eZoomBook Methodology and Template: A Case Study of Collective Authorship in the Classroom

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Abstract

This article reports on an innovative pedagogical methodology carried out in an executive education class. Participants were encouraged to link their classroom training and their professional activity using a methodology of collaborative note-taking and journal writing. The tool used for this activity was an eZoomBook, a multi-level tool incorporating different layers of content accessible by tabs in a menu. eZoomBooks include a zooming in and out function allowing readers to navigate between the different layers depending on interest and need. Participant testimony indicates that this student-centric approach to collaborative writing using the eZB methodology enhanced intrinsic motivation, teamwork skills, and learning. The executive education participants clearly indicated their satisfaction and their desire to continue using the methodology and tool in the workplace.

Keywords

collaborative writing, executive education, second language acquisition, team building, multi-layered documents

1. Introduction

The potential of Web 2.0 tools for project-based learning, collaborative writing, and educational research has increasingly raised interest among language researchers and teachers over the past few years (e.g., Kessler, Bilowski, & Boggs, 2012; Wigglesworth & Storch, 2012; Elola & Oskoz, 2010; Arnold, Ducate, & Kost, 2009). In executive education programs, where participants need to establish links between the training received and their professional activity, the use of Web 2.0 tools is essential because it enhances workflow efficiency, allowing for more effective distance communication and teamwork. For example, wikis used to reshape written communication have been shown to improve language skills such as lexico-grammatical accuracy or to increase students’ awareness and mastery of
text and genre characteristics (Francesca, 2015, p. 27). Many aspects of this area of research, such as the effects of peer collaboration in the writing process and on the end product warrant further investigation.

Following on from the original use of eZoomBook (henceforth eZB) methodology to teach English literature to French engineering students (Evain & De Marco, 2014; Evain, De Marco, & Carolan, 2013), this paper reports on an application of the eZB methodology in the context of executive education. The eZB methodology and template make it possible to create multi-level documents called “eZoomBooks” where readers can access multiple and/or enriched versions of the original work. Organized in layers accessible by tabs in a menu, eZoombooks include a zooming in and out function allowing the readers to navigate between the original and the newly created shorter enriched versions. The added-value of the template is that students themselves can collaboratively create an eZB by adapting and enriching the original version. The eZB template makes it possible for teachers to guide students in this enriching of books not only to illustrate and promote a document in the public domain, but also to create an edited original book based on the teacher’s and the class’s own design.

In this case, the objectives were not the same as in previous uses of the methodology since the overall aim was not to motivate students to read literature. The context of this case study is a group of ten participants, all colleagues in the same company, who attended an English language course focusing on those tasks in English that would be required in their professional roles. The course aimed to improve English skills generally as well as increase the motivation and confidence of the participants in using English at work. The methodology took the form of collaborative note-taking resulting in a class journal (in eZB format) which students were able to take away with them at the end of the course. In this way, instead of providing students with a course book at the beginning of the course, the students themselves produced their own electronic class journal, based on their note-taking throughout the duration of the course. Complementary to this macro level of collaborative writing, a micro level approach consisted in developing multiple layers of content focusing on specific tasks. For example, one layer of the finished eZB contained student reports on videos which had been selected for their appropriateness in terms of related professional content, another layer focused on technical vocabulary, another on articles from the press that students had summarized and discussed in class. In total, the finished eZB included the following seven layers or “chapters”: Full Class Journal, Class Profile, News Reviews, Marketing, ERP, Favorite Moments, and Vocabulary.

In this paper, we discuss the benefits of the approach for the participants and teachers as reported in a feedback survey. We argue that collaborative work of this nature is beneficial in two important ways: in terms of student motivation, and in terms of collaborative learning. A significant element of the eZB methodology is that students collectively produce a finished product in the form of an electronic book that can be downloaded and shared outside of the classroom, both spatially and temporally. The multi-layered nature of the finished eZB requires students to think carefully not only about the structure of the finished product but also the content. Collaborative note-taking induc
individualistic approach to learning and to adopt a collective responsibility for whole-group learning. Collaborative work of this kind also allows for the heterogeneity of student abilities so that students advance and contribute according to their ability: the work of weaker students is seen to visibly benefit the whole class, while stronger students are able to progress at their own speed without leaving others behind.

2. Collaborative Writing of Customizable Digital Documents

The study reported on here builds upon previous research related to the benefits of some elements of collaborative learning such as reciprocal teaching and teacher-guided cooperation. An advantage of the eZB methodology is that it capitalizes on the properties of Personalizable Virtual Documents. The existence of multiple layers of content, the eZB zooming in and out functionalities, and the potential for a hybridization of materials, facilitate learning for heterogeneous groups. Students actively participate to create and share course content and the end product is the result of shared effort and role distribution. In addition, participating in collective authorship develops interpersonal and metacognitive skills. According to Swain (2006), talking with fellow learners about the writing process and the writing produced enables learners to construct their thoughts about, and reconstruct their understanding of, concrete examples of written language that they have themselves created. She identifies this process as “languaging” which she defines as, “the process of making meaning and shaping knowledge and experience through language” (Swain, 2006, p. 98).

The pedagogical value of collaborative note-taking lies in the structured peer-to-peer teaching interactions. The notion that the best way to show that you know something is to try to teach it to someone else is not new: it has inspired many practitioners from Andrew Bell’s 1795 “mutual teaching method” to Jean-Pol Martin’s (1985) “learning by teaching” methodology, expanded on by Grzega and Schoner (2008). However, such a reversal of roles implies a conception of a classroom methodology that moves towards a more cooperative and collaborative model encompassing teacher-guided peer to peer interaction. Publications on the subject of collaborative construction demonstrate the benefits of cooperation among students and analyze how these benefits can be enhanced (Evain & De Marco, 2014; Evain, De Marco, & Gutierrez, 2013; Evain, De Marco, & Carolan, 2013). Hattie’s (2009) meta-research provides a synthesis of these studies highlighting the importance of reciprocal teaching. Gross (2007) states that “each student’s role can change along the process but it is essential to establish responsibilities to make sure students learn to work in groups” (p. 7). The key findings as applied here to the eZB approach are the need for the teacher to structure the task, the focused problem-solving nature of the student input, the responsibility that comes from assigned roles, and finally, the motivation in completing the production of an original group project that will be publicly displayed in the format of a Personalized Virtual Document (PVD) accessible outside of the classroom.

A research field has emerged that concentrates on the concept of PVDs and which seeks to measure their user effectiveness (Brusilovsky, Stock, & Strapparava, 2000; Falquet, Nerima, & Ziswiler, 2004;
Falquet & Ziswiler, 2005). Hyperlinks and multimedia in PVDs either provide additional information or record possible interpretation, or both. In the same way, the eZB approach allows for the personalization of documents offering a multimedia customizable “elegant organization” approach. The added value of the eZB template is the possibility to zoom in and out and thus to navigate between the different constructed layers and the original full version of a document. In addition, like all PVDs, eZB addresses the problems of teaching heterogeneous groups by allowing learners to use documents suited to their levels and needs.

To encourage a more active role during the learning process (Laurillard, 2002; Brewster, 2009; Lindberg & Olofsson, 2010; Romainville & Michaut, 2012), the eZB enrichments can also include pictures and videos or activities that the students create—for example interactive game strategies in the form of questions and quizzes, in line with the recommendations of Prensky (2001, 2012a, 2012b). While working on a personalized eZB, a group of learners will be collaboratively involved in producing a “library” of digital documents that are as easy to share and appreciate as the digital libraries highlighted in Heery and Lyon (2004) for the promotion of open knowledge and content (Iiyoshi & Kumar, 2008).

Working on an eZB classroom journal project thus allows learners to collectively “negotiate” the meaning of the course content in that each participant brings his/her notes and understanding of the material to the table. These notes can be discussed among the group to arrive at a consensus on the accuracy and thoroughness of the note-taking process. The pedagogy is thus process-oriented and requires learners to look closely at the material given in class and the extra material brought in by students to better understand the full content of the course.

In today’s collaborative culture, knowledge sharing has positively contributed towards establishing the foundations of both free software and free art movements (Dusollier, 2003), while having a considerable impact on education. In executive education programs, it is now possible to access a wide range of professional material. The group reported on here worked on videos posted by companies which explained and promoted the software that the participants were required to use in their professional roles. Teachers and participants collectively interpreted, analyzed, and summarized this content (in the form of bullet points, slides, comparative charts, etc.) as well as documents posted on the Internet sites of the companies in question. The re-working of this material, which involved a collaborative effort of analysis and synthesis, necessarily implied a collective authorship. Thus, it became clear that rather than taking pride in individual signatures, the actual collective effort towards meeting a common goal or towards achieving a final product was what mattered. The identities of the individual authors and their individual contributions were no longer important.

The numerous affordances of digital journal writing to create a common final document make it a very suitable and comprehensive educational activity in tune with the needs of companies, and which corresponds to the “interests and skills of nowadays’ technology-savvy students” (Castañeda, 2013), most of whom are immersed in a “hyper-collaborative participatory culture that has become ubiquitous
The opportunities to benefit from collaborative note-taking are enhanced by the use of technology and multimodality, which allows students to develop their creativity, linguistic skills and 21st century literacies (Castañeda, 2013) when producing, adapting and combining different elements such as audio, images, videos, sound or visual effects, textual materials, etc. This hybridization of materials of different natures and sources creates an incentive and a note-taking dynamic which allows for a more expanded perspective. It also allows teachers and students to determine the thread that unites all the topics covered in the context of this course.

Influenced by the methodology for collaborative learning described by Cassany (2008) and by Johnson and Johnson (1997), the eZB tool and teaching approach offer the following added-value.

- The existence of positive group interdependence and shared individual responsibility. The students’ collaboration must result in an end-product and each participant contributes to the collective effort of building up an eZB.
- The possibility for the formation of heterogeneous groups in terms of skills and competencies with expert readers helping non-expert or more reluctant readers.
- The enhancement of interpersonal communication skills (verbal and non-verbal) through the presentation of students’ work and the assembling of the final eZB.
- The meta-cognitive group work during which students verbalize the processes underlying their understanding of the content and themes of texts and receive feedback from their peers to which they have to respond.

3. Classroom Methodology

Ten trainees attended a 24-hour program divided into 12 two-hour sessions plus a final evaluation session. Two teachers were present at each session. In addition, participants were required to do 12 hours of autonomous work. One of the professional objectives was that learners gain English-language skills related to their specific field, in this case the vocabulary of complex and customized software solutions (ERP systems).

While the production of a class journal in the form of an eZB, was presented to learners as the main goal for the class, the methodology was also presented to achieve a set of pre-specified Intended Learning Outcomes (ILO) or learning objectives (M.I.T. Teaching and Learning Laboratory). The eZB which the students were asked to produce thus included the means by which the ILO’s were to be achieved. The teaching team began by mapping out the Intended Learning Outcomes which were then displayed in the eZoomBook template. Following in the footsteps of ILO experts, the team used the S-K-A acronym, which stands for Skills/Knowledge/Attitudes (M.I.T. Teaching and Learning Laboratory), to frame the learning objectives to be reached by the end of the program.

For example, in terms of the session on ERP systems, participants were given the following SKA roadmap:

- Skills: to learn how to locate information using professional documents such as the ones available...
on the SAGE XP3 website.

- **Knowledge:** to understand the basics of ERP systems.
- **Attitudes:** to experience working collaboratively to collect, synthesize, and demonstrate understanding of information.

During the first stage of the process, students participated in on-line collaborative note-taking as the means to compile the class journal. Students’ notes were typed into a document to which all participants, both teachers and students, had access during class using Web 2.0 tools such as Google Drive, Wiki Moodle, or Drop Box. While one teacher focused on guiding the students through class activities, the other teacher focused on reading the students’ notes and correcting any language errors so that students could see where they needed to improve and ensure that the finished document would be an example of correct usage. The appearance of each student’s name next to the text they were contributing enabled the teacher to identify the source of each written contribution and provide individual feedback. Parallel to the collaborative writing of the class journal, students were also given micro-level tasks to perform such as writing a personal profile, summarizing professional videos, writing news reviews, and listing useful vocabulary.

The second stage of the eZB production process required students to follow the tutorials available on the eZB website to learn how to download and use the template. The third and final stage involved transferring the previously prepared written content (class journal, news reviews, etc.) into the template, organizing the notes into relevant sections, each section corresponding to an electronic book layer, (marketing, ERP, favorite moments, etc.) and inserting hyperlinks between the different content layers. The evaluation of a web strategy project took place during the last class session. Following this, trainees and teachers were asked to complete a two-question feedback questionnaire on the eZB methodology:

1. Will you use the journal and/or the eZoomBook in the future?
2. How could the journal writing activity and the resulting eZoomBook serve to create bonds within your group and among the different groups that have access to the class journal?

### 4. Results: Trainee and Teacher Production and Feedback

The final eZB produced by the group comprised seven layers, representing 11,680 words. The average number of words produced was 868 per student and 1,500 per teacher. On average 4-6 key concepts were introduced in each session and 4-6 videos were studied. 22 new vocabulary terms on average were presented in each session.
Table 1. Main Figures Concerning the Class Journal

<table>
<thead>
<tr>
<th>Section titles: Full Class Journal, Class Profile, News Reviews, Marketing, ERP, Favorite Moments, Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of words (in the 7 sections)</td>
</tr>
<tr>
<td>Average number of words:</td>
</tr>
<tr>
<td>per student</td>
</tr>
<tr>
<td>per teacher</td>
</tr>
<tr>
<td>Number of key concepts introduced per class (e.g., “Viral marketing”, “Shared Economy”, etc.)</td>
</tr>
<tr>
<td>Number of videos and categories of videos per class (on average)</td>
</tr>
<tr>
<td>New vocabulary items per session (on average)</td>
</tr>
</tbody>
</table>

Figure 1. Screen Shot of the Class Journal

The participants and teachers were informed that public use would be made of all the documents produced in class as well as their feedback statements and they gave their approval. Student and teacher feedback took the form of written comments as well as a group discussion session. In addition to the group discussion, the teachers participated in a feedback session which resulted in convergent recommendations and ideas for future uses of the eZB methodology.

The questionnaire results were analyzed and categorized as follows:

- sharing within the group (recording);
- sharing beyond the group (continuity);
- sharing beyond the group (showcasing);
- sharing for enjoyment.

4.1 Sharing within the Group

Both participants and teachers acknowledged benefits of the eZB methodology for the transmission and
sharing of information, something they would not normally do with all members of their class:

“I will be using it to share interesting videos with you (in English) and new vocabulary I come across”.

The participants valued the exchange of information and opinions that arise from collaborative work:

“It will also be a good tool to pick up information or vocabulary”.

“The knowledge and the sharing of different points of view are necessary in a classroom”.

They felt that the eZB methodology contributed to the learning process:

“The manner and the method of the teaching allow a good consolidation of all that has been learnt”.

The teachers appreciated the way learners embraced the collaborative working method:

“It was lovely to watch you interact, via the journal: as you shared notes and info, we teachers could appreciate how much you were helping each other with your work”.

Collaborative writing resulted in a sense of collective authorship:

“It’s something that we all took part in—it’s not just my work”.

4.2 Sharing beyond the Classroom (Continuity)

Interestingly, and perhaps unexpectedly, participants also referred to the possibility of sharing the finished eZB outside the classroom and across different domains of interaction beyond the class group, in a spirit of “life-wide” learning:

“First of all, I will be using it to share with my friends, to show and explain to them what we have done in our English classes”.

The teachers were pleasantly surprised to hear that students were sharing their work beyond the classroom.

“It was nice to hear about the way some of you told your family and colleagues about the journal—and Carole even showed it to her daughter!”

The finished eZB is also perceived as a means to create relationships beyond the classroom:

“The journal will allow the next cohort to get in touch with us more easily”.

One comment indicated that the content of what has been learned will be directly applicable to the professional context and might be valuable enough to share in the workplace:

“I will be using it as a support for any presentations, using vocabulary and tips you gave us. It’ll help me remember arguments about [the various software we learned]. Maybe, I’ll show it to [my colleagues]”.

One clear benefit of the note-taking methodology was to provide a record of the work that was carried out throughout the class:

“It will be a good file support to remember the 15 English work sessions”.

Participants appreciated the multi-layered nature of the eZB which enabled them to produce a record of the different areas that were covered in class:

“Marketing/web strategy/ERP/leadership parts are interesting items to keep, in relation to our job as consultants”.

Teachers’ participation in the collective authorship of the finished product meant that writing and
correction occurred simultaneously so learners were able to benefit from the feedback with the knowledge that the finished record of their work was error-free:

“It’s nice to have all of our class notes accessible online. The notes are complete and teacher-corrected”.

From the teacher’s point of view, the benefit of collective authorship was related to monitoring students’ progress as well as the achievement of the ILOs.

“It’s interesting for a teacher to see what the class has retained from each session: the journal helps to record that”.

4.3 Sharing beyond the Group (Showcasing)

Participants also believed that the finished journal could be used to show future trainees what they have accomplished and as a means to recognize the work done in class:

“It could be used as a sample and example for the next [group of students following the same course]”.

One participant suggested it could be shared with trainees from other companies, as well:

“Suggestion: To share eZoomBooks between other continuous training courses”.

Teachers recognized similar benefits for the future:

“It will be a reference for future groups: flicking through the eZoomBook of the first […] group will help future groups understand what’s expected of them”.

“I will be using this journal to showcase what we do in class”.

“I will give the journal to [the head of the continuous training service and our training course developer]: hopefully, it will be a tool for them to promote our continuous training programs”.

“I recommend distributing this journal widely”.

Participant suggestions focused on the possibility for additional content:

“Add more vocabulary definitions, or each student adds his ‘unknown’ vocabulary section in the journal”.

It was also suggested that the record of classroom learning could move beyond the written register, since an electronic book can also contain elements in other modalities:

“To have more audio and live recording of the training in the eZB, to be able to re-listen to it at home”.

4.4 Sharing for Enjoyment

The remaining comments illustrate that learners found the methodology enjoyable:

“Favorite moments section contains Class jokes, Story-telling, Pictures. It’s important to have fun together in order to improve our English”.

The eZB as a record of learning is also perceived as a record of enjoyed moments:

“First of all, for me it will be a way of remembering these weeks spent with you guys! It’ll remind me of the funny stories about you all (especially the “Who we are” presentations)”.

“I will remember the great moments we had during this English training, having a look at the pics!”

Teachers’ comments also refer to their enjoyment of the method and anticipated future enjoyment of the finished product:
“I enjoyed reading what each student wrote and therefore correcting your work was not a chore!”
“I think I will take pleasure in re-reading the journal every now and then because I like to look back on the pleasant moments we shared together. I will take a trip down memory lane every now and then, especially if I feel I need to be stimulated on a grey winter morning...”

5. Discussion
The benefits of the eZB methodology were two-fold and inter-related: the student-centric approach not only led to collaborative learning, but it also enhanced intrinsic motivation. The learners’ primary objective shifted from obtaining an individual grade to being collectively responsible for producing a document. In addition to the macro-level objective of producing the class journal, learners had opportunities to develop their skills on a more individual level by carrying out the micro-level tasks leading to the production of the multiple layers of content. This motivation was enhanced by the learning through teaching opportunities that the teachers provided. Participants were encouraged through the one-classroom/one-journal system to take notes for the benefit of the class and not just for themselves. Those who managed to take notes easily benefited from helping the weaker students; the weaker participants benefited from peer coaching and enhanced motivation from the desire to “keep up”. The stronger participants were rewarded because the group progressed faster, and because the teachers corrected their work and offered verbal recognition for their efforts. Although difficult to measure, teachers noticed improved self-esteem among the participants: the resulting eZB was a recognition of the group effort and work done in class.
The collaborative writing of an eZB thus has transactional value, described by Pigg et al. as “the value placed on what can be derived in exchange for an act or a product of writing” (Pigg et al., 2014, p. 101). This is because the shared writing process enables students and teachers to create and maintain healthy classroom relationships. The finished product has value as a means for creating future professional relationships, as a record of the learning that took place, and as a linguistic resource for future reference. In addition to the synergy arising from sharing the writing process, learners and teachers also gained benefits from the accomplishment of sharing the finished written product. During class activities, the focus is on the writing process itself and the collaborative nature of the process which requires abandoning an individual approach to text production. In addition to this procedural aspect, the fact that the collaborative writing process leads to a product which can be shared online and downloaded means that the sharing can move beyond the spatial and temporal borders of the classroom.
This method is highly motivating for the students which directly impacts on teacher motivation. High student motivation contributes to the co-authoring of a document which is in turn rewarding for teachers because it helps them shape their material. In addition, it enables teachers to work with professional material, to keep up to date with professional developments, and venture into domains that they may not master. In an executive education context, teachers can thereby leverage the participants’ higher levels of knowledge concerning the material by guiding them through the learning process for...
future autonomous learning. The content of the eZB is a student-produced reflection of a teacher-produced plan. In this respect, the final product can be seen as part of a feedback loop to check whether students have achieved the teacher’s intended learning outcomes.

An advantage of the methodology is its use of new technologies to create a classroom dynamic building on each participant’s contribution towards a global learning objective. Nonetheless, this dependence on technology could also be seen as a limitation. Classroom material must be compatible with the template and participants need a certain familiarity with new technologies. With time, the compatibility issue will decline as more and more classrooms become equipped with the latest hardware and software, or as more and more students bring in their own device. As for the problem with more hesitant, techno-phobic participants, special care must be taken at the start of the program to familiarize them with the tool.

6. Conclusion

This case study particularly underlines the benefits of the eZB methodology and template for executive education programs. In an English as a Foreign Language context, the question of whether the eZB methodology contributes to improved vocabulary acquisition is one which could form the focus of a future experimental study. It would be interesting to examine the links between the number of words/concepts learned during a course using the eZB methodology and long-term retention. According to Gurevitch, Johnson and Goldberg, “verbatim recognition memory has been demonstrated for (...) ‘highly interactive’ or socially important utterances” (2010, p. 47). It is therefore possible that vocabulary recall is helped by the eZB methodology because new vocabulary is embedded in the interactive learning experience. This is especially important for executive education as participants go straight into professional contexts to use the vocabulary that has been targeted in class.

This experiment shows that the students have achieved qualitative improvements listed in our paper here such as team work, collaborative writing, general improvement of language skills and this indirectly translated into the students’ increased confidence in the workplace: using English at the consultancy level, signing up for the TOEIC test, becoming mentors for the next generation of trainees.

The potential applications of collective authorship and “eZoomBooking” are much broader than this context. On all educational levels, cross-disciplinary projects could benefit from the methodology. Future research could involve collaboration with pedagogues working on projects from primary level to higher education level. eZoomBooks could, for example, provide a template with guidelines for various learning activities such as story-enrichment activities, text-customizations, annotation or diary writing, contrasting and comparing texts, synthesizing, summarizing and analyzing texts. In other words, the wide range of possible eZB templates reflects the wide range of teaching approaches, texts, and students.
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