

## A study of the use of Instructional Design in Distance Education Ensemble Practice

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**Abstract:** This research investigated the use of the theory of Instructional Design in the subject of Ensemble Practice in the Distance Education Music Degree at the University of Brasilia (UnB). For this purpose, an action research project was carried out in which content was produced based on this theory. The results of this study point to a general pedagogical framework for teachers working in the field of distance ensemble practice, in terms of planning their lessons based on Instructional Design.

**Keywords:** Instructional Design; Content Production; Distance Education Ensemble Practice.

### Um estudo da aplicação do Design Instrucional na Prática de Conjunto EaD

**Resumo:** Esta pesquisa investigou a utilização da teoria do Design Instrucional na disciplina Prática de Conjunto do curso de Licenciatura em Música a Distância da Universidade de Brasília (UnB). Para tal, foi realizada uma pesquisa-ação em que conteúdos foram produzidos com base na referida teoria. Os resultados deste estudo apontaram um quadro pedagógico geral para docentes que atuam em práticas de conjunto a distância no que concerne ao planejamento de suas aulas a partir do Design Instrucional.

**Palavras-chave:** Design Instrucional; Produção de Conteúdo; Prática de Conjunto a Distância.

### Un estudio sobre el uso del diseño instruccional en la práctica de conjunto EaD

**Resumen:** Esta investigación analizó el uso de la teoría del Diseño Instruccional en la asignatura de Práctica de Conjunto en el curso de Licenciatura en Música a Distancia de la Universidad de Brasilia

(UnB). Para ello, se llevó a cabo un proyecto de investigación-acción en el que se produjeron contenidos basados en esta teoría. Los resultados de este estudio apuntan a un marco pedagógico general para los profesores que trabajan en la enseñanza a distancia en cuanto a la planificación de sus clases basadas en el Diseño Instruccional.

**Palabras clave:** Diseño Instruccional; Producción de Contenidos; Práctica de conjunto a distancia.

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## 1 INTRODUCTION

Technological resources can allow students to learn autonomously and to share knowledge with other students through so-called communities of practice, as described by Wenger (2002), and the music teacher can take on the role of mediator of these practices. In this context of technological innovation, Arroyo (2014) points out that music education in the 21st century must be designed for the subjects who live in this century, whether they are students or teachers, and that the forms of production, circulation, and reception of music triggered by current technological conditions have an impact on learning and teaching processes by and for new generations. Beltrame (2016) points out that the Internet can provide an environment for conversations, for presenting new musical paths, becoming a space that brings together different experiences, people, and cultures, reducing geographical distances, and providing a space for musical exchanges and experiences.

It is in this context that UnB's Distance Education Music Degree has developed its activities through Virtual Learning Environments (AVA), Moodle<sup>1</sup> and Teams<sup>2</sup>. The Teams software is provided free of charge by UnB to students enrolled at the university and is used for simultaneous (synchronous) classes. Teams allows students from different locations to communicate with teachers via video conferencing. However, in practical musical activities, when two or more people are singing or playing together, there is the problem of latency or delay, where the image and sound are not transmitted in synchrony. There are already resources available, such as LOLA (Low Latency) software, combined with the high-performance connection of Internet<sup>3</sup>, which could allow synchronous audio and video transmission in real time without any delay problems (GOHN, 2020). However, these technologies are not available at UnB and require the purchase of specialized hardware. This has made synchronous musical activities unviable (SILVA; VASCONCELLOS, 2022). Given this scenario, there was an interest in analyzing, from the perspective of music education, the extent to which the theory of Instructional Design (FILATRO, 2015) could help the teachers working on the subject of Ensemble Practice in the Distance Education Music Degree course at UnB.

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<sup>1</sup> MOODLE was developed in 2002 by Dr. Martin Dougiamas to help educators create online courses. Available at: [www.moodle.org](http://www.moodle.org). Accessed on: Aug. 10, 2021.

<sup>2</sup> Teams is an application that allows you to work as a team in virtual folders and videoconferencing. Available at: <https://support.microsoft.com/pt-br/office/introdu%C3%A7%C3%A3o-ao-microsoft-teams-b98d533f-118e-4bae-bf44-3df2470c2b12#:~:text=O%20Microsoft%20Teams%20%C3%A9%20um,tecnologia%20com%20o%20Business%20Assist>. Accessed on: Aug. 10, 2021.

<sup>3</sup> INTERNET2. Available at: [www.internet2.edu](http://www.internet2.edu). Accessed on: Aug. 11, 2021.

Based on the assumption that some public and private institutions use the theory of Instructional Design to structure distance education (DE) courses in different fields of knowledge, such as pedagogy and art (FILATRO, 2015), the following research problem arises: to what extent can the theory of Instructional Design be used by teachers in the subject of Distance Learning Practice? To achieve the general objective, the following specific objectives were defined:

- I. identify how Instructional Design can be used by teachers of the subject of Ensemble Practice;
- II. understand how Instructional Design can be used by teachers in the production of content for synchronous and asynchronous online classes in this subject.

## 2 DEVELOPMENT

### 2.1 Suggested methodology

Faced with the challenge that the AVAs available at UnB do not allow for synchronous musical practice, the authors of this article were interested in observing possible pedagogical paths in the discipline of Distance Ensemble Practice. The methodological approach adopted in the research was action research, and three student volunteers enrolled in the subject had lessons with the materials developed by the authors. Author 1 was responsible for planning and conducting the activities as a student teacher in the subject. Author 2 was responsible for guiding the study and supervising the action as a teacher of the subject. Action research is a social investigation closely related to an action or the solution of a collective problem, in which the researchers and the participants in the situation or problem are involved in a cooperative or participatory way (GERHARDT; SILVEIRA, 2009 *apud* THIOLENT, 1998).

Thiolent (2011) points out that in action research there are a series of phases, but they are not rigid, as they change order according to the specific requirements of each situation. For Sakamoto and Silveira (2014), action research presupposes the participatory nature of the researcher with a planned intervention in the course of the investigative process to resolve the situation under analysis. Méio (2014) mentions that the researcher involved in this type of investigation must seek a balance between two types of objectives: first, the practical objective of helping to solve the problem and transform the reality in which the work is carried out; second, the knowledge objective, which involves obtaining information that is difficult to obtain in any other way (Méio, 2014). From this, we seek to understand

how the theoretical framework of Instructional Design behaves practically in this discipline.

## 2.1 Implementing Instructional Design

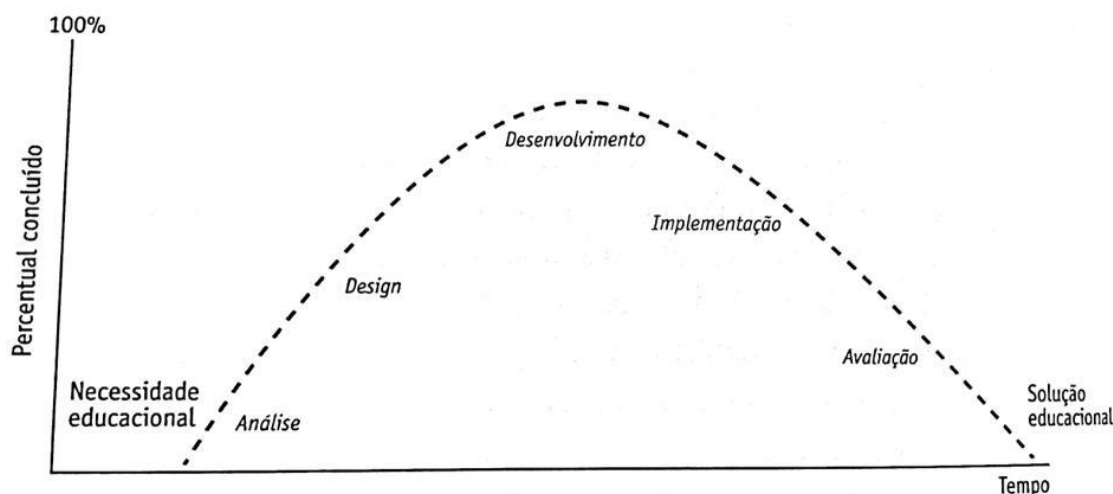
Filatro and Piconez (2004) define Instructional Design as the planning of the teaching-learning process, including activities, strategies, methods, assessment systems, and instructional materials. For Smith and Ragan (2005, p. 4, translated by us), Instructional Design is "the systematic and reflective process of translating the principles of learning and teaching into plans for instructional materials, activities, information resources, and assessment". According to Kemp et al. (2011), Instructional Design is the systematic process based on learning theories, information technology, systematic analysis, educational research, and management methods. Filatro and Piconez's (2004) definition is similar to Smith and Ragan's (2005), as both deal with the process of systematic planning linked to pedagogical principles, instructional materials, and assessment systems aimed at teaching. The definition of Kemp et al. (2011) also discusses the theoretical conceptions of learning, teaching and learning planning management methods raised by Filatro and Piconez (2004), Smith and Ragan (2005), however, Kemp et al. (2011) includes information technologies, currently called Information and Communication Technologies (ICT), which is the set of technological resources that allow communication and interaction in distance education (MARINS, 2022).

Given the possibilities for analyzing teaching strategies, planning pedagogical activities, developing materials, management methods, and evaluating instructional design presented in the definitions of these authors (FILATRO; PICONEZ, 2004; SMITH; RAGAN, 2005; KEMP et al., 2011), it can be considered that "in this sense, the theory of instructional design is dedicated to generating knowledge about the principles and methods of instruction that are best suited to different types of learning" (FILATRO, 2015, p. 145, translated by us), that is, instructional design as a theory brings propositions that are relevant to the practice of teaching.

Instructional Design consists of five phases: 1) Analysis, 2) Design, 3) Development, 4) Implementation, and 5) Evaluation, which form the acronym ADDIE (KENSKI, 2015).

According to Filatro (2015), these phases can be represented on a developmental time continuum, as shown in Figure 1.

**Figure 1** - Stages of Instructional Design



Source: FILATRO (2015).

First of all, observations were made on the subject of Ensemble Practice in the UnB Distance Education Music Degree Course. In the observation technique, there is a detailed record of the situations in which the researcher participates, keeping an open eye, to describe reality as accurately as possible (GERHARDT; SILVEIRA, 2009). At this stage, observation reports were used to identify the activities carried out by the teacher who taught the subject and how the student-volunteers interacted in this environment. Scientific research reports are an important tool for the researcher to record a defined and well-defined topic, trying not to influence their records (SAKAMOTO; SILVEIRA, 2014). At this point, it was observed that part of the students' difficulties in this subject was related to the fact that their musical productions required a special organization because they didn't have the opportunity to play together at the same time. Subsequently, Instructional Design and its ADDIE phases were used to define the pedagogical strategies for this study.

The analysis phase is when the teacher conceives what content will be used for student learning (FILATRO, 2015). This phase has three stages: 1) identifying the learning needs according to the educational objectives (FILATRO, 2015); 2) identifying the target audience in terms of demographic, technological, and cultural profile (FILATRO, 2015); and 3) identifying the available institutional resources. From the reports made at the time of the observations, it was possible to determine where the participants lived. The three students enrolled in the course were a drummer, a guitarist and a bassist, living in the cities of Palmas - TO, Ribeirão Preto - SP and São Paulo - SP, respectively. During the synchronous classes on teams, it was observed that some of the students had equipment used in professional recording studios, such as microphones, and audio cards, among others, and that others had a simpler structure, relying only on cell phones and headphones. Matos (2020) points out



that in Brazil, students' access to technological resources is still a recurring problem in distance music education. In addition to the demographic profile, the technological profile of the students was also established. During this phase, it was found that the students had difficulties in recording the audio and video for the final activity of the course, so they were only asked to record the audio of the songs to be performed, leaving the recording of the videos, so that the students would only have to worry about one element.

The design phase is where the pedagogical planning takes place to meet the learning needs of the target audience (FILATRO, 2015). In the Ensemble Practice discipline of this course, the productions developed by students throughout the semester in synchronous and asynchronous online classes are made available for free in a final presentation on streaming platforms. Beltrame (2016) mentions that music education that emerges from music production practices in digital and participatory culture is composed of self-learning processes, learning in formal institutions, peer exchange, creative space, and working in partnerships where everyone collaborates with their expertise, and that peer learning goes beyond the exchange of knowledge between people from the same space, the same musical style, and the same classroom. In the context of this course, the musical production stages were adapted because the students did not share the same physical studio space, because they lived in different regions of the country, and because group rehearsals were not possible due to the delay problem. The planning for the course was recorded in the schedule of activities (chart 1).

**Chart 1** - Schedule of activities developed for the discipline of Ensemble Practice

Week 1 (June 18-22)	Meeting with the students to discuss the activities proposed for the distance learning Ensemble Practice course.
Week 2 (June 25 to 29)	Rhythmic, melodic, harmonic and timbre analysis of the song "Last Train Home" by Pat Metheny.
Week 3 (July 1st to 5)	Presentation of the arrangement written by the teacher trainee. Study of the grids with the midi audio of the instruments: guitar, piano, keyboard, bass and drums of the song "Last Train Home" by Pat Metheny.

	Organization of the students for the recording of the proposed song. Stages of musical production.
Weeks 4, 5, 6 e 7 (July 8 to 27)	Recording period and finalization of the song "Last Train Home" by Pat Metheny.
Week 8 (July 29 to August 2nd)	Student self-assessment and assessment by the teacher trainee and the subject teacher of the final production of the song "Last Train Home" by Pat Metheny.
Weeks 9, 10, 11 e 12 (August 5 to 30)	Schedule to be developed jointly with the students, the teaching trainee and the subject teacher for the completion of the song in progress "Sex Machine" by James Brown.

**Source:** elaborated by the first author (2023).

The development phase is when ideas become tangible and existing content is adapted or new content is created for instruction (FILATRO, 2015). In this phase, we took into account the objectives set in the course syllabus regarding the study of repertoire of different styles, genres and periods in terms of interpretation, creation and improvisation, listening, arranging, reading, and harmonization. The records made in the observation reports during the lessons showed that the students used to propose their compositions in part of the repertoire. It could be seen that the process of creating, producing and finalizing these songs became complex because of the difficulties that arose in terms of how to guide the other members of the group in what to play, what the form of the song should be, what the arrangement should be, among other peculiarities. In developing the materials for the activity, we considered how the content could help the students to use a more structured process in their future musical productions. The 2 (two) songs chosen for this proposal ("Last Train Home" and "Sex Machine") were chosen because they had the same instrumentation available to the participants in this study (guitar, piano/keyboard, drums, and bass).

Another criterion for selecting these songs was that they had simple rhythmic, melodic, and harmonic patterns. When selecting existing content, we used the original recordings of the two songs





available on streaming platforms so that when listening in class, we could work on students' perceptions of style, genre, interpretation, instrumentation, arrangement, reading, and harmony. The materials produced were created using the free score editing software MuseScore, which allows the grid of instruments to be written on the score in PDF format (Figure 2).

**Figure 2** - Arrangement of "Last Train Home" by Pat Metheny





# Last Train Home

Pat Metheny

Transcrição - Douglas de Oliveira

**Introdução** ♩ = 100

Orgão de tubos

Violão

Piano

Bass

Drums

**Bb7M(9)**      **Bb7M(9)**      **Gm7(9)**      **Cm7(9)**

Source: elaborated by the first author (2023).

The implementation phase is when the actual educational action takes place. In this phase, the educational content produced or selected in the previous development phase is put into practice (FILATRO, 2015). Below is a description of how the produced content was introduced in the action carried out in the synchronous and asynchronous online lessons of the course. In the first lesson, the

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students were presented with the planning and schedule of the proposed activities. In the following lessons, as planned in the script, the rhythmic, melodic, and harmonic analysis of the song "Last Train Home" by Pat Metheny was carried out. Since the students were professional musicians and teachers, these analyses extended to other aspects such as timbre, dynamics, instrumentation, etc. The solo instrument in this song is an electric sitar<sup>4</sup>, which the students said they didn't know. In the presentation of the written arrangement, the grid of instruments showed the function of each one in isolation. The audio in MIDI<sup>5</sup> format made it possible to isolate what each instrument would play. One of the instruments in this song is the piano/keyboard, which is not played by the students, so author 1 of this article participated in the recordings. In the pre-production, after presenting the written arrangement, the form and planning of the song structure were defined, such as the introduction, number of bars, instrumentation, timbres, as well as the guide with the metronome markings, which served as a reference for the recording of the following instruments, foreseeing the spaces destined for the main soloist.

Weekly meetings were held on Thursdays from 16:00 to 18:00 on the Teams platform for students to discuss their production processes, with the teacher monitoring the activities developed for the research. In the asynchronous classes, the Moodle software was used to post the materials produced by the author and, at the same time, the students created a group on the instant messaging application WhatsApp to discuss through written messages about the production stages and to answer any questions they might have on the topic with the author. In this instant messaging group, the flow of information was diverse and not limited to matters related exclusively to the course itself but also included the sharing of materials and other matters related to the context of music as a whole.

During the production phase, the audios recorded in the participants' home studios were shared in collective virtual folders on Google Drive. To maintain the best quality standards, the audio formats shared in these folders had the WAVE<sup>6</sup> extension. It was observed that the group members divided the tasks as follows: one person was responsible for the recording schedule, another for the arrangement and guidance of the recording, and another for the production and post-production of the music. In this process, it was observed that the way the students organized their productions changed,

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<sup>4</sup> DANELECTRO. Sitar. Available at: <https://danelectro.com/product/sitar-resonator/>. Accessed on: Jan. 26, 2022

<sup>5</sup> MIDI is a format that takes up less space when saved, but can be edited in other editing programs. Available at: <https://midi.org/>. Accessed on: Jan. 28, 2022.

<sup>6</sup> WAVE is a format that takes up more space but has better sound quality and can be played on cell phones, computers and recording programs. Available at: <http://literacias-digitais.fea.usp.br/dados/trabalhando-com-arquivos/formatos-dos-arquivos/>. Accessed on: Jan. 30, 2022.

but the deadlines for the second recording were compromised and the music they produced was hardly delivered on time. At this point, author 1 of the article had to actively participate in the group for the activity to be completed on time.

Finally, the evaluation phase considers two points: 1) the students' learning itself, which can be verified through written assessments, assignments, seminars, portfolios, among others (FILATRO, 2015). The criteria used to assign grades were the students' participation in synchronous and asynchronous online classes, as well as the presentation of their productions to the public. Finally, interviews were conducted with the participating students to find out their opinions (FILATRO, 2015). At this point, the purpose of the interviews was to find out the students' perceptions of the proposals developed in the course using the theoretical framework of instructional design. The discussion of this data is detailed below.

## 2.1 Interviews

Knowing the opinion of the three (3) student-participants about the content produced using the theoretical framework of Instructional Design would allow us to understand how this content was received by the students. For these interviews, questions were designed to present and identify, in a sequential manner, the profile of the students, their interaction with the teacher, their perception of the materials produced for the classes, and how they observed what could be improved in the synchronous and asynchronous modalities. These 3 (three) students were regularly enrolled in the Ensemble Practice subject of the UnB Distance Education Music Degree Course and participated in this study free of charge, voluntarily. Each respondent was given a consent form and their identity will be withheld. The 3 (three) volunteers were exposed to the same materials produced in both synchronous and asynchronous online classes.

The data from these participants were collected through semi-structured interviews, which consist of a script of selected topics, but the questions can be more flexible and the sequence of questions depends on the dynamics of what happens between the interviewer and the interviewee (SAKAMOTO; SILVEIRA, 2014). All interviews were transcribed in full and are available in an interview notebook containing the accounts of the three collaborators, with a total of 14 pages. The acronym "CE" is used to denote the interview notebook. Through the diagnostic analysis, the specificities of this field of study were outlined.

### 2.1.1 Students' profiles

Charles is 33 years old, plays drums professionally, and owns two music schools in Tocantins (TO), which are linked to a franchise of schools with a national reach. In his interview, Charles emphasized that the Distance Ensemble Practice course was important for him to develop skills in different musical genres.

Student Tadeu is 28 years old, plays electric bass, guitar and acoustic guitar professionally, and has experience with other instruments. Tadeu works as a musician and teacher in Ribeirão Preto (SP). In his interview, he says that the Distance Ensemble Practice has helped him to think about different strategies for his students and his professional practice as a musician.

Gerônimo is 38 years old and plays electric bass, guitar and has experience with some other instruments. Gerônimo works as a musician and teacher in São Paulo (SP). In his interview, he said that the Distance Ensemble Practice course put him in the context of having to work with people from different musical backgrounds and levels, as well as helping him optimize the production of his work.

### 2.1.2 Class trajectories

When asked about the types of technological equipment used in the synchronous online classes of the Ensemble Practice course, the students' responses reveal two elements to be analyzed. The first aspect concerns the digital profile, which, according to social and economic factors, influences the technological resources available (FILATRO, 2015). Students Charles and Tadeu use similar equipment (mobile phone and headset), while student Gerônimo uses different equipment from the other two (computer and amplifier), revealing that the conditions of access to technological resources are different for students in the class. The second aspect concerns the characteristics of the equipment available. Cell phones and headsets (used daily) have been developed for communication in telephone and video calls, to capture or reproduce the frequencies of the spoken voice, but when used in musical practice they have certain limitations (COLABARDINI, 2021). The student Gerônimo has amplifiers (speakers used in professional recording studios) and is able to hear some elements more clearly, such as timbre and dynamics, because this equipment has a higher spectrum than the other two students use (headphones), which means that the students' experiences of musical appreciation are different.

In the interview, when asked what technological audio equipment they used for asynchronous class recordings, Charles said "I also use my cell phone. But in an interesting place in the room, which is already acoustically treated, so it wouldn't be so much a piece of equipment, but the room itself and

this exact distance of the recording" (C.E., p. 1, translation from Portuguese by us); Tadeu mentions that "the basic recording equipment would be the cell phone, the audio interface, and the notebook. And then inside the computer, I have different tools to work with the audio" (C.E., p. 5, translation from Portuguese by us); and Gerônimo comments: "I use the computer I use to record the audio and video, I use an audio interface, I use two audio monitors, a direct box, as well as instruments and cables" (C.E., p. 11, translation from Portuguese by us). During the synchronous online classes, when the students turned on their cameras to make their comments, it was possible to visually notice the difference in the technological resources available to them.

Student Charles had an acoustically isolated room because he is a drum teacher and his school is in a residential area, but the equipment he used to record was his cell phone microphone. This required the student to perform a type of music at the time of recording with a dynamic that didn't saturate the audio capture, and at the time of post-production, the drum audio had to go through some editing. The ideal recording for this instrument would be a set of microphones to record the different parts (cymbals, drums, and snares), but this is expensive. Student Tadeu uses an interface, which is a device that connects the musical instruments to the computer so that the recording can be done online (SILVA; VASCONCELLOS 2022). In addition to the audio interface, the student Gerônimo has monitors (which are the speakers described above) and a direct box (a device used to reduce noise). Some of Gerônimo's equipment is used in professional recording studios. Studies show that the conditions in which students are placed in distance learning music courses can influence their musical experience (OLIVEIRA-TORRES, 2012).

In addition to physical equipment (mobile phones, computers, and interfaces), music production also uses software, which is a data processing system that controls the operation of a computer (ARANGO, 2014). Software is commonly referred to as programs or applications. In the context of music production, this software is called a DAW (Digital Audio Workstation), which is a digital audio workstation designed for audio editing. When asked what software they use for audio editing, students Charles and Tadeu reported using free software (Moises and Reaper), and student Gerônimo reported using GarageBand software, which is available for free to consumers using Apple devices.

When asked what video editing software they use, students' responses indicate that they prioritize recording and editing more for audio and less for video. Throughout the course, students take classes in recording theory and practice and music technology with an audio focus, but there are no visual classes in the curriculum. In this regard, student Tadeu comments: "a suggestion would be

more ideas on how to work with video recording, for example, positioning, or how to adjust the light or lighting tools" (C.E., p. 6, translation adapted from Portuguese by us). The fact that there were no formal instructions in the course on how to work on the image part may have influenced the quality of his recordings. For example, in the videos of student Charles, his image was always recorded with his back to the camera, because the positioning of the cell phone, which was far away from the battery, favored audio recording, which ended up compromising the recording of his performance.

In the context of the Ensemble Practice subject of the UnB Distance Education Music Degree Course, the knowledge required to carry out the activities somehow exceeds the knowledge taught in the course, i.e. part of the student assessment requires content that is not covered in the instructions offered. For this reason, when the author carried out the analysis (ADDIE) of the activities of the action, he decided to abandon the requirement for videos, because it became clear that it would not be possible to develop materials in the design and development phase related to the visual part. Borne (2011) shows that the training required for teachers working in distance education is complex, as there are a multitude of factors that influence teaching practice in this modality, which is why planning is of paramount importance in this context.

This section has shown that social and economic factors influence the digital profile of students (FILATRO, 2015) and affect the quality of the activities they carry out (OLIVEIRA-TORRES, 2012; COLABARDINI, 2021). It is also necessary to discuss the insertion of new subjects so that the knowledge required in course evaluations does not exceed the knowledge offered in the classroom since this mismatch between what is required and what is taught can affect students' engagement in the subject (TONI, 2020).

### 2.1.3 Group interaction

As for the students' interaction in the course, it seems that they had different experiences depending on their context. Charles had the opportunity to be in contact with people who play musical genres to which he has an affinity, but which are not accessible in his locality. In this sense, the Internet transforms the perception of space-time through the means of telecommunication and the possibilities of musical interaction (ARANGO, 2014). Student Tadeu only presented the score of the song in class (during the observation phase), but he didn't propose how it could be recorded by other classmates, which made the production difficult to organize, but after the content presented in the action, the student began to worry about the stages of musical production. Instructional design (FILATRO, 2015)

was important in structuring the musical content of this action research because, without a defined plan, the action of the discipline could be lost, as discussed by Behzadaval and Vahedi (2019).

Gerônimo, through his report, revealed aspects that are common in the practice of a music teacher, because the knowledge levels of the students are different. The objectives set for this course by the sector responsible for the management of distance education courses - the Distance Education Center (CEAD) - and the Course Pedagogical Project (PPC), provide for the development of theoretical and practical aspects to develop reflective future music teachers, with the autonomy and knowledge to mobilize knowledge and skills by their work context, and to develop collaborative learning in distance education through a variety of student-student interaction situations, in addition to student-teacher interaction. In addition to the possibility of students producing music at a distance, skills have been developed that are provided in the legal instruments of the course.

#### **2.1.4 Interaction with teachers and content**

When asked about his interaction with the teachers who wrote this article (student teacher-author 1 and teacher-author 2), Charles says: "I think the positive thing is the general advice, I think the way the teacher and the student behave. It's a subject that I think is a pleasant way to work" (C.E., p. 3, translation adapted from Portuguese by us) and adds "especially on your part, when I see 'have you recorded it yet? If you have any problems, what can I do for you?', so I think that makes a big difference, you know" (C.E., p. 3, translation adapted from Portuguese by us); student Tadeu mentions that "I think it's nice when we put the arrangement together and comment 'couldn't this or that have been better'" (C.E., p. 7, translation adapted from Portuguese by us), I think it's nice when we put the arrangement together and comment 'couldn't this or that have been better'" (C.E., p. 7, translation adapted from Portuguese by us), and adds, "This was also a very cool experience because when we showed a song, everyone gave their impressions" (C.E., p. 7, translation adapted from Portuguese by us); Gerônimo comments, "I think I worked a lot on the recording. It was very difficult for me to produce, so it forced me to produce more with a certain agility, but also with this pressure, it's not interesting" (C.E., p. 12, translation adapted from Portuguese by us), and he adds "that I don't produce just because I have to meet a schedule" (C.E., p. 12, translation adapted from Portuguese by us). The students' perception of the interaction with the student teacher (Author 1) and with the content was relatively different. The participants agreed that the proposed activities stimulated musical production, but Gerônimo thinks that the deadlines of the course created a certain pressure.



Oliveira-Torres (2012) presents an analogous situation in his study of distance learning students, in which it was noted that some manage to organize their time and meet the weekly requirements, but others are unable to work out this organization and end up losing focus and the ways to carry out the tasks, making it necessary to request an extension of the initially proposed deadlines, for example, for posting in forums after they have closed. During the synchronous online classes, students Charles and Tadeu often shared their professional activities in parallel with the class, and student Gerônimo, when he had a professional commitment, chose not to attend the class (at other times, when he did attend, he left early) and in a way, his contact with the teacher was less than that of the other two students. When Charles had other professional commitments (teaching, attending a rehearsal, etc) during class time, he didn't turn on the camera, and when questioned, he turned on the microphone and appeared occasionally. This student comments that "points that would need to be improved, perhaps it would be my context. The timetable, right? Since I work almost all three periods. I haven't managed to participate fully yet" (C.E., p. 11, translation adapted from Portuguese by us).

Charles' situation was analogous to that of student Tadeu, who said, "This synchronous meeting usually happens when I'm traveling from one school to another. So it's happened that I follow the class and when I have to answer, I have to move to answer" (C.E., p. 5, translation adapted from Portuguese by us). This reality faced by students requires teachers working in this environment to take into account these social factors (FILATRO, 2015). On the one hand, the quality of Charles' and Tadeu's learning was diminished by the fact that they shared the attention of the class with their professional commitments, but in the case of Gerônimo, who was absent, he ended up missing some of the proposed content.

When asked how the content covered in this subject has helped them in their musical practice, student Charles says, "after it's all over, you see, 'man, I played this song like this, I played this and this, too', it's been very rewarding" (C.E., p. 2, translation adapted from Portuguese by us), and adds, "in my context here, I lived in Brasília for a long time, but when I moved to Tocantins, I was a bit limited in terms of different jobs" (C.E., p. 3, translation adapted from Portuguese by us), p. 3, translation from Portuguese by us); student Tadeu says: "I felt an improvement in organizing the music so that everyone understands it, in the sense of improving the musicians' communication so that the activity flows better, which is a point that I found very interesting" (C.E., p. 7, translation adapted from Portuguese by us); and student Gerônimo comments:

I think that the stimulus to production was positive, the recognition of authorial

compositions, the idea of bringing people who are students to show their work, to have material, the idea of stimulating authorial production, the production of a portfolio, so these are things that I found quite interesting and I think that this is something that we can't lose, we can't get into a line of production and not lose these points. (C.E., p.13, translation adapted from Portuguese by us).

This section showed that the proposed content was well received, with some reservations. Two of the students (Charles and Tadeu) reported more related experiences of acquiring production skills and a calm relationship with the author while the other student (Gerônimo) had reservations about the deadlines imposed in the course and said that he sometimes felt pressured by the Author 1 to complete the activities on time. The theoretical framework of Instructional Design and its ADDIE phases helped in the planning and implementation according to the learning needs of the target group and the technological resources available to them.

### 2.1.5 Limits and potential of distance ensemble practice

Regarding the limitations of distance ensemble practice, student Charles says that "so I know we're limited, but if I were to say something about what kind of activity I think I'd like to work on, I think I'd like to work on more textures, dynamics, dialog between one instrument and other instruments" (C.E., p. 2, translation adapted from Portuguese by us); student Tadeu mentions that "in the classroom you do a jam, you experiment, but in the distance environment it's a little more difficult" (C.E., p. 2, translation adapted from Portuguese by us), p. 2, translation adapted from Portuguese by us); student Tadeu mentions that "in the classroom we do a jam, you play together, you experiment, but in the remote environment it's a little more difficult" (C.E., p. 7, translation adapted from Portuguese by us), adding that "in the remote environment we need to have a greater definition, so what I mean is that these are the difficulties that have arisen in the distance" (C.E., p. 7, translation adapted from Portuguese by us), our translation from Portuguese); and student Gerônimo comments that "when I think that it's an ensemble practice without being in an ensemble, I know that it's quite complicated" (C.E., p. 12, translation adapted from Portuguese by us), and adds that "since it's a study of practice, that we can study the repertoire, I think that's the most important thing, and maybe what bothers me is that I'm taking in a lot at the same time, that I can't practice the repertoire because we're in an ensemble practice class" (C.E., p. 12, translation adapted from Portuguese by us).

The accounts of the three student volunteers reveal a wide range of elements of the difficulties of taking this course at a distance. The content suggested by student Charles (on dynamics) could be done during mixing and mastering, but discussing how each

instrumentalist wants his instrument to sound in post-production is something that would require even more from the students, because when the person in charge of editing has a videoconference with his classmate and plays the audio from his computer, the quality of the reproduction will be affected, In other words, the sound reproduction device that each person has access to will affect the final result of the musical production, so no matter how much technology allows for the sharing of materials, the final result may not meet the expectations of the participants.

The other aspect raised by Charles, the dialogue between one instrument and another, converges with the need to invest in existing technologies (LoLa software, combined with the Internet2) that would allow synchronous musical practice (COLABARDINI, 2021). Jams, which are moments when musicians improvise and experiment with musical ideas without a defined musical structure, allowing more freedom for the development of musical ideas, as suggested by student Tadeu, could expand the possibilities for creation, since ensemble practice ends up focusing more on musical production due to the limitations described. Arango (2014) states that the internet and technologies allow groups to produce music remotely, but the musical experimentation of instrumentalists is also reduced.

Regarding the potential of this course, Charles says: "I think it's very dynamic. I'm on my third course. At first I was a bit apprehensive (it's just another activity!), but now I take it as part of my work relationship, it's very relaxed" (C.E., p. 2, translation adapted from Portuguese by us). In this regard, student Tadeu mentions that "it's the class where the teacher teaches, but the students also teach, there's always a student who says he has a situation like this, who says 'there's such and such situation that I went through', so what I mean is that I find the subject very interesting" (C.E., p. 9, translation adapted from Portuguese by us).

Student Gerônimo says that the activity developed in this subject "shows a difference in our work because it tries to get away from the trivial, the basic, I think it's positive. There is an attentive look at the artistic question" (C.E., p.13, translation adapted from Portuguese by us). The students' accounts reveal aspects that can be analyzed on several fronts. First, when developing activities, the teacher must take into account proposals in which students interact with other coursemates, so that the feeling of being together is made possible, dispelling the idea of isolation that is very common when it comes to the non-face-to-face modality (JÚNIOR, 2012). The study by Oliveira-Torres (2012) shows that distance music students feel alone when they are doing their assignments and that being online does not mean being in contact with others. It is interesting to note that in the context of this course, despite the differences in equipment, the students organized themselves in conversation

groups and that the structuring of the content with Instructional Design was important for good planning of the actions carried out in the course.

### 3 CONSIDERATIONS

This research aimed to investigate how the theory of Instructional Design and its phases (ADDIE) would behave in the production of content for the subject of Ensemble Practice in the Distance Education Music Degree course at UnB. The unfolding of the theoretical framework in this article can be listed in five results.

The first result is that teachers who work (or will work) in this modality need comprehensive training that guarantees knowledge of the prerequisites of music education and the use of technologies to ensure adequate pedagogical preparation in this segment. However, it is necessary to take into account the technological resources available in the educational institution and accessible to the students to provide an appropriate pedagogical solution. Instructional design allowed us to analyze and diagnose the peculiarities of the target group and the educational context of this research site.

The second result shows that the task of teaching at a distance can be more difficult to accomplish without a well-defined instructional design, which is why each part of the instruction must have a reason and be recorded in the activity schedules and lesson plans so that the instructional proposals become consistent. Instructional Design has made it possible to define the pedagogical activity scripts according to the learning needs of this target group.

The third result shows that the teacher, when developing the activities to be implemented in the course, must consider that the selected activities (already available or not published) must be adapted to what was planned in the curricula. Instructional design made it possible to make the content more flexible at this stage of development, according to the particularities of this environment.

The fourth result shows that during the course of the lessons, the students use different technological resources to capture, record, and edit the audio of the proposed songs and share technological knowledge, while the teacher plays the role of mediator in this exchange of information. Instructional design made it possible to adapt the objectives of the curriculum of the Distance Ensemble Practice course to the context of these students.

The fifth result concerns the assignments used to assign grades to students. At this stage, the number of activities must be well balanced, because in this course the grade awarded takes into account the students' participation in synchronous and asynchronous online classes and the

presentation of their productions to the public. This (distance) production process is complex because it depends on the students themselves monitoring their recordings and communicating with their classmates through messages, which generates a certain amount of wear and tear. In addition, the knowledge and music production resources available to them are not homogeneous, which makes the whole process peculiar. As for the self-evaluation of the course made by the three (3) students who participated in this work, it helped to show that there are advantages in Distance Ensemble Practice classes because they allow musical exchange between people from different locations (in Brazil and abroad), but that in addition to asynchronous practice, they could also benefit from synchronous practice. Some of the problems of image and sound delays caused by the variable Internet signal could be solved by investing in existing technologies that would make these synchronous musical practices possible.

The collaboration that the students showed in the process was important, especially from the implementation phase on, because at the end of a production, the students who had played a certain role in a song would take on a different role than the one they had already played, for example, if the student was the arranger in one recording, they would take on the role of audio and video editor in another, among other actions. Arango (2014) mentions that in collaborative musical processes, the sound result does not come from the creative mind of a single person, but from the emergence of collaborative behavior that occurs in the interaction between different participants, and that the computer is not only an instrument for sound control but also a platform for social interaction.

Even with this self-organization and independence in the production of the songs, the author of the study still had a role in leading these activities of organizing the materials, how to achieve a satisfactory sound result when recording the songs, and paying attention to deadlines. Beltrame (2016) points out that the context of media and technology signals the need to understand how people involved in educational processes (teachers, students, institutional managers) relate to the cultural practices that emerge from technological transformations, which is reflected in studies on participatory culture (CP). As for the synchronous and asynchronous content developed in this cyberspace (OLIVEIRA-TORRES, 2012), according to the students' reports, there was an expansion of the knowledge they already had.

As for the use of DICTs in higher education (MARINS, 2022), we need to think about how these tools should be presented in the training of teachers who teach students who are already part of this digital culture (COLABARDINI, 2021), but who sometimes have difficulties and could benefit from the teacher's help. In addition to the understanding of these technologies, there are a variety of

factors (technological possibilities and limitations of virtual learning objects and environments) present in the work of teachers in Brazilian higher education (BORNE, 2011). Concerning distance music education, the changes and innovations taking place in contemporary culture are also reflected in music education (WESTERMANN, 2022). It is important to note that this scenario has revealed a high degree of complexity for teachers working in this context, as Instructional Design can present pedagogical paths for organizing content in music education (JÚNIOR, 2012; BEHZADAVAL; VAHEDI, 2019), but the resources available to students and institutions require further studies that can unravel this complex reality of content creation in this field of study.

This study has provided a general framework for teachers working in distance education to conceive possible pedagogical paths when planning their lessons, using the theoretical framework of Instructional Design and its phases (ADDIE). Further studies and research could delve deeper into this topic and present new possibilities for Instructional Design in the field of distance music education, but it is important to take into account the context in which the work is developed, as this work was carried out with a small sample of participants. Future studies could work with a larger sample and different technological resources than those used in this research. There are aspects of the selection made in this article that could not be analyzed but could be discussed in future studies, such as the cultural context of the students and the possible influence of this element on the application of Instructional Design.

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