

INNOVATING IN OPEN DISTANCE TEACHING WITH FACE-TO-FACE RETREATS WITHIN A DOCTORAL PROGRAM IN DIGITAL MEDIA ART

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Abstract

The Portuguese Open University, together with the University of Algarve, both in Portugal, launched a doctoral program in digital media art taught by a hybrid approach, adopting open distance asynchronous teaching based on an e-learning platform along with face-to-face sessions (doctoral retreats) with the duration of one week at the final of each academic year. This program has been established in 2012 pioneering the innovation of applying asynchronous online teaching in practical and some labor-intensive disciplines such as programming sensors or planning art installation exhibitions while creating an online learning community.

In this article we aim at presenting the doctoral program by emphasizing not only the overall project but specifically the pedagogic model and strategy adopted while providing examples of concrete teaching/learning scenarios implemented including the doctoral retreats.

Keywords: digital media art, doctoral program, virtual pedagogic model, open distance learning, doctoral retreats.

1 INTRODUCTION

Rapid growing of digital media technologies gave birth to a new type of art and communication expression – so called “digital media art” as a creative activity connected with using of technologies as both raw material and tool in the fields of computer graphics, video mapping and digital sound and music, digital storytelling, animation, 3D-visualization, creative interfaces and interaction, sensors and actuators, digital dance and body expression, creative programming, mixed virtual reality for mass media including Internet, cinema & television and publishing as well, interactive and digital design. Digital media art is today traversing several application areas ranging from art and culture, communication and media, education, marketing, to entertainment, among others.

Digital media art is here defined as “the art that uses the technology of digital media as the process (means) and/or product (end result)” where the technology is a tool at the service of creative ingenuity (artistic, educational, cultural, communicational, etc.) or as an engine for innovation at the level of creation of new forms and aesthetic discourses that exploit the informative and sensorial expressiveness of the multimedia content [6].

The Portuguese Open University, together with the University of Algarve, both in Portugal, launched a doctoral program in digital media art taught by a hybrid approach, adopting open distance asynchronous teaching based on an e-learning platform along with face-to-face sessions (doctoral retreats) with the duration of one week at the final of each academic year. This program has been established in 2012 pioneering the innovation of applying asynchronous online teaching in practical and some labor-intensive disciplines such as programming sensors or planning art installation exhibitions while creating an online learning community. This program is running its 9th edition being a unique approach not only in Portugal but all over the world, gathering students from remote places / countries who have been part of an online community of learning and practice in digital media art. During the doctoral retreat students, teacher and invited artists and seminarists convene to an *extramural* place to share experiences, conclude learning processes, and participate in interventive street actions and set up and present a final public exhibition of artefacts / art installations authored by the students.

In this article we aim at generally presenting the doctoral program by emphasizing not only the overall project but specifically the pedagogic model and strategy adopted while providing examples of concrete teaching/learning scenarios implemented including the doctoral retreats.

2 THE DOCTORAL PROGRAM IN DIGITAL MEDIA ART

The Doctoral Program in Digital Media Art aims to teach and train skills/competencies of research-action for the most diverse areas of intervention of the digital media art / multimedia art, in terms of art experimentation/creation and artistic/technological/communicational reflection, with solid application competences of the digital media technologies, communication sciences and intervention techniques as well artistic criticism; must also be able to take the lead of projects in experimentation/research-action, curation, artistic intervention and intercultural projects, of individual and collective nature, that embrace the development of new applications, artistic/cultural products and aesthetic narratives.

The doctor in digital media art is able to assume leading roles in research projects, teaching, development and creation of new highly innovative aesthetic discourses that strongly explore the informative and sensorial expressiveness of multimedia content, interfaces and technological interaction, aiming to build interventional artefacts in the creative industry, in cultural and artistic expression, education and entertainment, among others.

Upon completion of the doctoral program, students are expected to be able to:

- a) Classify the main theories, principles, models and technologies, their potentialities and limitations considering its application/exploitation in the design, interface, and interaction with multimedia communication content, that allow experimentation, development, and expansion of current and new aesthetic narratives.
- b) Rigorously and efficiently select, develop, and apply models, devices, methodologies, and techniques that allow the proper application and exploitation of computer technologies, communication sciences and media, in the face of the needs and opportunities for social intervention and the scenarios of experimentation, development and use.
- c) Autonomously, in a critical and imaginative way, manage projects of digital media art.
- d) Manage innovative processes resulting from the introduction of technologies and multimedia communication techniques in the different fields of intervention.

Due to the inter-, multi- and transdisciplinary nature of the doctoral program, encompassing theoretical-practical and interventionist components at the intersection of different disciplines and areas of knowledge, the teaching/learning methodologies of all learning units are student-centered and follow a collaborative theory-practice learning online approach, in a virtual class, which is based on of individual and group practical work, while the teacher assumes the role of facilitator of the knowledge acquisition process.

The doctoral program follows the principles of the Bologna declaration regarding structure and accreditation, being taught in a mixed regime of distance learning, in a virtual class using a specialized e-learning platform and adopting the Portuguese Open University's virtual pedagogical model. Thus, the teaching/learning activities run primarily in online open distance learning mode using the Portuguese Open University's e-learning platform, which includes virtual laboratory facilities. However, there are planned face-to-face sessions of intensive artistic experimentation nature, one week each year, specially considering here the first year of the program. During the first year of preparation of the doctoral thesis it is planned a moment per year for presentation/demonstration of intermediate results.

The face-to-face teaching sessions are organized as Doctoral Retreats and held outside of the universities premises in locations culturally enriched appropriate for the implementation of curatorial and digital artistic intervention actions in contact with local population and institutions. These are the locations where the doctoral retreats have been held (all in Portugal): Óbidos (2013), Silves (2014), Vila Nova de Cerveira (2015), Lisbon-Alfama (2016), Faro (2017), Lisbon-Alfama (2018), Óbidos (2019), Online (2020, 2021).

The program of each doctoral retreat is composed of several activities of academic nature, all integrated in the socio-cultural-artistic scene of the space that welcomes the retreat. It includes face-to-face classes, forum discussions and thematic seminars, artistic intervention actions, exhibition of digital media art artefacts, presentation, discussion and evaluation of thesis project proposals and intermediate thesis results, as well as specific actions to visit cultural and historical spaces and contact with the people of the doctoral retreat site.

The contact hours with the teachers happen primarily through the e-learning platform and less frequently via other telematic means. Additionally, face-to-face sessions are organized as doctoral retreats including thematic seminars, workshops, atelier as also art exhibition on an intensive basis with the duration of one week/year, for reinforcement and consolidation of knowledge or evaluation.

The doctoral program is designed for creative people working in the areas of digital and interactive art, creative industries, technologies of information and communication and electronics, the media, the media, design, literature, music and performing arts, or even other areas and who wish to carry out scientific and action research training advanced level art in the inter-multi- and transdisciplinary area of medium art digital. Doctoral attendance requires candidates to have access to computer with broadband Internet connection, have enough knowledge and skills in using computer applications with proven practice of digital creation and reading and comprehension skills in English.



Figure 1. Doctoral Retreat at Vila Nova de Cerveira (2015).

The program is planned for 3 years duration (180 credits ECTS (European Credit Transfer System)), with a first year to attend different learning units focusing on research methodology and advanced seminars as well the design and planning of the research project for the doctoral thesis, while the second and third years are for the implementation of the research project regarding the preparation of the doctoral thesis.

3 THE VIRTUAL PEDAGOGIC MODEL

The Virtual Pedagogical Model (VPM) of the Portuguese Open University [1] has been adopted in the design and teaching of the doctoral program in digital media art. It describes in detail how to design and implement teaching-learning contexts under online open distance learning (OODL) for courses in higher education [2] [3] [4].

The VPM promotes student-student interaction through collaborative learning and is focused on continuous assessment. 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.

The VPM is 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 (following what is the most intrinsic nature of OODL); 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 interaction is the basis of shared experiences, resources, knowledge, and collaboration in carrying out activities, being therefore crucial in ODDL.

- 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 OODL. This implies that any student who wishes to attend a course at the educational institution can attend online training to acquire ICT skills and be able to familiarize themselves with the technological tools before engaging in any course.

The VPM, as depicted in figure 2, provides a complete reference model for planning, organizing, and implementing university level online courses by fully exploring the facilities offered by the educational digital technologies.

On one hand we have the ICT medium facilitating and intermediating the overall OODL process. On the other hand, we have the VPM, as both as a set of four principles as also a set of rules, procedures, and implementation mechanisms to be considered in the concrete OODL scenarios. Both VPM and the ICT medium act together to permit not only the design of the OODL course but, above all, the implementation of the overall teaching and learning (individual and collaborative) processes.

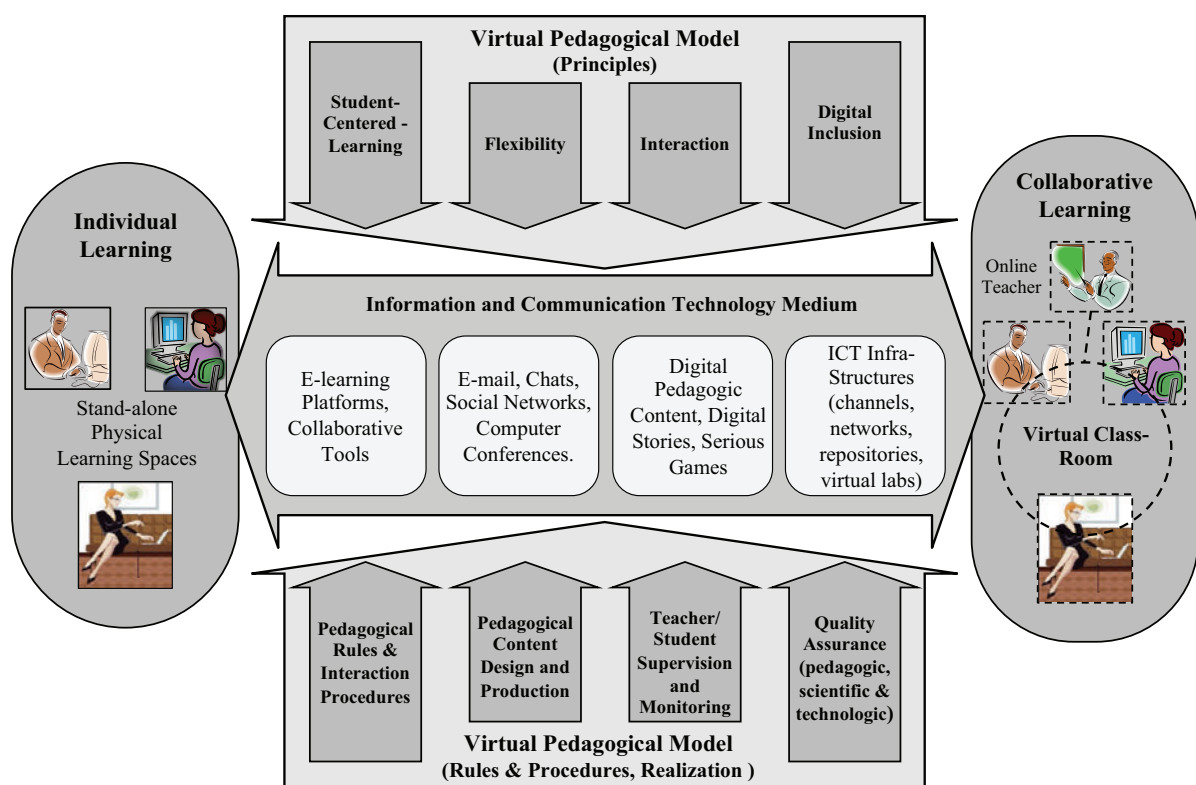


Figure 2. Overview of the Virtual Pedagogic Model.

The ICT medium embraces all the technology related issues, starting from the e-learning platform until the infra-structures such are networks, repositories, and virtual atelier/workshops.

In what concerns about the rules, procedures, and implementation mechanisms of the VPM they include aspects such are the quality assurance of the overall process from the pedagogic, scientific, and technologic point of view or mechanisms for teacher / student supervision and monitoring. As we can observe in figure 1 collaborative learning takes place in context of virtual classrooms while the individual learning occurs at geographically distributed local students' places.

4 VIRTUAL PEDAGOGIC MODEL ADOPTED TO THE DOCTORAL PROGRAM IN DIGITAL MEDIA ART

The application of VPM to the teaching-learning processes in the field of digital media art at doctoral level, besides requiring the appropriate ICT medium elements also demands some specific components to be implemented and made available to students. In fact, students engaged in OODL scenarios in the

field of digital media art need to have remote access to some specialized computing resources for media editing, digital creation / experimenting or computing kits for manipulation of sensors / actuators or other devices, among others, that they do not dispose at their local learning environments. Furthermore, due to the highly specialized characteristics of the different subareas of digital media art there is a need for a more intensive collaborative learning that requires shared virtual spaces where students can test or visualize their digital media art artefacts with the participation of their counterparts. This shared space may explore web 2.0 technologies such as wikis or focused social networks.

When results are ready for demonstration or exhibition they must be exposed at a virtual space, making them visible to the virtual classroom or to other specific audience.

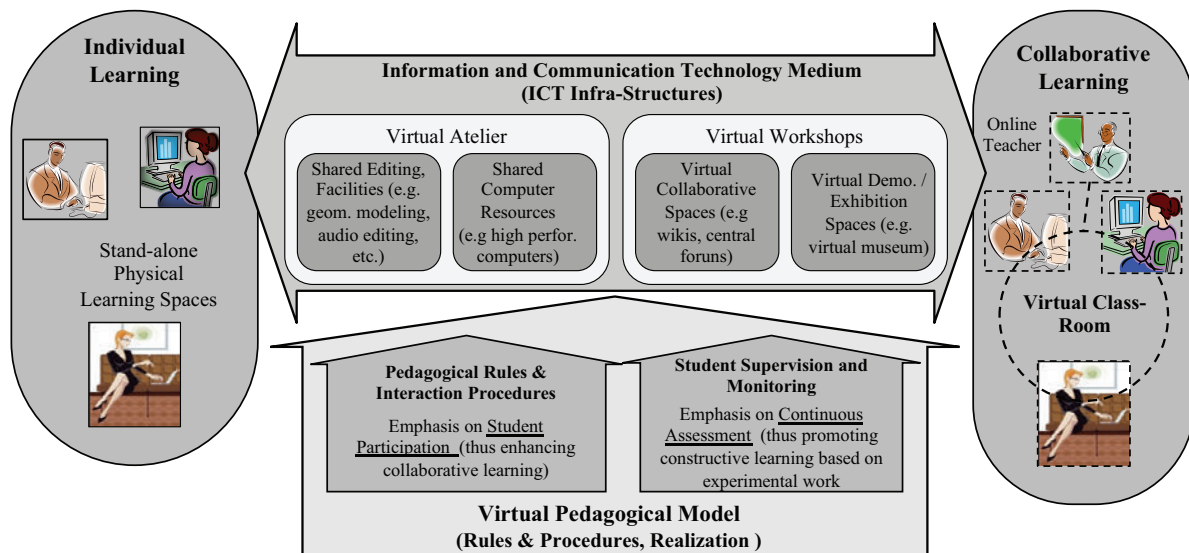


Figure 3. The VPM adapted to OODL in digital media art.

OODL scenarios in digital media art imply a slightly adaptation of VPM rules and procedures as also implementation mechanisms to emphasize (and promote) the level of students' participation with each other and with the teacher (essential for the overall collaborative learning to happen). Moreover, the supervision and monitoring of the student work shall be based on continuous assessment schemes where students tend (and are encouraged) to engage in the actual collaborative learning process as active members of the learning community.

There are digital media art subareas that involve intensive usage of editing tools for different media (video, sound, image, virtual environments, ...), for instance, the set up of art installations based on sensors / actuators supported by a central controlling processor (e.g. Arduino) require the provision of Arduino kits plus sensors testing board. It is very difficult (even impossible) for many students to gain such specialized skills by learning alone. Moreover, assessment schemes must constitute a motivation engine to involve students in the collaborative learning (and consequently in individual learning) during the overall academic year. This can be achieved through the implementation of an adequate continuous assessment scheme with verification moments (online demonstrations) realized on a regular basis.

In figure 3 is depicted the adaptation of VPM to the specific case of OODL in digital media art. In addition to the other modules, we divide the specific ICT medium into Virtual Atelier and Virtual Workshops. In the first one, students find all the facilities and resources needed to realize tasks, complete work if these require remote access to shared editing tools or computer resources. This work is usually of type stand-alone. When students engage in collaborative work, by sharing problems or completing together tasks, they use facilities available in the Virtual Workshop, which also includes the demonstration and exhibition of results in the virtual space.

4.1 Aspects of the online process

In the current VPM implementation the overall ICT medium is implemented over an e-learning platform that explores the Moodle technology. The platform is constantly evolving to incorporate new features and improve existing ones in a task that is never considered finished.

Students of each learning unit are grouped into virtual classrooms with a maximum of 30 students. The aim is to target the student mass aggregated to a learning unit in smaller groups to promote peer-to-peer interaction and facilitate a closer online monitoring by the teacher.

The doctoral program adopted a continuous assessment approach. It consists of the realization and delivery via the e-learning platform of two or three working assignments) during the course of each semester, which consists of discussion participation, inquiries answering, short essays, summarizing of scientific articles/art manifestos, graphic schemes presenting artefact concepts, short videos presenting artefacts, Arduino schemes for art installations, research proposals, among others. The continuous assessment also includes the final presentations of results realized during the doctoral retreats.

Figure 4. View of Moodle space of the learning unit “Research Seminar”.

Due to the essentially practical nature of the learning units, the teaching / learning process observes an online collaborative theoretical-practical learning approach which is based on the discussion of basic topics as well as the accomplishment of individual practical work and a group of technological creation experimentation, including production of an artefact, the partial results of which will be presented and discussed online, the artefact being exhibited during the doctoral retreat face-to-face at the end of the academic year to ensure a complete course of the research-creation cycle.

In the virtual classroom space in the e-learning platform, there are two types of forums: forum moderated by the teacher; and forum moderated by the students. The students must discuss the subjects related with the learning unit in the forum moderated by the students. Only when the forum moderated by the teacher is opened, can the questions still opened be placed there. Thus, we stress this way the interaction between students and the collaborative learning, freeing it from the potential subservience (and even dependence) on teacher intervention, who forcibly would not be able to respond to a large volume of repetitive individual requests which, for sure, would take place if there were no collaborative learning [5].

Figure 4 shows the virtual space of a specific learning unit, the Research Seminar. In the center, students have resources provided by the teacher such as: forums; the learning unit contract; learning activities, etc. On the left side, there are blocks of diverse functionality that the teacher can turn on/off according to their relevance to the learning unit.

4.2 Issues of the doctoral retreats

In the current VPM implementation the overall ICT medium is implemented over an e-learning platform that explores the Moodle technology. The platform is constantly evolving to incorporate new features and improve existing ones in a task that is never considered finished.

The doctoral program students enrolled are adults, inserted in active life, with an average age of 42 (considering the first 4 program editions), from various professional backgrounds, with emphasis on higher and secondary teaching (80%) in the areas of arts and communication, multimedia, arts education, design and music, among others, and about 20% of other professions including digital art, music, audiovisual production, design and others. All the students showed, to a greater or lesser extent, the work of creating (artistic) digital through the portfolio that they presented in the candidacy [7]. Their thesis work is naturally oriented towards their specific areas of professional intervention. For example, students who are teachers of musical education have performed theses in the field of digital sound and music, conjugating with the application in the teaching of music. Or the student digital artist guides his thesis to a specific area where he performs his artistic intervention.

Students are involved in the construction of a curatorial proposal of their own exhibition and artistic intervention, individual and collective that will take place in the space-time of the doctoral retreat. This exercise is initially done online based on available digital information about the space and intervenable points (streets, museums, churches, etc.) available at the retreat site, with subsequent implementation on the ground. This reinforces the interaction with the different learning units, interlinking in particular the practice of digital artistic experimentation and its final exposure / performance subject to evaluation and culminating the 1st year of the doctoral program.

Within the scope of the project of digital curation and artistic intervention the student has the opportunity to apply the acquired knowledge and to experiment in concrete methodologies of curatorial planning and artistic intervention in public spaces. This phase of the work also allows the student to develop and reinforce critical individual and team reflection skills on the results achieved in the light of the most pressing concepts, challenges and issues facing contemporary society, their relationship with art and as this may constitute the driving force of transforming the same society.

The doctoral retreats have shown to be indispensable for the successful completion of the teaching-learning process of the doctoral program first academic year. The academic success of students completing the first year of the doctoral program is strongly linked with the participation in the doctoral retreats. Numbers of the first 5 editions of the doctoral program demonstrated that the success rate among those students is about 80%.

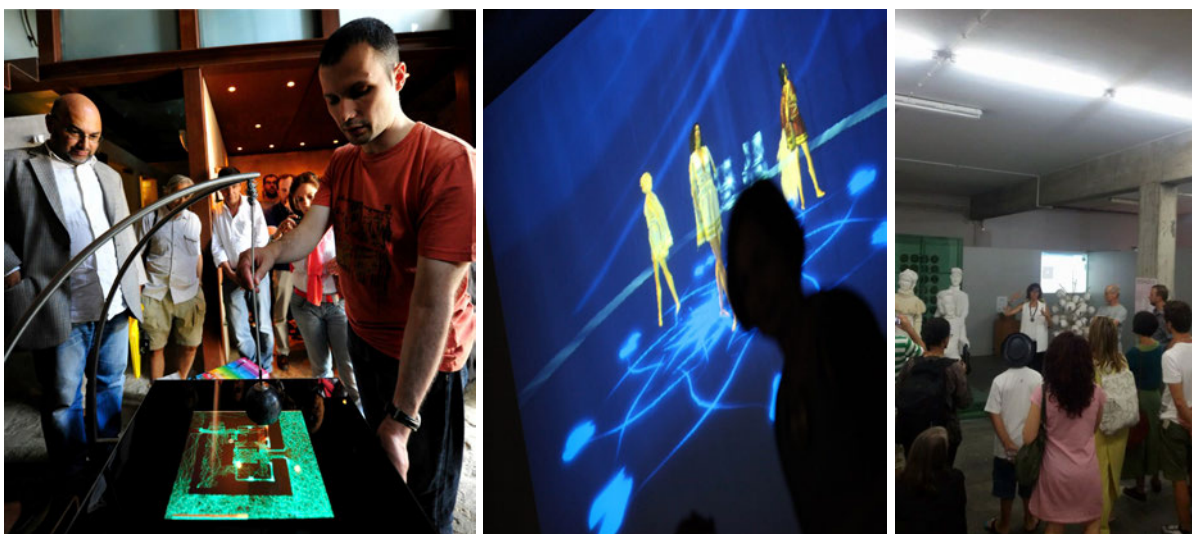


Figure 5. Views of exhibition moments of different doctoral retreats.

5 CONCLUSIONS

In this paper we have presented some fundamental concepts and definitions about digital media art. Then we have described the general principles that guide the Virtual Pedagogical Model in ODDL and its application to the special field of digital media art which demands for the availability of virtual ateliers and virtual workshops along with an emphasis on student participation and continuous assessment if we want to implement successful collaborative learning scenarios.

Then, we sought to describe some pedagogic issues to implement ODDL in the doctoral program in digital media art. Moreover, we explained some issues of the implementation of the doctoral retreats, and how these are essential to successfully conclude the overall ODDL teaching-learning process with face-to-face activities.

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