Blended Learning in GFL lessons in Italy – a real added value?

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ISSN 1470 – 9570

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This paper will show how blended learning can be usefully incorporated into traditional German language teaching through the use of the PerLe-platform. The concept of blended learning will be discussed as a possible added value for the teaching/learning process compared to traditional classroom teaching. The questions are: How does the use of media affect the learning process in the classroom? Can the implementation of media-based self-learning phases actually promote the acquisition of foreign language skills? And if so, what exactly are those skills, and to what extent is this increase in learning possible? The author of this exploratory study, which is based on the constructivist learning theory (cf. Papert 1991; Wang et al. 2009; Vygotsky 1978), has chosen an experimental research design which includes quantitative and qualitative data in order to analyze the effects of blended learning intervention and possible differences in learning achievements between treatment and control groups.

1. Introduction

As modern information technologies are common tools these days blended learning is becoming more and more an interesting didactic model at any educational level, in particular within the higher education system (cf. Euler & Seufert 2005; Vaughan 2007; Steffens & Reiss 2009; Garrison & Vaughan 2008; Picciano & Seaman 2009; Higgins et al. 2012; Lust et al. 2012; Siemens et al. 2015). The discussion about the changes in the use of internet applications in teaching scenarios is the focus of public and educational interest. There has been a steadily increasing attention in research on this topic over recent years (Amaral & Shank 2010; Bozzo 2012) and is still going on (cf. Meister & Shalaby 2014; Siemens et al. 2015) with varying results ranging from more positive to less positive experiences (cf. Reinmann-Rothmeier 2003; Kerres 2003; Thorne 2003; Roche 2008; Hartman et al. 2005; Chenoweth et al. 2006; Murday et al. 2008; Launer 2008).

Nevertheless, there is still neither scientific certainty about the real effectiveness of blended learning in the teaching process in general, nor about its validity for the learning process of the students.

Things are not very different when blended learning is implemented in the specific context of foreign language teaching/learning, and more specifically in the context of GFL, where pros and cons balance each other (cf. Meister & Shalaby 2014; Launer 2008;

Chenoweth et al. 2006; Murday et al. 2008). It is neither proven whether blended learning is a serious alternative method for foreign language learning, nor how blended learning can be successfully applied. This is why there is an increasing need for research approaches exploring blended learning scenarios through experimentation.

This study intends to contribute to this research by describing a blended learning project carried out and supervised during GFL (German as a Foreign Language) undergraduate courses at the University of Calabria from 2010 to 2012.

This case study is relevant both from a theoretical and from a practical perspective. From a theoretical point of view it aims at knowledge production by obtaining local but generalizable knowledge of blended learning in GFL lessons, which provides the necessary complement to the great performance studies and the basic research in the field. From a practical point of view, through the implementation of new knowledge, it aims at contributing to the development of blended learning activities in GFL lessons.

This exploratory study, based upon the constructivist learning theory (cf. Maturana 1982; Papert 1991; Glaserfeld 1991; Fischer 2002; Konrad 2014: 18; Mandl & Krause 2001: 5), used an experimental research design and included quantitative and qualitative data in order to analyze the effects of blended learning intervention and possible differences of learning achievements between treatment and control groups. To analyze both kinds of data may help to achieve a better understanding of possible blended learning scenarios. The goal was to determine whether and to what extent an added value can be achieved through blended learning, especially in comparison with pure classroom teaching.

Added value in this context means an increase in the learning success as an increase in reaching certain specified learning objectives or teaching aims. The term *learning success* is defined by results, which can be reviewed by evaluations or tests, and thus corresponds to monitoring a progress of learning. The focus is on the various factors that influence the process of learning and teaching.

Based on the objectives described above, the following research questions were formed: Can blended learning actually promote the acquisition of foreign language skills and enhance foreign language knowledge? If so, what skills are they and of what nature: receptive or productive? To what degree or extent is this possible?

In order to find an answer to these questions, a blended learning concept was tested. The learning outcome of the research group was compared with a reference group, who

attended only the classroom meetings. The results of the analytical and experimental investigation were deepened by information gathered from the learners by means of questionnaires (cf. Mandl & Kopp 2006: 13).

This article is organized as follows: After the description of the hypothesis the concept of blended learning is defined, based upon a brief discussion of the scientific literature and the presentation of the definition chosen for this research. In the next sections the institutional and didactic framework as well as the underlying learning theory aspects are outlined. This is followed by a description of the strategic and operational level – the research method, tools and the applied model as well as the learning environment. After the discussion of the results of the research, a summary of the findings concludes the article.

2. Hypothesis

The central hypothesis of the study is that an added value in learning and an increase of learning success can be achieved only if the *right* blended learning model is used on the basis of media-related self-study phases in language teaching. The blended learning model thus needs to meet certain criteria in order to be successful. These are as follows:

- Guarantee of a stable technical infrastructure with technical support
- Ensuring support and advice from tutors and coaches
- Ensuring individualization, intensification and increased interactivity of learning
- Encouraging independent (continuing) learning (cf. Roche 2005: 246-251)

As the blended learning model chosen for this research was based on these criteria, it was assumed that an *added value*, in terms of *learning success* as mentioned above would be achieved.

3. Definition of blended learning

Before the presentation of the procedure and the results, the concept of blended learning used for this project will be introduced.

Working through the almost overwhelming amount of research literature on the subject, one is confronted with numerous different definitions of the term *blended learning*. Roche, for example, defines blended learning as a

> Medienmix […] mit unterschiedlichem Anteil von Unterricht (Präsenzphasen) und elektronisch vermittelten Phasen [, um (R.P.)] […] damit die Vorteile des Kontaktunterrichts und des selbstständigen Lernens zu kombinieren. (Roche 2005: 242)

Roche defines blended learning as a *mix* of different *media* aiming to take advantage of the *combination* of technology enhanced self-study on one hand and face-to face learning on the other. Blended learning seems to be seen as a teaching strategy.

Kranz & Lüking also stress the *combination* of learning settings, but go a bit further taking into account the *added* long-term learning effect for the student:

> Abnehmerorientierter Mix von verschiedenen Methoden und Lernformen […]. Durch eine möglichst optimale Kombination und ein ausgewogenes Verhältnis von Präsenzunterricht, Selbststudium und Lern- und Arbeitsphasen in virtuellen Arbeitsräumen soll ein erhöhter und nachhaltiger Lerneffekt erzielt werden. (Kranz & Lüking 2005: 1)

In his definition Thorne stresses this central role of the student, in particular the possibility of tailoring the learning process to *the needs of individuals*, and talks about the *integration* of *online learning* and *traditional learning*:

> Blended learning is the most logical and natural evolution of our learning agenda. It suggests an elegant solution to the challenges of tailoring learning and development to the needs of individuals. It represents an opportunity to integrate the innovative and technological advances offered by online learning with the interaction and participation offered in the best of traditional learning. (Thorne 2003: 2)

For Young (2002: A33), a *blended learning environment* or a *hybrid learning environment* means "the single-greatest unrecognized trend in higher education today"; it combines "the best features of classroom teaching with the best features of online learning to promote active, independent learning and reduce class seat time". His definition underlines the active, independent learner seen as the center of the learning process and considers blended learning a tool to reduce the time spent in class.

Apparently there is no uniform, universally accepted standard definition, and it may be true that "blended learning means different things to different people" (Driscoll 2002: 1), but it is obvious that it is a form of teaching and learning supported by the use of modern media of whatever kind. However, almost all of these exemplary definitions revolve around the common principle of a not precisely defined mix of different media and methods in the process of teaching and learning. Very often the discussion involves the term "hybrid learning arrangements" (Kerres & Jechle 1999: 1; Kerres 2003: 5; Kerres 2002: 1), meaning media-related hybrid learning formats.

In addition Reinmann claims (2011: 2): "Das Neue und Besondere ergibt sich aus den *Potenzialen* der in einer bestimmten Zeit neuen Medien *für die didaktische Gestaltung* von Unterricht und damit auch für das Lernen." This definition of blended learning also serves as the starting point of this inquiry.

Didactic parameters are therefore at the heart and mark the starting point in the design of a blended learning model. Reinmann (2011: 2) for example starts out from the same didactic parameters such as the learner and his learning objectives in her definition of blended learning. According to her and on this basis, the first requirement should allow us to define learning content before discussing how media and technical resources can be included (cf. Reinmann 2011: 2).

4. Normative level: Institutional and didactic framework – Learning theory aspects

4.1 Target group

The target group consisted of italophone German language students in the second year of the three-year BA program for Foreign Languages at the University of Calabria. Students attended not only specialized practical lectures but also a professional scientifically embedded curricular course, which at the same time provides the academic framework for the investigation.

The general socio-demographic biographical information of the learners was collected by questionnaire in order to support the interpretation of quantitative data. In a total of 52 students, 26 per group, there were more women than men. They were evenly divided into the groups (69% ≙18 females in the experimental group and 65% ≙ 17 females in the control group vs. 31% ≙ 8 males in the experimental group and 35% ≙ 9 students in the control group). The age distribution was very homogeneous with an average of 21 years.

No correlation could be determined between the two variables group and gender / group and age. It can be assumed for the other tests that the gender and age of subjects has no influence on the results.

Even though the students came from different school types, relatively homogeneous groups with respect to educational background, learning traditions, study habits and motivation could be expected (cf. fig. 1 and 2).

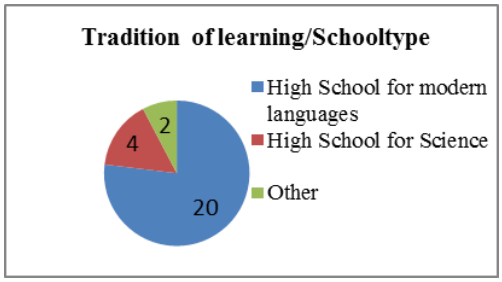


Fig. 1: Research group

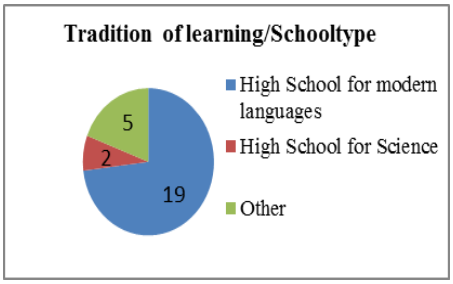


Fig. 2: Reference group

There were also no significant differences concerning experiences with language learning software (cf. fig. 3/ fig. 4).

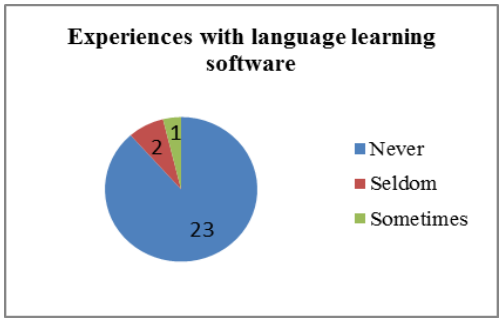


Fig. 3: Research group

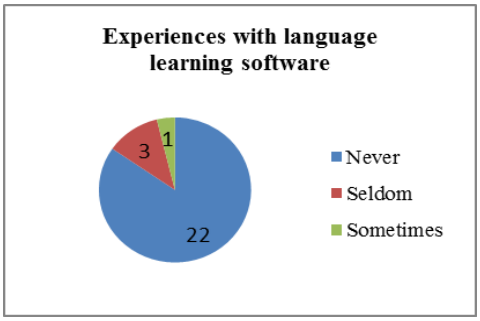


Fig. 4: Reference group

4.2 Teaching aims and learning objectives

Adapted to the specific target group and their learning objectives and in accordance with local, contextual needs and requirements (cf. Jones et al. 2009), the blended learning concept selected for this study took into account – as postulated by Reinmann – both learning theory approaches and media and methodological aspects. Thus, the principle of integration (cf. Reinmann-Rothmeier 2003: 38) was met at all levels of educational planning.

Indicative teaching aims are communicative, social, critical and intercultural skills in accordance with the Common European Framework (CEF) (cf. Goethe Institut Inter Nationes 2006). At the level of general teaching objectives, the schedule for the second year of studies comprised various receptive and productive skills as well as the expansion of linguistic knowledge areas such as vocabulary and grammar, tailored to the topics of level B1(cf. Bundesverwaltungsamt – Zentralstelle für das Auslandsschulwesen 2009; Glaboniat et al. 2012).

The learning contents included the extension of vocabulary and the development of new grammatical skills via reading and listening texts, dialogues, exercises and tutorials on topics from everyday life (cf. Glaboniat et al. 2012; Bundesverwaltungsamt - Zentralstelle für das Auslandsschulwesen 2009).

4.3 Learning Environment: From LMS to PLE

The learning platform PerLe represented the virtual learning environment throughout the course. PerLe is a Java-based open Moodle platform with a modular and transparent design which allows an external module or tutorial integration via a centralized authentication system.

- The university online services include integrated social networking features.
- It offers a variety of modern information and communication technologies, such as forum, e-mail and, in particular, access to virtual classrooms.
- Single login functions are available for all university courses/modules.

The Campus Language Training (CLT)[1] was then integrated into the learning platform. The software has a clear course structure with 24 progressive lessons consisting of interactive photo dialogues of everyday situations which introduce and practice new lexical fields, idioms and grammatical structures (cf. digital publishing AG 2010a: 18). During their work learners are supported by a video tutor and can choose to use additional material such as a grammar glossary and vocabulary training (cf. digital publishing AG 2010a: 23).

The whole learning process is recorded and visualized via the course explorer IntelliPlan (cf. digital publishing AG 2010a: 16). Thus, the learner is always aware of his own learning progress. In addition, a detailed success monitoring with information on pronunciation, evaluation and difficulty of exercise is available at any time (cf. digital publishing AG 2010a: 19). The data of IntelliPlan are also transmitted to the online tutor via the Learner Management System (LMS), in order to enable him to support the self-study phase of each participant individually (cf. digital publishing AG 2007: 9).

4.4 Investigation procedure

The experimental group worked with the university learning platform PerLe and the integrated language learning application CLT. They were given access to the placement

[1] CLT is a CEF-based language learning software for 5 European languages (level A1 to B2.2), used here specially for German as a foreign language (cf. digital publishing AG 2010a, 2010b).

test (cf. digital publishing AG 2010b: 2-6) and consequently to the corresponding course levels. In compliance with their potential (cf. Kerres 2003: 7), these media were used for the processes of language learning (cf. Reimann-Rothmeier 2003: 41).

In contrast, the students of the reference group used neither the learning platform nor the integrated learning application CLT. The topics and learning contents (vocabulary and grammar, textual reading and listening assignments), however, were the same for both groups. Thus, the difference was in the form of teaching (blended / traditional) and in the form of the learning material (online / printed).

As for learning theory, it was assumed that learning is a process of knowledge construction, which takes place both on the individual and the social level by interacting with other learners (cf. Fischer 2002; Konrad 2014: 18; Mandl & Krause 2001: 5). Therefore, a certain degree of self-organization was expected from the individual student. Because of this, it was tried at the normative level (cf. Reinmann-Rothmeier 2003: 38) to shape the learning environment to integrate the constructivist individual and active web-based self-study phases into guided instructive socio-communicative classroom learning. The learners were accompanied by a coach who supported them in identifying and solving problems in their learning process. The author of this article guided the process as a researcher and teacher. This way of proceeding – i.e. to investigate one's own teaching practice – is sometimes questioned because of a possible lack of objectivity, which would make it unsuitable for scientific inquiry. It is precisely this circumstance of assuming different roles in the same study, however, which needs to be understood as a methodological enrichment. The demand for a strict separation of subject and object in the scientific ideal of knowledge prevents the convergence of scientific and practical perspectives.

The alternation of action and reflection strengthens the ability to develop a "practical theory" (Altrichter/Posch 2007: 330) which helps to construct new hypotheses about the relationship between the quality of teaching and learning success, in order to produce new knowledge, and – more importantly – to make teaching better and develop it.

5. Strategic and operational level: Method - Media – Model

The curricular German language courses were scheduled over a semester of 12 weeks (see fig. 5) with weekly meetings in the class community, each lasting two hours (a total of 24 teaching units).

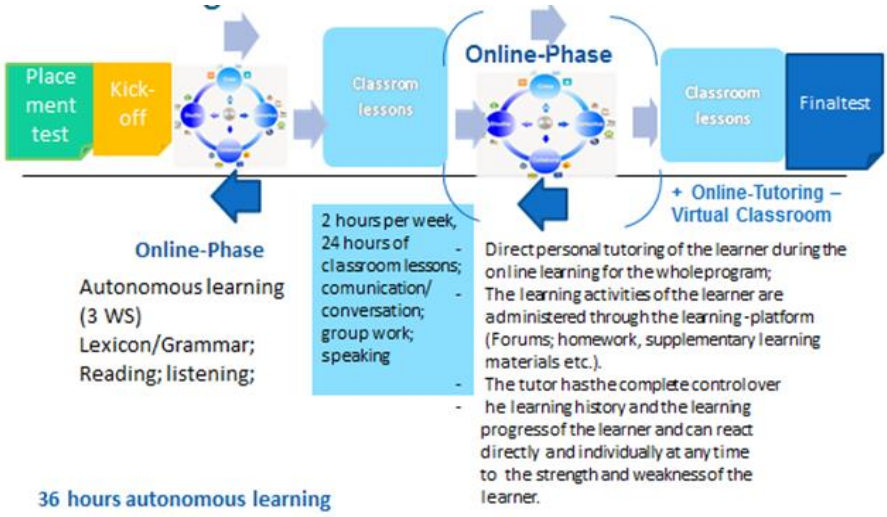


Fig. 5: Course structure (cf. digital publishing AG 2007)

The face-to-face meetings helped the participants to get to know each other and to exchange experiences. They were also especially useful to focus on communication and to practise what had been learned in the group classes, with a focus on interactive, collaborative learning.

Between classroom meetings, the research group worked independently with the CLT learning opportunities, according to their own pace and interest. They were recommended to study approx. three hours online per week, giving a total of 36 hours throughout the semester. The reference group attended only the classroom meetings and was advised to study approx. three hours a week. During the self-study phases, structural content such as grammar, vocabulary, pronunciation, listening comprehension and reading was explicitly trained and prepared for the group classes.

The students communicated synchronously and asynchronously with their teacher, their tutor and other students via the forum or by chat or e-mail. The synchronous group training with a tutor took place by arrangement via the virtual classroom.

Due to a targeted allocation of specific learning content to the presence of media-supported self-study phases (cf. Arnold et al. 2004), the integration of guided and self-directed learning, reception and exercise, activity and exploration as well as individual and cooperative learning was carried out on a methodological level (cf. Reinmann 2003: 41).

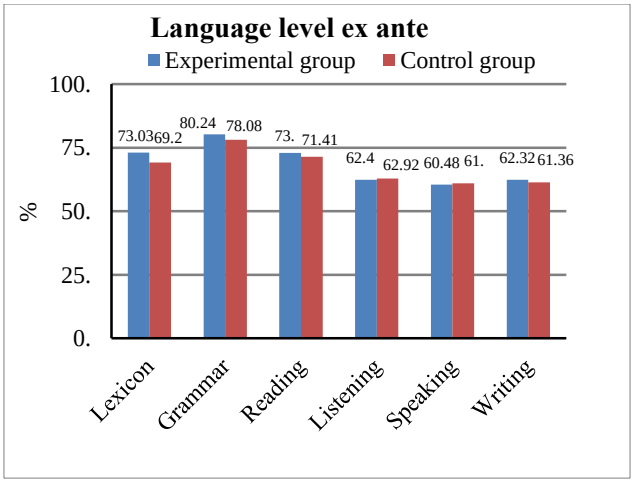
After this detailed outline of the didactic structure of the learning arrangement, the next chapter will show the results of the project.

6. Results: Language level comparison

The determination of whether the use of the described blended learning model actually led to increased learning success involved two stages: In a first step, the linguistic skills (listening, reading, writing, and speaking) and vocabulary and grammar knowledge were measured ex ante by means of a placement test in order to record the language level at the beginning of the project. In a second step, an ex post test was performed and the results of both groups were compared. Both the placement test and the final test consisted of sample sets used at Goethe Institut.

6.1 Language level ex ante

By comparing the ex-ante information, the starting levels of both groups and possible differences in performance in the different areas could be recorded. Almost all areas showed values above the 60% threshold, i.e. both groups had the A2 output level of competence. As fig. 6 shows, the mean value (MV) of the vocabulary tests is slightly higher for the experimental group with 73.125 than for the control group with 69.166 (MVcontr. = 69.20, SD = 2.66; MVexp. = 73.08, SD = 1.22, t (48) = -6.62, p < .001).



	Groups	N	Mean	Standard deviation	Standard error ot the mean
Lexicon	Exp.- Gr.	26	73,08	1,222	,244
	Contr.-Gr.	26	69,20	2,661	,532
Grammar	Exp.- Gr.	26	80,24	2,990	,598
	Contr.-Gr.	26	78,08	4,847	,969
Reading	Exp.- Gr.	26	73,00	2,739	,548
	Contr.-Gr.	26	71,48	2,417	,483
Listening	Exp.- Gr.	26	62,40	1,732	,346
	Contr.-Gr.	26	62,92	2,159	,432
Speaking	Exp.- Gr.	26	60,48	,963	,193
	Contr.-Gr.	26	61,00	1,581	,316
Writing	Exp.- Gr.	26	62,32	1,773	,355
	Contr.-Gr.	26	61,36	,810	,162

Fig. 6: Language level ex ante

For the grammar knowledge (exp. gr. MV 80; contr. gr. MV 78), and reading comprehension (exp. gr. MV: 73 / contr. gr. 71 MV) the same pattern could be observed. Similar results were obtained both for the listening comprehension tests (exp. gr. MV 62, 4; contr. gr. MV: 62,9) and for speaking skills. Regarding their writing abilities, the experimental group performed slightly better.

Using a t-test for independent samples, the difference was tested for significance. A significant difference between the groups was found in the areas

- Vocabulary (MVcontr. = 69.20, SD = 2.66; MVexp. = 73.08, SD = 1.22, t(48) = -6.62, p < .001);
- Reading comprehension (MVcontr. = 71.48, SD = 2.41; MVexp. = 73.00, SD = 2.74, t(48) = -2.08, p < .05);
- Writing (MVcontr. = 61.36, SD = .81; MVexp. = 62.32, SD = 1.77, t(48) = -2.46, p < .05).

For the other areas (grammar, listening comprehension, speaking) there was no significant difference between the two groups.

6.2 Ex ante versus ex post

The ex post test scheduled at the end of the semester was taken from the *Goethe-Zertifikat B1 – Deutschprüfung für Jugendliche und Erwachsene. Modellsatz Erwachsene* (Goethe Institut e.V. 2013) which consists of four modules: reading and listening comprehension, writing and speaking. Students have to reach at least 60 out of 100 points (60%). The task types, the number of items as well as the time limits correspond to the the *Zertifikat B1* examination (cf. Tab. 1).

No	Task (Testing aim)	Task type	Items
Reading (duration: 65 minutes)			
1	Korrespondenz lesen	Richtig/Falsch	6
2	Information und Argumentation verstehen	Mehrfachauswahl (3-gliedrig)	6
3	Zur Orientierung lesen	Zuordnung	7
4	Information und Argumentation verstehen	Ja/Nein	7
5	Schriftliche Anweisung verstehen	Mehrfachauswahl (3-gliedrig)	4
Listening (duration: 40 minutes)			
1	Ankündigungen, Durchsagen und Anweisungen verstehen	Richtig/Falsch und Mehrfachauswahl (3-gliedrig)	10
2	Als Zuschauer/Zuhörer im Publikum verstehen	Mehrfachauswahl (3-gliedrig)	5
3	Gespräche zwischen Muttersprachlern verstehen	Richtig/Falsch	7
4	Radiosendungen und Tonaufnahmen verstehen	Zuordnung	8

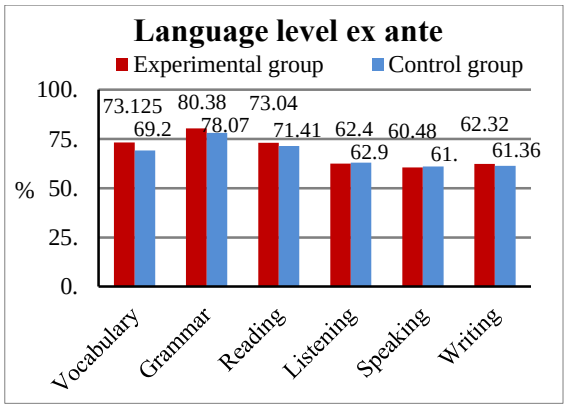
Writing (duration: 60 minutes)			
1	Interaktion. Persönliche Mitteilung zur Kontaktpflege	Freies Schreiben (beschreiben, begründen, einen Vorschlag machen	
2	Produktion. Persönliche Meinung zu einem Thema äußern	Freies Schreiben (beschreiben, begründen, erläutern, vergleichen, Meinung äußern, usw.)	
3	Interaktion. Persönliche Mitteilung zur Handlungsregulierung	Freies Schreiben (sich entschuldigen, um etwas bitten, o. Ä.	
Speaking (duration: 15 minutes)			
1	Interaktion. Gemeinsam etwas planen und aushandeln	Teilnehmende planen etwas wobei sie sich an 4 Leitpunkte halten	
2	Produktion. In einem Monolog ein Thema präsentieren	Teilnehmende tragen ein Präsentation zu 5 vorgegebenen Folien vor	
3	Interaktion. Situationsadäquat reagieren	Feedback zur Präsentation bzw. reagieren darauf und stellen einander je eine Frage bzw. reagieren darauf	

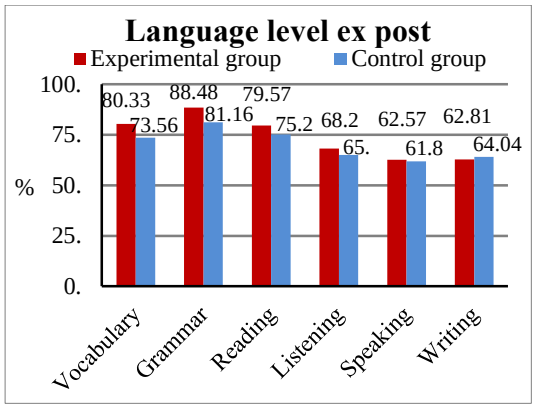
Tab. 1: Task types

Vocabulary and grammar were tested in two cloze tests taking into consideration the vocabulary and grammatical structures indicated in *Goethe-Zertifikat B1. Deutsch-prüfung für Jugendliche und Erwachsene. Wortschatz, Strukturen* (cf. Glaboniat et al. 2012). The grammar test consisted of an informal letter of approx. 100-120 words in which 10 words were removed. Students had to choose the correct multiple-choice option. Two points were attributed for each correct answer, zero for a wrong answer.

The vocabulary test also consisted of a cloze test of approx. 120 words with ten missing words. Each space had to be filled in by choosing the right one from a list of 16 words below the text, 6 of which were not necessary. Again, two points were assigned for each correct answer, zero points for a wrong answer.

The data of the ex post tests show that the threshold of 60% was achieved in all areas. Both groups reached the next level (B1).





	Groups	N	Mean	Standard deviation	Standard error of the mean
Vocabulary	Exp.- Gr.	26	73,08	1,222	,244
	Contr.- Gr.	26	69,20	2,661	,532
Grammar	Exp.- Gr.	26	80,24	2,990	,598
	Contr.- Gr.	26	78,08	4,847	,969
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	Contr.- Gr.	26	61,36	,810	,162

Groups	N	Mean	Standard deviation	Standard error of the mean
Exp.-Gr.	21	80,33	,966	,211
Contr. -Gr.	25	73,56	2,219	,444
Exp.-Gr.	21	88,48	1,209	,264
Contr.-Gr.	25	81,16	1,068	,214
Exp.-Gr.	21	79,57	3,880	,847
Contr.-Gr.	25	75,20	1,258	,252
Exp.-Gr.	21	68,29	3,566	,778
Contr.-Gr.	25	65,00	1,443	,289
Exp.-Gr.	21	62,57	1,832	,400
Contr.-Gr.	25	61,80	1,732	,346
Exp.-Gr.	21	62,81	,928	,203
Contr.-Gr.	25	64,04	1,594	,319

Figs. 7 & 8: Language level comparison: Ex ante versus ex post

In the vocabulary part, the experimental group (MV 80.3) again performed better than the reference group (MV 73), but there were significant differences in comparison with the pre-test: In the experimental group, the mean value increased from 73% to 80.3%, whereas it increased only from 69% to 73.38% in the control group.

The results of the grammar post-test also show a greater improvement in the experimental group (MV 88) in comparison with the control group (81%). Compared to the pre-test, the experimental group's value increased from an average of 80 to 88.4; whereas the control group increased from a mean of 78 to a mean of 81.

In reading comprehension the experimental group did better, albeit to a lesser extent. Compared to the pre-test results the experimental group increased from an average of 73 to 79.57, the control group from 71 to 75.

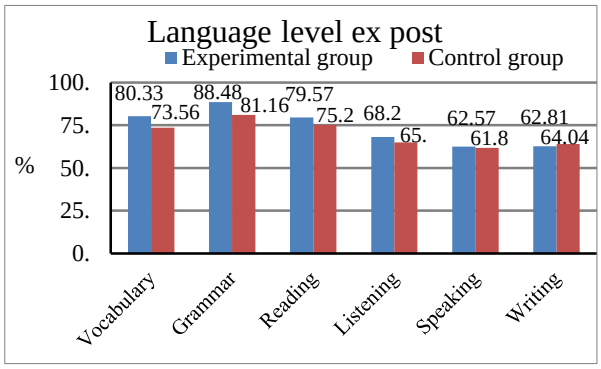
In listening comprehension, the experimental group was slightly better with a mean of 68.2, rising from an average of 62.4 to 68.2 as opposed to the control group (65 MV), rising from 62.9 to 65.

As to speaking, both groups were almost equal according to the post-tests (exp. gr 62; contr. gr. 61.8). Compared to the pre-test the experimental group increased from 60.48 to 62.57, the control group from 61 to only 61.80, i.e. virtually not at all.

In the writing part of the post-test, the control group performed better (64.6) than the experimental group with 62.8. Compared to the pre-test, the control group rose from 61.3 to 64.6. The experimental group improved hardly at all with an increase from 62.3 to 62.81.

6.3 Language level ex post

A t-test for independent samples showed a significant difference between the groups in the ex post test.



Groups	N	The mean	Standard deviation.	Standard error of the mean
Exp.-Gr.	21	80,33	,966	,211
Contr. -Gr.	25	73,56	2,219	,444
Exp.-Gr.	21	88,48	1,209	,264
Contr.-Gr.	25	81,16	1,068	,214
Exp.-Gr.	21	79,57	3,880	,847
Contr.-Gr.	25	75,20	1,258	,252
Exp.-Gr.	21	68,29	3,566	,778
Contr.-Gr.	25	65,00	1,443	,289
Exp.-Gr.	21	62,57	1,832	,400
Contr.-Gr.	25	61,80	1,732	,346
Exp.-Gr.	21	62,81	,928	,203
Contr.-Gr.	25	64,04	1,594	,319

Grammar (Mcontr.. = 81.16, SD = 1.07; Mexp. = 88.48, SD = 1.21, t(44) = 21.79, p < .001);
Vocabulary (Mcontr. = 73.56, SD = 2.21; Mexp. = 80.33, SD =.97, t(44) = 12.97, p < .001);
Reading (Mcontr. = 75.20, SD = 1.25; Mexp. = 79.57, SD = 3.88, t(44) = 5.32, p < .001);
Listening (Mconrtr. = 65.00, SD = 1.44; Mexp. = 68.29, SD = 3.56, t(44) = 4.22, p < .001).
Writing (Mcontr. = 64.04, SD = 1.59; Mexp.= 62.81, SD = .93, t(44) = -3.12, p < .05).
Speaking (Mcontr. = 61.80, SD = 1.73; Mexp. = 62.58, SD = 1.83, t(44) = 1.46, p > .05).

Fig. 9: Language level ex post

The research group fared significantly better in the following fields:

- Grammar (MVcontr. = 81.16, SD = 1.07; MVexp. = 88.48, SD = 1.21, t(44) = 21.79, p < .001);
- Vocabulary (MVcontr. = 73.56, SD = 2.21; MVexp. = 80.33, SD =.97, t(44) = 12.97, p < .001);
- Reading comprehension (MVcontr. = 75.20, SD = 1.25; MVexp.= 79.57, SD = 3.88, t(44) = 5.32, p < .001);
- Listening comprehension (MVcontr. = 65.00, SD = 1.44; MVexp. = 68.29, SD = 3.56, t(44) = 4.22, p < .001);

Interestingly, the control group did better and achieved a score higher than average concerning their writing skills; the difference could be considered significant. (MVcontr. = 64.04, SD = 1.59; MVexp. = 62.81, SD = .93, t (44) = -3.12, p < .05).

Finally, in speaking, no significant differences could be determined between the two groups. (MVcontr. = 61.80, SD = 1.73; MVexp. = 62.58, SD = 1.83, t(44) = 1.46, p > .05).

7. Language level difference

In order to measure the increased performance and the learning success within the group and between the groups, the difference was calculated from the results of the pre- and post-tests and arranged in descending order.

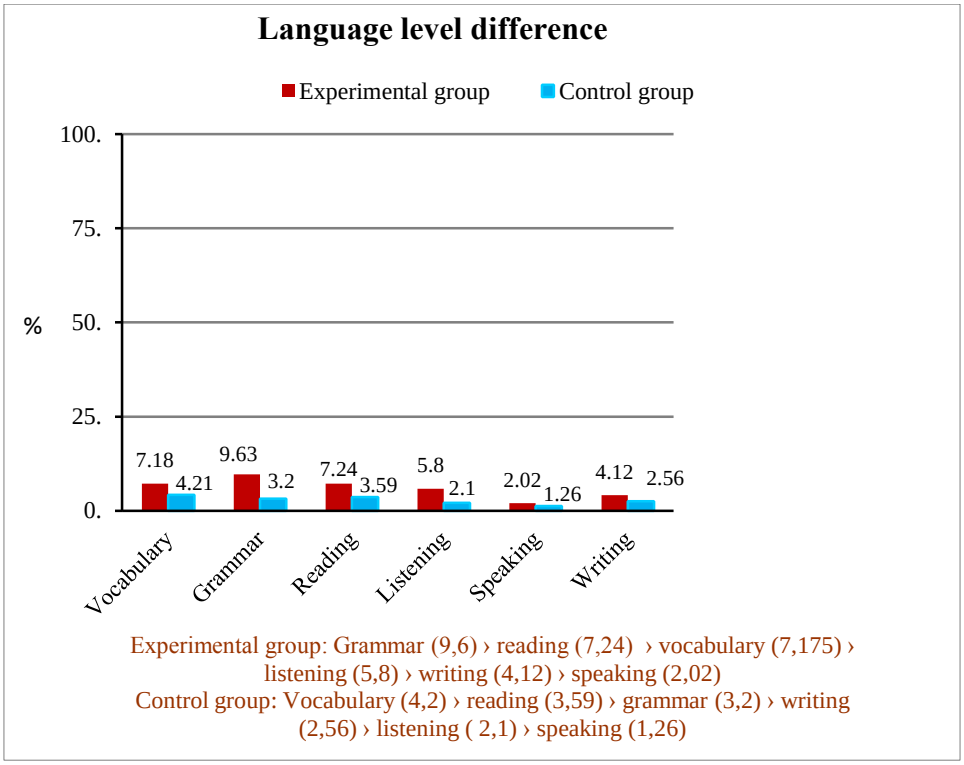


Fig. 10: Language level difference

The experimental group improved most in the field of grammar (9.6), followed by reading comprehension (7.24), vocabulary (7,175), listening comprehension (5.8), followed by writing (4.12) and finally speaking with the smallest value (2.02).

Within the control group, the vocabulary field (4.2) is the one with the greatest learning success, followed by reading comprehension (3.6), grammar (3.2), and writing (2.6). In listening comprehension (2.1) and speaking (1.26) success is far less significant.

8. Summary

In summary, it can be concluded that the described blended learning arrangement shows higher degrees of learning success than the traditional classroom learning, at least in the areas of grammar, vocabulary, reading and listening comprehension (cf. figure 11).

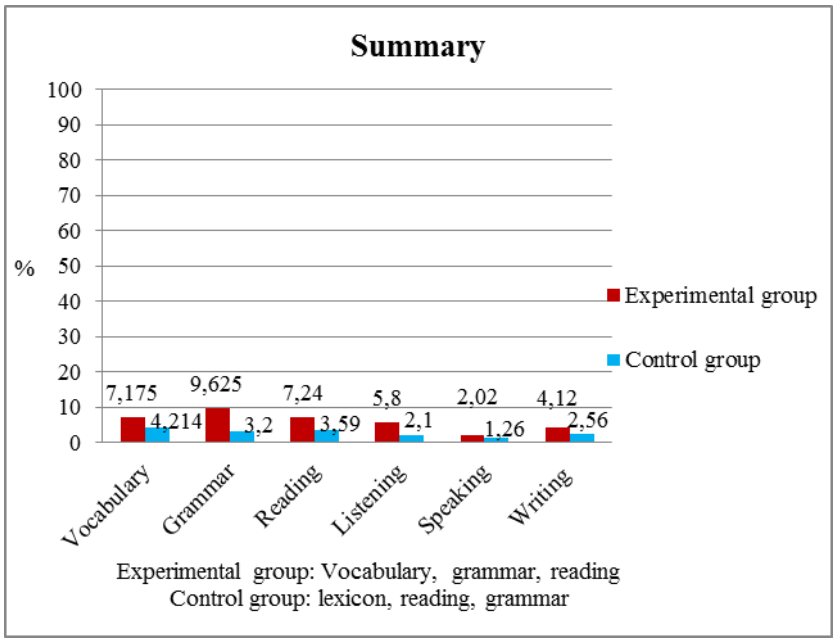


Fig. 11: Summary

This supports the hypothesis that learning success is promoted by assigning learning content of the different fields (grammar, reading comprehension, listening comprehension, and vocabulary) to media-supported self-study phases (see above), because it allows us to respond better to individual needs and interests.

Comparable results were obtained from studies in the following two years (2013/2014).

In the present case, however, the influence of a school learning tradition must be assumed, still placing grammar, reading comprehension and vocabulary work at the center of foreign language teaching. The results are probably due to that fact, since for vocabulary, reading comprehension and grammar the control group experienced a better learning success than for other areas.

Ultimately, it should be noted that the scope of this study includes only the university GFL lessons with italophone students at the average age of 21 years and cannot be cannot necessarily be generalised. Completely reliable conclusions can only be reached once a variety of groups and learning constellations have been studied, which points to the necessity of further studies in this area.

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Blended learning, Italian speakers, German as a Foreign Language