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Blending Academic and Professional Learning in a University Course for Future E-learning Specialists: The Perspective of Company Tutors

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Abstract: Blended learning usually refers to the combination of online/offline instructional methods. In this paper, we describe a university course in "E-learning Psychology" designed to blend not only modes of teaching, tools, and media, but also learning contexts; specifically, academic and professional contexts. To achieve an effective blend of learning contexts, students were monitored by academic and company tutors through an instant messaging app (WhatsApp). The unique contribution of the company tutor to the blending of academic and professional contexts is explored. By qualitatively analyzing (i) process data (four WhatsApp log chats) and (ii) self-report data (interviews with six company tutors), we found that the company tutor contributed to both the traditional blended dimension (mixing online and offline) and to the blend of the academic and professional contexts. When company tutors participated in the chat, students moved from an organizational dynamic, featuring chats monitored by only the academic tutor, toward a more collaborative and reflective dynamic. The company tutors considered the opportunity to blend academic and professional contexts as the best aspect of the course for both themselves as educators/company representatives, and for the students. This paper offers insights into the ongoing discussion about what blended is—or should be—and the role of company tutors in blending educational contexts.

Keywords: blended learning; company tutors; instant messaging; university students; group dynamics

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1. Introduction

Currently, the term 'blended' in relation to teaching and learning is used with increasing frequency. This trend could be attributed to educators and education systems exploring ways of working post-lockdown, after the imposed introduction of distance learning. Globally, all sectors of education have faced several waves of remote teaching to support educational continuity without face-to-face teaching. We have, therefore, witnessed an unprecedented use of digital technologies as a result of remote learning. But now many are starting to wonder what will remain of this digital experience. Will the platforms that we have begun to know—and perhaps even appreciate—be totally abandoned? Or, having developed digital skills, will teachers and students try to capitalize on them?

Those who favor this second possibility tend to invoke the blended learning approach [1]. Even before the imperative of distance education, blended learning was considered one of the top 10 trends to emerge in the knowledge delivery industry [2]. This occurs for many reasons. For instance, blended learning is considered to support inclusive education [3], sustain student motivation and self-efficacy [4,5], improve student learning [6], and promote innovation [7]. Given the renewed contemporary relevance of Blended Learning (BL), a clear definition is needed. In this paper, we first discuss a few

different ways of conceiving BL and subsequently, we articulate our position. Finally, we present an experience where our view of BL has been implemented in a university course with the support of an instant messaging tool, namely WhatsApp.

2. Theoretical Framework

'Blended' means 'mixed', so the concept of BL clearly involves the idea of taking different elements and putting them together to create something new that is greater than the simple sum of its parts. When applied to educational contexts, 'blended' mainly refers to mixing online and offline—face-to-face and digitally mediated teaching and learning. However, simply using elements of both online and offline learning is not necessarily Blended Learning (BL) [8,9]. For example, duplicating the same lesson face-to-face and remotely, either in real time or with the use of recordings, cannot be considered as BL. Rather, true BL is achieved when the online and offline elements integrate and enhance each other. If the educational offer remains unchanged in the two situations, there will be a mere substitution of activities and materials, just available in two different venues [10]. This cannot be called BL and often it generates confusion in students and difficulties for teachers in managing the educational experience.

Graham et al. [11] contend that genuine and effective BL requires a combination of different teaching and learning modes in addition to the mix of online and offline—from explicit teaching to different collaborative learning strategies. Further, a variety of technology is needed to deliver information and curricular content as well as to support different types of interaction.

Therefore, three elements are needed to achieve genuine BL [11]:

a. a combination of online and physical presence. This is the most popular conception of BL [12];
b. a combination of delivery tools or media used to provide information and to support interaction. Based on the increasing number of platforms, software and media available, this element is currently gaining great attention. Importantly, combining digital tools also require teachers and learners to accept various technologies [13];
c. a combination of different methods of instruction and teaching/learning. This is the most difficult aspect to realize because it implies that teachers and course designers should have a robust knowledge of the various educational strategies and that they understand which one is the best according to the affordance of the situation and to the specific learning goals [14]. Pedagogical knowledge is necessary to satisfy this requirement, and instructors do not always have it.

To synthesize the different models of BL we report in Table 1 a synthesis proposed by Galvis [15]:

Table 1. Overview of BL modes.

Dimensions of the Blend, Singh, 2003 [12]	Dimensions of the Blend, Galvis, 2018 [15]
Offline (face-to-face) and *online* (virtual) learning environments	*Spaces* (face-to-face, online, autonomous) and *time* (synchronous, asynchronous) for student-teacher-content *interaction*
Self-paced (learned controlled) *and live, collaborative learning* (among many learners)	*Pedagogy* (conventional, inverted) and *locus of control* (teacher, students, group)
Structured (formal) and *unstructured* (informal) learning	*Media* to attain knowledge (expository, active, interactive media)
Custom content (adaptive, flexible) and *off-the-shelf content* (generic)	*Learning experiences* (formal, non-formal, informal)
Learning (before a new job-task), *practice* (using job-tasks or simulation models), and *performance support* (Just-in-time coaching)	*Learning environments* (personal/networked, at work/at home, virtual classroom/physical classroom)

Source: Supporting decision-making processes on blended learning in higher education: Literature and good practices review [15].

BL has become particularly common in Higher Education (HE) [16]. The specificities of BL at this level of education can be classified into four macro-groups of concepts [17]. The first is *Social perspective,* which encompasses reconfiguration of space, time, and responsibility, individualization of education and promotion of educational equality [18]. The second is *Pedagogical perspective,* which proposes different teaching approaches based on several learning theories, included Community of Inquiry, Activity Theory, Project Based

Learning, Constructivism [19]. The third is *Technological perspective*, which focuses on the choice of tools and infrastructures based on specific teaching, learning and management purposes. Finally, *Organizational perspective* deals with the institutional factors supporting the adoption of a BL strategy.

Furthermore, BL in HE is not limited to the formal classroom (face-to-face and virtual classrooms) but also encompasses activities in additional learning spaces. Indeed, one of the affordances provided by digital technologies is the expansion and continuity of space–time in the learning environment [15]. According to Rossett and Frazee [20], BL occurs in formal (e.g., classroom), non-formal (e.g., work, communities of practice) and informal learning environments (e.g., media, websites), building on the strengths of each context. Moreover, Rossett and Frazee [20] highlight the facilitating roles of both humans (e.g., tutors) and digital technologies in education.

How to effectively blend different contexts has, to date, not been adequately interrogated. As such, this paper contributes to expand this scholarship by exploring another dimension of blending; namely, blending not only online and offline modes but different contexts and learning environments [21]. We suggest that effectively blending different contexts is challenging but necessary to support a more comprehensive and nuanced conception of contemporary BL.

A variety of contexts can be blended depending on the desired outcomes. For example, different levels of education can be blended creating a situation where students from, for instance, the final year of primary school collaborate with students from the first year of secondary education. In the present paper, we describe how university courses can blend with workplaces. We argue that blending educational and professional contexts in ways that are meaningful for the course, provides opportunities for students to practice what they have learned. Further, students' professional agency can be empowered by supporting the shift from being 'a student' to being 'a professional' [22,23]. Learning may also gain a playful and informal dimension [24], and learning strategies typical in non-school contexts can be imported into formal learning [25].

We contend that blending contexts enriches learning and that the extra support needed to develop an appropriate course architecture to incorporate this dimension is worth the investment of time. Our proposal is to have this element—mixing of contexts—included in the definition of BL alongside the already accepted element of mixing online and offline modes. To support our proposal, we present research that mixes both online and offline learning as well as contexts by mixing a university context with a professional context.

3. The Research

3.1. The Context of the Research

The educational context in this research is an "E-learning Psychology" course at the University of Bari (Italy). The course is part of a master's degree aimed at preparing experts in human resources. This course has already operated in a blended format (i.e., online and offline) for more than 10 years [26]. The blending with professional contexts emerged progressively throughout the various iterations and has been crucial to the success of the course. The professional context this course blends with the university context is the job market connected to e-learning; this is particularly relevant for the future employment of course participants. As such, e-learning companies are invited to join the course and, over the past decade, have become increasingly involved in the course design, offering suggestions about the syllabus and helping instructors to enhance the practical aspects of the course by sharing their professional expertise. The connection between this course and the e-learning companies has become a flagship for the entire program. Figure 1 provides an overview of the course structure.

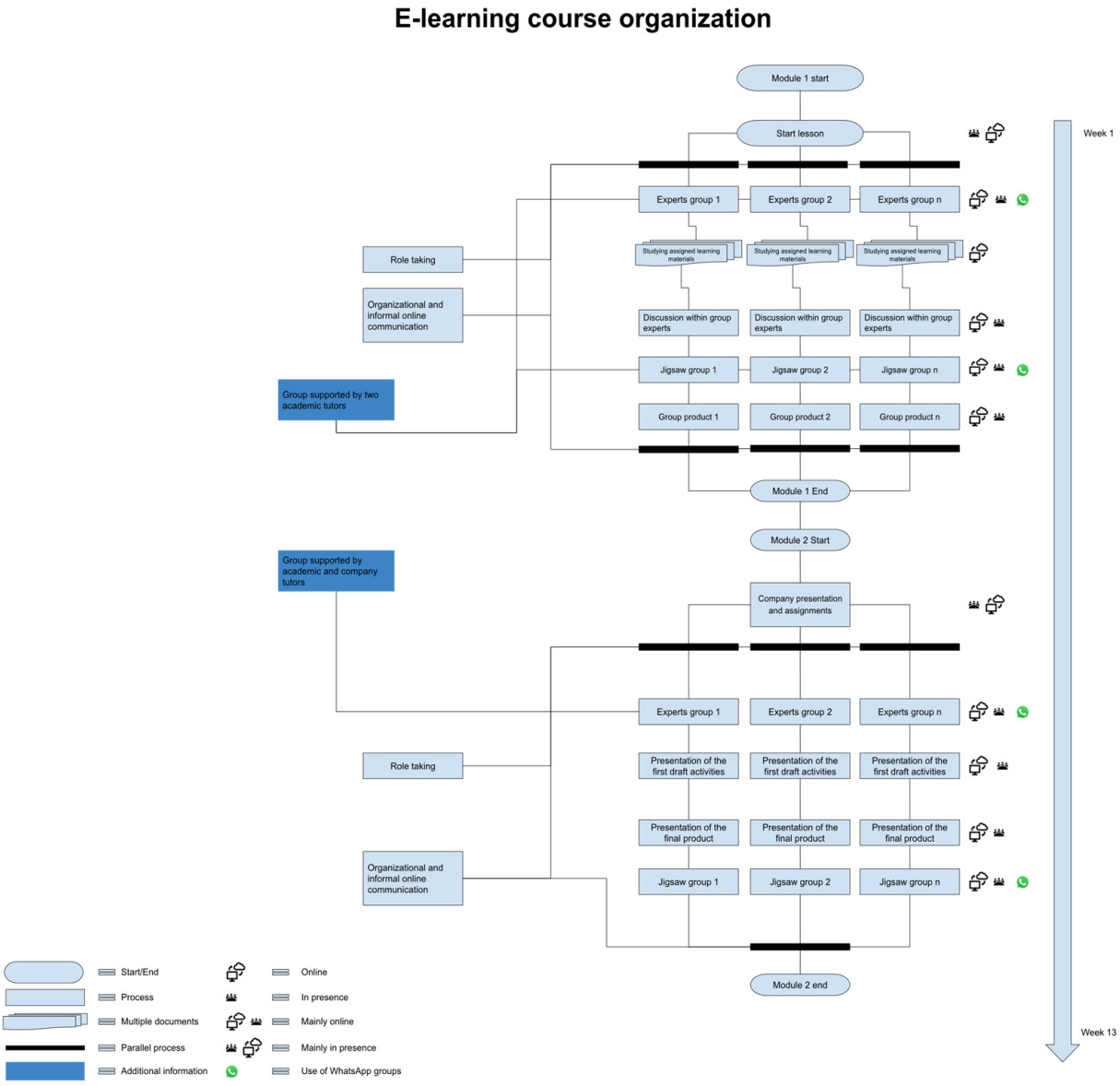

Figure 1. Structure of the course.

The 13-week course is divided into two modules: module 1 (M1) covers the curricular content, while module 2 (M2) focuses on activities designed and performed in collaboration with companies operating in the e-learning market [27]. Students are supervised by two types of tutors: academic tutors and company tutors. The former are volunteer students from previous course iterations who are interested in extending their e-learning expertise. They are purposely trained to guide the students through the course activities and to mediate relationships between students, teachers, and company tutors.

Each company appoints a tutor. This could be the main manager of the company or an employee. In any case, this tutor is only involved in M2. He/she is required to provide a business-oriented perspective and to guide the students in developing the company-based tasks assigned to them.

M1 starts with a face-to-face lecture that ends by negotiating a challenging and motivating research question that guides all subsequent activities. The pedagogical models inspiring this activity are progressive inquiry, collaborative problem solving, and professional knowledge-building [28,29].

Educational materials are assigned to the so-called 'expert' groups. According to the Jigsaw method [30], this type of group allows students to became experts in a particular aspect of the course. In a web-forum, each expert group discusses the educational material assigned. When this phase is concluded, expert groups are dissolved and 'Jigsaw groups' are formed by students who each comes from a different expert group. The Jigsaw groups illustrate their response to the research question (defined at the end of the lecture) by collaboratively designing a conceptual map (e.g., by using Google Drawings).

M2 sees active involvement of the companies. The overall goal is for students to put into practice what they had learned in M1. Companies introduce themselves either in person—when possible—or through videoconferencing, and they invite students to collaborate on a product that will be included into their catalogues (see Table 2 for some examples). M2 has the same structure of M1; however, expert groups now work with a specific company, with the support of both company and academic tutors, while Jigsaw groups compare the different company products and modes of working.

Table 2. Companies and their objects.

E-Learning Company	Objects to Build
Nuvolar	Quick reference guide for the Nuvolar application
Osel	An online course on emotional intelligence
Grifo Multimedia	A Serious Game design
Gruppo Pragma	A course concerning antitrust law
Lattanzio Learning	A MOOC based on existing OERs
Mosaico Learning	A learning object with Articulate

Academic tutors supervise all the groups. They are expected to provide three kinds of monitoring: organizational (e.g., monitoring deadlines), didactic (e.g., supporting reflection on the educational materials and on the connections among concepts in order to finalize the conceptual maps), and technological (e.g., providing suggestions about what technology to use for a specific group's purpose). Company tutors monitor the expert groups in M2.

The interactions between students and tutors are supported by WhatsApp. In M2, each expert group participates in two WhatsApp chats: one monitored by only academic tutors, and the other by both academic and company tutors. We chose WhatsApp because its popularity and widespread adoption did not require students train for its use. Furthermore, some studies have found that WhatsApp greatly contributes to increasing students' learning outcomes [31,32].

3.2. Research Questions

In previous experience, we found that both academic and company tutors acknowledged the advantages of blending university and workplaces practices. Hytönen and colleagues [33] also questioned what kind of instruction academic tutors and tutors from workplaces should give and what type of relationship they should establish with the students. Despite the value of this research, the process through which the company tutors support the blending of the contexts is not yet clear. In particular, in this paper we explore the company tutor perspective, considering how this type of tutor interacts with students and introduces a professional viewpoint, and how these dynamics are received by students. Specifically, the following research questions will be addressed:

(1) What differences are evident in the collaboration process when comparing WhatsApp logs with and without company tutor participation?
(2) How do company tutors describe their contribution to the process of blending academic and professional contexts?

3.3. Corpus of Data and Participants

In selecting our data, we opted for a limited number of chats for two reasons. First, this is an exploratory study and the analytic tools need to be purposely developed. Second, the discursive nature of the data requires a qualitative approach which is time consuming.

The two companies selected—GruppoPragma (G) and Lattanzio (L)—presented the richest chats, compared to the logs produced by the chats involving the other companies. To distinguish the chat-logs with and without the company tutor, the logs with only the academic tutor are marked with 1, and the logs where the company tutor was also present are marked with a 2. There were 13 participants in total: seven students (G = 3; L = 4; F = 5; M = 2; average age 24); four academic tutors (F = 2; M = 2; aged from 25 to 30), and two company tutors (F = 1, M = 1; aged from 30 to 45). Table 3 presents a synopsis of the chats data.

Table 3. Synopsis of the chat data.

	Number of Characters	Number of Posts	Number of Posts by Tutors	Unit of Analysis
G1—only academic tutor	50,606	617	Academic: 257	40
G2—academic tutor + company tutor	32,600	346	Academic: 47 Company: 70	47
L1—only academic tutor	10,073	123	Academic: 35	15
L2—academic tutor + company tutor	82,684	640	Academic: 88 Company: 283	73

To support our interpretation of the chats, we interviewed all company tutors involved in the course. The interviews were conducted using the mirroring technique [34]. In this approach, the interviewer formulates general questions and deepens participant responses by reformulating and recapping the responses. Interviewers were purposely trained in this technique and they were familiarized with the aims of the research. During the interview, the company tutors were asked to talk about: (a) their tutoring experience throughout the course and their tutoring style; (b) which strategies they used to manage the group; (c) how decisions were made within the group they monitored; (d) the reasons their company decided to participate in the course and the benefits they see from this experience; and (e) how they see the interconnection between university and the business world. Table 4 reports the duration and the number of units for each interview. We describe how the units were defined in the paragraph that follows.

Table 4. Synopsis of the interview data.

	Unit of Analysis	Duration
Interview 1—Gr	29	9′25″
Interview 2—L	33	20′26″
Interview 3—G	26	21′07″
Interview 4—M	28	22′29″
Interview 5—O	31	57′07″
Interview 6—N	33	21′34″

In synthesis, our corpus of data comprises:

- Four WhatsApp chats logs produced during M2: two chats with the academic tutor and two where the company tutor was also present;
- Six interviews with company tutors, used to support the interpretation of the group chat dynamics.

3.4. Data Analysis

Log-chats and interviews were analyzed through qualitative content analysis [35]. The first step was to identify the units of analysis, defined as "an idea, argument chain or discussion topic" [35], p. 31 Second, an iterative approach involving several rounds of reading was adopted to code the data. Two different coders worked on a small sample of data (about 25%). Codes developed independently in the first instance were then compared. Divergences were discussed with a third coder until resolved. In each round of analysis, the sample of data analyzed became larger until the whole set of data was coded. Inter-coder

reliability for the interviews (Holsti index 89.1%) and the chat-logs (Holsti index 88%) was high enough to provide a good level of reliability. At the end of the analysis cycles, we had a grid of categories—reported in Table 5—which we applied to both the log-chats and the interviews, with just one exception. In analyzing the interviews, we added an extra-category useful to our research aim: the blending of university and professional contexts, which we called blending contexts. This category emerged in the interviews as a result of direct questioning, but it did not appear in the log-chats because the communication was focused on the objects being built.

Table 5. Grid for content analysis.

Macro-Categories	Categories and Description
Decision making	*Goal influence*: References to the goals when a decision has to be made
	Task-structure influence: Reference to task structure when a decision has to be made
Role organization	*Students role*: Reference to students' roles taken as group organization; for instance students may be in charge to find more information or to synthesize the work done
	Relation with academic tutor: Reference to the relation with academic tutor
	Relation with company tutor: Reference to the relation with company tutor
Interdependence	*Conflict:* Conflicts within a group or across groups
	Collaboration: Supportive and collaborative interventions towards other students, might they belong to the same group or not
	Organization: Intervention aims at defining how to organize the work; for instance establishing deadlines
	Strengths/opportunities: Comments about strengths and opportunities of the learning context
	Challenges/weaknesses: Comments about strengths and opportunities of the learning context in general
Blended	*Traditional Blended:* Reference to the relation between online and F2F dimensions
	Blending contexts *: Someone refers to the cross-fertilisation between academic and professional knowledge, competences and practices
Psychosocial dynamics	Any other individual or collective process not included into the previous categories

* Used only to analyze the interviews.

We coded each unit of analysis through a no-mutually exclusive approach. This means that a unit is coded with as many categories as are appropriate. The software Atlas.ti was used to retrieve the category's distribution in both chat and interviews: the Occurrence (O)—how often a category appears within the chats. Occurrence results were reported as a percentage. On the interview data, we performed a second level of analysis named co-occurrence (C)—which indicates how often two categories occur together in the same units of analysis. This analysis was used to deepen the understanding of the company tutors' self-reflection and to explore possible relationships among the identified categories. Co-occurrence results are reported through the c-coefficient calculated as follow: $c = n12/(n1 + n2 - n12)$. The c-coefficient indicates the strength of the relation between two categories, similar to a correlation coefficient [36].

4. Results

We first reported the results of the log-chats produced through WhatsApp by collapsing all four chats—with and without the company tutor. Subsequently, we contrasted those chats with both types of tutors, and with those chats managed by only the academic tutor. Finally, we more closely interrogated some interesting aspects that emerged during the interviews.

4.1. Using Instant Messaging Communication

When looking at the whole set of data produced by the chats, we found that the macro-processes with the highest occurrence are: Interdependence (O = 36.3%), Role

organization (O = 23%) and Decision making (22.7%), followed by Psychosocial dynamics (O = 11.2%) and Blended (6.9%). Within the Interdependence macro-process, Organization and Collaboration are the two most frequent categories, while Strengths/opportunities and Challenges/weaknesses are slightly less frequent. Concerning Role organization, we found that the category Relation with the academic tutor (O = 14.5%) exceeds both the Relation with the company tutor (O = 5.4%) and the Student role (O = 3.1%), suggesting a centrality of the role of the academic tutor. The Decision making is mainly composed of the Goal influence (O = 13.8%) and, to a lesser extent, of the Task structure influence (O = 8.9%). These results are synthesized in Figure 2.

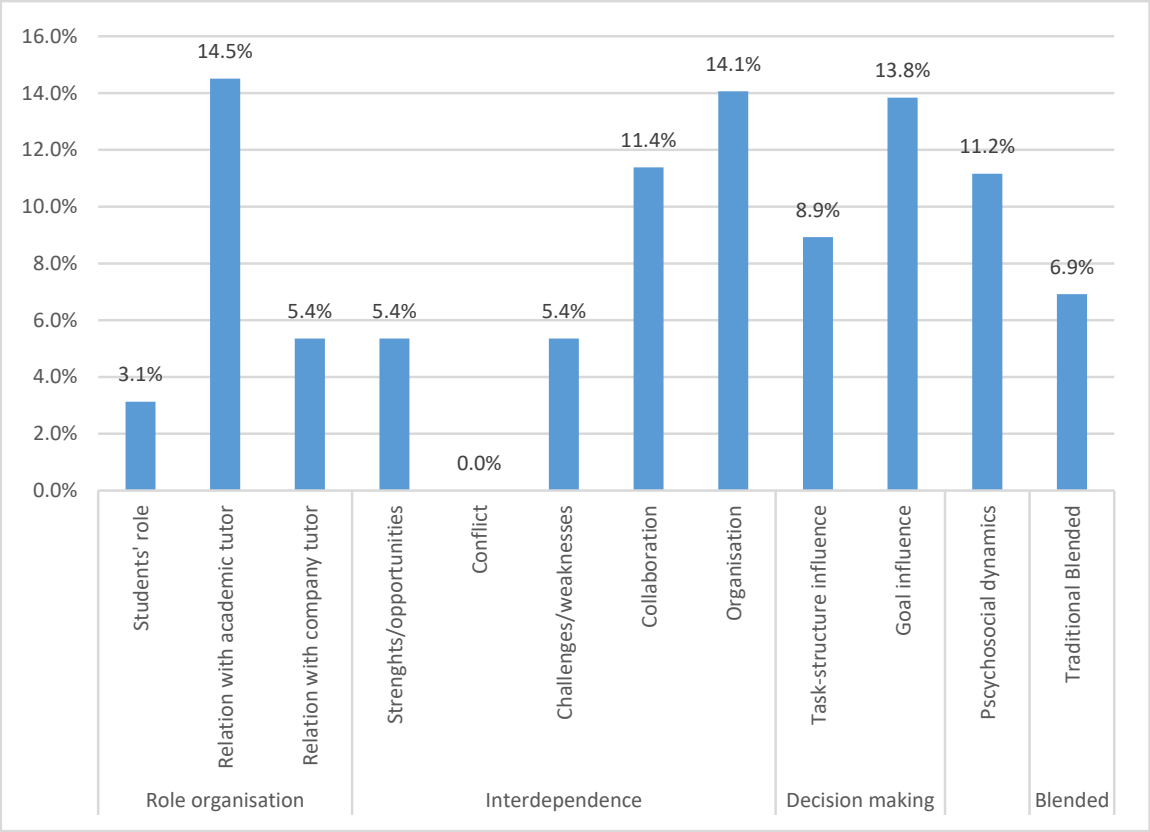

Figure 2. Occurrence analysis all the chats (G1-G2-L1-L2).

In short, academic tutors occupy a relevant role in the chats. This result is probably due to the presence of this type of tutor in all the chats; nevertheless, it is interesting to see the higher frequency of this category (14.5%) compared to the company tutor (5.4%). Further, we notice that the WhatsApp communication is mainly dedicated to organizational issues (14.1%), is structured by the goals (13.8%), and triggers collaborative strategies (11.4%).

To consider the impact on the chats of the company tutor, we now turn to comparing the two types of chats.

4.2. The Company Tutors' Specificity

We now compare the two chats that included only the academic tutors (G1, L1) with the two chats where both academic and company tutors participated (G2, L2). The main difference we found relates to the category Collaboration, included in the macro-category Interdependence. This category is higher in the chats with both tutors (O = 6.7%) and it is lower in the chats with only the academic tutor (O = 4.7%). On the other hand, the category Organization is higher in the chats with only academic tutors (O = 7.6%) and it is lower in the chats with company tutors (O = 6.5%).

Three categories were higher in the chats with both tutors than with only academic tutors: Strengths/opportunities (O = 4.2% vs. O = 1.1%), Challenges/difficulties (O = 3.8%

vs. O = 1.6%) and Student role (O = 2.2% vs. O = 0.9%). Even the Traditional Blended is higher in the chat with both tutors (O = 4.5%) than in chats with only the academic tutor (O = 2.5%). Figure 3 displays these results.

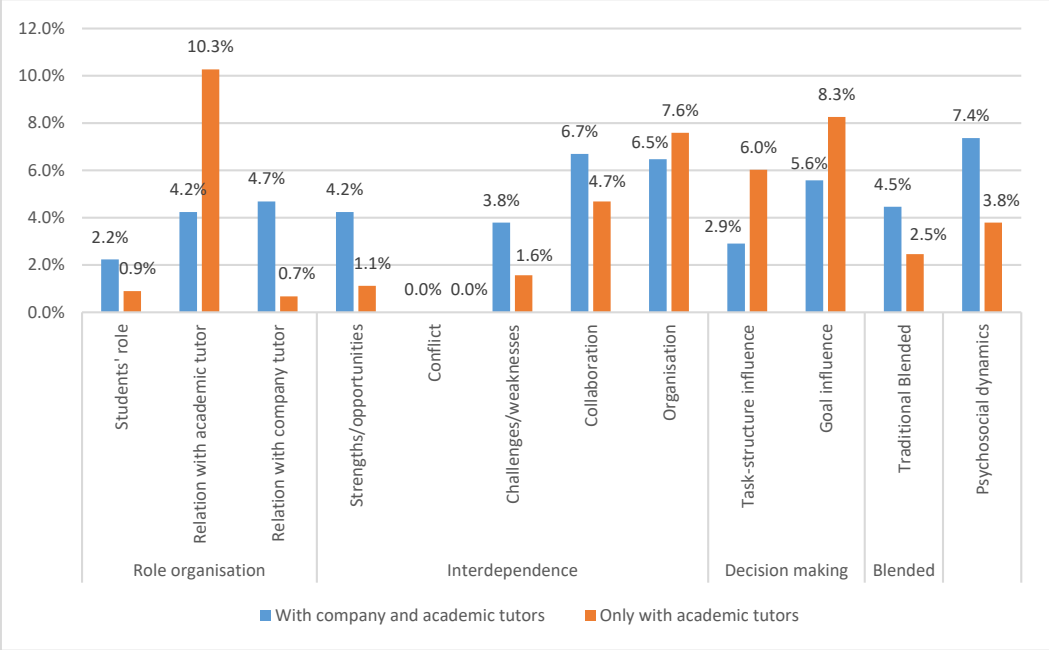

Figure 3. Comparing occurrences in chats with only academic tutors (G1-L1) vs. chats with both academic and company tutors (G2-L2).

The results suggest that the company tutor makes the collaborative dynamics more relevant compared to the organizational dynamics, and emphasizes the student role and the meta-reflection on both strengths and challenges. Moreover, the traditional blending of the offline and online components, to which participants explicitly refer into the chat, is higher in the chat with company tutors. This is well represented in the following excerpt, in which the L2 company tutor is referring to the presentation of the final product of the M2, which usually happens in the physical classroom at the university (see Figure 1).

Excerpt 1. Reference to traditional blended.

Company tutor: *Please let me know how the presentation is going*!
Student 1: *Of course! Tomorrow we will have to start preparing ourselves. It's the 29th. Thanks again.*
Company tutor: *If you share with me a video recording of the presentation on the 29th, I'm even happier ☺ so I can see you at work*!
Student 1: *We'll do it*.

The company tutor asks to video-record the presentation in order to collect more evidence of the students' work. This excerpt shows that even if the participants explicitly refer to "traditional blended" (combination of online/offline; combination of tools and media), they also implicitly move toward a blending of the contexts. In the next paragraph, we will see how this dimension became explicit in the interviews with company tutors.

4.3. Companies Tutor Perspective: The Interviews

For a more nuanced interpretation of the results gathered through the chat analysis, we closely looked at the interviews with the company tutors through the same coding grid, with just the addition of one category, aimed at shedding light on the relevance of blending contexts.

From the analysis of the interviews, the macro-processes have the following occurrences: Role organization (O = 38.8%), Interdependence (O = 26.6%), followed by Blended (O = 17.8%), Decision making (O = 13.7%) and Psychosocial dynamics (O = 3.1%). Within the macro-category Role organization, Relation with the company tutors (O = 17.8%) and Student role (18%) are the most frequent, while the academic tutors are infrequently mentioned by the company tutors (O = 3%). Within the Interdependence macro-category, company tutors focus most on the Strengths and opportunities (O = 14.7%), while Decision making is mainly based on the Task structure (O = 10.9%) (see Figure 4).

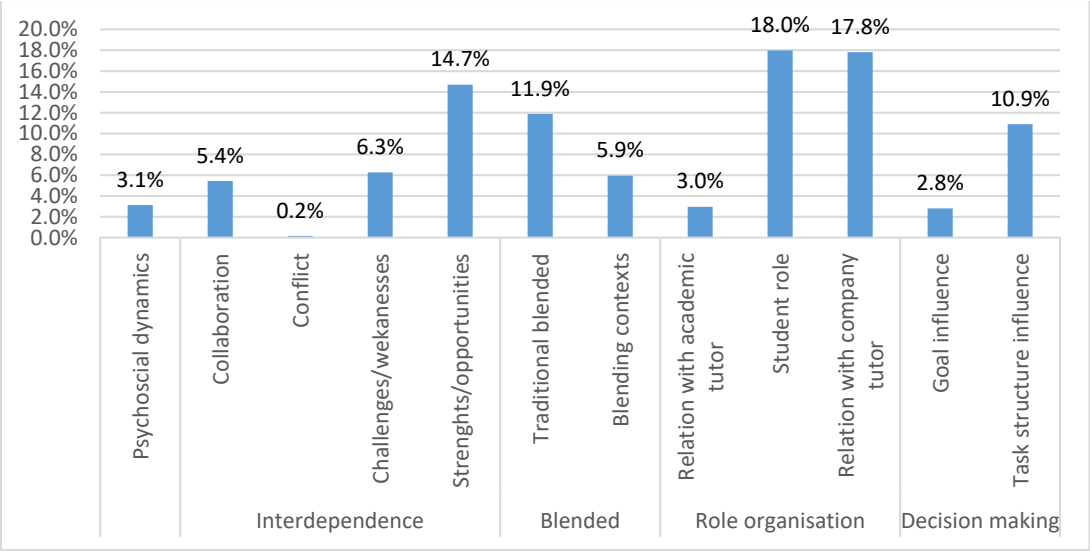

Figure 4. Occurrence analysis of the company tutor interviews.

To explore possible relations among the most mentioned categories, a co-occurrence analysis was run (see Table 6).

Table 6. Co-occurrence emerged from the company tutor interviews.

	BC	COLL	TASK	GOAL	TB	OPP	STUD	COMP_TU	CHAL
BC	0.00								
COLL	0.21	0.00							
TASK	0.07	0.18	0.00						
GOAL	0.06	0.16	0.20	0.00					
TB	0.05	0.11	0.25	0.06	0.00				
OPP	0.36	0.26	0.22	0.10	0.26	0.00			
STUD	0.20	0.19	0.54	0.16	0.37	0.46	0.00		
COMP_TU	0.17	0.17	0.34	0.12	0.29	0.37	0.57	0.00	
CHAL	0.14	0.18	0.27	0.20	0.32	0.20	0.26	0.22	0.00

Legend: BC = Blending contexts; COLL = Collaboration; TASK = Task structure influence; GOAL = goal influence; TB = Traditional Blended; OPP = Strengths and Opportunities; STUD = Student role; COMP_TU = company tutor role; CHAL = Challenges and weaknesses.

The strongest co-occurrence is between Student role and Relation with the company tutor (C = 0.57). Also, Student role and Task-structure influence (C = 0.54) presented a rather strong co-occurrence. Slightly lower is the co-occurrence between Student role and Strength and opportunities (C = 0.46). Interestingly, this latter category also co-occurs with Relation with the company tutor (C = 0.37), and the opportunity for Blending contexts (C = 0.36).

We interpret this group of co-occurrences as demonstrating that the relation between students and company tutors supported effective blending of the learning contexts. The opportunity to blend academic and professional contexts is perceived by company tutors as one of the greatest strengths of the course. The relation between those categories is well represented in the following excerpt:

Excerpt 2. Blending academic and professional contexts.

Company tutor 1: *Involving students in the business process enriches us because, of course, they are aware of all the theoretical and academic innovations and, at the same time, we bring our business experience*.

The traditional blending was reported both as one of the most significant challenges and weaknesses (C = 0.32), but also a strength and opportunity (C = 0.26). Traditional blending also strongly co-occurred with the student role (C = 0.37) and company tutor role (C = 0.29).

Analyzing the interviews, different reasons may explain this co-occurrence. There is a practical reason: the companies' locations were across the whole national territory; therefore, the tutors acted more online than face-to-face. As such, the online components of the tutoring were higher than the presence component. In the academic year 2019-2020, from which these data were collected, the online presence was exacerbated by the pandemic, reducing not only the students' opportunity to meet the company tutors in person, but also to work face-to-face with their peers.

The company tutor interviews disclose what it means for them to blend contexts. Many gave interesting explanations. For instance, one company tutor declared: "I think the key is mutual enrichment". This sentence reflects the concept of mixing contexts as it alludes to an enriching exchange of information between university and the workplace. We came across this concept repeatedly in other interviews. As another company tutor mused: "Let's say that for university students who are approaching the world of work for the first time, certainly also the simple fact of having to deal with the corporate reality ... let's say that the university world remains quite muffled in its own world ... Being in touch with the business realities gives them some food for thought."

Based on these statements, we contend that the main advantage for companies is to be in touch with theoretical innovation and have the opportunity to contribute to new generation training. In exchange, they offer a sort of bridge for students in their trajectory towards the workplace. Academia is perceived as "closed into itself" and they want to "help young people to understand the dynamics of the world of work" tasting "the pleasure of passing on what you know. If you learn something and you keep it to yourself it's not nice. Being able to make another person grow is a privilege."

Company tutors claim their capability to train learners by offering their professional insights and experience. This commitment has a reverse side: "Surely getting to know young talents is a useful and beautiful thing. In the group I met, there were valid girls who in the future may also have an interest in continuing the experience with us"; "There is always the possibility to continue the collaboration with students later, because we are a company that is always growing and, for us, it is useful to know that there are new recruits who are well trained by the university and who have already had an experience with us, who already know a little about how the company works." Companies are scouting for young talent and benefit from the opportunity to spot the most suitable future collaborators.

Some company tutors felt they were not sufficiently prepared to provide full online tutoring; similarly, they recognized that working totally online was a limitation, also for students. However, as can be inferred in the following excerpt, some tutors considered this challenge an opportunity to improve their tutoring strategies in the future.

Excerpt 3. Challenges of working online.

Company tutor 2: *Let's say working remotely is more ... more complicated than face-to-face. So in the future I would structure the contents of online meetings in a different way from a face-to-face mode of lesson ... in any case it was a challenge different from the usual ones and then ... and there is always room for improvements... I would create perhaps a little more interactive contents which allow students to exchange their ideas in the groups*.

5. Conclusions

This paper proposes to introduce a new element into the definition of BL. We contend that the traditional vision of blended (i.e., mixing online and face-to-face, several types of technology and educational methods) should be enriched by also including the mix of learning contexts. To unpack this aspect, we analyzed a situation where a formal education context meets the professional world, under the umbrella of a purposely designed course. Specifically, the perspective of the company tutors was analyzed and how the professional viewpoint they introduced is received by the students.

As a meeting place between university and professional contexts, WhatsApp was introduced and this digital space was monitored by two types of tutors: academic tutors and company tutors. Two kinds of WhatsApp chats were used: one with the exclusive presence of academic tutors and the second one with both tutors present. The reason for having these two types of chats was to offer students the opportunity to fully express their learning needs and challenges. In the first chat, they could discuss issues connected to the whole course with the academic tutor; in the second type of chat, students could focus on the construction of an object proposed by the company. The relevance of having an online tutor is already widely proven to be effective [37–39]. In this research, we follow-up on the suggestion coming from Hytonen [33] to investigate how company tutors can support the contextual blending between formal university education and workplaces.

Through qualitative analysis, chat-logs of four chats and six tutor company interviews were analyzed. The results suggest that groups monitored by both types of tutors produce more collaborative communication that reflects on strengths and opportunities as well as challenges and weakness. Students moved from an organizational dynamic when only academic tutors were present, to a collaborative dynamic that supported student reflection when both types of tutors monitored the chat. With the presence of only company tutors, participants more frequently mention the blending of offline and online components. In some interviews, the company tutors explicitly mention that the "traditional forms of learning" should be revised and they acknowledge they should provide additional support for the blending of the contexts, as they recognize its value. Similar research [40] has already highlighted that the tutor can provide an important scaffold for progressive inquiry reasoning, detected by comparing groups tutored online versus groups not tutored online. The former was found to produce more messages that supported high quality inquiry processes.

In this research, we investigated the structure of the communication more closely and found that the tutor presence allowed a convergence mechanism to emerge, demonstrated by the absence of conflict dynamics across the four chats. This could be explained by the pressures students felt to find consensus before approaching the company tutor [41]. The impression is that they wanted to appear cohesive and talk to tutors with one voice, especially with company tutors who students probably perceived as potential future employers. We suspect that students probably used other spaces to explore and compare different ideas in advance, such as face to face or private online groups. This impression is confirmed by a few interviews. For instance, a company tutor stated: "I think once they reached an agreement, they reported the decision in the chat with the tutors ... well ... I think the group I followed met in another space". Another tutor openly specified that: "The students said they had talked to each other frequently . . . they reported that they conferred with each other in advance and they made decisions prior to entering the chat with me. I did not ask where and whether a tutor was present or not... they haven't specified it ... in any case I felt it was a good thing. Surely I will improve the instruction to give them to perform the task but students are able to find their own form of autonomy; I think this is indispensable ... they have to leave the nest, right? "

This company tutor seems to grasp the logic inspiring students' private discussions prior to entering the chats. She considers this positively, as a sign of students' autonomy, acting as adults ("leave the nest"). Further research investigating these private spaces of

peer-interaction as a preparatory step before encountering a company tutor can offer new insights into how students perceived the blending of contexts.

From the company tutor interviews, the central role of the academic tutor identified in the whole corpus of the chat did not emerge. These results are in line with previous studies which found that, even in cases where the guidance succeeded well or moderately well with both company and academic tutors, the two contexts were perceived as separate by both tutors and students [33]. In this sense, we believe the way we orchestrated the course improves tutors' awareness of this type of blending.

Based on our results, we propose to add a further element—namely the *Contextual* perspective, to the four perspectives singled out by Castro [17] —*Social*, *Pedagogical*, *Technological* and *Organizational*. This element, featuring BL in HE, refers to the connection to a different but related context, able to enrich the students' learning experience. Adding this dimension would support even greater expansion of the space–time environment, possible under two conditions: (i) having tutors prepared in monitoring the students; and (ii) using digital tools (such as WhatsApp) that are accessible and easily deployed by all participants [42].

Blending contexts can be a reciprocal positive experience, different from boundary-crossing but also with some similarities. In boundary-crossing, the contexts are often situated entirely in professional work [43], whereas in our case we connected formal education with the workplace. Further, boundary-crossing is an unstructured learning process, whereas we consider the role of tutors crucial for blending contexts. Finally, the ultimate scope of boundary-crossing is to generate innovation [44] while blending contexts retains an educational function and, as already stated, it has to be considered an enriching element of the blended approach.

Finally, as stated by Adam and Nel [45], we agree on the relevance of a finer understanding of preparing and planning a blended course, as well as appreciating the consequences in terms of effects on learning and perception of the learning experience. In this sense, our research highlights that a complex architecture needs to be mastered and continuously monitored. However, while adding a new element makes it more complex, it is also more rewarding.

6. Practical Implications and limitations

Our study offers a few practical implications. First of all, it is clear that to blend contexts it is crucial to have roles such as tutors. The teacher/instructor should dedicate some effort in training the academic tutors and make clear what is required from the company tutors. This may appear as extra work but, if well done, it would help a smooth progression of the activities. Furthermore, students should be aware from the outset of the course that the blended approach requires a wider range of learning approaches. In addition to standard learning from textbooks, students must be ready to learn from discussions and group activities (also online) where they will meet also professionals. Therefore, digital skills are required as pre-requisites. To support students to develop the necessary levels of digital skills, it is advisable to allow time for students to become familiar with the technologies adopted within the course. In our case, we think of Module 1 as a safe warm-up environment for Module 2, before encountering the companies.

A second recommendation concerns choosing which digital technologies will best support the blending of contexts. In line with other research [46], our work has shown that having a tool familiar to the participants helps the blending of different contexts. Options include informal instant messaging tools (e.g., WhatsApp) or more professional based chat tools (e.g., Slack, Microsoft Teams chat, Discord). Moreover, digital technologies can be exploited to collect evidence of the students' learning. This evidence can be used both by the teachers for assessment, as well as by company tutors, who are interested in the opportunity to recruit students.

We also gathered a few recommendations for the academic tutors. Academic tutors should promote a professional mindset by clearly presenting the processes involved in the collaborative activities. They should make clear their appreciation for students' autonomy

and initiative. Students may feel in awe of interacting with company representatives, and this could refrain them from taking risks by voicing their views. As such, academic tutors need to encourage students to engage with company representatives by fostering the right confidence and communication skills.

The research we present has many limitations, mostly due to the ecological nature of the research design. In collecting the data, our scope remained largely educational, so our efforts were directed at guaranteeing an optimum learning experience for the students. Therefore, the conclusions of our results remain confined to the specific situation of the course. Nevertheless, we believe our results can offer some insights and contribute to the ongoing discussion about what blended is—or should be—and the role of company tutors in blending contexts.

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