USING LEGO BLOCKS FOR TECHNOLOGY-MEDIATED TASK-BASED ENGLISH LANGUAGE LEARNING

by **Agnieszka Gadomska**

University of Social Sciences and Humanities

Ul. Chodakowska 19/31, 03-815 Warsaw, Poland

agadomska @ swps.edu.pl

Abstract

Lego blocks have been played with by generations of children worldwide since the 1950s. It is undeniable that they boost creativity, eye-hand coordination, focus, planning, problem solving and many other skills. Lego bricks have been also used by educators across the curricula as they are extremely motivating and engaging and, in effect, make learning effective. The toy has developed with time, as a result of technology impact as well as users' needs and expectations. This paper describes the transformation of the use of Lego based activity in the academic writing class in the Institute of English Studies at the University of Social Sciences and Humanities in Warsaw, Poland spanning a period of the last seven years. Originally, the author's idea was just to illustrate in theory the principle of cohesion and coherence on the example of Lego composition instruction, a concept described by Joseph Williams; however, it evolved into a highly successful technology mediated task-based activity. The activity has been conducted since 2008 and in the author's newest 2014/15 version, it involves online writing, digital photography, computer editing programs, animation, e-learning tools and blogging; it boosts, apart from the above mentioned skills, writing, reading, teamwork and IT skills. Its teaching/ learning success results also from its multimodality, learner empowerment and authenticity. Moreover, the case illustrates teacher development due to both external and internal class factors, including the impact of learners' competence and skills on the transformation of the activity itself and the resulting teacher training. Finally, the paper focuses on the role of the fast changing ICT technology in the development and adjustment of the English language learning task, the task based on the innovative use of Lego blocks in teaching academic skills to the students of the English studies program.

Keywords: Technology-mediated learning, TBLL, LEGO blocks

1. Introduction

Task Based English Language Learning (TBLL) has been considered beneficial in motivating learners to engage in authentic and meaningful tasks (Ellis, 2003). Nevertheless, "from pedagogical perspectives, real world target tasks are likely to be too difficult for learners to

achieve because of potential semantic, pragmatic, lexical and syntactic difficulties. Thus, pedagogical tasks should represent a bridge to real world tasks" (Izadpanah, 2010: 49). It is, therefore, the teacher's role and responsibility to adjust tasks to learner' needs and to their learning objectives. In this regard, Borg (2003: 81) underlines how language teachers are "active, thinking decision-makers who make instructional choices by drawing on complex, practically-oriented, personalized, and context-sensitive networks of knowledge, thoughts and beliefs." This means that "it is extremely difficult to meet the academic needs of the English language learners by merely combining teacher lectures with textbook readings and activities" (Hernández, 2003: 148).

This paper aims at presenting the theoretical and applied rationale for incorporating a TBLL activity into an academic writing class based on the Lego blocks technique leading to the development of IT skills. This technique has more recently gained momentum in Higher Education (James, 2013) where *learning by making* (Papert & Harel, 1991) can enhance student reflection (Gauntlett, 2011) even in the language classroom.

2. Task Based English Language Learning (TBLL)

TBLL is based on the assumption that, as a consequence of focusing on the primary aim of the task instruction, i.e. its successful completion, students "are likely to learn the language as if they are focusing on language forms (Harmer, 2007: 71). Therefore, the strategy can be compared to a reversal of the PPP (Present, Practice, Produce) approach or to a Boomerang Procedure (Harmer, 2007: 67), where students are first engaged in a task and as a follow-up activity, they are asked to perform a language activity (for example, writing, communication game or role-play).

Among the critics of TBLL (Littlewood, 2004 & Seedhouse, 1999 qtd in Harmer, 2007:73) and those concerned about its effectiveness (Swan, 2005 & Ur, 2006 qtd in Harmer, 2007:73), we can distinguish those who doubt its applicability in systematic language teaching, or those who realize that teachers may lack classroom time (Ur, 2006). The Lego task is a creative writing activity and as such is treated as a "break" from the routine approach to mastering academic writing. Although it is time-consuming, it is worth pursuing as "an additional component of the language based syllabus" (Ur qtd in Harmer, 2007:73) due to its effectiveness.

TBLL is a complex approach that has been the focus of scholarly attention for over 20 years now. Its complexity is visible in the number of definitions of a task and task-based learning principles. This study adopts the definition provided by van den Branden (2006:4),

whereby "a task is an activity in which a person engages in order to attain an objective, and which necessitates the use of language." It is, thus, clear that "there is a commonsensical understanding that a task is an activity that is carried out using language" (Richards & Rodgers, 2001: 224). In other words, it is "a piece of work undertaken for oneself or for others, freely or for some reward." (Long, 1985: 19). Bygate et al. (2013: 11) further add that:

> a task is an activity, susceptible to brief or extended pedagogic intervention, which requires learners to use language, with emphasis on meaning, to attain an objective, and which is chosen so that it is most likely to provide information for learners which will help them evaluate their own learning.

Among the many doubts addressed by van den Branden (2006), there are questions as to the effectiveness of TBLL in different age groups, classes with mixed ability students and groups of students with different cultural background. Van den Branded (2006) also points to the influence of learners' beliefs, expectations and experience of their involvement in task-based instruction.

This paper attempts to address the question of the usefulness of TBLL based on the Lego blocks technique in the academic context. It will discuss its methodological justification in the academic writing class instruction, where it may help learners conceptualize and experience the theoretical abstract and complex principles of style, which serve as "a metaphor for the construction of meaning" (Buckley, 2015:1). An overview of the cult status of Lego blocks is first provided to frame the use of this technique in the design of a TBLL lesson plan.

3. Lego blocks: cult status

Lego blocks have been played with by generations of children worldwide since the 1950s. It is undeniable that they boost creativity, eye-hand coordination, focus, planning, problem solving and several other skills. Conventionally, Lego blocks have been used as toys and are, thus, associated with leisure, creativity, freedom, problem solving, team work and rewards.

Lego bricks have also been used by educators across the curricula as they are extremely motivating and engaging and make learning effective (Buckley, 2015 & McNamara et al., 1999; Erwin, 2000). The undeniable cult status of Lego bricks in the education of young learners has prevailed for over 65 years. Lego Education has introduced methods and tools including ready-made classroom solutions that make learning fun and inspiring. The toy has developed with time, also as a result of technology impact and users' needs and expectations

so that there is now a vast range of toys, software, robotics and computer gadgets to cover different educational objectives.

From a linguistic perspective, the universal Lego construction principle (Figure 1) was introduced as a metaphor for the principles of style by Joseph Williams in his work *Style: The Basics of Clarity and Grace* (2003), a popular text used for writing classes. Among the ten principles for writing clearly, Williams distinguishes between coherence and cohesion, two aspects necessary to diagnose and revise sentences "so that readers will judge them to be not just individually clear, but collectively both cohesive and coherent" (2003: 79). Williams realizes that being quite similar, the terms might be confusing to language learners, and thus provides the following explanation:

> Think of *cohesion* as the experience of seeing pairs of sentences fit neatly together, the way two Lego pieces do. Think of *coherence* as the experience of recognizing what all the sentences in a piece of writing add up to, the way lots of Lego pieces add up to a building, bridge, or a boat (p. 83).
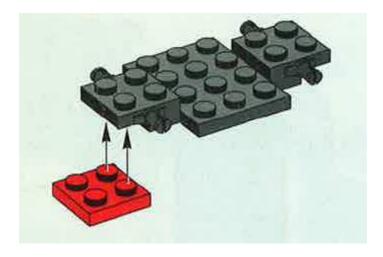

Figure 1. Lego construction principle (source: Lego System 2535 manual)

In other words, Williams believes we should not complicate already complex ideas which we express in academic writing. Therefore, it is essential that we understand style as one of the fundamental aspects of writing. Academics, especially Americans, (Garner, 2001; Lesikar, 2005; Williams, 2003, Williams & Colomb 2010, Zinsser, 2001) have tried to formulate the principles for writing clearly in English.

Williams' original idea of using Lego bricks metaphorically as an illustration of the principle of cohesion and coherence led the author to personal ideas of realizing it in practice. The current Lego-based activity follows a slightly modified procedure of Harmer's (2007)

ESA teaching methodology applied to a 'patchwork' lesson sequence. ESA stands for engage, study and activate (Figure 2).
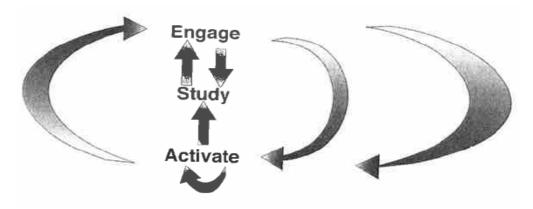

Figure 2. 'Patchwork' lesson sequence (Harmer 2007: 67).

In the first phase, the teacher engages students by demonstrating a simple Lego blocks construction and/or the Lego construction principle (Figure 1), thus using this association as an illustration of the concepts of cohesion and coherence. Then s/he encourages learners to create their own unique and coherent Lego exhibits. This task serves, in turn, as an inspiration (an illustration) of a creative writing activity. The aim of the follow-up language activity is to master the principles of style, i.e. of cohesion (combining two sentences like fitting two Lego blocks) and coherence (creating a coherent composition out of many sentences like making a coherent exhibit out of many Lego blocks). In the subsequent phase of the lesson, the teacher discusses Williams' Lego association and the "lesson on coherence," based on his *Style: The Basics of Clarity and Grace*. Then, students are asked to digitally master their exhibits, upload them with the accompanied stories on the class blog and, finally, choose their favourite Lego story. Once they experience and in effect understand the difficult concepts of cohesion and coherence (Engage phase) as a result of the performed task, they study the concept and its application in writing (Study). Then they activate their knowledge first, thanks to the creative writing activity and later when doing follow up activities from their coursebook.

4. Lego in the TBLL classroom

The fifth semester of the academic writing course in the Institute of English Studies at the University of Social Sciences and Humanities in Warsaw, Poland, focuses mainly on the principles of style. When using William's (2003) book for teaching academic writing class in

this context, the idea of using real Lego blocks in practice to illustrate the principles of cohesion and coherence was introduced. While this simple and spontaneous task appears to be rudimental, its initial design has evolved over the last eight years to address young adult learners in the academic context. In the author's newest 2014 version, the task entails online writing, digital photography, computer editing programs, animation, e-learning tools and blogging. The design of this technology-mediated task-based activity is also aimed at boosting learners' writing, reading, teamwork and IT skills, and at enhancing their creativity and motivation. A lesson plan for a sample Lego activity based on composition instruction is presented below.

4.1. Lesson plan: *Lego Story Competition*

Setting: Institute of English Studies, University of Social Sciences and Humanities (SWPS)

Level: 3rd year BA studies program: academic writing class

Time: 90 minutes

Aims and objectives:

- to boost learners' creativity in writing
- to sensitize learners' to the needs and expectations of their audience
- to revise the principle of unity
- to focus on the principles of style, such as: unity, concision, coherence, cohesion, Old-to-New, concision, etc.
- to visualize/experience concepts of unity and style
- to show similarities between writing in English in general and for specific purposes
- to build social skills

Resources

Lego blocks (students should be given a wide selection of blocks from different sets. The bigger the selection, the better - Figure 3). This approach allows them to create their own unique exhibits and not just reconstruct an object from the original manual.

Figure 3. Resources for the Lego story competition lesson.

Digital aids and software

- a cell phone with a camera/ computer/ Internet connection (non-IT based option also possible)
- school Moodle platform or/and a blog site

This lesson plan has been designed for very IT experienced students of the English Studies at SWPS. Moreover, this sequence of an academic writing course was part of their teacher training curriculum[1]. The advantage of this task-based activity lies in the fact that it can be easily adapted to a different age group and a traditional classroom setting, resigning from some IT based solutions. Uploading tasks on the Wordpress class blog allows for online cooperation, evaluation, post task student comments. Moodle platform is a more formal environment for students than the blog forum. Therefore, it is a more authentic, real-world task for learners than the university-administered platform (although the blog is a secured class usage blog only).

Possible Constraints

a. Time management: if teachers lack time, they may ask their students to finish the activity as homework.

b. Lack of sufficient number of Lego blocks: However, recycling of the blocks is possible the moment the picture is taken and kept for the record.

---

[1] More on the same class can be found in the author's article, entitled "Implementing blogs for teaching academic writing skills in multicultural groups" in Smyrnova (2014) *E-learning and Intercultural Competences Development in Different Countries.*

Procedure:

Pre- stage (20 min)

    a. Explain the reason for the Lego-based activity, rules of competition (the best/ chosen by the teacher and other students story will win the competition);

    b. Demonstrate the definitions of cohesion and coherence with the use of Lego blocks (Figure 2).

While stage (70 min)

    a. Choose as many blocks as you wish (but not too many/ negotiate with fellow students) and create your own unique Lego exhibit.

    b. Take a picture of the exhibit with your phone camera (or ask a fellow student for help) (Figure 4).

    c. Give the exhibit a title and write a short story (one extended paragraph).
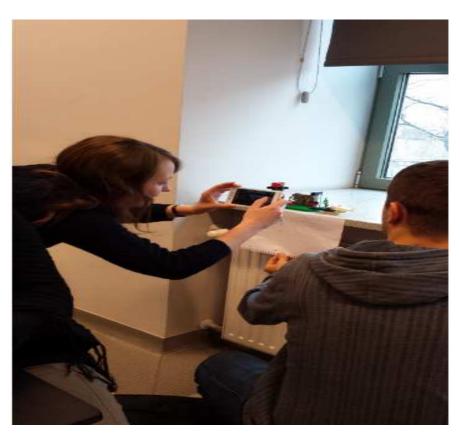

Figure 4.Lego story competition lesson (while stage).

Post-stage: (optional, depending on timing and access to IT)

- Computerize/customize the image (animation, special effects, etc.) and upload it with the description on the e-learning platform or the class blog (see Appendix 1 for sample student work).

Students and the teacher are given some time to read all the proposals and vote (choice/ questionnaire tool) for their favourite one. The final decision belongs to the teacher, but it is usually consistent with the students' choice as learners realize that a well written text fulfils the following criteria:

1. the story and the image go together;
2. the story is interesting to read;
3. it has a motivating title;
4. it shows unity (repetition of key nouns and pronouns, consistent use of pronouns, one idea per one paragraph, Old-to-New Principle, logical order of ideas, concision, coherence and cohesion;
5. it is grammatically and mechanically correct.

4.2. Discussion

The Lego activity shows that TBLL can be an effective tool in the TEFL curriculum. The instructional activity of prose writing focuses on the self-contained paragraph structure. Its organization and development criteria should entail the idea of unity, coherence and cohesion (i.e. the flow of one sentence to another achieved thanks to putting the old information at the beginning of the sentence and pushing new and complex information to its ending), the use of transition signals and linking words, repetition of key nouns and pronouns, consistent use of pronouns, logical organization of ideas (Oshima 2006 & Williams 2003). The popular coursebooks on academic writing in English provide the theory, models and drills; yet, the tasks suggested are monotonous and repetitive. Moreover, for most learners academic writing is difficult and demanding. However, TBLL tasks inductively focus on pedagogy; they are spontaneous, "influenced by learner choice, and susceptible to learner reinterpretation" (qtd in Van den Branden 2006, 3-4). The Lego activity "camouflages" the pedagogical aim even more as it is nostalgic and playful and thus far from the academic routine.

Buckley (2015) points out the "personal, engaging nature of the [LEGO] activity" and " the inherent playfulness of learning [which] is emphasized through the use of Lego, used as a metaphor for the students' construction of meaning" (2015:1). Thanks to the Lego blocks technique, this activity serves as a natural bridge between learners of different cultural backgrounds. Foreign students enjoy the class as much as their Polish colleagues and actually

this activity bonds them more than others. Students in a semi-formal/university setting start to behave spontaneously, enjoying the activity to such an extent that they even share their photos with friends on their own *Facebook* accounts, which can be considered a sign of success.

5. Summing up

Although the Lego Story activity may not be the real-world task of adult language learners, as a TBLL activity it can serve as a natural (or even nostalgic) bridge between pedagogy and reality. It serves to teach in a spontaneous, inductive and discrete way concepts that are very hard to present in a theoretical classical mode. Joseph Williams in his *Style*, often refers to the readers' feelings, asking questions: How does a given sentence or passage make us feel? Passive, choppy, disorganized, dense, incoherent? Lego exhibits are like pieces of art, unique and open to interpretation. They require not only the author but also the audience; similarly to writing for academic purposes. It is the audience to judge whether our argumentation is logical, grounded, convincing and motivating to read. Sentences consist of words like Lego exhibits consist of blocks. With a theoretically unlimited number of words, we can create an unlimited number of utterances; yet, if they are to tell the story, they must flow one from another (cohesion) and compose one unity (coherence). Only thanks to our knowledge of vocabulary, grammar and style, are we able to express our thoughts to tell the story. Therefore, it is very important to mix Lego blocks from different sets (*Space, City, Football, Underwater, System,* etc). By using one set only we limit the user's creativity asking him/her just to reproduce a ready-made model[2].

There might be different variants to this task; for example, teachers may skip the introductory phase of presenting Williams' concepts of cohesion and coherence. The last "award" stage, when a teacher justifies the verdict may include this information. Without cohesion the exhibit will fall apart; without coherence it will not tell any story. In addition, the activity may be used in many follow-up exercises, such as matching, guessing (the image with the story), class discussion, etc. In fact, the dynamics and flexibility of the technique, resulting from its 'Patchwork' sequence, enables individualization and adaptation, depending on the learners' needs.

---

[2] Unfortunately, in the newest 2015 edition of *Style. The Basics of Clarity and Grace*, the concept of using Lego blocks visualization has been replaced by the metaphor of a jigsaw puzzle, which in the author's opinion limits the creative and educational potential of this activity and in fact enforces the idea of replicating someone else's ideas.

Furthermore, the Lego task-based activity clearly shows that task-based aims need not be necessarily linguistic [e.g. building a Lego exhibit], but do need language use for its performance (Bygate et al., 2001). The Lego technique thus helps construct, experience and communicate meaning, involving learners' cooperation and negotiation skills as it is highly influenced by their choice made for the audience (Long, 1985; Bygate et al., 2001 qtd in Van den Branden, 2006: 3-4). Lego Story lesson has proved successful in different groups of learners for a few years now; with its every new edition students modify it and suggest new creative ideas. While some of them use traditional resources to create set decoration for the constructs, those more technically advanced, apply: animation, special effects and many other tools. Originally a pen-and-paper activity, it has been adapted to suit the expectations of the digital natives. The only aspect that has not changed are the old Lego blocks.

References

Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe, and do. *Language Teaching*, *36*, 81-109.

Branden van den, K. (2006). *Task-based Language Education: From Theory to Practice*. Cambridge: Cambridge University Press.

Buckley, C. (2015). Conceptualizing plagiarism: Using Lego to construct students' understanding of authorship and citation. *Teaching in Higher Education, 20*(3). Retrieved March 19, 2015, from http://www.tandfonline.com/doi/abs/10.1080/13562517.2015.1016418?journalCode=cthe20#.VQ3u_- HJ7es.

Bygate, M., Skehan, P., & Swain, M. (2013). *Researching Pedagogic Tasks: Second Language Learning, Teaching, and Testing*. New York: Routledge.

Ellis, R. (2003). *Task-based Language Learning and Teaching*. Oxford: Oxford University Press.

Gadomska, A. (2014). Implementing blogs for teaching academic writing skills in multicultural groups. In Smyrnova, E. (ed.), *E-learning and Intercultural Competences Development in Different Countries* (pp. 280-297)*. Katowice-Cieszyn: University of Silesia.

Garner, B. (2001.). Legal writing in plain English, exercises. Retrieved January 15, 2015, from http://press-pubs.uchicago.edu/garner/.

Gauntlett, D. (2011) *Making is Connecting. The Social Meaning of Creativity, from DIY and Knitting to YouTube and Web2.0*. Cambridge: Polity Press.

Harmer, J. (2007). *The Practice of English Language Teaching*. Harlow: Pearson Education Limited.

Hernandez, A. (2003). Making content instruction accessible for English Language Learners. In Gilbert G., Garcia (eds.), *English Learners: Reaching the Highest Level of English Literacy* (pp. 125-149). Newark, Del: International Reading Association.

LEGO.com. (n.d.). Retrieved January 15, 2015, from http://www.Lego.com/en-gb/.

Izadapanah, S. (2010). A study on Task-Based Language Teaching: from theory to practice. *US-China Foreign Language*, 8(3), 47-56. Retrieved from http://capswriting.pbworks.com/f/Task-based+Language+Teaching.pdf.

James, A. R. (2013). Lego serious play: a three-dimensional approach to learning development. *Journal of Learning Development in Higher Education*, 6. Retrieved from http://www.aldinhe.ac.uk/ojs/index.php?journal=jldhe&page=issue&op=view&path%5B%5D=15.

Lesikar, R., & Flatley, M. (2005). *Basic Business Communication: Skills for Empowering the Internet Generation* (10th ed.). Boston: McGraw-Hill/Irwin.

Long, M. H. (1985). A role for instruction in second language acquisition: Task-based language teaching. In Hyltenstam, K., Pienemann, M. (eds.), *Modeling and Assessing Second Language Acquisition* (pp. 77-99). Clevedon: Multilingual Matters.

McNamara, S., Cyr, M., Rogers, C., & Bratzel, B. (1999). LEGO brick sculptures and robotics in education. Paper presented at the American Society for Engineering Education Annual Conference & Exposition, Charlotte, NC.

Oshima, A., & Hogue, A. (2006). *Writing Academic English*. New York: Pearson Longman.

Papert, S. & Harel, I. (1991). Situating constructionism. In Papert S., Harel, I. (eds.), *Constructionism* (pp. 1-12). New York: Ablex Publishing.

Richards, J. C., & Rodgers, T. S. (2001). *Approaches and Methods in Language Teaching* (2nd ed.). Cambridge: Cambridge University Press.

Williams, J. (2003). *Style: Ten Lessons in Clarity and Grace, seventh edition*. New York; London: Longman.

Williams, J., & Colomb, G. (2010). *Style: Lessons in Clarity and Grace* (10th ed.). Boston: Longman.

Writing Class M.A.- Using Blogs for TEFL, [online] at www.wordpress.com. (accessed 31 July 2014)

Zinsser, W. (2001). *On Writing Well: The Classic Guide to Writing Nonfiction* (25th anniversary ed., 1st Harper Resource Quill ed.). New York: Quill.

Appendix 1- Sample Student Work

October's Attack: Lewandowski, we miss you![3]

The 17th of October could have been a wonderful day for the Polish football team. The match started with a dream-come-true situation. When in the fifth minute of the game Lewandowski scored a beautiful goal, the English goalkeeper had no chance to defend it. It was a great moment for the Polish fans; that is why they chanted the national Polish anthem and patriotic songs. With each subsequent minute of the match, Poles did not give up. Unfortunately, their winning streak was destroyed by the weather. Suddenly, it started to rain. In fact, it was a very heavy fall of rain. This horrible storm made the organizers decide to close the stadium's roof and that is when the real problem appeared. All of a sudden, the stadium's lights stopped working. After a few minutes, for the unknown reasons, the stadium brightened and an unidentified flying object flew onto the grass making a horrible noise. An unidentified green and horrific figure stepped down from the spaceship. It frightened the players and the audience to death. People started to panic, scream and finally escaped from the stands. Some of them ran into the grass, slipped onto the wet surface, and broke their legs. It was like a scary movie, except that it really happened. Even football players forgot that a few minutes earlier they had been the fierce opponents. Trying to defend themselves from the attack, they used goalposts and the net. Unfortunately, they did not manage to defend the greatest of all, the Polish and European champ - Lewandowski. He was kidnapped by a strange green figure, which ran away to its spaceship. Suddenly, it departed without any trouble because somebody opened the roof. Who was that? Will the creature from the outer space ever return our Lewandowski? Lots of questions pop up now; yet, nobody has been able to answer them.

---

[3] Robert Lewandowski is a world-famous Polish football player. The author of *October's Attack: Lewandowski, we miss you*! has chosen blocks from different sets (*Space Lego, Football Lego*, etc), in effect creating the unique exhibit. The random choice of blocks boosted creativity both in the non-pedagogical phase and in the subsequent prose writing. Then, at home, the student has digitally mastered the background (National Stadium in Warsaw) and uploaded the task on the Moodle e-learning platform. For this purpose the Forum was used, so other group members could access the files. Next, the Choice activity was used to vote for the best story.