Simulation as a Game-based Experiential Technique in English for Professional Purposes: Implementation and Evaluation

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The goal of this paper was to explore how effective simulation as a game-based instructional method is in teaching English for Professional Purposes. It explains the creation, implementation, and assessment of the Company Simulation, a social epistemic simulation game in which students act out roles in a predetermined scenario and learn about the concepts and relationships of the business world while immersed in a classroom-created micro-world. Students complete tasks that mimic real-world professional tasks by navigating a complex web of interactions and transactions. A students' perceptions questionnaire has shown that the simulation was unequivocally thought to be relevant, enjoyable, and useful. It has also helped participants acquire specific language, social, and domain competences and skills in a collaborative environment offering abundant learning opportunities, thus bridging the academia and industry gap and helping students develop 21st century work-related skills in a meaningful, integrated, and purposeful way.

1   Introduction

For successful professional communication and integration in the modern globalized and high-tech workplace arena future graduates need to possess an intricate set of skills and competences In order to effectively prime students for the ever-increasingly sophisticated world of work, today's educators are faced with the challenge of creating not only meaningful and relevant learning environments, but also ones that are pertinent to the new generations of learners born into a digitally-wired world. The new protagonist of the 21ˢᵗcentury educational scene, the new learner is a game player, experienced problem-solver and effective navigator in the world of networked information. The new learner has an exploratory and playful learning style and expects the learning space to be interactive, personalized, authentic and co-creative, as well as enjoyable and entertaining (Prensky, 2001; Veen & Staalduinen, 2009; Veen, 2007).

These complex demands necessitate a critical approach to existing teaching practices and the re-tuning of the instruments of education in order to "sync up learning to the new rhythms of the 21ˢᵗ century" (Trilling et al., 2009, p. xxviii). Teachers should evolve into architects of learning experiences, game designers and game masters, able to design pedagogically and theoretically sound, yet enjoyable learning experiences.

This paper sets out to explore and test simulation as an instructional format in teaching English for Professional Purposes. Strongly rooted in the game-based learning paradigm, simulation lends itself easily to creating not only relevant and meaningful learning tasks, but also ones that have a strong game element, introducing excitement and challenge into the learning experience. Following the introduction providing the motivation and context for the implementation of this project, the most important theoretical and methodological tenets of play- and game-based learning and simulation as a technique are introduced. A brief description of the design and implementation of the Company Simulation in teaching English for Business Purposes is provided, followed by the discussion of the research study results, the challenges of game-based learning and concluding remarks.

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2   Play- and game-based learning – an overview

Inspiration for 21st century teaching and learning challenges might be found in the world of play, tapping in its infinite potential and harnessing its captivating power. Play is a universal and primordial phenomenon accompanying human societies from times immemorial, regardless of their economic and cultural development level, age or gender, social class. In addition to its numerous other roles, play has always been an important pedagogical instrument, a powerful mediator for learning, for handing down the social heredity and tradition from generation to generation (Groos, 1901).

The idea of the potential of play in education goes a long way back. 25 centuries ago, Plato made the observation that early education ought to be a form of entertainment, as "knowledge which is acquired under compulsion obtains no hold on the mind" (Plato & Jowett, 1888, p. 218). Unfortunately, due to many misconceptions of play as being frivolous or even sinful, this line of thought has not been followed through until the end of the 18th century and the works of Enlightenment philosophers Friedrich Schiller and Jean-Jacques Rousseau, and later Dewey, Jean Piaget and Lev Vygotsky. Today, play is considered to be an infinite reservoir for learning and a lifelong portal to growth for all generations.

Although widely enjoyed for amusement and entertainment for thousands of years, the first records of games and simulations used for educational purposes are found rather late, in the 17th and 18th centuries in the field of military training (Wolfe & Crookall, 1998). It is the 1950s that mark the beginning of the contemporary era in simulation and gaming, and this is the period when a multitude of different games and simulations find their way into education and training in a range of diverse disciplines, management, healthcare, political sciences (Gredler, 2004; Klabbers, 2009). Play has been given (back) its legitimacy in education, as an approach, mindset, method and technique. A number of research studies (Connolly et al., 2012; Whitton & Baek, 2013) have shown the effectiveness of play- and game-based learning in the development of cognitive and affective skills. In higher education they have been found to be effective in the integration of content knowledge acquisition and the development of specific skills, such as collaboration, creative thinking decision-making, problem-solving and leadership, key 21st-century competences (Johnson et al., 2011).

Ever since the emergence of the communicative approach, games and simulations have found their way into the field of foreign language learning (FLL) as well, and their positive effects on raising students' engagement and motivation and levels of achievement have been well studied and documented (Crookall & Oxford, 1990; García-Carbonell et al., 2014; Hyland, 1993; Magge, 2006). However, although not a recent fad, they are still underutilized, particularly in the field of Languages for Professional Purposes.

3   Simulations

In the FL field, simulations are linked to a number of educational approaches and methods, such as experiential learning, task-based approaches, the socio-cultural theory. This paper's focus is on experiential social simulation games and their assets for learning and development. In a simulation game, players are immersed in a micro-world constructed to reflect and represent some complex social, economic, political or any other organizational system (de Freitas, 2006), be it a conference, enterprise, hospital, negotiations, etc. Participants play a defined role in a certain scenario and experience feelings and concerns of a particular role in a certain social context (ibid.). They navigate and explore an intricate web of interactions and transactions in this world, fulfilling tasks and solving problems, deepening their insights into this world and discovering its principles and relations (Rieber, 1996).

Simulation games take place in Huizinga's magic circle (Huizinga, 1955). The classroom becomes the playground, a virtual world, safe and sacred and dedicated to performance, where "people take risks and grow" (Heinrich, 2017, p. xiii). It is a risk-free environment, where the cost of mistakes and failures is low. The atmosphere is relaxed, reducing shyness and lowering the affective filter. Using role-play, students can freely experiment and try out different competences and skills in a world that is imaginary, yet with functions that are realistic (Jones, 1982). It allows reflections on new and unknown situations and practicing future events in a creative and stimulating ambience.

In line with the socio-cultural theory that perceives learning as a social process that emerges in a socio-cultural context, simulation games involve mutual and reciprocal peer learning, support and scaffolding, collaborative dialogue, negotiation and cooperation (Swain, 2000). It is through those nexuses of emergent interactions that

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the zone of proximal development is created (Vygotsky, 1978), a space where progress, growth, and learning happen, where we bridge the gap between what we are and what we may become. It is an experiential approach, encouraging experimentation, self-discovery and exploration where play acts as the catalyst "for qualitative socio-cultural transformation" (Holzman, 2009, p. 115).

In Languages for Professional Purposes, simulation games offer the opportunities for creating communicative situations and tasks that are replicas of real-world situations, tasks or problems, with the possibility of transferring acquired experiences in future professional environments, thus priming students for future life and workplace experiences (Sturtridge, 1981). They offer a rich mixture of linguistic and domain-specific input, output and interactions and are conducive to inter-curricular integration, an integrated approach in acquiring not only linguistic skills but also specialist, domain-specific knowledge. Simulations have interactional authenticity and relevance for the future workplace. Tasks are contextualized, meaningful and purposeful, mirroring real life communicative challenges and embodying elements of real discourse.

4   The Company simulation – design, structure and implementation

The Company simulation, designed for first-year students in the English for Business Purposes course, was conceived in such a way as to meet the learning objectives of the curriculum and the workplace target needs of our future graduates, as identified by a previously conducted comprehensive needs analysis. These presume developing the linguistic, socio-linguistic, socio-cultural and socio-pragmatic communicative competences and skills for active participation in various business and life situations.

The Company simulation attempts at recreating and co-creating a micro-world, which is a representation of the settings of the business world reality, in line with Jones' (1982) definition of simulation as "a reality of function in a simulated and structured environment" (p. 5).

It is meant to be a safe and interactive space for students to play out their chosen business roles and discover the business world's principles and relations. As presented in Table 1 below, the Company simulation is built around missions and

tasks, situations and experiences characteristic of the potential target workplace and culture: establishing companies, recruitment and delegation of company roles, diverse business interactions and transactions in an imaginary business world.

Table 1: The Structure of the Company simulation

	Project tasks	Project subtasks	Organization
Mission 1	Building a Company Profile	A Setting up a company B Deciding on a business idea	Small groups
Mission 2	Building a Job Profile	A Delegating roles & responsibilities	Small groups and individual work
Mission 3	Preparing a CV and cover letter	B Job applications	Individual work
Mission 4		Presentation	Whole group work
Mission 5	Attending a Trade fair	A Making contacts at the trade fair B Wining and Dining	Small groups Whole group work
Mission 6	Conducting business transactions	E-mailing – inquiries, offers, placing an order, complaints	Small groups
Mission 7		Final Presentation	Whole group work
	Feedback and Evaluation	A Feedback and Comments B Evaluation & Discussion	

Source: Authors' design

The tasks are varied, involving individual, small-group and whole-group work and activating all four language macro-skills (reading, writing, listening and speaking) in an integrated way. They have tangible outcomes and clear and meaningful purposes instigating communication and information gathering and exchange, decision-making, knowledge sharing, negotiating of meaning and problem-solving. Students enact various spoken and written interactions accompanying business activities. They practice both formal business language and social interactions (company and personal business presentations, flight and hotel accommodation, establishing and developing contact with prospective business associates, formal business e-mails), as well as less formal interactions in building rapport and maintaining business contacts, working towards closing a business deal with another student company. Students are free to experiment with imaginary professional identities and behaviours, which contributes to a relaxing and enthusiastic atmosphere in the classroom. The final presentation encompasses presenting all the undertaken activities, as well as a portfolio containing the documents generated throughout the

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Company simulation and the project closes with a comprehensive feedback and evaluation session.

Each mission in the Company simulation is introduced with a briefing and wrapped up with a debriefing session. The briefing session specifies the mission requirements, brings attention to specialist vocabulary and expressions (Bullard, 1990), sparks students' motivation and activates content, linguistic and socio-cultural background knowledge (Knutson, 2003). In the debriefing, reflection session, the learning experience is revisited and analysed, thus observing one of the main principles of experiential learning, namely, that "knowledge is created through the transformation of experience" (Kolb, 1984, p.38).

5 Evaluation

5.1 Research questions and method

As part of the reflection process on the pedagogic and linguistic effectiveness of the Company simulation project, a classroom-based study was carried out. The research questions addressed students' perceptions on the relevance of the Company simulation, its alignment with the course learning objectives and the students' need and interests as well as their perceptions on the enjoyability and usefulness of the Company simulation in general, and in terms of the acquisition of certain linguistic, social and professional skills.

RQ1: What are students' perceptions on the alignment of the Company simulation's content with the learning objectives of the English for Business Purposes 1 course?

RQ2: What are students' perceptions on the alignment of the Company simulation's content with their needs and interests?

RQ3: Do the students find the Company simulation tasks to be interesting and motivating?

RQ4: Do the students find the Company simulation tasks to be purposeful and relevant?

RQ5: What are students' perceptions on the enjoyability of the learning experience using the Company simulation?

RQ6: What are students' perceptions of the usefulness of the knowledge gained in the Company simulation in their further work?

RQ7: Do students find the Company simulation to have been effective in enriching their presentation skills?

RQ8: Do students find the Company simulation to have been effective in enriching their lexical skills?

RQ9: Do students find the Company simulation to have been effective in enriching their knowledge on business operations?

RQ10: Do students find the Company simulation to have been effective in enriching their teamwork skills?

The instrument used to gather data on students' learning experiences and attitudes was a students' perceptions questionnaire. The items were rated on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). It was administered on two occasions, with the 2014/2015 generation of students, upon the first implementation, and once again in the 2018/2019 academic year. A total of 57 and 67 participants, respectively, completed the evaluation questionnaire. The data were analyzed using the descriptive statistics method.

5.2   Results and Discussion

Mean scores and statement agreement percentages of students' perceptions on the relevance, enjoyability and usefulness of the Company simulation in general, as well as in terms of acquiring specific linguistic, social and professional skills are shown in Table 2.

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Table 2: Mean scores and percentages on the students' perceptions questionnaire

Statements:	2014/2015 n=57		2018/2019 n=67	
	M	Agree & strongly agree %	M	Agree & strongly agree %
1. The Simulation content is aligned with the learning objectives.	4.31	87.8	4.70	95.5
2. The Simulation content is aligned with my needs and interests.	4.28	83.9	4.40	85.1
3. Tasks were interesting and motivating.	4.38	89.3	4.77	97
4. Tasks were purposeful and relevant.	4.33	91.2	4.74	95.5
5. Learning through simulation tasks was interesting and enjoyable.	4.50	92.6	4.74	98.5
6. The knowledge gained will be useful in my further work.	4.25	90.9	4.50	94.9
7. The Company simulation has been effective in enriching my:				
A Presentation skills	4.45	87.3	4.65	97
b Lexical skills	4.41	88.6	4.53	89.6
c Knowledge on business operations	4.21	84.3	4.46	86.6
d Teamwork skills	4.43	84.6	4.57	87.8

Source: Authors' calculations

The results show a significant degree of agreement with the given statements, with means exceeding 4.5 in a number of statements, especially for the 2018/2019 cohort, which might tentatively be attributed to introducing minor adjustments and the authors' greater confidence in directing and managing the simulation. Perceptions of usefulness and enjoyability coincide. The experience of learning using the simulation instruction format was found to be interesting and enjoyable by more than 92.6 % and 98.5% of the participants, respectively, an exceptionally high rate.

The Simulation was regarded as useful for future professional communication and found notably effective in developing presentation, lexical, teamwork skills as well as business-specific knowledge. In conclusion, we might say that the findings of our study aimed at exploring the effectiveness and viability of using simulation in teaching English for Professional Purposes are promising and encouraging and show that the instructional format was perceived as both enjoyable and relevant justifying our primary purpose and motivation for the implementation of this project. The simulation format has allowed for the creation of an exciting, collaborative and immersive learning environment abundant in learning opportunities for developing future work-related skills in a meaningful, integrated and purposeful way.

6   Concluding remarks

Play- and game-based learning are not without challenges. Navigating the tightrope between fun and purpose, finding ways "to get the correct balance between delightful play and fulfilling specified learning outcomes" (de Freitas, 2006, p.5) is never easy. Another important controversy related to learning using playful formats are assessment and evaluation, as the visible effects in terms of improved cognitive or social skills are not always immediate and the gap may be measured in months or even years (Bateson & Martin, 2013). Empirical studies' results are often inconclusive and learning through play is still a black box raising important questions as to what learning is exactly and how learning outcomes should be specified and measured in a valid and reliable way.

However, although further research is still required as to the fine-tuning of instruments for measuring the direct influence of play- and game-based approaches on learning, we strongly believe that they deserve a highly prominent place in education. Combining language, content, and skill development in meaningful and purposeful replicas of target tasks using a game-based format enables: a) the creation of a learning experience that is more in line with the ways in which digital natives think and behave; b) the closer integration of teaching and learning with real-world professional experiences. Play is a driver of creativity and flexibility, preparing us for meeting future challenges and discovering new approaches for dealing with the world (Bateson & Martin, 2013). Learning through play, complex and sophisticated as it is, has learning outcomes that are far more wide-ranging and cross-disciplinary, deeper and longer-lasting and potentially more rich and applicable to real-world

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experience. In education, it is the royal road to an ecological, holistic and humanistic approach to learning.

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