Poster Presentation

Teaching-Learning Cycles: A Genre-Specific Pedagogy

Colin F. Rundle
Soka University

Genre approaches to text analysis have contributed greatly to analysis and teaching of texts in ESP. Genre analysis places both textual and grammatical structures in specific contexts, highlighting the logic of those structures and their practical applications. While genre is a well established tool for practitioners of ESP (Bhatia, 1993; Dudley-Evans & St John, 1998; Swales, 1990; Swales & Feak, 1994), teaching-learning cycles are less well established. Thus, this paper describes how the teaching-learning cycle is applied to a procedure genre in a science and engineering university writing class.

The Teaching-Learning Cycle

The Teaching-Learning Cycle (Hyland, 2006; Paltridge, 2001) or Curriculum Cycle (Gibbons, 2002) grew out of the Sydney School of genre studies as an "explicit teaching" alternative to process approaches to writing in order to empower marginalized primary school students (Gibbons, 2002). It is Vygotskian as it mediates language through social interactions, as indicated in the outer-ring of Figure 1. The double-headed arrows indicate that mediation switches flexibly among teacher-class, teacher-student, and student-student, contingent on needs and abilities at each stage. The four main stages are building the field, modelling the text, joint construction, and individual construction, shown in the second ring of Figure 1. Double-headed arrows link each stage in the cycle, indicating that activities may flow back and forth between the stages as needed. Arrows pointing from the outer ring to the core indicate that as the cycle progresses and

is repeated, individual linguistic competence and thinking processes develop through interactions and shared experiences among participants (Hyland, 2006; Paltridge, 2001; Rose, 2012).

In the unit discussed here, social interactions and shared experiences are afforded by applying the cycle to a practical science and engineering group project which provides the content for a written procedure text. The main objective is a written description of how students built a simple electric motor in groups of two to four. The cultural and social contexts of the genre are highlighted as students recast relatively simple "situationally embedded" spoken procedure instructions into a more elaborated, abstract, written procedure description (Gibbons, 2002, p. 42). The project described here constitutes a five- to six-week unit of a 15-week course which meets once a week for 90 minutes, with six to 16 students typically between 350 to 600 TOEIC level.

Building the Field

To begin, the topic, context and specific vocabulary are introduced to "build the field." This project begins by showing a photograph of a finished motor from

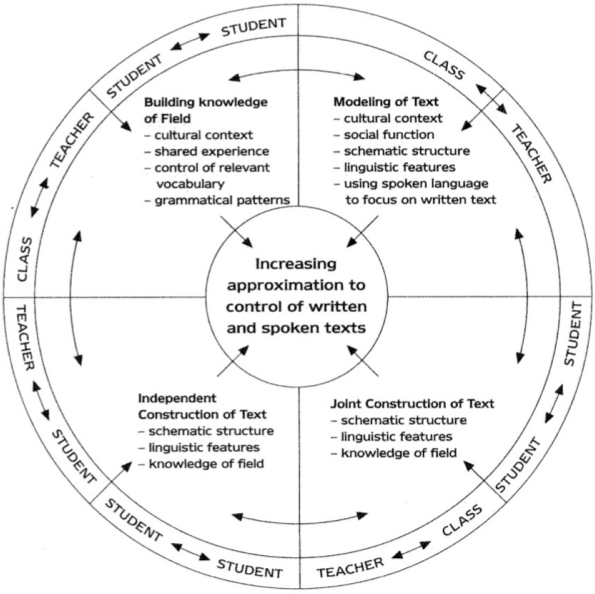


Figure 1. The Teaching-Learning Cycle (Hammond et al., 1992, in Paltridge, 2001, p. 31).

the Hila Science Projects (n.d.) website. The transcript of the accompanying YouTube video was divided into stages, and the steps were jumbled. Groups of students then completed several tasks. The first task raises awareness of the basic process and content vocabulary as follows.

1. Study a list of electric motor materials and parts and a picture of the completed motor.
2. Check vocabulary.
3. Discuss jumbled steps of process taken from the YouTube video instructions and begin to put the steps in order.

This is followed up at home and then checked in the next class as follows.

1. Watch YouTube video at home.
2. Put steps in correct order.
3. Note verb forms and tense.
4. Enter new vocabulary into vocabulary notebooks.
5. Check with peers and teacher in next class.

The video is a spoken procedure, not written, so the language forms and structures are comparatively simple imperatives and a chronological list of steps. In addition, the video greatly facilitates comprehension while establishing the context as a typical scientific laboratory setting. In this way, a basic process genre is introduced along with the language and the social setting of a simple technical project.

Modelling the Text

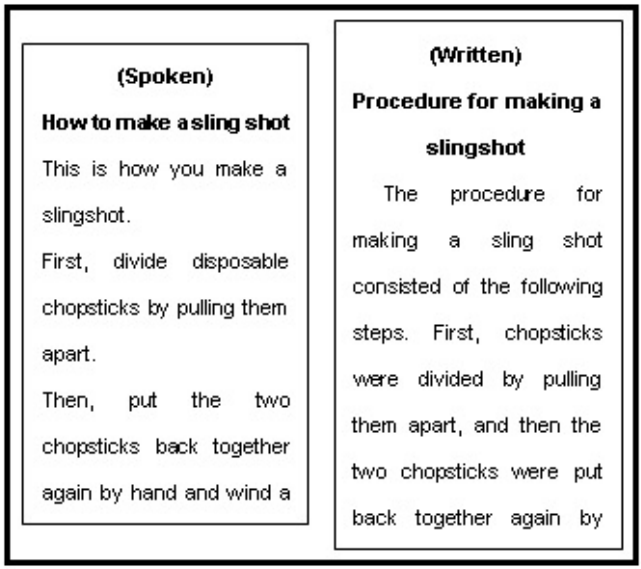
Next, the structure and linguistic features of the written genre are introduced by analyzing a model of the same genre in a similar but simpler field, making a slingshot. For consistency, the model is introduced in a spoken mode first, which is then compared and contrasted with a written example (Figure 2). In this way the linguistic and stylistic similarities in the modes (sequence transitions, purpose, method, means) and differences, such as the more complex grammar (passives not imperatives, past not present tense), more elaborate description to compensate for lack of visual support ("after *securing them* ...," not "after *that* ..."), and more formal vocabulary ("was tied *in order to secure* them," not "*to* join

them") are highlighted. These tasks are also completed in groups, as follows.

1. Read through spoken instructions of how to make slingshot.
2. Discuss with group members.
3. Reconstruct a jumbled written description of how to make a slingshot.
4. Identify the genre features on a checklist.
5. Discuss how the spoken and written texts differ, and possible reasons for the differences.

Joint Construction of the Text

The students have now examined two spoken procedures and one written procedure, and they also have been introduced to electric motor vocabulary. They now use the spoken description that they saw on YouTube and re-assembled when "building the field" to build a motor. One member of the group is assigned as note-taker and keeps detailed "lab-notes" of how the group actually builds the motor, not just copying the basic instructions. Each group experiences unique problems while building the inherently unstable motor and must solve them in unique ways. Thus, no two groups will have exactly the same procedure. Groups



(Spoken)

How to make a sling shot

This is how you make a slingshot.

First, divide disposable chopsticks by pulling them apart.

Then, put the two chopsticks back together again by hand and wind a

(Written)

Procedure for making a slingshot

The procedure for making a sling shot consisted of the following steps. First, chopsticks were divided by pulling them apart, and then the two chopsticks were put back together again by

Figure 2. Spoken and written procedure models.

make an electric motor as follows.

1. Use instructions from YouTube for language and technical reference (constructed in reordering activity and reinforced in video when building the field).
2. Make lab notes (fill in a flow chart handout)
   - What they *actually* did
   - Include problems and solutions (debugging)

In addition, notes are also kept on up to three tests and a comparison of the motors to determine whether they meet the performance specification (spin unaided for one minute) and to determine which group's motor spins the longest. This testing also further differentiates each group's notes, which individual students use as an outline for producing the written procedure genre in the next stage. In this task, groups take notes as they time how long the motor runs and compare each group's motor and determine the "best" motor.

Before moving on to individual construction of the text, groups complete exercises to change the spoken instructions for building the electric motor into written forms. These exercises focus primarily on forming passive structures, especially in the past tense. The most challenging and interesting feature here is the large number of irregular verbs that students must transform from imperatives to passives. In a traditional grammar lesson, this would be a mechanical and dull transformation. However, in this rich context, students have just performed the actions, so they are actively engaged in accurately representing their actions, as would detail-oriented scientists.

They are fully engaged as they consider the form and pronunciation of verbs such as "wind-wound-wound" (the coil wire), "spin-spun-spun" (the coil), or "cut-cut-cut" (the copper wire, aluminum sheet, etc.). They also have a chance to consolidate important notions from both modes, such as method (*by* verb-*ing*), tool (*with* a box-cutter), or purpose (*to*/*in order to* secure the bracket). Students may also be given exercises for extra practice with the linguistic and stylistic features, such as changing imperatives to past tense passives, completing a table of irregular verbs, and completing a cloze exercise with appropriate forms for method, tool, or purpose.

Independent Construction of the Text

After groups have collaboratively built their motor, compiled detailed notes on how their motor was built and tested, and practiced important linguistic forms, each student produces a written explanation of how the group made the motor. This is a standard three-draft process in which individuals write a first draft from their group notes. This is peer-checked, and then individuals write a second draft on which the teacher gives individual feedback. Finally, each student submits the final draft for grading. While this is an independent stage, students still collaborate by describing the same process, sharing the same outline, and peer reviewing their first drafts. The amount of collaboration and sharing may invite copying, but I have not found this to be common.

Conclusion

The teaching-learning cycle ensures that genres are scaffolded systematically so that students become familiar with and gain control of genre features. It is intuitive and can readily be adapted to a wide range of levels, genres and projects. Indeed, the example outlined here is adapted to suit various classes. For example, sometimes the electric motor texts are used as models for a group project to build and test the slingshot. In other classes, the same procedure genre is embedded into a lab report "macro genre" along with other "micro-genres" (Woodward-Kron, 2005) such as extended definitions. Creative teachers and students will find a number of similar projects to fit into the cycle, thereby creating communities of motivated, collaborative language learners.

References

Bhatia, V. K. (1993). *Analysing genre: Language use in professional settings*. London, England: Longman.

Dudley-Evans, T., & St John, M. J. (1998). *Developments in English for specific purposes: A multi-disciplinary approach*. Cambridge, England: Cambridge University Press.

Gibbons, P. (2002). *Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom*. Portsmouth, NH:

Heinemann.

Hila Science Projects. (n.d.). Electromagnet, Basic Speaker, Electric Motor. Retrieved from http://hilaroad.com/camp/projects.html

Hyland, K. (2006). *English for academic purposes: An advanced resource book*. London, England: Routledge.

Paltridge, B. (2001). *Genre and the language learning classroom*. Ann Arbor, MI: University of Michigan Press.

Rose, D. (2012). Genre in the Sydney school. In J. P. Gee & M. Handford (Eds.) *The Routledge handbook of discourse analysis* (pp. 209-225). New York, NY: Routledge.

Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge, England: Cambridge University Press.

Swales, J. M., & Feak, C. B. (1994). *Academic writing for graduate students: A course for nonnative speakers of English*. Ann Arbor, MI: The University of Michigan Press.

Woodward-Kron, R. (2005). The role of genre and embedded genres in tertiary students' writing. *Prospect*, *20*(3), 24-41.

Author bio

Colin Rundle *teaches English for science and engineering in the World Language Center at Soka University and ESP in Soka's MATESOL program. He has taught for 25 years in Australia, Indonesia, and Japan, promoting learner autonomy and academic literacy through socio-cultural approaches. rundle@soka.ac.jp*

Received: September 30, 2017
Accepted: November 10, 2018