

# LABORATORY MAKING: HOW ANALYTICAL TEAM PLAY IMPACTS LEARNING AND RESEARCH

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**Abstract:** This paper presents a case study on the creation, in a private college, of a laboratory focused on Ludology and game development. The aim of this study is to uncover different ways of relating teaching to research, student expectations to academic needs, and research field to research field in such an interdisciplinary environment as a Digital Games course. The case at hand features experiences in syllabus revision, earlier oral examination, course gamification, technical partnership, and the preparation of an academic forum. Preliminary results show that efforts which enhanced faculty responsibility in the course management yielded qualitative changes in student's production.

**Keywords:** Game Studies. Student research. Learning.

## 1 INTRODUCTION

This paper presents distinct strategies for empowering the relations between academia and professional formation in a Superior Technological course environment.

The authors propose preliminary responses to each strategy, and discuss the issues that arise from the different circumstances. When concerning the concept of "case study", we follow a methodological approach grounded on the ones proposed by Yin (2003) and Stake (2005), among others. The analytical approach to each sub-case will vary and shall be explained in detail within the respective sections.

Together, the sub-cases present one environment, in which faculty worked as a team in many levels. As a holistic case, they represent one joint academic effort to transform learning experience. This process will be understood by means of the Lacanian psychoanalytic theory.

By means of the team play around the foundation of a course laboratory, we believe to pursue a break from the belief that learning is based on mere transmission of knowledge by a teacher. Here we consequently follow a time logic such that students will, through living (*Erlebnis*), see and take conclusions on the knowledge

relating to their unique learning experience. This experience (*Erfahrung*) transforms the student, grounding his knowledge construction<sup>20</sup>.

## 2 RELATED WORK

The present paper, as showing a holistic case study of volunteer academic collaboration, arises as an ethical need for understanding our own teaching and researching environment, in order to attain the desired changes in the student-teacher relations and research output. Duarte (2008) argues that the case study is not only a valid research method, but also a convenient one for individual researchers' limited budget.

Follows from that situation an augmented risk of observer's interference. That is why we take into account advice from Stake (2005): "It is important to make yourself visible to the reader, in order to establish the existence of interactivity between investigator and phenomena" (apud DUARTE, 2008).

Yin (2003, p. 8) makes a point that the case study can be of importance to History: "it adds two sources of evidence not usually included in the historian's repertoire: direct observation of the events being studied and interviews of the persons involved in the events". In the present case, we investigate History of Education and Game Studies.

The work under examination is an effort to enhance learning by strengthening student involvement, as well as to increase faculty production by means of such human implications. Literature shows many responses to the problem of learning as a passive relation; for instance, James Paul Gee (1987) has had strong influence on studies relating games and education, as his distinction between "learning" and "acquisition" has grounded the use of alternatives to traditional lectures: "Acquisition is a process of acquiring something subconsciously by exposure to models and a process of trial and error, without a process of formal teaching".

Although one of the sub-cases (3.3) deals with games as pedagogical tools, the distinction above can help clarify the work's aim as a whole: move from a knowledge transmission model to a knowledge building one.

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<sup>20</sup> See Iribarry (2003) for a discussion on the *Erlebnis* and *Erfahrung* aspects of experience.

The case under study takes place in a private university, so that implies a political take on the concept. Here we take “university” not as a closed system, a universal set of knowledge. Hence the work under the *uncomplete university* perspective (not “incomplete”, originally *universidade descompleta*, Fachinetto, 2012).

According to Cordié (1998), pedagogical formation has made educators believe in the possibility of controlling teaching-learning processes, in neutral transmission, with no subjective implication, apart from animic states. The *uncomplete university* perspective proposes knowledge as constantly built and rebuilt, taking into account analytical discourse.

### **3 THE LABORATORY AS A HOLISTIC CASE**

The case at hand is the faculty’s initiative to unite in research and production activities within Faculdades Metropolitanas Unidas. Because we managed to create a laboratory for Ludology and Development, we will call the holistic case the “laboratory”. That will be explained in detail under each sub-case.

A social situation presented itself as an issue for inquiry: the fact that a large amount of students and faculty are devoting themselves to studying games. The efforts among Computer Science centers and Engineering departments among institutions like Pontifícia Universidade Católica de São Paulo, FATEC-SP or Unisinos have laid a foundation for the development of the Brazilian game courses, but the market’s quick growth has led to many environments in which the social bonds and the exchanges between research and industry are still at its beginning. Games are not as traditional a subject as others at the University, so Game Development courses have attracted a manifold of specialists from several disciplines, often lacking the ability to communicate and, consequently, work together, be it as academic partnership, be it as business.

The course under examination was formally created by Faculdades Metropolitanas Unidas in 2007, and most of the present faculty joined the staff later. Within this environment, a group of researchers proposes changes to the Digital Games technological third degree course. Having support from the department authorities, but no financial aid, professors have started reunions and team play in several issues. The present paper intends to show how recent experience in the mentioned school yielded relationship changes between students and faculty and the course’s production in general.

Hence this case study arises as an ethical demand in the History of Game Design: we must investigate the environment by challenging assertions on bibliography, teaching practices, evaluation and production, in order to found a game laboratory, which we called LUDEV.

The laboratory will act as the holistic, single case studied; *embedded* come the following sub-cases:

- 3.1: LUDEV (the laboratory per se);
- 3.2: a real case of student implication in the course, by means of oral presentation committees;
- 3.3: an experiment on ludification, in the form of a narrative game;
- 3.4: a glimpse on other collaborative matters.

### 3.1 The LUDEV case

Faculty at Faculdades Metropolitanas Unidas have presented the formal proposition for LUDEV (Ludology and Game Development laboratory) in 2013. Its goals are to review teaching practices, strengthen research, and enhance production (both student's and faculty's).

Academical writing requires a process of knowledge deconstruction and reconstruction. In this analytical process, the student acts as researcher, while the teacher provides guidance. The researcher must dare to tread an unknown path toward answers to his or her queries, instead of adjusting to responses in the tradition. In order to unbind the student from preestablished meanings and truths, it is necessary that the analytical process includes the student as subject.

The creation of a laboratory inside the Digital Games course at Faculdades Metropolitanas Unidas aimed at escaping the repetitive stance both faculty and students risk to assume. When the subject is tied to an imaginary identification, there is no deconstruction. Therefore we intend to address the student need for standing out of an imaginary identification position attached to the transmission of work abilities and into a more autonomous writing process. As for teacher formation, psychoanalytical work has helped avoid the strictness of knowledge transmission, in favor of a team work that intends to pose significant questions to educators themselves. It also provides circulation for words, ideas and knowledge.

While researchers struggled to get formal recognition and proper room, results were nonetheless visible: faculty meetings became more frequent, course syllabus was collectively revised (as well as the mandatory group coursework), undergraduate research has started (with grants earned from the university).

### 3.2 The "small committees" case

One of professor Fachinetto's interventions in the group coursework for the Digital Games students was inspired by the *cartel*. It represents a strategy towards breaking imaginary identification.

Imaginary identification, as a psychoanalytical concept, refers to the constitution of the Ego. At that stage, the subject is captured by his own mirrored image, fixing his or her alienation to the Other's desire (LACAN, 1961-1962).

There is a dual relationship at stake: the subject is captured by the Other's image. Thus the student is constrained by available knowledge, like *Alice through the Looking-Glass* (CARROLL, 2009).

We, on the other hand, pursue not a dual teacher-student relationship, but a process of knowledge construction as mediated by a third party. Here the Lacanian concept of work transfer ("*le transfert du travail*") (LACAN, 1964) plays a role in implicating the student in text production so that new relations and knowledge follow. Instead of being trapped by the mirror, the student will trail the other side of the glass. This change is possible when the tutor helps the student move away from the imaginary identification stance, which hinder production.

Our hypothesis is that teacher intervention, when protected by the transfer bond, can implode imaginary identification, hence promoting subjective change towards knowledge production.

Ribeiro (2010) argues that students must learn to write constrained by the rules of the university rhetoric. Riolfi and Ribeiro (2010, p. 528) say that, "when a blossoming researcher is subject to scholarly discourse, he replaces relations mediated by common sense for preestablished knowledge". This replacement is possible only as the students admit their lack of knowledge and demand teacher intervention.

In order to help the students break the mirror of preestablished knowledge, we need to work under risk, betting on that the student will advance towards self-

formation. The “small committees” make room for deconstruction, and the inclusion of other views, unbound by tradition.

A tool for such a change is known in Psychoanalysis as *transfer management*. As Freud (1921) highlighted, identification is an inevitable process, but the educator must refrain from playing the “master”.

Voltolini (2011) presents Lacan’s response to that issue. “A good master is the one who allows the disciple to go beyond himself, not in the sense of how far can he go, but as not seeing the master as the ideal measure.” Therefore Psychoanalysis has contributed to the field of Education by responding to the issue of school acting as a potential obstacle for knowledge production.

A teaching practice that recognizes knowledge as permanent construction and deconstruction must provide dialogue. However, the *uncomplete university* approach requires some conditions, the “*pôr de si*” (“self-set”, as in “sunset”) and implication (as relation, imbrication). These conditions relate to alienation and separation, regarded by Lacan (1998) as essential operations for subject constitution. For Lacan, the subject and the Other undergo a dialectical relation, that involves alienating himself to desire towards the Other and parting from him. Alienated to desire towards the Other, the subject won’t attain the “*pôr de si*” (FORBES, 1996).

We propose the Lacanian *cartel* as a way of presenting the student’s evolution towards the “*pôr de si*”. That is how Lacan proposed work transfer, and it remains a milestone for teaching that breaks with alienation and identification obstacles.

As Jimenez (1994, p. 13) highlights, “*cartel* comes from the word *cardo*, Latin for pivot, hinge. It also relates to the number four. Its structure, said Lacan, is the one of the Borromean knot, that is,  $X+1$ ”. Lacan uses Freud’s findings on Mass Psychology as a foundation for the proposition of the *cartel*. Members in the small group will produce a text with the guidance of someone external to the group.

Following Quinet (2009, p.84-85), the *cartel* is “specifically structured, according to the study, work and discussion of both theory and practice in Psychoanalysis. It involves a small group, however a group that tries and fights the Mass Psychology structure.”

Freud (1921) describes how collective formation works. In his great contribution towards the unveiling of group logic, Freud (1921, p. 92) investigates “what drives people to organize as a group, under certain circumstances, for a given

goal". Simply gathering people is not the same as forming a group. There must be an identification bond.

Concerning collective life, the common bond is an identification towards the leader: "The group leader is the fearsome primal father; the group still yearns to be governed by force and has a passion for authority (...). The primal father is the group ideal, it directs ego in ego's ideal place" (FREUD, 1921, p. 161). The group incorporates the leader, and that implies the annulment of alterity. "A group is extremely credulous and open to influence; has no critical faculties and, for the group, nothing is unlikely. It thinks with images, which call each other by association (like individuals in state of free imagination)."

Marked by imaginary phenomena, groups may represent an obstacle to intellectual work.

For Lacan, the *cartel* is defined by three basic conditions:

- It comprises a small group, three to five people and the "plus-one" (someone from outside, a mediator);
- There is a limited time of duration;
- The *cartel* needs to contact other *cartéis* within the same institution.

Thus Lacan proposes the dissolution of identification towards the leader or peers. The *plus-one* is there not to teach, but to enforce personal investigation.

According to Jimenez (1994), work transfer through the *cartel* is perceivable under two forms: first, desire for knowledge comes from questions that arise from texts and their relations with practice; the other is desire to put thoughts into debate. The plus-one must avoid partaking in the group's imaginary identification; his is a symbolic place. "The plus-one would assume the ethical obligation to transform that ask for teaching into work transmission" (JIMENEZ, 1994, p. 21).

The idea is that the *cartel* will result in singular texts. The tactical goal is to work production, while work transfer would be the strategic goal (JIMENEZ, 1994).

Although the actual work at Faculdades Metropolitanas Unidas did not take strictly the form of the Lacanian *cartel*, it is important to note its presence in the intervention's logic. Times for the submission of work to alterity were called "*banquinhas*" (small committees). First the small groups submit their projects to their peers, then to faculty.

Such an intervention aims at providing new academical reading and writing conditions, empowering student autonomy. As a result, the *banquinhas* triggered a

change in student's attitudes toward their coursework, involving a more critical view. That provided better communication among students, and more significant exchanges between groups as well.

### 3.3 The course ludification case

As a result from discussion with the course's final project advisor, and others who advocate more crafting experience in the course, and in observance of the Department suggestion of mixing practical applications to every session of theoretical exposition, the professor responsible for the Ludology discipline added the creation, fruition, and discussion of a game in class as a way of increasing motivation for the theoretical content.

The Ludology class is already responsible for the production of a social game by the students (usually, a tabletop board game or a card game). It is the first part in the mandatory group coursework that will culminate, in the last semester, with a demonstration electronic game. That game, developed throughout the semester in groups of up to five people, is one of the six grades the students need to earn in order to advance in the course. The changes in this activity are discussed in 3.4.

The sub-case at hand is an experience in the "gamification" front. We will employ *ludification* as a broader word, suggested as an option to *gamification*, its greater range coming from the "toy play" aspect that the "game" stem might lack. The ludification activity under analysis, proposed to first-semester students, has both toy play and game rules.

Werbach (2012) has shown how gamification works by enhancing motivation in some manner. A typical approach to assessing motivation is behavioral change, as measured in controlled environments. Although data has been collected on this experience in the form of a survey, the size of the sample makes it a better case for an in-depth analysis than for a statistical one.

The desired motivational effect of choice was to strengthen participation on concept discussion, enhancing vocabulary acquisition. Mastery of common "keywords" is a typical way of assessing student success, be it as measured by tests, be it as desired professional experience. The professor lectures about that lexicon very often, but there is a need for in-class revision and illustration.

Digital Games courses have the idiosyncrasy of presenting games as study matter, so a clarification is needed. Since the first semester, the mandatory group

project relates to game production. Many disciplines will involve game creation activities. The “ludified” activity will be a game among others to these students. Even so, the survey after the ludification experience showed good results.

This game has also been proposed to Communication students, with the same purpose of providing motivation for a theoretical revision of a discipline at the end of the semester (both classes were first-term disciplines, both held in the starting semester of 2014).

This proposed activity consisted of crafting, playing and discussing a card deck inspired by the commercial game *Dixit*.

The original *Dixit* game, by Asmodée (recently published in Brazil by Galápagos), features 84 cards, each with a different image. It is a storytelling game: players will take turns choosing a card from their hands, and saying a sentence out loud for that card; others will choose cards from their hands that seem to fit the sentence; the storyteller’s and the others’ cards are shuffled, and players will try and guess what is the storyteller’s card, with points awarded to those who guess correctly and to those whose cards got to be chosen.

The modifications in the original rules and these narrative game’s idiosyncrasies are explained within each step’s description, as follows. Each crafting and playing session took half a day’s class, that is 100 minutes or less.

- *Crafting*. A narrative game was chosen as ludified activity for both the classes studied (a loose translation from Portuguese for the discipline names would be “Game Studies”, for a Digital Games technological course, and “Ethics”, for a Communications Bachelor of Arts). Both proposed free association between words and images. The game rules created by faculty were explained briefly. The lecturer took keywords from the students to the blackboard and assigned, for each, three cards that students would volunteer to draw. As a pedagogical and practical concern, we chose to multiply each keyword by three, some with text, some hand drawn. For example, for the keyword “alea” from the blackboard, you could have a student write that word on a card (the “typography exercise”); other would, by free association, draw a die; a third student would volunteer for writing the name of a person or movie on a card. Motivation seemed increased, and the aim of devising a deck of dozens of cards was accomplished (they were 24 and 48 cards, roughly one card per student in each class).

- *Playing.* We had unrelated lectures amidst the ludified revision sessions. Keywords would come up, and in fact students asked for the game until playing week came. Then the students learned that they would play in groups, that would act as one “player” for game effects. As a game of narrative and guessing, they would have to discuss their narrative propositions before playing a sentence, the same before guessing on the right card in a table. Theoretical debate among students took place sometimes, but faculty chose to leave the action flow without academical interference during gameplay.
- *Discussing.* In a later session, the professor took a few minutes to ask the class “what they were thinking” when making and playing our game. That was when academical tips and advices were given, by the semester’s ending.
- *Evaluation.* A small portion of each class responded to a volunteer survey we later proposed. The students were asked to rate their activities for their “importance for the discipline development”. Although the sample does not allow statistical analysis (only 12 complete questionnaires were delivered), the textual responses confirmed numerical ones. Playing the game holds the best score as “important”, followed by lectures, seminars, and debates. Noticeably, “crafting” the game holds a lesser score, and that will be discussed below. Video sessions were in the survey, but the low score is probably due to technical problems in one class.

In the textual responses, Communications students let more clear that the narrative game acted as a relevant pedagogic practice, calling it “great revision” and “most surprising activity”.

Game Design students were less festive about it possibly because they already had to create their own games, as group coursework, supervised by the same professor. The addition of another game-crafting activity doubles students’ game authorship for the semester, though, as the other disciplines in the first term don’t usually involve game creation.

The narrative game acts, consequently, as a ludification of theoretical exposition. It is not game design matter; perhaps a teaching design issue. It can be subject to deeper study by pursuing questions like “How can the crafting stage be more meaningful?”, “What’s the impact on school grades?”, “How does it motivate a deeper interest in the theoretical debates that involve the keywords in their work?”,

“Did it help students acquire, rather than learn, the keywords?”, which arose from this experience.

### 3.4 Other partnerships

Other team work that resulted from the laboratory creation include structural changes in the student group project, as well as book writing and the organization of an academic meeting.

The mandatory group project for first-term students had been, since the course’s beginning, the creation of a tabletop game. Students would create such a game following loose thematic guidelines. The advisor for this project, professor Guimarães Neto, has proposed in 2012 the change towards a more strict demand from the first-term interdisciplinary group project: that students create “useful” games, “games for change”, or “serious games”, instead of products intended for mere fun. That change aimed at both challenging Huizinga’s (2010) strict definition of game and, more important, increasing social relevance of student output.

As an interdisciplinary project, the proposition needed faculty’s approval. As faculty embraced the new model, structural changes started to be discussed for other coursework within the new laboratory activity. The first-term “games for change” project could be a matter for further study, as the Arts professor presently plans a partnership with the City Council for the creation, by the students, of games for the general population.

Another hint on the power that comes from increasing faculty team play was the contract with Editora Érica publishing company for a book on game screenplay and character design. As the company published a call for authors, professors Guimarães Neto and Leonardo Lima presented a collaborative proposal and were chosen over other researchers and writers, including independent candidates from the university.

The laboratory was the cradle for a newborn Academic Forum. The Fórum Acadêmico de Estudos Lúdicos features, since 2014, undergraduate research and field specialists, mainly around workshops, in a model that borrows from Fórum Acadêmico de Letras, held by the Associação Nacional de Pesquisa na Graduação em Letras (National Association for Languages Undergraduate Research), for the importance given to practical activities in academia (FAIRCHILD, 2012).

## 4 CONCLUSION

Faculty team work aimed at stepping out of the “knowledge transmission” model, into building new ways of working, of bonding teaching and research. Thus the same logic used in the student practice applies to faculty work.

Results have shown several impacts the creation of a development laboratory can have in a Digital Games course. As sections 3.1 and 3.4 have highlighted, such an initiative can strengthen faculty production in and out the school. Sections 3.2 and 3.3 discussed how can a pedagogical shift provide better student writing and knowledge acquisition.

The promising results may be a reason to continue work on this research. Other blossoming Game Studies communities may be particularly interested in the solutions we provided; Education researchers could find it useful as a source of debate about proper structure and funding. We hope to have contributed to show how team play, grounded on analytical thinking, can benefit research and development.

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