

The impact of the use of the B-Learning modality in higher education

El impacto de la utilización de la modalidad B-Learning en la educación superior

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Abstract

The new educational scenarios propose to adapt the teaching-learning process to the use of ICT, especially the semi-classroom or B-learning modality, the work in collaboration, the development of competences and communication skills to meet the needs and expectations of the students, the labor market and the prevailing social dynamics. The main objective of this research is to analyze the conditioning factors of the teaching-learning process of the Latin American university for the adoption of new educational approaches. The research design is mixed with recurrent triangulation DITRIAC. In the quantitative phase, the method used is descriptive-transversal, through questionnaire with Likert Scale to 50 teachers, 402 students and 6 authorities. In the qualitative phase the method was ethnographic. Semi-structured interviews were conducted with 10 teachers, 38 students and 2 authorities, with descriptive and interpretative analysis. Among the main conclusions is the need to promote the social factor of learning and give greater prominence to the student. The resources used are traditional and analog. Teachers accuse changes in their teaching practice, but

little in the inclusion of ICT. Likewise, the three aspects that are most difficult for teachers to change in their face-to-face modality are: leaving the protagonism to the student, changing from the transmissive class to collaborative learning, and from the summative evaluation to the formative one.

Keywords: B-learning, teaching-learning process, higher education, collaborative learning, communicative skills, evaluation.

Resumen

Los nuevos escenarios educativos plantean adaptar el proceso de enseñanza-aprendizaje al uso de las TIC —en especial la modalidad semi presencial o B-Learning—, el trabajo en colaboración, el desarrollo de competencias y de competencias comunicativas para satisfacer las necesidades y expectativas de los estudiantes, el mercado laboral y las dinámicas sociales imperantes. El principal objetivo de esta investigación es analizar los condicionantes del proceso de enseñanza-aprendizaje de la universidad latinoamericana para la adopción de los nuevos planteamientos educativos.

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El diseño de la investigación es mixto con triangulación recurrente DITRIAC. En la fase cuantitativa el método empleado es descriptivo-transversal, a través de cuestionario con Escala de Likert a 50 profesores, 402 estudiantes y 6 autoridades. En la fase cualitativa el método fue etnográfico. Se realizaron entrevistas semiestructuradas a 10 docentes, 38 estudiantes y dos autoridades, con análisis descriptivos e interpretativos. Entre las principales conclusiones se vislumbra la necesidad de fomentar el factor social del aprendizaje y darle mayor protagonismo al estudiante. Los recursos

empleados son tradicionales y analógicos. Los docentes acusan cambios en su práctica docente, pero poco en la inclusión de las TIC. Asimismo, los tres aspectos que más le cuesta cambiar a los docentes en su paso de la modalidad presencial a la B-learning son: dejarle el protagonismo al estudiante, cambiar de la clase transmisiva al aprendizaje colaborativo, y de la evaluación sumativa a la formativa.

Descriptor: B-learning, proceso enseñanza-aprendizaje, educación superior, aprendizaje colaborativo, competencias comunicativas, evaluación.

1. Introduction and state of the issue

The authorities and bodies that regulate higher education institutions, universities, the actors of the teaching-learning process and society in general, consider the university training offer to be improvable, realizing that the needs and expectations of students, the market labor and society in general are not adequately met. And from all these fronts possible solutions are outlined (UNESCO, 1998, SEESCyT, 2008, UASD, 2013).

Therefore, the educational paradigms in higher education have undergone great transformations in the last decades (Iborra & Izquierdo, 2010, Núñez & Vilchez, 2017). Some of these transformations come not only from educational psychology (Woolfolk, 2006), but also from the didactic ones of the different disciplines. But the most transcendental, without a doubt, has been the irruption of ICT (Information and Communication Technologies) in education; especially the Internet, Web 2.0 or Social Network with emails, forums, wikis, blogs, Twitter and now educational platforms and Web 3.0 (virtual reality or augmented reality) (Barriopedro, Valiño & Leguía, 2012; Núñez, Penelas & Cuesta, 2014).

Regarding the area of Spanish Language Teaching (SLT), it is being considered that written text and regulations are no longer enough to teach Spanish Language because of the creation of new categories of discourse, the modifica-

tion of writing and its combination with other textual types (Cassany, 2012). To complete this panorama, one of the purposes of the Spanish Language course is to enhance the communicative skills of students for their socialization and cognitive development.

As a solution to the foregoing, the experts propose to implement B-learning at the higher level under the paradigm of the competency approach, the development of communicative competencies and the use of methods that encourage collaborative learning, under the following points.

- B-learning presents in the digital society many advantages for higher education, among them a wide volume of information and easily updatable contents can be made available to students. As well as, making the information more flexible, regardless of the space and time in which the teacher and the student are. Also, it allows the delocalization of knowledge; facilitates student autonomy; promotes a just in time and just for me training; among others (Cabero & Román, 2008). According to the educational trends of recent years in higher education, blended learning or B-learning (Blended Learning) is the most recommended for the achievement of new skills (Llorente, 2009, Johnson, Becker, Estrada, & Freeman, 2015).
- Collaborative learning helps students with their cognitive development and critical



thinking, socio-emotional development and emotional balance, development of social skills, democratization of academic success opportunities, among other advantages (Moruno, Sánchez & Zariquiey, 2011).

- Learning by competencies provides greater flexibility, more inclusiveness by being more individualized, more objectivity in evaluations, seeks the holistic development of learners, encourages collaborative work and learning is contextualized, among many other advantages (Zabala & Arnau, 2014).
- Life in society involves communication; nowadays people write and read more than ever, and the discursive genres are enlarged, as well as the media; but it is also true that there is a progressive change in the ways of communication for language users. Formal education must assume the commitment to adjust to the communicative needs of speakers (Cassany, 2012, Lomas, Osoro & Tusón, 2002).

1.1. New challenges, new roles and new assumptions

It is recognized that the excellence of an educational system cannot be superior to the quality of its teachers, since the results obtained by the students depend to a great extent on the teacher's capacity, and the improvement of academic performance is achieved by raising the quality of the instruction (Tiana, 2013). Education in the 21st century requires a curricular change that entails an attitudinal change and commitment of the teacher who is the catalyst for reforms and innovations in the classroom. Because the new trends and educational currents demand the formation of critical and transforming citizens of a world where ethics and values prevail, coexisting with technologies and care for the environment, in a democratic, egalitarian climate and with a holistic development (De la Torre & Barrios, 2000; Carbonell, 2015). For these reasons, teachers must promote the

autonomy of students, organize the culture they intend to teach, know and implement teaching strategies that help students generate, manage and evaluate knowledge, together with the management of teaching and media resources and the organization of the learning environment adapted to the circumstances and characteristics of each and every student (Jiménez Rodríguez, 2011; Brown & Pickford, 2013). To achieve the teleological, epistemological and gnosiological goals imposed by the educational act, the teacher must act reflexively (Perrenoud, 2007), based on reflection and joint research between teachers and students to dialogue, review their conceptions, beliefs, values and assumptions in those who support the classes (Margalef, Iborra, Pareja, Castro, Domínguez, García & Giménez, 2007), applying criticality to all the acts that they do, whether in the classroom, for the class, or for the class, since education is not it is a finished product (Durkheim, 1976).

After this reflexive exercise, the teacher must propose action models that involve the collaborative, active, reflective, autonomous and constructivist learning of the student (Zabala & Arnau, 2014). In turn, Iborra and Izquierdo (2010), believe that for the success of this change a process of rearrangement is needed, where the inclusion of elements that increase motivation, creativity, innovation, happiness and responsibility of students in their learning processes for the optimal and effective use of teaching and learning strategies is successful (Galiano & Ravina, 2017). But it is easier said than done, because the problem is more conceptual than operational, because it must do more with changes in the teacher's way of thinking about teaching and learning and his role in that task (Zabalza, 2011). This change must occur within universities, "from the analysis of cultural dynamics and the justifications that come into play between the stabilization of the status quo and the dialectical forces, always keeping in mind their concerns and needs, using the tools that demand the context" (Gairín, 2012, p 39).



Using ICT and implementing B-learning in training institutions affects the methodology, didactic strategies, access and distribution of materials, the organizational structure, and the traditional roles of teachers and students (Cabero & Márquez, 1999). For these reasons the analysis of the reality of the teachers of the Latin American university is proposed, in this case, of the Autonomous University of Santo Domingo (UASD), as a way to adapt the training offer to the necessary standards for the achievement of classes in B-learning, as is the worldwide trend.

1.2. Characteristics of the Blended Modality

The blended modality has characteristics that give it its own identity and not be a mere overlap of unconnected strategies and activities in the classroom and the web. Among these characteristics are (Llorente, 2009, Cabero & Márquez, 1999) the following:

- Confluence or combination of spaces and times (face-to-face and non-face-to-face).
- The scenario is a continuity because it allows synchronous and asynchronous communication, in real time and deferred, according to the needs and possibilities of the user, and the nature of the topic (face-to-face communication in the classroom, mail, chat, videoconferences, wiki, blog, microblogging, etc.). Mix of physical environment (classroom, hallways, cafeteria, parks, library) and virtual support (virtual classroom and all Web 2.0 and 3.0).
- Mix of analog and digital technologies and resources (books, magazines, PDF, animations, videoconferences, etc.).
- Mix of approaches and methodologies (behaviorism, constructivism, connectivism, expository class, collaborative work, PBL, by projects, etc., analysis of the learning objectives that are intended, the theory that best explains that learning process,

and the technology that more is suited to that need).

- It promotes learning experiences, their appropriation and socialization (face-to-face and in EVA).
- It allows us to propose different forms of representations of reality in diversified contexts.
- Facilitates knowledge construction processes and metacognition.
- The relevant information is presented dynamically and modularly.
- Highly interactive, with the program and other people (tutor-student, student-tutor, student-student). Encourages autonomous learning and decision making.
- It encourages complex learning, where mistakes are learned, and success is rewarded with positive feedback.
- Present reports of student progress.
- Ubiquitous learning because of the ease offered by mobile devices to people to train at any time and in any place.
- They converge in the same learning environment technologies, networks and content available to the student at all times.

2. Materials and Methods

The complexity of the teaching-learning process has led to the subject of research being approached under different but complementary approaches and perspectives. On the one hand, the qualitative approach and on the other, the quantitative approach. This last approach allows us to measure and weigh opinions, attitudes, activities, used strategies, among others, from different sources, tools, estates and approaches, which gives us a more complete idea of the reality under investigation, a deeper and generalizable knowledge, since data are "richer and more varied" (Hernández Sampieri, Fernández Collado & Baptista, 2008, p.756). Chart 1 shows the methodology used.



Chart 1. Methodology used during the research

Mixed research Recurrent DITRIAC Triangulation (Cresswell, 1994)	
Quantitative phase	Qualitative phase
Method: descriptive-transversal	Ethnographic, educational, interpretative.
Techniques: Questionnaires Likert scale (1 = negative, 3 = neutral, 5 = positive)	Semi-structured interviews, photo analysis, investigative prints
Analysis: Frequency statistics, deviation, regression, correlation and K-media cluster (SPSS 22.0)	Descriptive, analytical, interpretative, categorization, matrices, conceptualization (Atlas.ti 7.0)
Universe: 87 teachers, approx. 5,655 students and seven authorities	
Population and sample: 50 teachers, 402 students and six authorities	Six teachers, 38 students and two officials
Geographical scope: headquarters of the Autonomous University of Santo Domingo (UASD), in 35 buildings scattered in the Great Santo Domingo (Dominican Republic). Feb.-June 2015.	
Validation: by experts, pilot test, Cronbach's Alpha reliability, Spearman-Brown coefficient and two halves of Guttman.	Mixed triangulation: between methods-theory-estates-instruments.

Source: own elaboration

The present research is framed in the geographic scope of the Dominican Republic, specifically in the Autonomous University of Santo Domingo (UASD), as an example to other contexts in similar situations. For the present work the Autonomous University of Santo Domingo (UASD) was selected, as it was the oldest (founded in 1538), the one with the largest number of students (almost 50% of the university enrollment), because it is state-run and provides easy access to students with fewer resources.

The subjects programmed by UASD Virtual in virtual and blended modality were 71 subjects, distributed in: 23 in the Faculty of Sciences; 13 in the Faculty of Engineering and Architecture; 8 in the Faculty of Economic and Social Sciences; 8 in the Faculty of Humanities; 6 in the Faculty of Legal and Political Sciences; 5 in the Faculty of Health Sciences; 4 at the Faculty of Arts; 4 in the Faculty of Education Sciences. It is planned to gradually increase the number of subjects and sections in virtual and blended modalities. The medium-term goal is to have two online courses in virtual model by faculty; that would represent 18 subjects with several groups or sections each.

The long-term goal is for 50% of the subjects to be offered in virtual modality in order to decongest the classrooms and lighten the face-to-face teaching load. The offer of subjects in these modalities increases in a sustainable way, but it is not verified in the School of Letters. This absence motivated us to start this research, to go against the global tendency in the blended modality. And it is worth wondering if this absence is due to lack of qualified personnel to develop the teaching and learning process in the Virtual Learning Environments or that the use of ICT for educational purposes is reduced.

To validate the mixed method, we appealed to respect the characteristics of both the quantitative method and the qualitative method (internal validity), we adapted both methods to the research questions, the general objective and the specific objectives of the research (external validity), and explained the coincidences and discrepancies in the results obtained with each method (validity of the instruments) (Hernández Sampieri *et al.*, 2008, p. 795). Regarding the reliability of the questionnaires used in the quantitative methodology, we resorted to corroborating according to statistical criteria. We



apply Cronbach's Alpha tests, Guttman's two-half coefficient, Spearman-Brown coefficient. The obtained results were very good, since the questionnaire of the students in the Cronbach's Alpha the value was of .949 and .925 what places it as excellent, which shows a high internal consistency between the items reflecting that they measure the same construct and that are highly related. The same is observed in the output of SPSS from the teachers' questionnaire (.985 and .919). As for the Spearman-Brown correlation, the lengths in the students' questionnaire were .723 and the Guttman halves coefficient was .717; In the teachers' questionnaire, both values were .912 and .775, respectively, which also qualifies it as a good correlation between the items.

According to the Autonomous University of Santo Domingo (UASD) there is an average of 65 students per class section. If we have 87 teachers and we take a section of each teacher, with an average of 65 students per section, then the approximate universe would be 5655 students. From this universe, a simple stratified random sample was taken. Finally, the obtained sample was 50 teachers, 402 students and six authorities. It is distributed as follows: 246 study level I of BSL and 51 study BSL II (81.5% and 16.9% respectively), in relation to gender 54.6% belong to the female gender and 45.4% to the masculine.

The main objectives of this research are: first, to establish the fundamental defining features of the teaching-learning process in a higher education institution in the face-to-face modality and the critical variables to consider, and second, to analyze how to implement b-learning to improve communicative competences of students through collaborative learning in both aspects of this modality. The action of migrating BSL from face to face-to-face in the Autonomous University of Santo Domingo (UASD), must meet certain requirements that in this investigation that we try to determine through answering the hypotheses:

H1: Teachers of higher education in the area of BSL differ significantly in the methodology used in classes.

H2: Teachers consider that changes should be introduced in the BSL teaching-learning process, especially including ICT, a positive factor for the implementation of B-learning.

H3: Teachers in the BSL area observe tendencies to change their teaching practice.

To demonstrate the H1 hypothesis, a K-means cluster is carried out to determine the homogeneity of the aforementioned groups and the intergroup differences to determine the methodologies and the number of teachers who practice them. The K-means cluster analysis is chosen because all the variables we group are quantitative, and the simple Euclidean quadratic distance is adequate to determine the similarity between the objects we seek to compare. The questions used in this cluster were 7, 8, 9, 10, 13, 21 and 30 that measure the variables Planning, Teaching Methods and Modalities, Teaching Strategies, Resources Utilized, Persecuted Competencies and Types of Evaluations, respectively. The evaluation scales were 1 = Never, 2 = Almost never, 3 = Sometimes yes, sometimes not, 4 = Almost always and 5 = Always, except in question # 8, of scale 1 = I do not apply it, 2 = Very little use, 3 = Little use, 4 = Moderate use and 5 = A lot of use.

For the demonstration of the H2, the means of questions 11 of the teachers' questionnaire and 28 of the questionnaire of UASD Virtual officials are compared.

In the demonstration of H3 questions 5 (Variation in Teaching Practice) were crossed with question 6 (Causes Variation in Teaching Practice), to determine the existing correlation between these two variables through the statistical method R of Pearson.

Next, the constructs used with the corresponding items are detailed.

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Construct 7- When planning the subject of Basic Spanish Language, I consider:

1. The mission and vision of the institution.
2. The objectives of the program and the units.
3. The needs and particularities of the students
4. The requirements of society and the labor market
5. The traditional function of the subject of teaching rules and grammatical analysis
6. The skills that my students must develop to be, do and live in a changing world
7. Formulate the objectives as capacities and values
8. Providing the correct contents for the achievement of the objectives

9. The affective, emotional and motivational part of my students
10. Have high expectations of achievement in relation to my students

Another construct is the one corresponding to the variable 9- The teaching strategies that I use with the best results for my students are, with the following items:

1. Objectives
2. Illustrations
3. Intercalated questions
4. Signaling
5. Abstracts
6. Previous organizers
7. Analogies
8. Conceptual maps and networks
9. Textual organizers
10. Guided discussion
11. Diagrams
12. CQA Pictures
13. Synoptic tables
14. Problematic situations
15. Case analysis
16. Simulations
17. Questionnaires

Variable 10- The resources that I use to teach Basic Spanish Language I and II are, with the following items:

1. Textbooks
2. Reference books
3. Dictionaries
4. Literary works
5. Newspapers
6. Magazines
7. Internet
8. Problems of the context
9. Projectors
10. Television
11. DVD
12. Virtual platform
13. Computers



14. Interactive whiteboard
15. Blackboard and chalk
16. Wikis
17. Blogs
18. Forums
19. Social networks

Regarding the opinion of teachers about the skills they seek to develop in their students, 13- For the exercises that I assign, the type of evaluation I use and the dealings with my students, I seek to develop in them, with the following items:

1. Ability to analyze and synthesize texts and situations.
2. Ability to organize and plan your classes.
3. Basic knowledge of the world in which he/she lives.
4. Basic knowledge of the profession studied.
5. Your oral and written communication.
6. Basic skills in the management of the computer.
7. Skills to search and analyze the information you find.
8. Skills for problem solving.
9. Skills for decision making.
10. Develop your critical and self-critical capacity.
11. Learn to work in a team.
12. Increase your interpersonal skills.
13. Train him to work in a team with people from different disciplines.
14. That I appreciate diversity and multiculturalism.
15. Have an ethical commitment.

And the last latent variable is the 21- To verify the degree of use of my courses, I apply the following evaluations to my students, with the following items:

1. Diagnostic evaluation.
2. Formative evaluation.
3. Summative evaluation.
4. Self-evaluation of students.
5. Co-evaluation among students.

3. Analysis and results

H1: Teachers of higher education in the area of BSL differ significantly in the methodology used in classes.

When designing the different items of the questionnaires, five possibilities of answers according to the five educational paradigms proposed in the theoretical part are considered:

1) the paradigm of traditional teaching, which in the area of language represents what is called traditional grammar; 2) the behavioral paradigm of Skinner and Pavlov, which we equate with Saussurean and post-Aussurean structuralism; 3) the cognitivist paradigm, which we assimilate in it to the generative grammar of Noam Chomsky; 4) the different structuralisms, from Piaget to Vygostky, here we cover textual linguistics and semiotics; and 5) the paradigm of competencies, which we represent with functional and communicative approaches in language teaching-learning. Chart 2 shows the items where there are more differences among teachers in terms of their methodologies.

Chart 2. Cluster types of teachers by their methodologies

Type of teachers of BLS based on their opinions on the methodology they use Valid cases: 50							
Items	Final Cluster Centers					ANOVA	45 Gl.
	1	2	3	4	5	F	Sig.
P. 27 Planning: 1- NecPartEst.	5	5	5	3	5	21.099	.000
2- ReqSocMertLab.	4	5	3	4	1	11.069	.000



3- ComSerHacCon.	5	5	4	3	5	11.299	.000
4- FormObjCapVal.	5	5	4	3	1	29.411	.000
5-ParAfeEmoMotEst.	4	5	4	4	1	21.516	.000
6-AtlExpLogEst	5	5	4	3	1	59.977	.000
MODEL AND METHOD							
1- CaseEst.	4	4	3	4	3	4.571	.004
2- AprOriProy.	4	4	3	3	1	6.071	.001
3- AprCoop.	3	5	4	3	4	9.453	.000
4- PractClas.	4	5	5	3	5	14.300	.000
TEACHING TECHNIQUES							
1- EstPregIntrc.	2	4	4	3	3	6.639	.000
2- EstSignali.	4	4	2	4	3	3.931	.008
3- EstSummary.	4	4	4	4	1	4.212	.006
4- EstOrgPrev.	4	4	3	4	3	3.956	.008
5- EstMapRedConc.	5	4	3	3	3	6.021	.001
6- EstOrganTex.	5	5	4	3	1	5.663	.001
7- EstDiscGuide.	5	5	4	3	4	5.398	.001
8. EstCQAPict.	4	3	2	3	1	5.398	.001
9- EstSynopChart.	4	4	3	3	2	4.529	.004
RESOURCES USED							
1- LibConsUse.	5	4	4	3	3	4.791	.003
2- ObrLitUse.	5	4	4	3	3	6.283	.000
3- PeriodUse.	4	4	3	3	3	5.174	.002
4- JournlUse.	4	4	3	3	1	5.802	.001
5- InternetUse	5	4	4	3	4	4.077	.007
6- ProbContUSe	5	4	4	4	1	8.031	.000
7- ProjectUse.	4	3	3	3	1	3.220	.021
8- TVUse.	4	2	2	2	2	4.993	.002
9- DVDUse.	4	2	2	3	1	4.314	.005
10- VirtPlatUse.	4	2	2	3	1	6.367	.000
11- PizinteraUse.	4	2	2	3	1	3.420	.016
12- WikiUse.	4	2	2	3	1	4.650	.003
13- Forums.	4	2	2	3	1	3.989	.008
COMPETENCES TO PROMOTE:							
1- CapAnáSinTexSit	4	5	4	3	4	5.088	.002
2- CapOrgPlanClas	4	5	3	3	3	9.665	.000
3- ConocBásMund	4	5	4	4	5	8.505	.000
4- ConBásProfEst	4	5	4	3	5	11.540	.000
5- ComOralEsc	4	5	5	4	5	6.941	.000
6- HabBuscAnallnf	5	5	4	3	3	12.583	.000
7- HabResProb	4	5	4	3	3	8.266	.000



8- HabTomaDec	4	5	4	3	1	28.178	.000
9- DesCapCritAutoc	5	5	5	3	5	8.602	.000
10- ApreTrabEquip	5	5	4	3	3	18.519	.000
11- IncrHabInterp	4	5	4	3	1	35.264	.000
12- CapTraEquiInterd	4	5	3	4	1	10.510	.000
13- ApreDivMulticult	4	5	4	3	3	8.842	.000
14- CompÉtica	5	5	5	3	4	26.166	.000
EVALUATION SYSTEM							
1- EvalDiagn	3	5	4	3	4	7.567	.001
2- EvalFormat	5	5	4	3	3	5.940	.000
3- EvalSumat	4	5	5	4	1	17.844	.000
4- AutoEvalEst	3	4	3	3	1	6.508	.000
5- CoevalEst	4	4	3	3	1	4.884	.002
Total: Mean Addition	328	321	277	270	204		
Total number of cases ineach cluster	3 6%	33 66%	8 16%	5 10%	1 2%		
Typologies	Complex functionalist competences	Constructivists Functionalists	Generalist cognitivists	Generalist behaviorists	Traditional Grammarist		

Source: own elaboration

When making the cluster to group teachers from their educational paradigms, we find that the largest number of them are located in Group 2, teachers with constructivist profile (33 subjects, 68% of the total), followed by teachers with a tendency cognitivist (Group 3, with 8 individuals for 16% of the sample), then continue teachers with behavioral tendencies (Group 4, 5 teachers, 10% of respondents), fourth are teachers who use methodologies and models by competences (Group 1, 3 professors, for 6%); and lastly, with 2%, since only one teacher belongs to Group 5, there is the traditional teaching model, the tendency to teach grammar.

H2: Teachers consider that changes should be introduced in BSL, especially including ICT, positive factor for the implementation of B-learning, respectively question 11 of the questionnaire applied to teachers that measures the variable Opinion on

Changes in the Program was analyzed of the Subject, and question 28 of the questionnaire applied to UASDVirtual officials, which measures the variable Resistance to Change of Paradigm in B-learning of the Teacher.

According to the univariate analyzes, the changes that the teachers marked as necessary in the BSL program are, according to the means, in the first place, including more activities with ICT (4.22), change in the use of strategies (3.96), the competences to achieve in the students (3.91), the objectives to achieve (3.88) and the evaluation system (3.87). They also obtained average above 3.5, change: Resources, Themes, The pedagogical approach and The methodological part. Likewise, according to UASDVirtual, the body in charge of offering the subjects in virtual and blended modality, in the variable Problems for Change to B-learning, the most pressing problems are: Leave



the protagonism to the student (4.67), Change the transmissive class to collaborative learning (4.67), and Change from the summative evaluation to the formative one (4.67).

H3 In teachers of BSL trends are observed to change in their teaching practice crossed the means of question 5 (Variation in Teaching Practice) with the means of question 6 (Causes Variation in Teaching Practice), to determine the correlation existing between these two variables through the statistical method R of Pearson. The analysis showed that there is a moderate

positive relationship, almost strong, of a 99% acceptance between reflection and methodological change (.675 with .000 of significance); between reflection and conceptual change (.591 with .000 of significance); between reflection and the use of materials (.562 with significance of .000); as well as between reflection and the way of relating to students (.577 with significance of .000) and reflection and updating to new pedagogical currents (.487 with significance of .000). In the use of ICT, there is no significant relationship in the change.

Chart 3. Correlation changes and cause of changes in teachers

TEACHERS' OPINION ABOUT THE CHANGES IN THEIR TEACHING PRACTICE BASED ON THE REASONS THAT HAVE MOTIVATED THOSE CHANGES								
TABULATION OF MEAN VALUES (Pearson's R)								
(Measurement scale: 1- Strongly disagree, 2 - Disagree, 3 - Neutral 4 - Agree, 5 - Strongly agree)								
Number of cases 50								
The changes were product of:	I have changed the way I teach throughout my academic career in:							
		I haven't changed in anything or too few	The methodological	The conceptual	The inclusion of ICTs	The actualization of new pedagogical trends	The use of Materials	The way in which I relate to the students
I haven't changed in anything or too few.	Pearson Correlation	.387**	-.153	-.084	-.005	-.139	.028	.006
	Bilateral Sig.	.006	.289	.564	.970	.336	.847	.968
Reflection	Pearson Correlation	.132	.675**	.591**	.247	.487**	.562**	.577**
	Bilateral Sig.	.361	.000	.000	.084	.000	.000	.000
imposition from the institution	Pearson Correlation	.284*	.025	-.068	-.002	-.035	.096	.098
	Bilateral Sig.	.046	.864	.637	.989	.807	.507	.500
Pressure from the external environment	Pearson Correlation	-.126	.409**	.255	.256	.373**	.294**	.488**
	Bilateral Sig.	.384	.003	.073	.073	.008	.038	.000
Observing the students' lack of motivation with the system that used	Pearson Correlation	-.132	.086	.019	.102	.105	-.018	.137
		.360	.551	.894	.480	.466	.899	.343
* The correlation is meaningful at the 0.05 level								
** The correlation is meaningful at the 0.01 level								

Source: own elaboration



4. Discussion and conclusions

The hypothesis *H1 BSL teachers differ significantly in terms of the methodology used in classes*, is confirmed, since it is observed that there are five groups well differentiated by their pedagogical practices: 1) Competence-functionalist-complex (6%); 2) Constructivist-functionalists (66%); 3) Cognitivist-generativists (16%); 4) Behaviorists-structuralists (10%); and 5) Traditional-grammarians (2%). As it is observed, 72% of the sample of BSL teachers, the sum of the groups formed by the constructivist-functionalists and those belonging to the complex-functionalist-competence group, are teachers whose educational practice is routed on paths where the student is the center of the process, its development is taken into account in all aspects, context is considered, learning from different perspectives and with various methods, models, strategies and resources. The above aspects correspond to the strengths of the teachers' practice, and the weak points are that there are still remnants of traditional learning and the use of technology should be increased more, because it was the least favored line, it is a pending issue. There is also a need to improve the participation given to students in their evaluation, since the co-evaluation and the self-evaluation must be increased. These conclusions lead to outline institutional strategies to adapt training offers and guide curricular redesigns so that teachers acquire more digital skills, which is what is currently lacking.

This coincides with Gutiérrez (2011), who found that teachers use different methodological strategies, but the least known and used are the appropriate strategies for working on a network. In this sense, Monclúz & Núñez (2014) found that, in the same researched educational context, the most used resources are textbooks, blackboard and chalk, reference books, and the least used are wikis, blogs, forums, platforms and software applications; what Báez (2009) demonstrated is due to the lack of digital literacy of teachers.

According to the review of the literature, higher education advocated by international organizations, education ministries of different nations, governments and private institutions must be adequate to the requirements of society, employment and the integral development of the individual. This means including competency-based, collaborative, student-centered learning, methods such as PBL, which include ICT and with a tendency to hybridization or blended learning.

Hypotheses H2 is confirmed: Teachers consider that changes should be introduced in BSL, especially including ICT, a positive factor for the implementation of B-learning and H3: In BSL teachers, there are tendencies to change in their teaching practice, because the teachers of BSL are motivated to change, that in fact they assume it in several lines in their teaching task. They also consider it necessary to reform the program of the subject, favoring the use of ICT over any other reform. This means that the institution reconsiders the updating of the programs of the subjects, since in addition to the opinions on it, the tests collected in UASDVirtual advise to work the most neuralgic aspects of the change of paradigm, which are the methodology, the evaluation system and the implementation of collaborative learning. The obtained results are very encouraging, since the attitude of teachers towards change can be described as positive with intrinsic and extrinsic motivation, largely as a result of reflection, observation of their practices and, to a lesser extent, pressure from external environment. There is a long journey, a lot of work and resources, but the measures are being taken. Finally, it is recommended to plan considering the institutional guidelines, the new pedagogical and technological currents, always taking into account the needs of the student and the socioeconomic context where he will develop his vital and work functions.

Among the limitations of this article is the fact that it has been developed in a single university in the Dominican Republic, specifically in the Autonomous University of Santo Domingo



(UASD), one of the institutions of higher education in this country best positioned in the rankings of academic excellence of Latin America. From our point of view, it would be interesting that in the future this study will be carried out in other universities in order to have a clear picture of the role played by B-Learning learning within the Latin American higher education system. In this way it could be determined, among other things, if the implementation of this pedagogy has contributed actively and positively in the objectives established at the beginning of the course by the different programs that make up the subjects of an academic degree.

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