fi	%	Fi	%	Fi	%	Fi	%
Instrument families of the orchestra	10	67%	5	33%	0	0%	15	100%
Electric instruments	12	80%	3	20%	0	0%	15	100%
Instruments and sound objects of the environment	13	87%	2	13%	0	0%	15	100%

According to Table 2, the results of the pre-test of the dimension: auditory discrimination, the level of the students is deficient.

Analyzing the level of auditory discrimination is important because it occurs when we listen and think about what we hear. It is superior to perception because we must have a reason to distinguish between one tone and another.

Table 3.
Rhythmic Interpretation.

	Deficient		Fair		Good		Total	
Rhythmic interpretation	Fi	%	Fi	%	Fi	%	Fi	%
Handling of the Sibelius and Finale software	12	80%	3	20%	0	0%	15	100%
Entering musical notes in the software	12	80%	3	20%	0	0%	15	100%
Performs rhythmic interpretations: pulse, accent, tempo	12	80%	3	20%	0	0%	15	100%

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According to Table 3, the results of the pre-test for the dimension: rhythmic interpretation 80% have a deficient level.

The skills related to rhythm and meter problems are fundamental to musical competencies and to the proper application of musical language in all areas of specialized musical activities and go beyond focused learning. The effective application of rhythmic skills is of particular importance for theoretical and analytical understanding, for reading and its application for musical performance. (Rivas, 2020)

Table 4.
Enter notes in the score.

	Deficient		Fair		Good		Total	
Enters notes in the score	Fi	%	Fi	%	Fi	%	Fi	%
Knows how to enter notes in the score	10	67%	4	27%	1	7%	15	100%
Solfeggio of crotchet musical figures and their rest	12	80%	3	20%	0	0%	15	100%

According to Table 4, in the dimension: introduce notes in the score in the pre-test, 67% of the students have a deficient level in relation to the indicator: knows the accesses of introduction of musical notes, while for the indicator: solfège of musical figures of crotchet and its silence, the result is a deficient level of 80%. The results show relationship with the results of the research of Lituma (2015), who refers to the fact that the management of score editor programs help students' musical learning because they are designed to allow editing, modifying and printing in musical language from a simple melody to an orchestral score with an impeccable graphic result.

Table 5.
Music Theory.

	Deficient		Fair		Good		TOTAL	
Music Theory	Fi	%	Fi	%	Fi	%	Fi	%
Identifies musical nomenclature	5	33%	10	67%	0	0%	15	100%
Recognizes aurally the different chords	13	87%	2	13%	0	0%	15	100%
Simultaneously transcribes chords	11	73%	4	27%	0	0%	15	100%

According to Table 5 of the pre-test results for the dimension: rhythmic interpretation, an average of more than 50% have a deficient level.

Learning music without understanding its theory is like wanting to study literature without knowing how to read and write. Although certain musical skills can be developed without theory, the process is easier and more complete when at least its basic concepts are understood. Leaving music theory aside means ignoring the knowledge acquired over hundreds of years that undoubtedly enriches, perfects and allows us to understand music in order to play it with greater dexterity.

Theory is the legacy that has simplified our understanding of music. Every time new ideas are brought in; this knowledge can be reused thanks to theory. By understanding what happens in each style, we can replicate, transform and mix them appropriately. In music, the term interpretation is used to refer to a musical performance on an instrument. A true musician interprets music when they play it because they not only know how to reproduce the right sounds at the right time, but they also understand on a theoretical level what is happening at each musical moment. (Colomer, 2017)

Table 6.
Melodic Dictation.

	Deficient		Fair		Good		Total	
Melodic Dictation	Fi	%	Fi	%	Fi	%	Fi	%
Identifies musical intervals and tonal degrees	11	73%	4	27%	0	0%	15	100%
Transcribes intonates and identifies musical intervals	11	73%	3	20%	1	7%	15	100%

According to Table 6, regarding the dimension: melodic dictation in the pre-test, 73% of the students have a deficient level in relation to the indicator: identifies musical intervals, while for the indicator: transcribes, intonates and identifies musical intervals.

The study of musical dictation must be well focused from the beginning, otherwise it can be very stressful for the student and become convinced that it is useless when in fact he has been the victim of a bad approach, a lack of absolute understanding of what it is, had to do and ultimately a misunderstanding to translate their rhythmic, melodic and theoretical knowledge on a sheet of paper just listening to music (Dreams, 2017).

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Post Test Application Results

Table 7.
Visual Recognition.

	Deficient		Fair		Good		TOTAL	
Visually Recognizes	Fi	%	Fi	%	Fi	%	Fi	%
Families of instruments of the orchestra	1	7%	4	27%	10	67%	15	100%
Electric instruments	0	0%	3	20%	12	80%	15	100%
Instruments and sound objects of the environment	0	0%	3	20%	12	80%	15	100%

According to Table 7 we can observe that after the application of the Sibelius and Finale software the levels of the students' musical abilities have improved significantly since for the dimension: visually recognizes there is a 67% with a good level for the indicator families of instruments of the orchestra and 80% in the indicator's Electric instruments and Instruments and sound objects of the environment respectively. Cano (2017), stated that it is the ability to conceptualize musical terminology, identifying, understanding, relating and transferring all that declarative knowledge that constitute the materials used by the musical discourse.

Table 8.
Aurally Discrimination.

	Deficient		Fair		Good		TOTAL	
Aurally Discrimination	Fi	%	Fi	%	Fi	%	Fi	%
Families of orchestral instruments	1	7%	3	20%	11	73%	15	100%
Electric instruments	0	0%	2	13%	13	87%	15	100%
Instruments and sound objects of the environment	0	0%	4	27%	11	73%	15	100%

Table 8 shows that after the application of the Sibelius and Finale software, the auditory discrimination dimension improved in its three indicators, since in the post-test, the students presented a good level with percentages of 73%, 87% and 73%. Auditory discrimination should be developed gradually, starting with solid localization games, its practice should precede singing, and should be essential in the first years of life, when children, due to their great curiosity, have a greater tendency to learn new things, one of the main characteristics of students (Danvila, 2010).

Table 9.
Rhythmic Interpretation.

	Deficient		Fair		Good		Total	
Rhythmic Interpretation	Fi	%	Fi	%	Fi	%	Fi	%
Handling of the Sibelius and Finale software	0	0%	8	53%	7	47%	15	100%
Enter musical notes into the software	0	0%	5	33%	10	67%	15	100%
Performs rhythmic interpretations: pulse, accent, tempo	0	0%	3	20%	12	80%	15	100%

According to Table 9 in relation to the indicator introduces musical notes in the software, the result is 67% with a good level and 33% with a fair level. Finally, for the indicator performs rhythmic interpretations: pulse, accent, time, as with the other indicators, the level improved from deficient to good by 80%.

Musical interpretation and analysis are two branches of great importance in the conception, creation and development of music. Each of them provides fundamental properties that contribute to the configuration of its vast universe (Ainhoa, 2007).

Table 10.
Inserting notes in the score.

	Deficient		Fair		Good		Total	
Enters notes in the score	Fi	%	Fi	%	Fi	%	Fi	%
Knows how to enter musical notes	0	0%	3	20%	12	80%	15	100%
Solfeggio of crotchet musical figures and their rest	0	0%	5	33%	10	67%	15	100%

According to Table 10, the dimension introduces notes in the scores, has two indicators that have been evaluated both in the pre-test and post-test, of which it was observed that in the indicator knows the accesses of introduction of musical notes, achieving the objective because the results improved by 80% to a good level, while for the indicator solfège of musical figures of quarter notes and their silence we observe that there are still 33% of students with a regular level and 67% with a good level. There is a relationship with the results of Chan, Jones, Scanlon and Joiner (2006), that the use of learning tools facilitates the learning process.

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Table 11.
Music Theory.

	Deficient		Fair		Good		Total	
Music Theory	Fi	%	Fi	%	Fi	%	Fi	%
Identifies musical nomenclatures	1	7%	4	27%	10	67%	15	100%
Recognizes aurally the different chords	1	7%	2	13%	12	80%	15	100%
Simultaneously transcribes chords	1	7%	1	7%	13	87%	15	100%

According to Table 11, the results of the dimension: music theory show that, as in the other dimensions, there are excellent results. 67% of the students present good levels in the indicator: identifies musical nomenclatures, 80% recognize the different chords aurally and 87% of the total number of students transcribe chords simultaneously in an adequate manner.

The theory allows to increase the musical resources when composing. There are hundreds of known methods for creating music. Learning these methods can only enrich your vocabulary and tools. Composition is a creative process that draws from one's own experience and that of others (Lopez, 2017).

Table 12.
Melodic Dictation.

	Deficient		Fair		Good		Total	
Melodic Dictation	Fi	%	Fi	%	Fi	%	Fi	%
Identifies musical intervals	0	0%	3	20%	12	80%	15	100%
Transcribes, intonates, and identifies musical intervals	0	0%	3	20%	12	80%	15	100%

According to Table 12, the research resulted for the melodic dictation dimension that the application of the Sibelius and Finale software 80% have a good level and identify musical intervals as the indicator transcribes, intonates and identifies as well as 20% have a regular level.

The melodic dictation allows writing a melody with sounds and rhythms. These dictations help the student to correlate what he/she is hearing and what he/she is reading in the score. Transferring the hearing in writing, that is, associating the signs of writing with what is perceived acoustically (Pacheco, 2010).

Discussion

The result of the research is broadly linked to the theory proposed by Herrera (2016), since the integration of technology in music education is a fact and that students possess more new tools and are more receptive to study by becoming active participants themselves. The learning process is a basic breakdown, both by the use and management of software, as well as by the Internet that can be considered as mandatory references for future teachers regarding music technology and its teaching opportunities (Rodriguez, 2012). Nowadays, it is necessary to automate musical composition through the support of programs and/or software that make the musician's task easier.

Velazco, et al. (2020) The level of retention in musical memory of intoned sequences, according to the application of LenMus software, is significant at an expected level of achievement, since students through this software manage to solfeggio with proper intonation, recognize the intervals of major second and major third and minor fourth just, compared to students who develop the musical language course without the use of any software.

We consider that the Sibelius and Finale software are a very important tool at the moment of editing and reproducing scores, and everything related to musical calligraphy. In addition, these programs facilitate the creation of audiovisual compositions, and the most important thing is that they can be used in a quick and easy way to manage notations and symbols. In turn Siamancas (2017), the software allowed teachers to innovate their ways of teaching the subject of music through the proper use of music software. That didactic classes using the music software favored the participation and learning of the students who participated in this teacher training process. Likewise, Buenaño (2017) expresses that information and communication technologies contribute to achieve quality teaching and learning, effectively boost the professional development of teachers. Lenmus, Solfege and Musescore are satisfactorily integrated and adapted to the proposed Methodology and have a significant influence on student performance.

Conclusions

It is concluded that the application of musical software (Sibelius and Finale) has a positive influence on the learning of music students at

the Universidad Nacional del Altiplano Puno, achieving a very good level, since it was observed an improvement in the ability to make musical arrangements using computer resources, and the motivation of students increased considerably since it is easier for them to develop in the teaching-learning process.

The level of orchestration skills in the pre-test is of a deficient level, for the post-test, with the application of the musical software (sibelius and finale) the level achieved is Good, since the students began to understand and develop the structures of the instrumental ensembles.

It is concluded that the abilities in the composition improved after the application of the Software Sibelius and Finale as binding tools, giving as a result in the post test improvements in their level from deficient to good in 80% according to the statistical tables as teacher evidenced that there was an improvement and expansion of the utilities of the utensils editors, which in this case were represented by Sibelius giving the composer obviously with the previous knowledge of the domain of these utilities opportunities for the musical writing of their creations.

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Conflicts of interest

The group of researchers has no conflict of interest.

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