

Transforming Multilingual Students' Learning Experience Through the Use of Lego Serious Play

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Abstract

To prepare their students for the increasingly demanding workplace of the 21st century, business schools resort to using experiential learning techniques to make explicit connections between knowledge and experiences students already have, encouraging them to make their own interpretations. In this case study, 50 multilingual students participated in a Lego Serious Play (LSP) intervention for one academic semester. Due to the continuous rise of the numbers of international students in management schools in the UK in the post-COVID-19 era, researchers and lecturers indicate that additional support is often deemed necessary to promote social justice for multilingual and multicultural students and support their well-being. These students used LSP to make better sense of the assessment criteria and the theories they had to use to respond to the instructions and prepare a group paper and a group oral presentation in terms of a module on intercultural management. Findings revealed that these English as a Second Language (ESL) students were inspired by the use of LSP as it allowed them to reflect on the theories and apply them in creative ways fostering collaboration and creative problem-solving. Students initially felt uneasy to engage in this new approach but then enhanced their performance in their group oral presentations by 35% as they were able to improve their second language competence and intercultural awareness. The article concludes by discussing implications for using LSP with multilingual ESL students to help them overcome linguistic and cultural barriers, offering suggestions for the effective use of game-based techniques in Higher Education.

Keywords: Lego ESL writing, linguistic and intercultural barriers, multilingual and multicultural students, post-COVID-19 well-being, presentations skills, Serious Play

LEGO® Serious Play™ (LSP) is well established as a management technique, as it has been employed widely in various business contexts such as banking and project management (Gkogkidis & Dacre, 2021). However, although the foundation of LSP is underpinned by many constructivist educational theories and practices (i.e., exploratory learning, see Duckworth, 2006; Rick & Lamberty, 2005), it has as yet seen little application in educational contexts (McCusker, 2014) with a few exceptions (Kurkovsky, 2015; Mccusker, 2014). LSP has been used to improve learner engagement and interaction, develop competency in receptive or expressive academic language (Howland, et al., 2013) and create exploratory teaching environments that can support learning (Gkogkidis & Dacre, 2021). It is an experiential approach designed to promote innovation and optimum performance in the business and management world. LSP is related to the Serious Play theory, which is also supported by pedagogical theories such as complex adaptive systems, and self-referential epistemology (Roos & Victor, 2018). At present, LSP is gradually becoming a prominent method used in business schools but also in Higher Education (HE) more widely as it is employed in various knowledge fields as diverse as marketing, second language acquisition, arts, and education (Bushnell, 2009; Dann, 2018; Grienitz & Schmidt, 2012; James, 2013).

Research indicates that LSP can be a valuable tool that lecturers can use to support ESL students as they can receive peer support and even look up vocabulary while trying to express themselves in English (Bond, 2018). It is claimed that LSP also encourages playful learning which makes learners less self-conscious and more willing to take risks, contribute to group conversations and make mistakes (Atmatzidou, Markelis, & Demetriadis, 2008; McCusker, 2020). Previous studies indicate that the integration of serious games, such as LSP, in ESL classes, may decrease students' stress, and motivate and maintain their interest in ESL learning, even when this is combined with content learning (Lykke, Coto, Mora, Vandel & Jantzen, 2014). It can also assist students in learning and retaining the language, for example with new vocabulary, in an enjoyable way (Anyaeibu, Ting-Jessy, & Li, 2012).

This study explored the use of LSP at a business school in the UK to increase students' engagement. One of its main goals was to support students in the post-COVID-19 era as they struggled to adjust to life after the pandemic evoking playfulness (Wheeler, 2023). These multilingual students also needed to make sense of the assessment criteria, the assignment instructions, and the theories they needed to use to overcome significant language barriers (Steigerwald, et al., 2022). As Higher Education Institutions (HEI) in the UK welcomed an increasing number of international students after the pandemic, lecturers sometimes had to explore new ways to support these multilingual and multicultural students allowing them to learn while also having fun. The business students in the present study were invited to use LSP once in terms of a 3-hour long workshop. The overall aim was for them to reflect on their work for their group paper and related oral presentation, interact with their peers, provide, and receive feedback and most importantly connect through a face-to-face learning experience which included serious gaming. The current undergraduate final-year students had never been involved in using the LSP simulation technique before.

This learning intervention allowed management students to experiment with LSP to make sense of their coursework, develop their linguistic resources, and clarify the management theories they had learnt so far. The main aim was to use these theories while co-writing their papers with their peers and preparing their group video presentations. The lecturer and researcher utilised this intervention to develop these international students' language and professional skills as many prestigious companies ask future employees and interns to engage in LSP in

order to assess their creativity and ability to collaborate with others (de Ramírez & Lafford, 2017; Leopold & Reilly, 2020).

Peabody and Noyes (2017) explored the use of LSP as a reflective practice pedagogy, and their findings revealed an optimal impact on group cohesion, inclusive teaching and learning, and an experiential process associated with different learning styles. Ever since 2010, LSP has been progressively employed by many educators in the academy. Various studies have indicated its significance as an innovative (language) learning approach, particularly in HE (Gauntlett, 2018; James, 2015; York & DeHaan, 2018). However, this approach has yet to be further adapted to support international students' well-being and academic advancement (Tseng, 2017). In the current implementation, the main aim of LSP was to foster creativity and imagination and support the strategic development of international students' linguistic, negotiation, and presentation skills. Therefore, it is hoped that the present intervention will guide other colleagues who want to experiment with serious games in their classes to support their international students while they try to apply their language skills to real-life-like communication (Berns et al., 2016). There is very little research (if any) exploring students' attitudes towards LSP in management education (Lopez-Fernandez et al., 2021). In the present study, students' perceptions of LSP were explored after their participation in a 3-hour long LSP workshop. The researcher also examined the impact of this intervention on students' academic performance as this was perceived by the participating students. The research questions this project aimed to shed light on were the following:

- a. What is the impact of LSP on final-year international business students' academic performance (i.e., on their linguistic dexterity, as this was perceived by the participating students)?
- b. What are final-year international students' attitudes towards the use of LSP on their motivation and well-being with a focus on the post-COVID-19 era?

Literature Review

The ever-evolving role of HEI towards knowledge construction, innovation, entrepreneurship, and solving sophisticated real-world problems has led to new ambitious actions and reform processes (European Commission, 2015). Nowadays, business education needs and aspires to abstain from traditional teaching models (Sierra, 2020). Among the new promising approaches, the use of gamification is becoming extremely popular (Dichev & y Dicheva, 2017). Research indicates that gamification has an actual impact on learning, irrespective of age, sex and ethnicity, offering significant benefits, such as enabling knowledge, skills acquisition and language learning development (Prez, Duque & Garca, 2018; Sierra, 2020), the evolution of higher cognitive abilities (Bernabeu & Goldstein, 2009) or continuously growing motivational and engagement levels in learners (Buil, Catalán, & Martínez, 2019). With this method, HE instructors offer their services more as enablers for developing innovation-associated competencies and group creativity to face real-world challenges (Steiner, 2013) rather than as experts on a specific subject who only offer their knowledge but do not encourage any interaction and/or reflection. Therefore, the literature indicates that LSP is an innovative teaching and learning technique for reflective practice pedagogy in a non-traditional groundbreaking format (James, 2013); it allows the evolution of creative instructional approaches directing HE lecturers towards teaching for creativity and teaching creatively while meeting the language learning needs of international students (Berns et al., 2016; Jeffrey & Craft, 2004).

Nowadays, graduates from business schools are expected to be technically competent in their chosen field, but also to have fully developed their professional skills, namely negotiation, intercultural awareness in linguistically rich and cognitively challenging environments (Sylvén & Sundqvist, 2012), creativity and teamwork skills (Karzunia et al., 2019). To respond to employers' requirements, management schools focus on experiential learning interventions, such as the use of LSP, to develop soft skills, especially critical thinking in learners (Laufer, McKeen, & Jester, 2018). These initiatives frequently require group work either due to class size constraints, or because they need to promote collaboration with the specific aim of developing students' teamwork, decision-making and interpersonal communication which also enhances language learning (Betts & Healy, 2015; Celce-Murcia, 2007).

However, although the use of LSP is supported by many educational, linguistic (Cohen, 2012), and pedagogical theories, it has not been applied widely in educational contexts, especially in HE (McCusker, 2014). The LSP Method involves learners' use of LEGO blocks as mediating artefacts to create symbolic and/or metaphorical representations of theories, abstract concepts and ideas. This novel educational tool allows students to bring theory and ideas into practice by concretising their conceptions and perceptions of intangible thoughts and ideas. Learners can then share their ideas and challenges through a physical representation. This enables them to further reflect on the problem they need to resolve, the assignment they need to complete or the theory they need to understand using a physical landscape. It also allows them to compare their solutions and see how their perceptions and ideas relate to those of other students. Most importantly, this is particularly helpful with students who have a visual/spatial, kinesthetic or interpersonal learning style (Gardner, 1991). Previous implementations reveal that this new approach provides a forum which promotes rich discussion, negotiation, and intercultural awareness among multilingual and multicultural learners (Aghasafari, Bivins, & Nordgren, 2021), as business schools, especially in the UK, are currently inundated with international students (Meletiadiou, 2023). Research indicates that HE instructors often feel the need to provide equal opportunities for success for these ESL learners fostering social justice and sustainable learning and development for all students irrespective of their background (Meletiadiou, 2022).

LSP was initially conceived as a workshop led by a facilitator, with a group of 6 to 10 participants. The facilitator usually asks a question or provides a problem and the participants create, share and reflect as well as exchange feedback on the ideas or solutions that they propose. LSP, as developed by Johan Roos and Bart Victor of the International Institute for Management Development in Lausanne, and put forward by Robert Rasmussen, Director of Research and Development at the LEGO® Company, was based on psychological theories of learning. It brought together ideas of play, constructionism, flow, the hand-mind connection, the use of metaphors and complex adaptive systems (beliefs) aiming to have a positive impact on group interrelatedness, cooperation and psychological safety thus promoting a mentoring/coaching approach (Rasmussen Consulting, 2013; Wheeler, Passmore, & Gold, 2020). The LSP method was created as a response to the need for fostering creativity, collaboration, innovation and imagination among people working in business settings with the aim of developing appropriate strategies to resolve and manage complex projects. Similar theoretical frameworks were then adapted and used in educational settings for various purposes, particularly to enhance student engagement, second language learning and promote cognitive functions like memory and reasoning (Garden, 2022).

Several researchers have examined the use of “play” in education (Paltoglou, 2021). Following the Piagetian (1977) theory of constructivism according to which a learner's knowledge and

meaning are “constructed”, it refers to a process in terms of which an individual (usually a young child) learns how to make sense of the world around him/her through the interaction of his/her ideas and experiences with other learners. Vygotsky and Cole (1978), on the other hand, claim that young individuals learn to support previous learning and knowledge through play, and most importantly gain new knowledge, ideas and understanding of increasingly greater complexity within a “Zone of Proximal Development” (ZPD). Papert (2002) supports the notion of ZPD by indicating that activities are delightful when they are used with the appropriate level of difficulty to maintain learners’ curiosity, interest, and involvement. Several researchers and practitioners tried to use games to engage learners in cooperative language learning in their effort to enhance their academic performance (Pechenkina et al., 2017). These innovative approaches attempt to create a meaningful context in which students can engage with the play at a deep level (Vlachopoulos & Makri, 2017). McCusker (2020) discusses criteria for LSP which are perfectly aligned with achieving the flow state described by Csikszentmihalyi (1975). This actually underpins the LSP method.

Papert (1986) also discusses the idea of constructionism as an extension of constructivism. He maintains that individuals not only learn by creating and testing mental models of the world around them, but this learning can be further fostered if they are offered the chance to develop physical models in the real world. Keene, Rasmussen and Stephan (2012) also elaborate on the interconnection of the mind and the hands and claim that people’s brains mainly operate by controlling their hands. Therefore, learning – especially language learning - is optimised when students are asked to think and interact while actually doing things. While this particular theory has been supported by the image of the sensory homunculus (Silva & Neves, 2020), researchers and lecturers do not yet know whether this connection can foster a more direct and thus more effective communication of knowledge, ideas, concepts, theories and understanding. However, by asking students to create mediating artefacts in terms of the LSP workshops, lecturers can promote enhanced learning by exploiting the close relationship of the hand and the mind (Hayes & Graham, 2020).

Creating artefacts is undoubtedly an important part of the LSP workshop but the story behind the artefact is the most crucial component of the LSP process. Students are therefore asked to use the artefact to tell a story reflecting on the theories and concepts they learnt and applying them into practice as they are also developing their linguistic skills. The significance of the use of LSP in HE, especially with multilingual students, lies in the process of reflection it entails. This facilitates deep insight and the opportunity for learners to share their ideas in a non-threatening setting with peers and make sense of the theories they learnt. Dewey (1933) highlights the significance of interpersonal communication, critical thinking and reflection in learning which seem to be promoted in LSP workshops. Kolb (1984) also refers to these ideas as he discusses his experiential learning cycle, in which he uses a process of experience, reflection, conceptualisation and testing of any concept or theory. This procedure reminds researchers and lecturers of the cycle of building, sharing and reflecting which are usually found in a typical LSP workshop.

It is awkward that although LSP is extremely popular in the commercial field, especially project management, it is not widely implemented in HE (Frick, Tardini, & Cantoni, 2013). Nevertheless, more recently, some HE Institutions have experimented with this approach in various settings, such as business (Kristiansen & Rasmussen, 2014). Moreover, despite the fact that there are few publications which discuss the use of LSP in HE, there is an increasing interest in its use in the academic context especially with ESL learners lately (Nerantzi, 2018;

Roos & Victor, 2018). Therefore, the aim of the current implementation was to reclaim LSP practices for use in academic and pedagogical practice.

To sum up, the benefits and challenges of using LSP to support international students while lecturers strive to help them develop their presentation and linguistic skills and promote enjoyment of learning at the same time were explored in terms of this study. LSP was implemented in an undergraduate final-year student module in the UK. The overall aim was to assist international students develop their presentation and writing skills while developing their collaborative and negotiation skills and increasing their engagement and second language competencies. As most of these ESL students confessed that they were intimidated to present their work face-to-face, especially after spending almost 2 years attending online classes, the researcher aspired to help them with this intervention. She therefore used LSP to increase students' engagement and academic (linguistic) development, promote enjoyment of learning and support students' well-being and mental health (Hill & Blackledge, 2019). The following section describes the methodology and presents this intervention in detail.

Methodology

During implementation, the instructor/researcher used a mixed-methods approach (Mikalef et al., 2017) and collected both quantitative (group oral presentation scores) and qualitative (anonymous student feedback, reflective report, lecturer's observations) data to respond to the research questions (see Table 1). She utilised paired t-tests to compare students' scores in the pre- (before the LSP intervention) and post-tests (oral group presentations) of the control group and the experimental group (Hedberg & Ayers, 2015). The main goal was to investigate the impact LSP had on students' language learning development and academic achievement. There were 25 students in each of the groups. Then, she employed thematic analysis to analyse data from (experimental) learners' feedback and reports (Braun & Clarke, 2023). Finally, the data were triangulated with the instructor's observations by comparing the main themes to increase the reliability and the collective value of the study (Kern, 2018) and examine learners' approaches towards LSP. Students were randomly assigned to the control and experimental group by the Head of Subject. All students received the same teaching and used the same learning materials as they registered to attend the same module.

Table 1
Methodology

Mixed-methods approach	
Quantitative data	Qualitative data
<p>Sample: 50 learners [divided in 2 groups – experimental (use of LSP) 25 learners and control (no use of LSP) 25 learners]</p> <p>Sources of Data: In-class pre- (week 2) and post-tests (Week 10) oral/video presentations on learners' chosen topic (Intercultural Management module)</p> <p>Method of analysis: Paired and independent sample t-tests</p> <p>Raters: Researcher and an assistant</p>	<p>Sample: 25 students and 1 instructor</p> <p>Sources of Data:</p> <ol style="list-style-type: none"> 1. Anonymous peer feedback via Mentimeter immediately after the LSP workshop (Week 6) 2. Reflective report in Week 13 3. Instructor's observations in the form of field notes about the implementation <p>Method of analysis: Thematic analysis of learners' anonymous feedback and reflective reports. Triangulation with data from observations.</p> <p>Coders: Researcher and an assistant</p>

Fifty final-year international management students (Table 2) participated in a module on intercultural business management which explored basic principles and theories of cross-cultural management (International Human Resource Management), as part of their regular undergraduate curriculum. One of the assignments for this module was a group video presentation assessing learners' productive skills, particularly speaking. Students were intimidated as they had just joined face-to-face classes after almost 2 years of online delivery due to the pandemic. The fact that they were international students and therefore faced additional linguistic challenges as English was not their first language made them even more hesitant to contribute to the group assignments.

The instructor asked students to form groups randomly and prepare a short oral presentation on their chosen topic after providing the students with a list. She wanted to assess students' previous knowledge, fluency in the target language (English), help them recall the theories they had learnt so far and assess their overall oral performance. The researcher secured research ethics approval from the university in which the study was implemented, and learners offered their informed consent as volunteers. The researcher ensured confidentiality and anonymity of learners' marks and reflective reports. The Mentimeter feedback was not compulsory and therefore not taken into consideration for learners' grades. This was to ensure learners' voluntary participation in the study.

Table 2
Student Demographic Characteristics

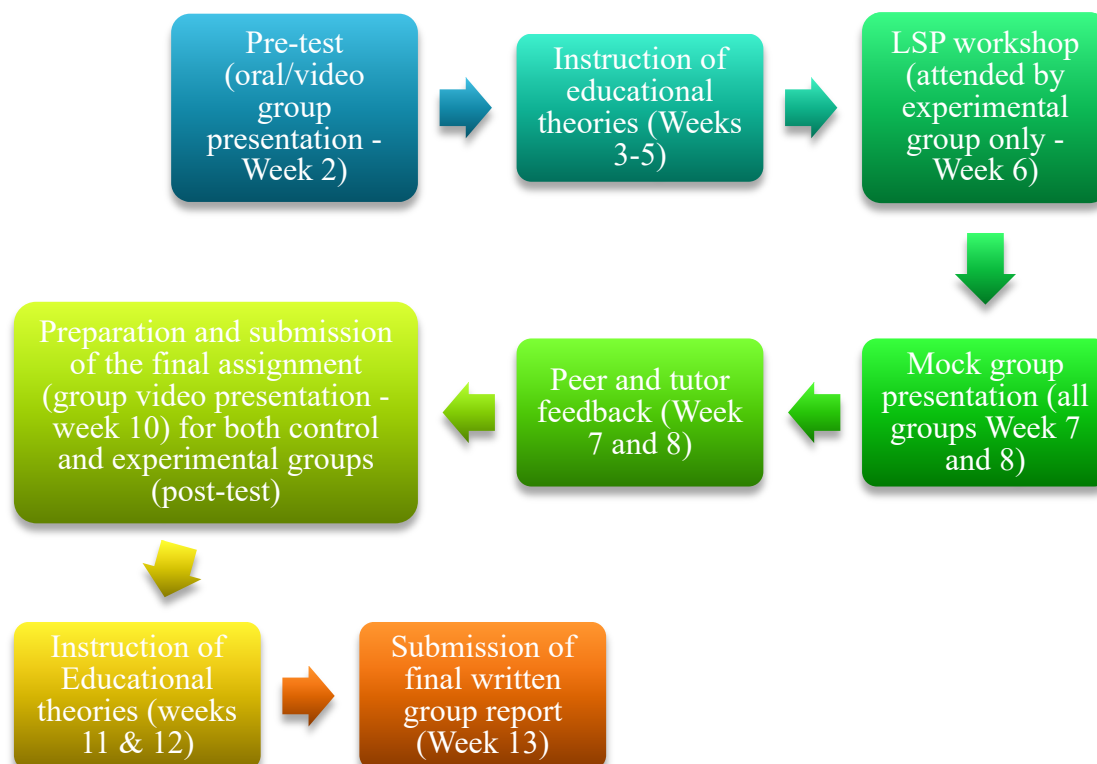
	Students	Frequency
Nationality	European	44
	Asian	6
Gender	Male	27
	Female	23
Age	20-25	45
	25-30	5
Class rank	High-performing learners	6
	Average-performing learners	20
	Low-performing learners	24

The Implementation Process

Learners at the management school where this LSP project was implemented frequently complained about the lack of interaction among learners in their classes. They protested about the repetitive lecturer-centred sessions in which there were few opportunities for students to support each other since they faced considerable linguistic challenges, especially in terms of vocabulary, as second language speakers of English. They were also unable to thoroughly understand the instructions for the assignments and the theories taught so that they could apply them in their assignments and in real life. Students in this Business Management course also complained about the lack of opportunities to develop their presentation skills and their oral fluency in the target language as most of them (50 out of 60 students registered in that module) were international students and English was their second or even third language.

Therefore, the researcher decided to facilitate an LSP workshop for the students who chose to participate in order to investigate its impact on international students' linguistic and academic development. From the 60 students registered in this module, 50 were international and 25 from them chose to participate in the LSP workshop and successfully submitted their group presentations. Twenty-five students were not present during the workshop either by choice or by chance (i.e., sickness). The lecturer provided a pre-recorded lecture (substitute) about some intercultural theories which were essential for the assignment since she talked about them during the workshop. Her goal was to support students who were absent. All students had to participate in a pre-test (Figure 1), which was a group oral presentation on the topic they had chosen, to assess their presentation skills at the beginning of the academic semester. The overall aim was to investigate the impact of LSP on students' oral presentation, writing skills and motivation. The post-tests for the experimental and control groups were the final group oral/video presentations students had to submit towards the end of the semester.

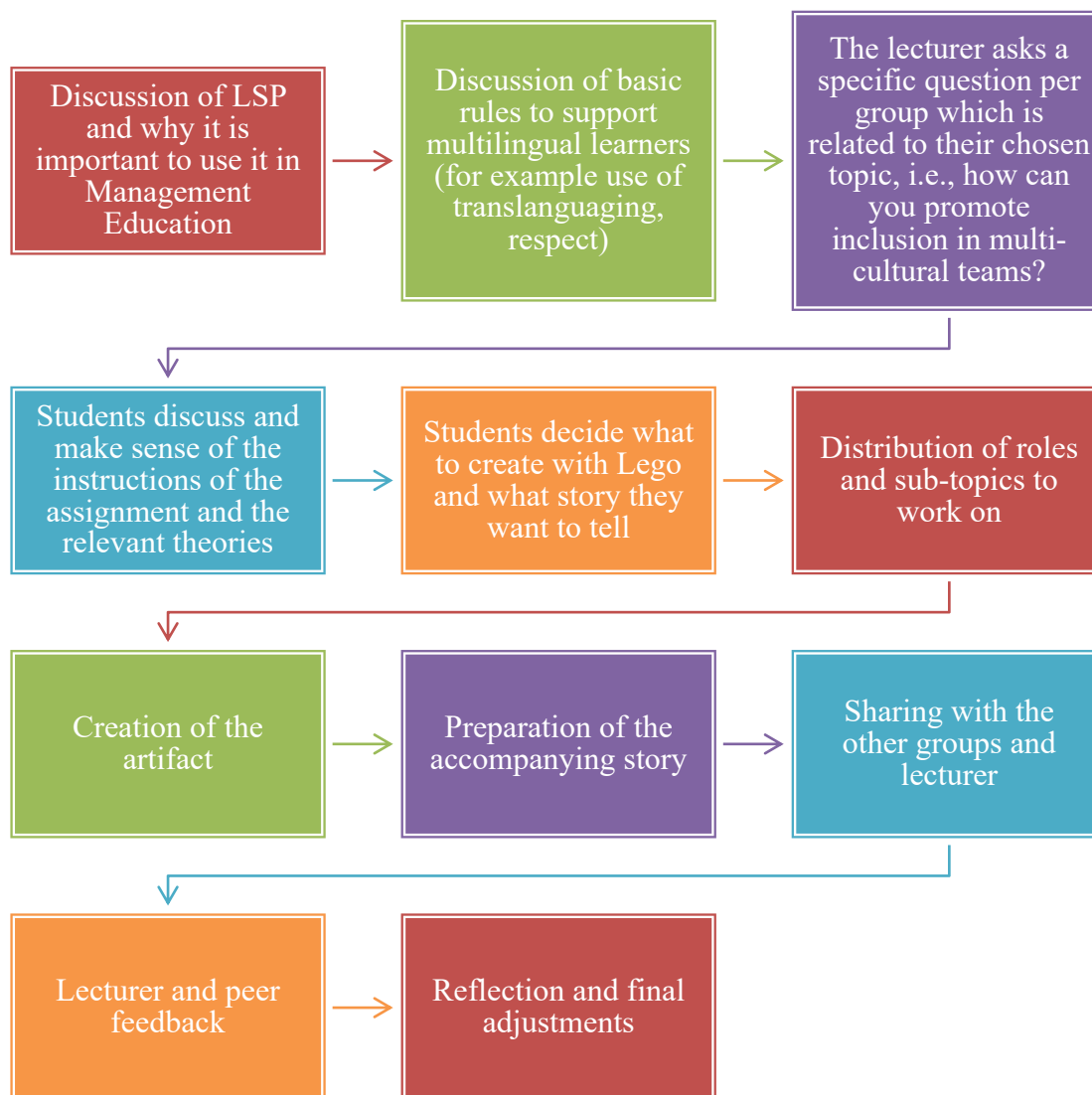
Figure 1
LSP Implementation in Terms of the Module



Participants in the experimental and control groups were asked to prepare their mock oral group presentations and present them by the end of weeks 7 and 8, that is immediately after the LSP workshop. Groups received peer and tutor feedback and were then asked to submit their final assignment by week 10.

During the LSP workshop (Figure 2), learners were asked to think about their chosen topic, namely ethical issues involved in receiving gifts in various cultural contexts and discuss the assignment instructions and the related theories with their peers. They were then guided to create an artefact to discuss how they would present their chosen topic and what they would include in their group presentation. All students' oral presentations were recorded and a second rater—an experienced instructor who had taught in a similar module in the past - assessed all learners' presentations to ensure reliability. This is the norm in HEI in the UK to maintain quality assurance (Gamage et al., 2020). The instructor and her assistant utilised the same assessment criteria to evaluate all learners' assignments. During the workshop, learners' communication in their mother tongue was allowed to ensure effective negotiation of meaning and enhance students' collaboration as they tried to overcome linguistic difficulties, and make sense of the instructions, and the concepts they had been taught. Experimental and control groups went through exactly the same procedure and the only difference was that students in the control group did not participate in the face-to-face LSP workshop.

Figure 2
LSP Step-by-Step Implementation



Experimental group students provided feedback via Mentimeter immediately after the LSP workshop. They were also asked to submit reflective reports about the LSP experience at the end of the academic semester. They could then further reflect on the benefits of the intervention on ESL students' overall academic performance as students also had to submit a group paper (Figure 1) in terms of this module. All learners had to participate in weekly seminars (3 hours each) for 12 weeks.

In terms of their group oral presentation (Assignment 1 - up to 15 minutes in total), the lecturer asked learners to work in a multi-cultural team with three or four other students from their seminar group on a topic of their choice, such as the principal causes of communication problems in global virtual teams, from the list provided. The presentation was delivered face-to-face and students had then to write a group paper (Assignment 2) on the same topic as well. Learners were provided with a group mark for their presentation. They were asked to use theories they had learnt in terms of the module and do their own personal research on the topic. Immediately after the LSP workshop, students were asked to provide anonymous feedback using Mentimeter (<https://www.mentimeter.com/>). This is an interactive digital platform

frequently employed by university instructors to examine learners' approaches towards novel methods they utilised anonymously. The final goal is to explore their immediate response to this learning-oriented tool.

Moreover, the instructor kept field notes before, during and after the intervention while using this serious gaming approach to explore its impact on ESL learners' oral presentation and writing skills as learners also had to write a group paper after presenting their work orally. In the end, learners were asked to submit an individual report in which they reflected on the LSP workshop. They recounted how this influenced their overall experience of this module, ESL learners' academic performance (oral and written) and their engagement with the sessions.

Findings

Impact of LSP on Students' Presentation Skills

The investigator correlated students' presentation skills between a pre-test and a post-test (see Figure 1) to examine the effect of the LSP workshop on ESL learners' oral performance (experimental group versus control group). Another experienced instructor, who delivered lectures on this module last year, offered marks independently for all group presentations after watching the videos students recorded. Inter-rater reliability was evaluated by calculating the similarity percentage which was 92%. The high percentage verified that the researcher's grades were reliable (Belur et al., 2021).

Table 3

ESL Learners' Academic Performance (Presentation Skills)

Measurement	N	M	SD	T value	Df	Sig.	Cohen's d
Pre-test same for all students (exp)	25	47.2	8.1				
Pre-test (control)	25	38.4	10.6				
Post-test with LSP	25	74.8	10.9	16.1	24	p < .05	d = 2.87
Post-test without LSP	25	47	8.7	9.9	24		d = .88

A paired t-test was utilised to examine learners' academic progress in the two groups (control versus experimental). This revealed that there was a statistically significant difference between students' pre-tests (M = 47.2, SD = 8.1, n = 25) and post-tests (M = 74.8, SD = 10.9, n = 25) in terms of ESL learners' oral presentation skills ($t(24) = 16.1, p < .05$) for the experimental group, while there was a minor difference for the control group (M=47, SD=8.7 n=25, $t(24)=9.9, p<.05$). Cohen's effect size value (d= 2.87) indicated a "very large" effect size and high practical importance for the influence of LSP on ESL learners' academic performance (presentation skills) for the experimental group and a comparatively smaller effect size (d=.88) for the control group (Tomczak & Tomczak, 2014). These tests showed that the utilization of LSP in the experimental module enhanced ESL learners' presentation skills considerably more than when students were asked to prepare their oral group presentations without being previously engaged in a LSP workshop.

An independent t-test was also utilized to investigate the differences between the post-test scores of the control versus experimental group (Lakens, 2013). On average, experimental group ESL learners' scores (M= 74.8, SD=10.9) were higher than those in the control group

($M=47$, $SD=8.7$). This disparity was statistically important $t(48) = 9.9$, $p = .000$, $d = 2.8$. This finding underscores the fact that the utilisation of the LSP workshop had a statistically important effect on experimental group ESL learners' presentation skills corroborating earlier research (ElKelish & Ahmed, 2022).

Perceived Effect of LSP on ESL Students' Academic Performance and Approach towards Learning

The investigator utilised thematic analysis to examine the perceived effect of LSP on ESL students' academic performance and approach towards learning (Braun & Clarke, 2022). ESL learners' reflective reports and anonymous feedback (qualitative data) was collected and analysed by a research assistant so as to explore the various themes such as "enjoyment of learning" (Table 4). These data were subsequently triangulated with the investigator's field notes (Natow, 2020). The instructor and a research assistant analysed all data to mitigate researcher bias (Wadams & Park, 2018).

Table 4

Perceived Impact of LSP on ESL Students' Academic Performance and Approach Towards Learning

Themes (frequency of occurrence in Students' data)	Sample ESL Student Comments
Positive Impact	
1. Impact on ESL students' presentation and writing skills (25)	<i>Sessions are usually monotonous. The LSP workshop allowed us to interact sometimes using words from our own language and clarify any points in the assignment we did not understand as well as the theories. I think it had a considerable impact on the quality of our group presentation and report. (Reflective report S3)</i>
2. Development of critical thinking and reflection (23)	<i>Using Lego for three whole hours allowed us to critically think about the theories we learnt and how these are related to our topic and share our views while reflecting on how we could apply them in real-life situations in the future. Awesome experience! (Anonymous feedback)</i>
3. Professional skills development (24)	<i>LSP facilitated the development of various professional skills, i.e., negotiation, ...problem-solving, creativity, effective intercultural communication, ... and teamwork. (Reflective report 6)</i>
4. Impact on ESL students' enjoyment of learning (23)	<i>I really enjoyed using Lego. It reminded me of when I was younger and carefree. I was then willing to use my imagination and spend hours playing. In terms of our LSP workshop, I was able to discuss how we can apply new theories to present our topic and write our paper ...despite my linguistic barriers as an ESL learner. (Anonymous feedback)</i>

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| 5. Influence on ESL students' well-being post-COVID-19 (24) | <i>COVID-19 had a definite impact on us...Our health, our motivation to learn and our ways of life...I am glad we are back to real-life, interacting with multilingual people and why not...playing around while learning...LSP makes us feel safer and willing to contribute (Anonymous feedback)</i> |
| 6. Impact on development of intercultural awareness (21) | <i>This involvement in an LSP workshop allowed us to interact in terms of a multi-cultural team and raised our intercultural awareness even more...I thoroughly enjoyed it. (Anonymous feedback)</i> |
| 7. Development of students' autonomy and collaborative skills (24) | <i>Working face-to-face during the LSP workshop really helped us develop our teamwork skills although I was reluctant at first...I was then able to work on my own as well and reflect on what I have learnt. (Reflective report 13)</i> |
| 8. Catering for different learning styles (23) | <i>Lego has improved our learning attitudes as we could play and learn at the same time...Great for me... as I am not that fluent in English...and I love moving around while learning (anonymous feedback)</i> |

Challenges

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|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9. Non-traditional students' challenges with gaming (4) | <i>At first, I thought I was too old to do this especially after COVID-19...10 minutes later I was enjoying it with my peers...We are just used to listening rather than doing something with our hands at the Uni. (Reflective report 14)</i> |
| 10. Resistance of some ESL students to engage in story-telling (3) | <i>I am not that good at storytelling, but I guess I should develop that skill. As an ESL student, I am also not that good at talking...Well, I have to work on that...The best leaders are excellent storytellers. (Anonymous feedback)</i> |
| 11. Lack of sufficient time and bricks (2) | <i>I think three hours are not enough for us to complete the artefact and create a story. This is the first time we are doing it... I could also do with more bricks, animals, flowers etc. (Anonymous feedback)</i> |
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The qualitative data of this study revealed that ESL students felt that the LSP workshop was an exciting idea-generating event. They confessed that this empowered them to exchange thoughts and make sense of challenging concepts of intercultural management which were related to their topic while preparing their group presentations and developing their linguistic competence in English. The lecturer also observed that LSP activated innovative thinking and creative problem solving among these multilingual and multicultural international students (Table 4, Point 3). ESL learners revealed that the use of LSP helped them improve not only their presentation, but also their writing skills as they were able to negotiate the meaning of various unknown terms/words in English with their peers and collaborate effectively by engaging in meaningful gaming (Table 4, Point 1). LSP developed their critical thinking and reflective skills and enhanced their intercultural awareness even though these ESL students initially faced minor challenges (Table 4, Point 7). Certain students stressed that they needed

more time and resources (bricks) to familiarize themselves with the new gaming approach and some of them also resisted engaging in story-telling due to the linguistic barriers they faced. However, they reported that they soon found themselves immersed in this new learning experience which reminded them of their young age (Table 4, Point 9). These findings corroborated former research into the use of LSP as they highlighted several benefits of the approach in terms of student engagement (Kristiansen & Rasmussen, 2014), ESL students' language development (Boudadi & Gutiérrez-Colón, 2020) and student satisfaction (McCusker & Swan, 2018).

To summarize, the current LSP intervention aimed to assist educators, especially in HE, explore new gaming approaches such as LSP, to increase ESL students' engagement and involvement in their own learning after the traumatic COVID-19 pandemic experience. It aspired to support colleagues in HEI to foster inclusion for international students who often need their lecturers to place more emphasis on fluency rather than accuracy. Lecturers may therefore opt to experiment with a game-based approach to relieve international ESL students' anxiety as they embark on their learning journeys in HEI worldwide.

Discussion

This research project aimed to provide insights into how undergraduate international students experienced the use of LSP as they endeavoured to improve their academic performance as ESL learners. The study illustrates how LSP helped them overcome their linguistic and cultural barriers while enhancing their well-being (Table 4, Point 5). Benefits as well as constraints related to the use of LSP in undergraduate education were presented in the findings to make other colleagues aware of the pitfalls related to the use of LSP so as to avoid them in the future (Table 4, Points 9, 10, 11). The current study confirmed previous findings which indicated that LSP promotes psychological safety for ESL learners particularly after a major crisis such as the COVID-19 pandemic (Wheeler, Passmore & Gold, 2020) as students can immerse in meaningful play, negotiate meaning, and share new ideas and thoughts (Table 4, Point 5). Furthermore, it revealed that students in the current study developed valuable professional skills, such as storytelling, negotiation, creativity, intercultural communication, and teamwork (Table 4, Point 3 and 10). ESL students also confessed that LSP facilitated active learning by promoting student engagement in their own learning process (Dacre, Gkogkidis & Jenkins, 2018) thus fostering independence (Table 4, Point 7). One of the goals of this intervention was to bring together constructivist learning theories, intercultural (Signorini, Wiesemes, & Murphy, 2009) and multilingual learning frameworks (Dafouz & Smit, 2016) which foster translanguaging to emphasise fluency rather than accuracy (Table 4, Point 1) and empirical research on the use of LSP (James, 2013). The ultimate aim was to support ESL students in global HE settings.

Challenges encountered during the LSP intervention were related with what Papert (1980) identifies as "hard fun". Therefore, there were ESL participants who seemed reluctant to engage in deep reflection and to share ideas and emotions with their peers (Table 4, Point 10). The COVID-19 pandemic seemed to make it even more difficult for students to express themselves face-to-face and to interact with each other while exploring new theories, developing their language skills, and making decisions about their assignments. Students had been working in isolation for almost 2 years (Table 4, Point 5). The literature suggests that loneliness can be associated with significant stress, anxiety and even depression for ESL students (Richardson, Elliott & Roberts, 2017). In the present study, that was evident as some participants found it hard to enjoy the LSP workshop and reap its benefits (Table 4, Point 9) –

at least in the beginning – as this was a deeply “affective experience” (Neratzki, 2018). Some mature students thought it was challenging to revert to their childhood and engage with bricks (Table 4, Point 9). Alternatively, they claimed that they needed more time than available in this intervention to get used to the idea of thinking while doing (Table 4, Point 11).

ESL students, who had faced a prolonged period without their peers (Burns, Dagnall, & Holt, 2020), now felt disconnected and uncomfortable when surrounded by groups of people possibly suffering from social anxiety (Table 4, Point 5). In contrast with previous studies which emphasise that LSP encourages playfulness (Wheeler, 2020), the current intervention revealed that students needed additional resources, especially more personalised bricks which were linked with their own ideas and experiences (Table 4, Point 11). Therefore, having a greater variety of LSP bricks and figures as well as asking students to bring their own favourite Lego pieces from home or other serious games such as pieces of Playmobil Serious Play, would be a great idea. This could also allow students to choose their own favourite figures and better express their ideas and feelings as well as interact more effectively with their fellow students.

In summary, the current study, confirming previous research, reports that LSP was able to improve the ESL students’ learning experience and academic performance and support their well-being as they strived to heal from the COVID-19 trauma. It also highlighted that ESL students from diverse cultural backgrounds need more opportunities to unleash their powers and focus on learning while having a good time without attaining perfection. LSP seemed to have increased the multilingual students’ self-confidence and other-awareness and supported the learners through peer learning/mentoring while also creating vibrant communities of (language) learning. These ultimately helped the students fully develop their presentation, writing, interpersonal, linguistic, and psychological skills (Tables 3 & 4).

Conclusion

This study provided new information associated with undergraduate ESL students’ experiences of using LSP in the post-COVID-19 era. The feedback the researcher collected from the students revealed that they thought that the intervention promoted critical discourse as learners engaged with highly complex organizational problems related to cross-cultural management. The present implementation also offered educators a practical methodology (Figures 1 & 2) as the lecturer employed experiential learning to foster learner involvement, ESL students’ language development and co-creation of knowledge by promoting an exploratory context. The investigator aspired to enrich the teaching, learning and assessment practices of HE lecturers and promote the creation of active learning and professional communities among students.

The outcomes of the study reveal that although some ESL learners may have felt intimidated to invest time and energy in LSP, namely due to embarrassment, they soon opened up with the appropriate support. They then freely participated in group work exchanging ideas, developing their vocabulary, and reclaiming their creative imaginative powers while also involving themselves and others in deep reflection. Future research should be encouraged to explore the use of LSP in other countries and faculties in order to construct a robust pedagogical framework. This could facilitate the use of serious games in business and management schools, but also in HEI globally. The findings of the current study cannot be generalized due to the small number of ESL students involved in a particular setting for only one semester. More longitudinal studies involving a larger number of participants are needed to explore the impact of LSP on ESL students’ academic performance.

The discoveries of the research suggest that as a response to the need for innovative and creative teaching, learning and assessment techniques, LSP may not only inspire creative confidence liberating freedom of expression in ESL students but also serve as a tool for further academic, linguistic, personal, and professional development. This study tried to empirically affirm LSP as more than a novel strategy for pedagogical use, further to expand its bandwidth as a potentially effective tool for producing divergent thought and creative solution generation to respond to complex organizational challenges and support multilingual and multicultural international students in HE. While this intervention empirically supported that core tenets of LSP, like playfulness and cooperation were present, a surprising finding, and one worthy of further future research, was the emergence of the support ESL students need in terms of their mental health after major crises such as COVID-19. The study showed that LSP may provide a formula to support ESL students' well-being, social and emotional development through play developing future professionals with increased intercultural and multilingual awareness and tolerance of ambiguity.

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