The implementation of blended learning courses at the University of Caxias do Sul: challenges and prospects

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Abstract: This paper aims to present and reflect on the process of implementation of blended learning in undergraduate courses at the University of Caxias do Sul (UCS), considering guiding principles, monitoring of teachers in action and evaluation stages of such implementation. It features theoretical reflections, reports of teachers who got acquainted to the disciplines and teachers in training, tools for assessment and self-evaluation applied to teachers and students. We propose a method of analysis of blended learning from highlighted possibilities and the discussion on pedagogical conception from educational support. The paper was written under an interactive educational perspective and focuses on the student's role regarding to learning. The pedagogical conception of virtual learning environment is a matter for debate throughout the text, since it is a mediator element for the interaction between the actors involved. Under the same line of thought, debate about the student and the teacher's action in blended learning is deepened. Concerning the student, the paper discusses the importance of prior knowledge and its implications in the construction of learning, the learner modus and skills considered important in this context, and the role of other parts involved with the learning process. At the same time, we recover intensely the debate about the pedagogical model proposed and discuss possibilities of progress considering the use of virtual learning environments.

Keywords: blended learning, students in blended learning, pedagogical aspects in virtual learning environments.
1. Context of implementation of blended learning courses in graduate programs of UCS

At the University of Caxias do Sul it has been conducted researches on the use of computers in teaching context since 1999, through the Lavia project - Laboratory of Virtual Learning Environments - which currently constitutes itself as a research group. Moreover, since 2004, with the creation of the Distance Education Program, it has been used virtual learning environments in Undergraduation and Post-Graduation - Lato Sensu - courses. Over the early experiences of Lavia it was possible to try the use of customized environments, especially constructed for each instance of learning. With the implantation of the first undergraduate course at distance, in Pedagogy, it was chosen the development of a virtual learning environment with a common standard that would allow the organization of the learning units. Concomitantly some experiments were performed to offer courses in blended learning category, in undergraduate courses. However, it is from 2007 that UCS had officially included in their academic programming, blended learning disciplines within their undergraduate courses. To make feasible this implementation, two actions were prioritized, one of technical and other of educational nature. The first one was the creation and provision of a virtual learning environment integrated with the university academic system. The second one was the gathering of a team responsible for training teachers to use technology in education.

From a technical standpoint, the virtual learning environment created is sheltered in an academic portal service and offers a set of basic tools for the organization of disciplines. Although it is still a little bold and limited environment, as regards to the interaction resources, it follows a common line to other applications for Distance Education, with space for posting collective and private scraps, guidelines for studies (schedule and details of activities), publications of materials to students, sending and returning of commented assignments (webfolio) and the tools of synchronous and asynchronous interaction (chat and forum). The virtual environment supports the teacher’s organization once it is directly connected to the academic system, which allows data to be loaded automatically in real time (update the list of students in a class, discipline projects) or shared (common didactic materials to one or more teachers). Concerning interaction resources, the environment provides forum, chat and webfolio. To broaden the scope of interaction, teachers in training for ministering blended learning courses, perform experiments with the use of other resources, external to virtual learning environment. We will discuss about these experiences later.

The summit of the implementation of blended learning courses has been the work of training and supporting to teachers who will work with these disciplines. To develop a blended learning subject, in addition to administrative approval within the College of the course, it is urged that the teacher attends the Pedagogical Didactic Seminar: Learning Environments Computerized
beforehand. During the offering of the subject the teacher is has at disposition a
technical and pedagogical support, and also participates in specific events
(seminars and workshops) for discussion and analysis of experiments.

At the end of the seminar, the teacher has as a result the detailed planning of a
subject to be taught in the blended learning category. The allied actions of training
and monitoring have made possible a minimum level of security to the teacher’s
work in developing the discipline and mainly, they have encouraged the adoption
of a teaching model which prioritizes the role of students in the learning process,
under a perspective of constant interaction.

Following in this paper, a review of the principles and experiences that have
marked the implementation of the blended learning courses at UCS is presented,
and through them the intention to deepen the debate on the teaching model we
seek to consolidate. For that is made an analysis of the following aspects: the
actual blended learning category from guiding benchmarks that have conducted
the work at UCS, the prospect of the student and profile that we search to build,
the perspective of teachers and their educational demands, and finally, the
challenges and thoughts for the continuance and improvement of the work being
developed.

2. Possibilities and potentialities of blended learning courses

Researches have revealed numerous opportunities to promote learning with
quality, with the support of VLEs (Virtual Learning Environment). The analysis
and discussion of experiences in the academic context, has called attention to the
imperative need to promote the training of professionals with new skills, eager and
able to learn independently and continuously. This reality emphasizes the
importance of the university in assuming the duty of giving their students the
opportunity to come into contact with different ways of learning. In this context,
the offer of blended learning category is being discussed at UCS, to promote the
tailoring of professionals with the ability to cope with power problems and
challenges of their profession. In fact this is essential in a context where the
dynamism of technological changes turn knowledge obsolete due to its
increasingly rapid speed. And it has consequences on the occupational profiles
that the professional market demands. More than ever, it is mandatory to have
initiative, creativity, entrepreneurial spirit and ability to update constantly.
Therefore education has gained increasing prominence as a protagonist of change
required. The future professionals must acquire not only knowledge and technical
skills but also develop the ability to define and analyze problems - of companies,
regions, sectors or nations - to formulate solutions to succeed at teamwork, to
recycle continuously over the whole working life, to make use of information
technologies and to improve such palliatives, both by broadening their
applications and by helping to socialize them, thereby expanding the access to
these resources.

This is a change in paradigms, and it requires a change in the organizational model of undergraduate programs, whose focus has to cease to be teaching, but become learning. Traditional lecture classes based primarily on oral exposure of content, tend to be replaced by more efficient strategies to ensure the active participation of the student.

In view of these considerations, it is understood that the use of ICT (information and communication technology) in education can be either a possibility to encourage the replacement of lessons where the student is mere spectator, and also to favor the development of a vital skill during the whole of a professional life: the ability to learn by oneself and to seek new knowledge freely.

One possibility considered in this context, is the realization of distance activities which interface with the in loco meetings, has allowed us to involve students in discussions on the issues mentioned here. This happens not simply by using the computer, but through the opportunity to promote strategies for the realization of collaborative and supporting activities in project development, based on the exploitation of the meanings and on the contextualized application of theories that are the object of study in each course.

This new modality which is already being integrated into the undergraduate courses of UCS, has been implemented with the primary intention of qualifying the processes of teaching and learning, which depends mostly on the teacher’s actions as an organizer of activities, mentor and mediator. However, as we aim to make it clear, no less expressive should be the involvement of the student in accepting to attend the course under this modality, and also agreeing with the learning process that is being proposed.

The blended learning courses are being organized, planned, monitored and assessed is more than a new way of teaching and learning. In fact, rather than modernizing the processes of teaching and learning, the inclusion of information and communication resources must be justified by improvements in quality that can add to learning when considering it as a result of the action itself of whoever learns, operating through study, research and interaction, coexisting in environments of learning where the exchange of ideas, discussion and debate are a critical component of emphasis on the acquisition of new knowledge. That is how we can understand the learning: as an active process, which itself depends on the action of those who learn by interacting with the environment, with resources and with people.

With this approach, many opportunities are generated due to the use of ICTs, in disciplines taught at blended learning category, amongst which are:

- the possibility to individually monitor students who are willing to get involved;
- the development of reading and writing abilities;
- the development of autonomy;
- growth in terms of social interaction, commitment, knowledge and creativity;
3. The student in the context of blended learning courses

An important question to be made when contemplating the offer of blended learning courses is if there is a profile of students with better conditions to follow the development of these courses, or as in traditional courses, if all students can attend them, as long as they are prepared for a context of academic learning. Certainly there are different characteristics that indicate facilities or barriers for the monitoring of a blended learning course.

The assessment made and the perception of those students, is reported by teachers and point out to some of the most significant benchmarks in the context in question: the degree of familiarity with the computer (and hence the implications for the use of the virtual environment), the need of time and space flexibility for study, the previous experiences of learning (and hence its modus operandi), the perception of another (colleague and teacher) for the implementation of learning, are some of the criteria that influence the profits of the student to attend a blended learning course. Then some of those benchmarks are analyzed based on the assessments of students and teachers who minister courses in this category. From this analysis we seek to answer the question raised about the profile of the student to follow a blended learning course.

3.1 Familiarity with computers and the use of virtual learning environment

Routine has shown that more and more students come to university with computer skills as part of their lives, something as trite and already incorporated, including how to understand the reality (in language, for example, is common the usage of information technology slang conditioned through metaphors applied to certain situations - delete, reset, has tilt, etc). But to say that the number of students with this characteristic raises at each term, is not yet to say that we all share this experience. Those who search for computer science courses, engineering and courses into business and management areas or any other technical area, are previously acquainted to ICT resources way more expressively than in other affairs. Among students of health, psychology, philosophy, education and other areas, is still significant the number of those who make little usage of computers on a daily basis and there is still a significant portion, amongst them who confer great importance to ICT in their daily lives (including university ends).

There is no doubt that for a student acquainted to computers as a
communication tool, the search for information and dissemination of ideas, will ease to adapt to a context that makes use of educational resources alike. More than that, the student used to those resources probably will seek for a similar structure at university. Yet this familiarity with computing is not a guarantee of good quality in learning. This is because the presence of computers as learning support requires a distinct usage from that commonly used. One thing is participate in an informal chat with friends, another thing is to sustain a conversation over a topic to be thoroughly analyzed. Also, as taking part of an informal forum or make it a channel for construction of academic knowledge, can be different. Indeed, proficiency in ICT and its incorporation to everyday life is an important factor for the insertion of a student in the learning environment mediated by virtual environments, but other skills constitute equal importance.

Among these other abilities for the development of learning in the context of blended learning courses are: discipline of study, habit of reading and accuracy in writing. Sometimes students less familiarized with the use of computers may develop further the skills identified, being left the need to improve what they lack.

Later, it will be treated the development of autonomy and then, students’ skills will be discussed around the major of study, as well as reading and writing.

3.2 The learner modus

Much more decisive than the teaching activities is the student's learner modus to succeed in their learning. Not that it minimizes the importance of teaching activities or that it permits to neglect the planning of education. What happens is that the protagonist of any learning process is always the subject learner. So, few paragraphs are devoted to reflection on the learning process in the context of subjects mediated by a virtual learning environment, with activities at distance.

In different reports of teachers about situations of evaluation of the development of blended learning courses, it appears intensively the idea that the student who is enrolled in blended learning course needs to develop greater autonomy of learning as compared to the monitoring of a conventional course. But it is mandatory to question what gives support to this idea. On the one hand, we have teachers who effectively are reevaluating their conceptions of learning and teaching, and therefore stress the concern about the autonomy of the student, but we can not discard that the desired autonomy is only a methodological strategy for the achievement of certain goals. Exploring briefly this second idea, that of autonomy as a resource and not as a founding, we have the notes below.

Firstly, there is a fallacy to be deconstructed: it is called as autonomy what in fact is a direct action not supervised. Left to the students solves by themselves certain tasks, and doing so, it does not necessarily imply in the development of autonomous power. We need to consider that strategies of coercion, usually linked to the assignment of notes, culminate in showing direction of action as efficient as the very presence of teachers. The many experiences with directed studies show
that precisely: the student, without the direct and permanent contact with the teacher, effectively does a predefined sequence of tasks without necessarily being aware of the very process of learning.

Differently, self-learning involves taking responsibility for oneself of the results one wants to achieve. In any way we can confuse it with isolation, because the subject is not a lone independent in learning. The autonomous subject is active. He sets in motion to meet the other and knowledge, without waiting for others (Kant, 2004).

When speaking of courses whose topological reference is virtual and the teacher-student and student-student relations do not occur synchronized, necessarily we are talking about a student who often needs to conduct his proceedings without the direct action of the teacher. This can be a major factor in enabling conditions for an autonomous learning, but it will probably not occur if the pedagogical model has not applied the autonomy as one of its guiding principles. A virtual learning environment should, at least, cause teachers and students to think from a new organization of time and space point of view: a time that does not need to be coincident and a space which has no physical representation of coincident participants.

It is, therefore, located in a time and a space that is flexible, but not so disconnected from responsibilities to be met, which requires the subjects who carried a high degree of initiative and commitment. But that is not enough: for these characteristics to be translated into results on the learning, it is needed to have good capacity to interpret the (virtual) reality experienced and to have sense of action (especially interaction) in this context. It is true that most of the virtual environments used for educational purposes (and is not different at UCS) present elements for simple navigation and not enough to constitute a virtual reality that is far away from that experienced in space activities presence.

It is interesting to note some perspectives brought by students, which emphasize ideas such as "we used to be spoon-fed by the teacher" and "now (with the use of virtual learning environment) is needed to displace" and: "we win with that". If the demand of greater autonomy for some students is a difficulty, given their educational experiences hitherto lived and the manner of facing their own training, for others it is seen as an opportunity to move into new horizons. Fact is that changes in posture that the use of information technology brings to education, seem very encouraging for the development of autonomy as a basic competence for learning. Teachers and students that have already surpassed the stage of only using tools of information technology and have begun to experience learning environments mediated by virtual environments, increasingly show how urgent it is in the pedagogical process. It is not without reason that some defend blended learning disciplines to be offered in the very beginning of the first semester of courses, alleging among other reasons, the gaining conferred through the development of a more autonomous learning by the students.
4. The teacher and the configuration of the virtual environment: educational aspects

The implementation of blended learning subjects in undergraduate programs, as it has been highlighted, is another methodological possibility that favors learning and promotes the development of more autonomous students. Such a fact can be attributed to a greater degree of involvement of the students and to their recognition and also the teacher’s, that learning requires understanding and meaning what you learn, excluding the idea of memorizing, applying formulas, doing calculations and following sets of instructions as methods of teaching and learning (Lima, Sauer, Soares, 2004).

The proposition of interactive methodologies, such as emphasized in the blended learning, agrees with the idea of active learning, which is the result of learners’ action of those who learn, operating through studies, research and interactions. The "principle of active learning" is not new: "to learn effectively, the student must find himself a part of the subject taught as large as possible, given the circumstances" (Polya, 1977).

In learning environments where the exchange of ideas is promoted, discussions and critical argument, learning integrates components of thought and more complex cognitive structuring and by the student’s reflexive actions towards the acquisition of new knowledge (Piaget, 1995). And in this way, it becomes possible to understand learning: learning through learner’s self actions, interacting with the environment, with resources and people.

The teacher, who owns this conception, understands that his educational management can and should promote conditions for the involvement of the student, so this one also understands as being his, the most significant share in the process of learning.

The action of the teacher is therefore an important point to consider when we talk about learning environments.

To him is owed the first and continued action of creating, and go beyond the operational routines in virtual environments, where methods for distance studies are developed, fully or partially.

Going further away on the publication of support and study materials, proposing tasks to be performed and sent to the teacher, computing and publishing notes or general information about the course, involve thinking about educational management. The teacher, as manager of blended learning courses environments, understanding this modality as a way to make a difference to the processes of teaching, to learn and to coexist, has at his control the proposition of strategies and interventions based on flows of interaction and communication among students, between them and the teacher, and between students and the resources available in the virtual environment to support the construction of knowledge required.

Technology, as in any virtual environment, or even as the support in traditional learning environment, provides the resources that allow spaces to be created,
where new forms of representation of reality are favored, to expand the contexts and further encouragement to the cooperative production processes of knowledge, development of creative thinking, awareness, creation of new solutions to shared problems that arise.

How, then, we appropriate of technologies in a way of integrating them into the set up of an environment that advances and expands the physical and temporal limits of the classroom? It is not a question of technological ability, only. What other aspects and requirements must compose the conditions of a teacher who wants or is required to act in blended learning courses? We can list several approaches for reflection on these aspects. What was taken out from records of talks and monitoring of teachers who work in blended learning courses at the University of Caxias do Sul, we chose to highlight two aspects, referred to and discussed by teachers: the presence of the teacher in the VLE and its organization and planning in the case of blended learning courses.

4.1 Contact / teacher and student relationship

The link and motivation must happen among the participants in order to achieve interaction, cooperation and construction of knowledge in virtual environments. For this it is essential to establish common goals, maintain constant negotiation, assume and preserve conducts of tolerance with differences and conflicts, guide it by the ethics and interpersonal remaining in the mood for the changes, and in cases of continuous assessment, that this meets the needs of the group. From such aspects, it may emerge "collective intelligence" (Lévy, 1998). The presence of the teacher in the virtual environment, according to recognition of all teachers who work with blended learning courses, is a stimulating and motivating factor for the student to get involved in the activities. In the virtual learning environment, and sometimes with the support of other web resources that can be aggregated to the VLE, it is possible to promote the activities, synchronous or not, whose discussion allows the actors of the process to exchange ideas through written communication: views, problems, tips, suggestions, exchange of ideas on issues of common interest.

In any of these ways, the most important is that the student receives feedback for his involvement. It is in this aspect that the presence of a professor becomes prominent, who needs not always to be the one who answers all the questions and is available at all times, but is a central reference for attitudes of encouragement, for distribution of tasks, for demanding that other classmates help an enquirer when none of them has yet offered themselves for an exchange of ideas. It is the teacher who can get all involved, whether in cases of specific discussions on issues of studies, on the implementation of proposed activities or even on conversations in other contexts where the goal is just being together or relax, such as meeting rooms coffee or a space for happy hour as examples.

The teacher’s conduct as caregiver, host and incentive figure can make all the
difference in virtual environments for learning. In cases of more isolated students, it is noticed that a more frequent and incisive contact is needed. Unlike the classroom, where there are those who go merely for the attendance, understanding that their role is accomplished, in the VLE this is an unfeasible practice. Each has to get involved and participate. It is with his "speech" that a student is present, whether in areas of discussion or in the tasks carried away at distance. And also in this way of being present at the VLE, is important that the student meets the teacher, individually if possible, in contact with the group in returns that require special attention and, the later one’s assessment for the whole class, of which was presented in each topic of discussion or task of study proposal.

Thus, it is understood as a teacher’s role to be in the environment, take to himself the management of communications, of the flow of information, of space organization and of realized actions, both as regards to the construction of knowledge as relating to affective aspects, hosting and motivational.

4.2 Organization and Educational Planning

Still considering reports of teachers who have developed blended learning disciplines, it is worthy to highlight some points about the teaching profession planning. According to teachers, students who attend blended learning courses, demonstrate to understand how the teacher organized the discipline as a whole. Moreover, this is so important to show the students that they are keen to point out that experience. So the student can understand the structure on which the discipline is organized - especially for the clarity of the schedule presented at the beginning of the semester and the detailing of each activity that is being presented in the form of guidance to school – then it gives them more confidence for monitoring activities and for the assessment of learning. This perception of the student is directly linked to the use of virtual learning environment as a space to record the proceedings.

In a specific report, a student would have done the following combination: the conventional disciplines are little organized when compared to the blended learning ones, which have always a more complete planning. What is left to know is how much the perception of these students may be linked to a more detailed planning of the blended learning subjects or only to its visibility, due to the use of VLE. Fact is that the use of virtual environment as an element of transparency in the planning of the teachers, already brings significant gains.

It is proposed here that the two cases associated with the planning of teachers are considered: the first one that points to more detailed planning of the blended learning subjects, if compared to the conventional ones, and the second points to that same level of planning, only with a higher potential, in the perception of students, due to the transparency that VLE provides.

Doubtless, the virtual environment provides to the students the chance of a more systematic view of the organization of the teacher, once it makes available
not only the discipline syllabus, which is also available in in loco disciplines, but also a schedule of activities for the semester, this one not always at hand for students attending in loco subjects, and mainly the written detailing in the form of guidelines for studies of the activities to be developed in a specific period. To make this set of information available to the student, the teacher necessarily needs a detailed planning of what is intended to be developed throughout the semester. Often happens that the teacher already has extensive experience ministering discipline, and therefore is determined not to allow more details in its plan of education. When this same teacher is invited to give his discipline blended learning mode - and especially becoming at easy with the new atmosphere, the new topology - there is the need to rethink his planning. In these cases, without any questions, the change in the modality the course is offered, also implies in the qualification of the teaching plan.

In some of the teachers’ speeches, the need of having a clear planning from the beginning of the semester and present it to students (how many meetings and what the distance, especially), and an agreement between teachers and students on the organization of discipline is highlighted. To that transparency, combined with a protocol on responsibilities and actions of both the teacher and the student, is attributed an important part of the success of a subject offered at partial distance.

In fact blended learning requires integrating presence and distance. Distance learning requires to design a complete plan of actions to be undertaken and the materials available before the action itself (Nevado, Carvalho, Menezes, 2007).

5. Final Considerations

To finish this paper, which aimed to focus on the blended learning category as a pedagogical strategy with potential to promote better conditions of learning, some aspects stand out on the speech of teachers, such as challenges and perspectives on the implementation of blended learning subjects into the undergraduate courses of UCS.

In each period of study and preparation of such disciplines, as well as monitoring activities when they are conducted, the teachers bring from their experiences, aspects that pose as difficulties and challenges to be overcome.

The teachers say that many students resist the new ways of study and learn, that some show indifference towards this modality as an efficient way to learn, and they do not believe they can learn “at distance”, who also have the habit of attributing to technology the justification for non-compliance of tasks (due to viruses, damages, internet down) which declared not having sufficient time for studying and for the accomplishment of proposed tasks to be done at distance, and that a good part of them is little participative.

Many students feel safer in a traditional teaching model (where the teacher "gives lesson"). This is due, mainly, to the formative experiences at school and at
the university itself, where a model of transmission of this knowledge has been more present than the strategies that aim to autonomy in cases more focused on research and collaboration, particularly when targeting the development of skills rather than content.

As in any process of transformation, discomfort and imbalance are expected. It is also added the challenge of the teacher that also must learn, improve, try, adjusting in action, new methods of education, organization, communication and evaluation.

As perspectives from the experiences, there is the possibility of gradual increase of the supply of blended learning disciplines, the students' recognition of their role in the building up of their knowledge and of the benefits of their involvement in activities promoted at distance, and, even if in a way back, the activities of study at distance, broadening the possibility of adoption of these strategies in *in loco* matters.

Finally, it is important to emphasize that, at the same time as perceptions and conceptions of teachers and students on teaching and learning, to some extent limit the increasing in the supply of blended learning disciplines, the strategy adopted by UCS of investing in continued training of its teachers for these subjects, increasing the supporters for such implementation, more and better are the perspectives to modify exactly the conceptions of teaching and learning. And it is in this way that better chances to change the idea of higher education, and this, by inserting the performance of trained professionals in more interactive contexts that spread and covers all areas of social coexistence, to reach better conditions of education at all levels in our country.

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