

OPEN DISTANCE TEACHING PRACTICES IN PANDEMIC TIMES: DEVISING A SIMPLIFIED VIRTUAL PEDAGOGIC MODEL FOR THE UNIVERSITY OF SAINT JOSEPH IN MACAU, CHINA

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Abstract

The COVID-19 pandemics had most impact on teaching and learning processes in all over the world particularly considering the traditional universities that base their pedagogic processes on face-to-face teaching. The imposed lockdown implied that suddenly all teaching-learning processes had to move online which led to an increased use of and familiarization with web conferencing technologies, thus intensifying, and driving new ways to learn and communicate while launching new or enforcing existing online learning communities. These online learning practices tend(ed) to be adopted after the pandemics thus establishing unstructured approaches of hybrid pedagogic models integrating both online and face-to-face classroom-based teaching-learning processes.

In this paper we report on online teaching practices during COVID-19 pandemics in context of the learning unit Research Methods in Design in the Master Program of Design of the Faculty of Arts and Humanities of the University of Saint Joseph, Macau, China, where we have adopted open distance teaching and learning strategies based on student-student interaction through collaborative learning. Based on this experience we propose a simplified virtual pedagogic model in view of the post-pandemic teaching and learning scenarios at a face-to-face university like the University of Saint Joseph.

Keywords: teaching practices, open distance teaching, pedagogic model, virtual pedagogic model, post-pandemic teaching.

1 INTRODUCTION

In the first half of the year 2020, a pandemic caused by COVID-19 (caused by the SARS-CoV-2 virus) has taken the entire planet by surprise, implying a change in all our lives due to the lockdowns imposed. These conducted to real impact and repercussions on all levels [1] [2] [3] with special emphasis on teaching and learning processes in all over the world particularly considering the traditional universities that base their pedagogic processes on on-site face-to-face teaching. In fact, the COVID-19 pandemic led to an unprecedented level of discussion of pedagogical innovation along with concrete implementation actions of digitalization and online learning in higher education. Despite being commonly accepted as a priority for years, digital transformation of higher education institutions has speed up due to the demand to shift from face-to-face teaching to blended learning or fully distance learning while, on the other hand, most of the changing actions were unplanned [4] [5] [6]. Moreover, the greatest number of teaching staff and students had little (or full absence) background or prior experience in distance education [7].

The adopted approach in most of the face-to-face teaching universities were based on synchronous scenarios based on video-conference teaching trying to replicate at online spaces the face-to-face class scheduling. Suddenly all teaching-learning processes had to move online which led to an increased use of and familiarization with web conferencing technologies, thus intensifying, and driving new ways to learn and communicate while launching new or enforcing existing online learning communities. These online learning practices tend(ed) to be adopted after the pandemics thus establishing unstructured approaches of hybrid pedagogic models integrating both online and face-to-face classroom-based teaching-learning processes [8] [9].

According to the IAU Global Survey Report on the impact of COVID-19 on higher education around the world [10], cited on 2020 UN policy brief [11], many of the subjects inquired considered the experience of working and teaching from distance as a significant opportunity to learn and to experiment more flexible learning possibilities, say it blended or hybrid learning or even mixing synchronous learning with asynchronous learning. Moreover, as described in the Times Higher

Education survey [12] most respondents (85% of higher education institutions) assessed the transition to an online teaching environment was successful. Of a sample of 2000 responding higher education institutions, 40% think that online teaching quality is as good as face-to-face classroom based (on-site) teaching, while only 19 % believe that the quality has dropped with the transition.

It looks like that students were also generally content with the quality of emergency online teaching. The European Commission's survey of mobile learners within the Erasmus+ and European Solidarity Corps programmes [13] shows that the thoughts of the respondents towards online activities were mostly positive. For example, 71% of subjects responded that digital learning tools and platforms work very well. 63% of the respondents found the quality of activities good, and more than half (55%) affirmed they stimulated participants to learn.

A recent empirical study performed on a sample of 10,092 higher education students from 10 countries across 4 continents during the pandemic's first wave through an online survey [14] demonstrated the impact of e-learning quality on the students' performance was strongly mediated by their satisfaction with e-learning. Actually, e-learning has become a compulsory educational process for many universities, during the lockdowns as they continued to offer education by using various digital means including elearning platforms or video conferencing systems. Many universities were even encountering this mode of delivery for the first time, making the transition particularly demanding for them since no time was available to organize and adapt to the new scene for education. Both teachers and students funded themselves in a new environment, where some looked better out at adapting than others. The study demonstrated that the active role of teachers and their responsiveness and feedback seem crucial for the students' satisfaction with the online instruction since the teacher/instructor is a key element of success with the e-learning environment. Moreover, the study inferred that administrative, technical, and learning assistance through tutors and the library is very important for students' greater satisfaction and, in consequence, students' higher perceived satisfaction and performance [14].

The COVID-19's unplanned and unprepared experiment in distance teaching and learning allowed for capacity building of staff and faculty who have learned and tested new tools and systems to enable distance teaching and learning. We are assisting to a shift in mindset happening in all over the world opening a new horizon of opportunities for teaching and learning. It is expected that a push forward occurs in terms of an increased exploring of the potential of flexible learning and more acceptance for online learning in order it becomes a more integral part of study plans for traditional face-to-face universities. It is foreseeable an increase in innovation in the field of teaching pedagogies as well as delivery modalities of teaching and learning [10] [15].

In this paper we report about an experience of online teaching practices during COVID-19 pandemic in context of a learning unit of the Master Program of Design of the Faculty of Arts and Humanities of the University of Saint Joseph, Macau, China, where we have adopted open distance teaching and learning strategies based on student-student interaction through collaborative learning, asynchronous communication, and continuous assessment mixed with synchronous class-sessions based on video-conferencing. Based on this experience we propose a simplified virtual pedagogic model for planning, organizing, and implementing university level (hybrid) online courses by fully exploring the facilities offered by the educational digital technologies in view of the post-pandemic teaching and learning scenarios at a face-to-face university like the University of Saint Joseph.

This article is organized in the following sections: first, we introduce the methodology embraced followed by a description of the learning unit "Research Methods in Design" where the online teaching experience occurred, including the virtual learning space and the students observed feedback. Next, we propose a simplified virtual pedagogic model, followed by the conclusions.

2 METHODOLOGY

The methodology adopted in this work has been based on online observations and online focus group considering here the members' group of the online (virtual) class (including the teacher and author of this article) who participated in the process of teaching-learning around the learning unit "Research Methods in Design". The teacher assumed the role of researcher by conducting a systematic set of online observations against a list of premises bearing in mind the overall actions occurring within the learning unit. In this respect, the researcher is an insider of the research field who participates in the observed object while assumes the role of an observer [16].

The research object is constituted by the virtual learning space of the learning unit where a class of 6 enrolled students were active. The observation items embraced the discussions in the forums, the documents submitted, the difficulties and successes registered on side of the students, as also the level of students' adherence to certain online activities or the final grading. This methodology can also be defined in the category of online ethnography [17].

The formulating of the simplified virtual pedagogic model arises from an intense process of reflection / reverberation about the research results taking into account as a basis reference the virtual pedagogic model of the Portuguese Open University [18].

3 THE LEARNING UNIT “RESEARCH METHODS IN DESIGN” OF THE MASTER PROGRAM OF DESIGN

The learning unit “Research Methods in Design” is a semester mandatory course of the third semester of the Master Program of Design offered by the Faculty of Arts and Humanities of the University of Saint Joseph, Macau, China.

This paper reports on the course edition of the academic year 2021/2022 that started in September until December 2021.

3.1 The virtual learning space

The virtual learning space of the course embraced its Moodle-based space (named after USJ Hub) along with the Google space (google class, google meet) where the video-based synchronous class sessions were realised.

Of the overall virtual learning space, we have selected the following ones: the central space; the central help forum; the learning activities; and the online assessment.

3.1.1 The Central Space

The central space of the learning unit is where the students find the welcome address message, foreword, syllabus, learning activity plan, main study documentation, as also, the general forums (news, general help, and consulting), grades, and any other element of general nature.

The central space represents the main entrance stage of the virtual space where the student expects to encounter all the top-level elements of the course as also guidance to access the remaining virtual areas. Therefore, an easy-to-understand-and-follow central space is essential to engage students in the virtual learning space and have them accessing the right activities, tools, and documentation. In figure 1 is presented a screenshot of the central space.

3.1.2 The Central Help Forum

In the virtual learning space, there are two types of forums: the ones moderated by students; and the others moderated by the teacher, that is only open during specific periods. This way, we stress the importance of student interaction and collaborative learning by providing open discussion spaces controlled by the students themselves. The quality of the conducted discussions is part of the overall course assessment.

The special case of the central help forum, that is in the central space and moderated by the teacher, it represents the medium where students can post questions and ask for help regarding topics / issues of general nature. The central help forum permits to establish a direct channel with the teacher to deal with problems and concerns regarding the learning unit that might be of administrative or academic type. Moreover, being a forum, it also supports class discussions not directly linked with the learning activities.

Interaction in the form of discussion is fundamental for the teaching-learning process effective results in terms of acquisition of knowledge and skills on the side of the student. This interaction takes place when the student participates actively in learning activities that involve communication with peers and teacher, whether contributing to a discussion, solving an exercise, analyzing of a result, or simply exchanging impressions with colleagues or clarifying doubts with the teacher [19].

In the case of the learning unit under research, the central help forum has been used by the teacher and students to share information and concerns, thus it was possible to establish discussions that strengthen the sense of group awareness and teacher's presence.

MDS105 - Research Methods in Design
You are logged in as Adérito Marcos (Logout)

My Hub

Home ▶ My courses ▶ 202109MDS105

Navigation

Home

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Settings

Course administration

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Switch role to...

My profile settings

Topic outline

General

Welcome to the space of the module

"Research Methods in Design"

1

Find a worthy research question

2

Review the existing research

3

Undertake your own research

4

Formulate an answer to your question

Foreword, Forums

- Foreword
- News Forum
- General Help Forum

Documentation, other main issues

- Module Syllabus
- LearningActivitiesPlan
- CoreFirstPapers
- ClassSessionsSlides
- PhotosVidLibTour27Oct2021
- ResearchQuestionDelivery

GRADES

- FinalGrades

Search forums

Go

Advanced search?

Latest news

Add a new topic...

Adérito Marcos 16 Sep, 17:28

LA1: new deadlines for RS and Essay submission [more...](#)

Older topics ...

Upcoming events

There are no upcoming events

Go to calendar... New event...

Recent activity

Activity since Sunday, 15 May 2022, 12:20 AM

Full report of recent activity...

Nothing new since your last login

Turn editing on

Learning Activity 3

Learning Activity 3

Writing the Master Dissertation Project Proposal

Figure 1. View of the central space of the learning unit "Research Methods in Design".

3.1.3 The Learning Activities

The learning materials of the course under study are basically composed by papers or book chapters to read, videos or podcasts to watch or listen, forums embracing direct questions to answer or discussions to conduct or take part, and assessment activities to complete.

All the learning process is organised according to a set of learning activities. Each learning activity has a title, a time duration, a set of intended learning outcomes to be achieved, a set of materials, a set of actions to complete, and a set of assessment actions to realise including eventual deliverables to submit.

The learning unit "Research Methods in Design" has been organised according to three learning activities, namely:

- Learning Activity 1 - Fundamentals of Scientific Research (13 September - 4 October).
- Learning Activity 2 - Practising Scientific Writing (19 October - 15 November).
- Learning Activity 3 - Writing the Master Dissertation Project Proposal (12 November - 17 December).

All three learning activities have two forums: a) a brainstorming forum for open discussions conducted and moderated by the students; b) a question-answer (Q/A) forum for direct questions for the students to answer and elaborate, moderated by the teacher.

The learning activities are open in sequence and made available to the students according to the time plan of the learning unit.

In figure 2 we present an overview of a learning activity.

In figure 3 we can see an overview of Q/A forum.

Learning Activity 1

Fundamentals of Scientific Research

(13 September - 4 October)

| | |
|---|---|
| <p><u>Discussion Topics:</u></p> <ol style="list-style-type: none"> 1 – What is scientific research in general? 2 – Why is scientific research systematic? 3 – Describe what is fundamental research. Compare it with applied research. 4 – Does applied research always results in concrete inventions / discoveries? Ground your answer. 5 – From the ground rules of the scientific method we have objectiveness, that is research must be free from the influence of value judgements on part of the observer-researcher. Explain why this rule is so important. 6 – When can we classify practitioner action (e.g., the act of creation of one artist or designer) as research action? Explain your answer in detail considering the case of "research through practice". 7 – Why "research through art and design" implies a creation cycle around one artefact (or family of artefacts)? 8 – What is a "research statement"? Explain why is it important for self-clarification? | <p><u>Intended Learning Outcomes:</u></p> <ul style="list-style-type: none"> - Discriminate the fundamental characteristics of scientific research - Discriminate the main differentiating characteristics of research through art and design and the respective creation/research cycle and the importance of the outcome artefact - Distinguish the importance of the research statement as a tool for self-clarification and project communication and its main components - Reflect in a sustained manner on the research approach better suited for the own master project (being it more "research into art and design"; "research through art and design" or "research for art and design"). |
|---|---|

Priority study and consultation materials (descending order of priority):

- 1 - Core articles identified by the teacher ("CoreArticles" folder).
- 2 - Set of web sites identified by the teacher.
- 3 - Autonomous Internet search carried out by the student.

"If a creative artefact is the basis of the contribution to knowledge, the research is practice-based" (there is always an artefact)
"If the research leads primarily to new understandings about practice, it is practice-led."
[\(https://www.creativityandcognition.com/practice-based-research/\)](https://www.creativityandcognition.com/practice-based-research/)

CoreArticles
 RStatementExamples
 WebSites
 Brainstorming Forum (LA1)

Research Statement
 Forum Q/A (LA1)
 Essay (synthesising a research article)

Figure 2. Overview of learning activity 1.

MDS105 - Research Methods in Design

My Hub

Home ► My courses ► 202109MDS105 ► Learning Activity 1 ► Forum Q/A (LA1)

Search forums


Navigation

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 - RStatementExample
 - WebSites
 - Brainstorming Forum (LA1)
 - Research Statement
 - Forum Q/A (LA1)
 - Essay (synthesising a research article)
 - 202201ADPD205_DS

Settings





Forum administration



This is a moderate open forum for discussion and analysis of issues related to the Learning Activity 1. Despite being an open forum, try to stick to the issues raised, avoiding starting new issues. In your answers, favor concise texts, with assertive content, which effectively contributes to the discussion with new and/or complementary elements. Respect the rules of good interaction and online communication. Whenever possible and relevant, support your argument with references to publications, websites, others, related to the topic under discussion.

And remember that your participation in the forum will be evaluated!

Add a new question

| Discussion | Started by | Replies | Last post |
|--|--|---------|---|
| Q3 - Describe what is fundamental research. Compare it with applied research. |  Adérito Marcos | 13 | Mamadú Seck Tue, 25 Jan 2022, 01:58 PM |
| Q7 - Why "research through art and design" implies a creation cycle around one artefact (or family of artefacts)? |  Adérito Marcos | 6 | Mamadú Seck Tue, 25 Jan 2022, 01:55 PM |
| Q8 - What is a "research statement"? Explain why is it important for self-clarification? |  Adérito Marcos | 5 | Mamadú Seck Tue, 25 Jan 2022, 01:48 PM |
| Q6 - When can we classify practitioner action (e.g., the act of creation of one artist or designer) as research action? Explain your answer in detail considering the case of "research through practice". |  Adérito Marcos | 7 | Mamadú Seck Tue, 25 Jan 2022, 01:44 PM |

Mamadú Seck

Figure 3. Overview of a Q/A forum.

3.1.4 The Online Assessment

The assessment actions adopted in the learning activities are the following:

- Activity 1: free and open discussion conducted in the brainstorming forum; answers to direct questions in the Q/A forum; student individual research statement; and one short essay synthesising one research article.
- Activity 2: free and open discussion conducted in the brainstorming forum; answers to direct questions in the Q/A forum; short or poster paper, or graphic poster about the student's master project research topics.
- Activity 3: free and open discussion conducted in the brainstorming forum; answers to direct questions in the Q/A forum; student's master project proposal (according to a given template).

Additional assessment elements of the learning unit were also the level of participation and self-initiative in starting new discussions or being interventive during the synchronous video-based class sessions.

3.2 The students observed feedback

Observing and assessing the students' actions in the virtual learning process we could conclude the following hypothesis-proofs:

- Spite of being students who were used to attend face-to-face on-site classes, all the six students (100%) concluded successfully all the 3 learning activities.
Evaluation: even though 2 (33%) students delivered with delay part of their homework, the overall adherence of the students to the e-learning activities was fully achieved.
- The level of participation in each individual assessment action is as follows:

- a) (6/6) 100% participated in all Q/A forums.
- b) (29/30) 97% of all requested deliverables (30 = 5 actions x 6 students) were submitted.
- c) (2/18) 11% of participation in the brainstorming forums (18 = 3 brainstorming forums x 6 students). Only two interventions have been registered.

Evaluation: Students understood rather well the dynamics and importance of the Q/A forums as well the functioning of the deliverable mechanism. On the contrary, the brainstorming forums were less used even though they could provide an additional source of learning and grading.

- 3 The overall usage of the Central Help Forum was residual. Only two pertinent interventions have been registered. However, all students have presented themselves during the first week using this forum which is considered rather positive.

Evaluation: Besides the self-presentation moment during the first week of the course, this forum has been only used by the teacher to publish announcements or notices.

- 4 All six students (100%) have asked for the teacher's help sometime during the course by using the synchronous video-based channel. This gives concrete evidence that students were enough confident to ask the teacher for help while contacting him directly by using the video channel; but less willing or self-assured to write a proper help request in the respective forum.

Altogether, the overall student enrolment in the virtual learning space and adherence to the respective teaching-learning activities were successful thus providing important cues to devise a virtual pedagogic model for the post-pandemic online and on-site teaching and learning scenarios for the University of Saint Joseph.

4 THE DIVISED VIRTUAL PEDAGOGIC MODEL

The virtual pedagogical model (VPM) of the Portuguese Open University [18] has been adopted successfully in the design and teaching of several graduation and post-graduation programs along the last decade. This model encompasses in detail how to design and implement teaching-learning contexts under online open distance learning for courses in higher education. The introduction of this model was a breakthrough, with the results well reflected in today's increasing numbers of enrolled students and their rate of success [19] [20] [21].

In the process of formulating of a simplified virtual pedagogic model for the University of Saint Joseph we have followed an intense process of reflection / reverberation about the experience of hybrid teaching-learning within the learning unit "Research Methods in Design" while adopting as a basis reference model the VPM of the Portuguese Open University.

4.1 The four principles

The virtual pedagogic model shall promote student-student and teacher-student interaction through ways of collaborative learning while tending to adopt continuous assessment based on the undergoing online actions.

The simplified virtual pedagogic model SVPM is to be based on four major principles, namely:

- The Principle of Student-Centered Learning, where students are assumed to be active individuals, builders of their own knowledge, driving their learning process as essential parts of a learning community. The learning takes place either with recourse to independent learning; or in interaction and dialogue with peers, adopting strategies of collaborative learning, sharing experiences, joining efforts in solving problems and completing tasks, thus, collaboratively achieving common learning goals.
- The Principle of Flexibility, where students can learn anywhere and anytime, regardless of the space-time constraints that, by contrast, physical classroom teaching imposes. A communication model that is essentially asynchronous, allows for the non-coincidence of space and time where, in general, the communication and interaction take place as it is convenient for the student. He/she should take the time to read, process information, reflect and then establish dialog or interact with the proper quality with the peers and teacher.
- The Principle of online Interaction, which extends to the new type of student-student interaction that occurs in asynchronous discussion groups within each virtual class and is the basis for collaborative learning. The communication here is essentially asynchronous which allows for

time of reflection and preparation of each intervention with clear benefit to the student in developing skills for critical reflection and synthesis.

- The Principle of Digital Inclusion, where the educational institution is the agent of training and transmission of basic information and communication technology (ICT) skills for those who find themselves excluded from this type of knowledge and thus unable to attend higher education in online teaching-learning. This requires the university to provide an introductory module where new students may acquire those skills before starting the course in which they are enrolled.

The SVPM, as depicted in figure 4, shall provide a reference model for planning, organizing, and implementing university level online courses by fully exploring the facilities offered by the digital technologies.

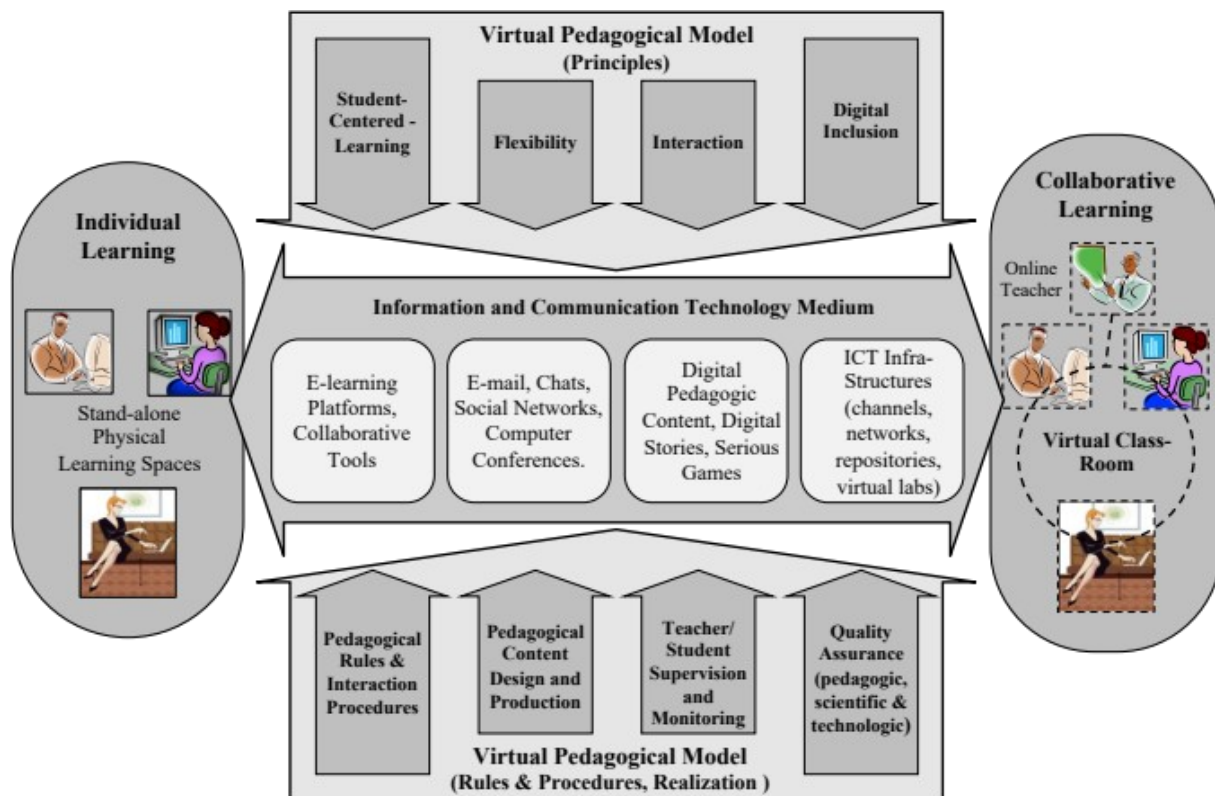


Figure 4. Overview of the SVPM based on VPM of the Portuguese Open University [18] [21].

4.2 The Pedagogic Elements

The application of the SVPM to teaching programs assumes that the teacher with the help of a technical supporting board designs and organizes in advance a teaching and learning process through the adoption of a set of characterizing elements. These elements are structuring to the organization of online (virtual) classes of up to 50-60 students each. The teacher is responsible for the planning of the learning unit (syllabus, time plan and schedule, assessment rules and criteria, learning activities, etc.), selects the pedagogic resources (books, book chapters, papers, websites, podcasts, and videos, etc.), chooses the teaching strategies, including the developing and managing of the actions to be performed by the students. The teacher designs a learning path which will originate a schedule of activities to be followed throughout the semester.

Thus, we identify the following pedagogic elements that must be created with the virtual learning space:

- Plan of the Learning Unit (PLU): a digital online booklet provided to the student at the beginning of the semester where the overall planning is described, including syllabus, time plan schedule with the plan of learning activities and actions, description of the pedagogic resources, assessment criteria, among others.

- Learning Card (LC): it is a personalized device that aggregates the results of what the student produced throughout the learning process in an organized and systematic assessment registration tool. This card registers all the assessment elements planned within the learning unit and the respective grades.

In the case of post-graduation programs, the PLU becomes a Learning Contract with a similar structure, however, assuming the form of a contract between the teacher/university and student where it is incorporated a certain degree of flexibility adjustable in function of the student's personal rhythm and needs.

4.3 The Teacher, Tutor, and Technical Staff

When the number of students in each learning unit is higher than the maximum defined for online classes (e.g., 60-70 students) more online classes are created. Each teacher should not assume more than a certain number of online classes (e.g., 2), even though he/she will be the responsible regent of all online classes of the same learning unit. The remaining online classes will be taught by tutors who are assistant teachers collaborating with the university and selected for this purpose only. All the tutors assigned to online classes of a certain learning unit will be coordinated by the respective teacher.

The technical staff will be in charge of the e-learning platform, design and development of pedagogic materials and assist the teachers/tutors as also the students in the teaching-learning processes.

4.4 Online Class and Blended Class

Online classes are adopted when the respective teaching programs are based on entirely online asynchronous pedagogic activities. This means that all activities are realized online using communication devices capable of integrating several communicational resources, using a proper e-learning platform. Online classes explore to the limit the principle of flexibility.

Blended classes are adopted when the teaching programs embrace online, and face-to-face interaction and the nature of instruction is to provide in each of these modalities. The planning of the learning unit must cope with a balance between activities in both these modalities that must complement each other. The face-to-face component of a blended course should be considered secondary and used mainly as a socialization factor or a laboratorial or residential period.

5 CONCLUSIONS

In this paper we reported about the experience of online teaching during COVID-19 pandemic in context of a learning unit of the Master Program of Design of the Faculty of Arts and Humanities of the University of Saint Joseph, Macau, China, where we have adopted open distance teaching and learning strategies based on student-student interaction through collaborative learning. Based on this experience we have proposed a simplified virtual pedagogic model for planning, organizing, and implementing university level (hybrid) online courses by fully exploring the facilities offered by the educational digital technologies and taking as a reference the virtual pedagogic model of the Portuguese Open University, a virtual public university.

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