Improving Efficiency of Learning in Education Master Programs, by Blended Learning

Prof. Dr. Dorin Herlo

“Aurel Vlaicu” University of Arad, Bd. Revolutiei, No. 77, 310130 Arad, Romania

Abstract

In order to produce student-centered learning we operate, in our education master programs, with blended learning (BL) strategy, aimed challenge and we support the student’s active learning, who acts on the information to transform it into useful gain. For establishing the efficiency of using BL strategy in students’ achievement, we use pedagogical research methods. We have discovered, through this strategy that the professor causes the student to become responsible and participator in the construction of the information’s meanings, problem reframing, through exploration and research, and applying what they gain in new different contexts. The assessment results show us that 32% of our students have obtained excellent grades, 52% optimum and 16% good, the impact of BL being awesome.

Keywords: student-centered learning, blended learning, interactive methods, pedagogical research methods

1. Introduction

„Hello, sit down, silence please, listen to me…”

Can the professor still begin his course that way today? No, for sure! It is not enough for a student to attend a presentation of the professor’s material to really learn what it is supposed to learn.

* Prof. Dr. Dorin Herlo. Tel.: + 00 40 722 82 37 67.
E-mail address: dorinherlo@gmail.com
Professors are called to implement student-centered learning, much needed to attract and involve students in the act of learning and for this goal they must take into account several indicators mentioned below:

- to propose instructional contexts in which student’s learning is active (the student is engaged in solving real problems and tasks), contextual (knowledge is built from the student's existing knowledge), social (promotes cooperation and collaboration among students) and responsible (student's possibility to choose and be aware of his own learning);
- to aim structuring effective learning situations in which the students will be involved, what action necessarily requires anticipation of learning experiences that will be acquired. Source of elaboration the learning experience is no longer just the knowledge structures/culture, but also the needs, interests, aspirations of those who are the beneficiaries of education and in the organizing learning counts not only what is taught, but how, or in what ways are learnt;
- to support priority centering on mental processes, on capacity development and cognitive skills of the students and less on learning outcomes (derived from simple reception of content). One way of achieving this goal is to create learning situations that involve the direct participation of the student in solving problems / situations in real or simulated contexts;
- to support students in developing meta-cognitive capacity (e.g. learning to learn), these capabilities are essential to optimize intelligent behavior of students;
- to develop transversal competencies in students, such as: problem solving, problem reframing, use of effective learning strategies, interpersonal and social skills, communication skills, skills of effective use of resources, skills that become central to long-term students’ personal development and more efficiently integrated in their work;
- to adjust at the levels of cognitive development of the students and their individual peculiarities;
- to propose the use of most diversified content and activities for student’s intellectual development and full potential.

No doubt, student-centered learning sustains the forming and developing the students' competencies. Training and developing the competencies require a different type of learning, a cognitive-constructivist one. Learning by reception and/or repetitive exercise is not enough. It requires active participation of students in the construction and use of skills; he/she selects, combines and applies different knowledge, skills, attitudes, etc. in order to achieve authentic tasks and in different contexts. Clearly, competence is integral to student-centered learning. In terms of student-centered learning in curriculum implementation, it is recommended to operate with the interactive training strategies aimed challenge and support active learning, in which the student acts on the information for transforming it into a new, personal, understandable and useful gain. By using these strategies, the professor causes the student to become responsible and participator in the construction of information's meanings, problem reframing (not only solving) through exploration and research (exploration, researching) and applying what they have gained in new different contexts. Being aware of this issue of the current educational requirement – student-centered learning – and being convinced and confident in this way, we propose and support / sustain academic activities in the light of this aim, by using blended learning. Blended learning (BL), as interactive strategy, combining e-learning and face-to-face (f2f) meetings, was used (and is used) in our education master programs: “Policies and strategies for training the competencies for teaching career”, “Interactive pedagogy” and “Teacher training for early childhood and small age education”. Our intentions were to establish the efficiency of this learning strategy by methods of collecting (observation, survey, training portfolio analysis and tests), organizing, processing and presenting data, for all the aspects concerning teaching and learning process, and ongoing (formative) and final (summative) evaluation.

2. Blended Learning used in our education master programs

Blended learning (BL) seems to offer the largest perspective for transformative learning (Mezirow’s Theory) requirements – critical reflection, reflective discourse, action – and accomplish what education technology has long promised but rarely delivered: greater student learning and improved teaching efficiency. Because BL works with “blending” face-to-face (f2f) activities with e-learning activities, it does not exclude elder meetings between professors and students to feel each other’s intellectual sweat nor distance communication, which means favoring enhancement of interactive learning methods, induced by professors in the courses or seminars meetings, as well as
asynchronous or synchronous tools of e-learning. On the other hand, BL works because it combines two things, in a way that makes each one better than they are on their own: the professors’ expertise and talent to use the interactive methods and technology tools. Therefore BL allows professors to do what they do best: work directly and closely with individual students and small groups (f2f or e-learning) by harnessing the power of transformative learning and precision of technology.

In f2f activities we provide the contents empowering learners with different kind of interactive methods such as:

A. **cooperative learning.**
   
   We used it in tutoring and coaching situations. The students worked in small groups (face-to-face or online – asynchronous or synchronous), on an assigned project or problem under the guidance of a professor who monitors the groups, ensuring the students are staying on task, and are coming up with the correct answers.

   We have taken into account the five basic elements of this method:
   
   - Individual Accountability – the students work on a clear task with a group goal. All students must have a contribution or the goal cannot be achieved.
   - Positive Interdependence – the group is accountable for achieving its goals and each individual member is accountable for a particular, identifiable contribution.
   - Face-To-Face interaction – students interact with each other face to face as part of the task. They discuss problems, explain their learning to each other, and tease out ideas. In online cooperative learning, the face-to-face part may be more discrete, for example, interacting with each other using e-mail.
   - Social Skills – group’s skills such as attentive listening, questioning to clarify ideas, eliciting responses, or disagreeing in a constructive way are explicitly taught. Their development is not left to chance.
   - Group Processing (Reflection) - groups reflect on the cooperative learning skills they have used and consciously focus on developing their skills in working together.

B. **collaborative learning.**
   
   Collaborative Learning is quite similar to cooperative learning as the students work together in small teams to increase their chance of deeper learning. However, it is a more radical departure from cooperative learning in that there is not necessarily a known answer. For example, trying to determine the answer to our question “how effective is e-learning?” collaborative learning has offered to our students a wide ranges of possibilities to answer to this question, depending upon their perspectives, their respect for the others and for him/her self and for the scientific truth. Because the collaboration sometimes results from less purposeful and focused activities, some of the learning will be unintentional or serendipitous.

C. **problem solving**
   
   The focus of the task is an original document that can be a traditional printed matter but more and more also an Internet-based new media source. Documents may be analyzed from different points-of-view: to find out relevant information (critical thinking), to clarify the positions of different actors (empathy), formulating concepts/ideas (analysis, synthesis). The professor chooses the document/source that is assigned to be read either at home or in the academic activity (course, seminar…). The students are encouraged to use the source throughout the whole process. The whole process comprised several stages like studying the content and finding facts, analyzing and synthesizing the information and ideas, putting oneself into the role depending on the situation or problem, presenting and defending one’s findings or point of views, general discussion. An effective output of the document/source analysis is relevant for the presentation of the results.

D. **discussion-methods**
   
   For developing a good discussion professor can follow the next steps:

   a. Ask students to prepare themselves for discussing over an agreed issue/topic reading a source text or looking for the information in the Internet to be able to share ideas, offer solutions, raise one's competency
etc. on the content topic. This can be done as home task or in the f2f meetings in the university.
b. For discussing in the seminar room participants will take a seat in a circle, recommended for professor also.
c. Professor explains/remembers the rules of following discussion (voluntarism in taking the floor, careful listening to each-other, and politeness in address of the speakers, asking reformulation of one’s ideas if not clear etc).
d. One student will be selected/appointed to follow and record the forthcoming discussion. A check-list will be provided indicating what to follow:
   - Did somebody try to dominate?
   - How many students were not taking actively part in the discussion process?
   - Have there been any moments of risks that the topic might go into the wrong direction?
   - In which cases was the help of the professor needed?
   - Was somebody helpful to the others during the discussion?
   - What unexpected moments did take place during the discussion? etc.
e. Somebody (it can be the professor) starts the discussion with an introduction.
f. Participants will take floor freely one after the other developing the discussion.

E. role play, simulations, games
Simulations mostly have four phases:
   I. The professor begins the learning activity by explaining the purposes of the simulation and provides an overview of how it will proceed.
   II. In phase 2, the students learn about rules, procedures and goals of the simulation and are informed on the provided time for practice.
   III. During phase 3, the simulation itself, the professor serves as a coach, giving feedback, clarifying misconceptions, and recalling on the rules. The professor neither tells students what to do nor provides direct assistance.
   IV. The debriefing aspect of the simulation, phase 4, allows time to describe and analyze experiences, make comparisons to real world situations, and relate the experience to the subject they are studying. At this final phase the professor’s role is critical in helping the students make sense of the simulated experience and tie it to the course content.

F. interactive assessment
Interactive assessment implies a dynamic process that is both formative and summative. It is based on examination of the three dimensions:
   i) the professor's perception,
   ii) the student's perception, and
   iii) the student's performance.
Students are provided with instruments (assessment tools) to let the professor know what went well and what didn’t, both in terms of their performance and in terms of their perceptions of the professor's performance.

Nowadays, we, the professors, are provoked and invited not only to apply interactive methods described above, but also to learn more about integrating technology for e-learning courses in higher education, knowing that the students are not so interested in learning but they have a huge attraction for technology, and so we will be better able to motivate them.

As our master curriculum programs were structured in:
   - 30% courses and seminars, carried out in f2f modality (by interactive methods),
   - 30% e-learning (by Learning Management System / Learning Platform),
   - 20% documentaries from suggested bibliography and webography,
   - 20% internship in kindergartens, primary schools and secondary schools,
one can understand that virtual learning activities cover more or less 50% of the whole each study program and the e-learning part from blended learning is present.

Taking into account professors’ competencies on IT, students’ skills in using virtual learning environmental tools and our University’s resources, the e-learning elements used in our education master programs consisted into the following relevant aspects:

- **online activities and exercises**, that took place by learning management system (LMS) such as Moodle (University’s platform), in asynchronous way (not dependent on time and place) - by posting the Syllabus, the Student's Guide, PowerPoint presentations, video presentations, requirements for the students, answer files of the students, etc. - and live online synchronous meetings (time dependent) - by two video conferencing on Skype, so that students understand and practice the content in their own manner, personalized, but persuaded/guided by the professor;

- **enlightening discussions** on chat and by Skype, to maintain contact between professor and students as much as possible (the seminar-type discussions);

- **collaborative learning**, by Google docs, so that students work together in projects without the need to be at the same time and place for answering professor's requirements;

- **online tests**, posted on the learning platform, to check the student’s understanding of the content.

The impact of BL in our education master programs revealed by pedagogical research methods of measurement, collecting, organizing, processing and presenting data and the assessment results (observation sheets, survey results, training portfolio analysis, and tests), showed us both the qualitative and the quantitative aspects of evaluation. In the tables below there are information about our education master programs, the number of enrolled students and their results, obtained at the end of the last academic year, at different kind of assessments (observation, survey, portfolio, docimological tests), both qualitative nature as well as quantitative.

### Table 1. Status of master programs and students enrolled in academic year 2012-2013:

<table>
<thead>
<tr>
<th>Name of the educational master program</th>
<th>Number of students enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies and strategies for training the competencies for teaching career</td>
<td>25</td>
</tr>
<tr>
<td>I-st year</td>
<td>35</td>
</tr>
<tr>
<td>Interactive pedagogy</td>
<td>50</td>
</tr>
<tr>
<td>II-nd year</td>
<td>156</td>
</tr>
<tr>
<td>Teacher training for early childhood and small age education</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
</tr>
</tbody>
</table>

**Grand Total** 316

### Table 2. The global results of qualitative and quantitative evaluations at the end of academic year 2012-2013

<table>
<thead>
<tr>
<th>Assessment tool</th>
<th>No. of qualifying / marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation sheet, Survey</td>
<td>Excellent (9,01-10)</td>
</tr>
<tr>
<td>Portfolio, Test</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
</tr>
</tbody>
</table>

| Percentage | 32%  | 52%  | 16%  |

As it is shown above by the figures, blended learning, used in proper way, has a positive impact in student-centered learning that means finally a transformative learning produced into the students under professor's coordination.

### 3. Conclusions

Blended learning strategy is satisfactory if it is used student-centered interactive methods as effective in face-to-face activities as those offered by e-learning. BL offers more hope and help than hype, both in the teaching and learning process, and ongoing and final evaluation.
We also concluded that blended learning:

- Aroused student curiosity about a content and grow up their intrinsic motivation;
- Provides plenty of models, samples, and examples so that students know what to do.
- Offers encouraging focused feedback as well as general praise to encourage students to work with purpose (noticeable from observation sheets, training portfolio analysis, and tests).
- Helps students develop self-efficacy by helping them see the connection between effort and achievement (deduced from observation sheets, training portfolio analysis, surveys, and tests).
- Makes success possible, proposing each task from easier to complex material, question, a.s.o., creating learners' confidence (observable from surveys, and tests).
- Offers the students a variety of ways to self-monitor their work (deduced from training portfolio analysis, surveys, and tests).
- Helps each student master the content and skills he needs (noticeable from observation sheets, training portfolio analysis, surveys, and tests).
- It’s awesome because the students tend to better behave in learning situations (observable from students’ approach of each task by observation sheets) and allows professors to get the most out of their planning and instructional time.

References