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Students' Reflections on the Use of Portfolios in Higher Education

»Resumen

La pedagogía de empoderamiento promueve las prácticas pedagógicas centradas en el estudiante, el pensamiento crítico, la construcción del conocimiento y la autonomía del aprendizaje (Freire, 1970). Este estudio cualitativo, basado en el análisis del contenido, describe las reflexiones constructivistas de los estudiantes sobre el uso de portafolios en una clase de comprensión de lectura en Inglés de la carrera de Agronomía de tres poblaciones diferentes de estudiantes en el II semestre 2014, I semestre 2015 y I semestre 2016 del Instituto Tecnológico de Costa Rica, Sede Regional San Carlos. Durante los tres semestres (16 semanas por semestre) de la clase de Inglés Técnico para Agronomía, los datos fueron recolectados a través de un cuestionario semi-estructurado

y una narrativa reflexiva al final de la clase de dos tipos de portafolios: un portafolio de vocabulario y un portafolio de comprensión de lectura. Los resultados indican la importancia de la autonomía del aprendizaje, el desafío de la creatividad y el desarrollo del pensamiento crítico, así como, la importancia de la puesta en práctica del contenido (teoría vs. práctica). Los estudiantes favorecieron el uso de portafolios; sin embargo, recomiendan enfocarse más en la comprensión de lectura y el vocabulario (contenido) en lugar del desarrollo de la creatividad, usar portafolios digitales en lugar de físicos y promover el trabajo colaborativo para el internalizar el proceso del portafolio.

Palabras clave: Pedagogía del empoderamiento, portafolio del estudiante, educación superior.

»Abstract

Empowerment pedagogy encourages student-centered teaching practices, and enhances critical thinking, knowledge construction, and learning autonomy (Freire, 1970). This qualitative study, based on content analysis, aims at describing students' constructionist reflections in terms of the use of their portfolios in a reading comprehension class of the Agronomy major of three different student populations in the II Semester 2014, I Semester 2015, and I Semester 2016 at Instituto Tecnológico de Costa Rica, Sede Regional San Carlos. In the course of three semesters (16 weeks per semester) of the class Inglés Técnico para Agronomía, data were collected through a semi-structured questionnaire, and a reflection narrative at the end of the class of two types of portfolios: a vocabulary portfolio, and a reading comprehension portfolio. Results indicate the importance of learning independence, the challenge of creativity and critical thinking development, and the significance of applied content (theory vs. practice). Overall, students favored the use of portfolios yet they recommend focusing more on reading comprehension and vocabulary (content-based) rather than creativity; as well as transitioning from paper-based to digital-based portfolios, and promoting collaborative work for the portfolio meaning-making process.

Keywords: Empowerment pedagogy, student portfolio, higher education.

»Introduction

The challenges of higher education in the XXI century in technological higher education settings give space to challenge the traditional methodology paradigms such as knowledge transfer and banking education (Cummins, 1987; Freire, (1970, 1994; Giroux, 1993, 1988). Empowerment pedagogy focuses on aspects that promote criticism, students' commitment to their learning process, the creation of knowledge through co-construction and dialogue, and the development of learning autonomy (Freire, 1970). Empowerment pedagogy calls for a paradigm shift in the way students are taught, as well as how knowledge is assessed; it calls for promoting student's ownership of their learning. This study describes students' constructionist reflections about the use of their portfolios in an English reading comprehension class of the Agronomy major at Instituto Tecnológico de Costa Rica, Sede Regional San Carlos.

»Literature Review

Different from the transmission model, empowerment pedagogy aims at letting students take initiative and control over their own learning. In this matter, students become active generators of their own knowledge, as they should be more involved in curriculum planning (Cummins, 1989). Empowerment pedagogy's objectives focus on strengthening the students' skills in terms of resourcefulness, self-awareness, and self-direction. It is mandatory to become increasingly reflexive and critical to educate

students to face the current social issues. Some critical educational theorists have argued about the oppression structures that aim at dominating students in educational contexts (Freire 1970, 1994; Giroux, 1983, 1998). Freire is well known for his perspectives in terms of critical pedagogy and empowerment pedagogy, and has encouraged teachers to seek connection with the students in order to increase their personal and social motivation which are required to learn and transform their lives.

In the educational contexts, the classroom and the curriculum need to be filled with vital issues taken from the students' lives. Thus, students are empowered and learning becomes meaningful and contextualized; active learning takes place and students focus on commitment and initiative while becoming more responsible of their learning process. Freire (1970) claims that becoming empowered implies change. That change implies thinking differently, opening up to new perspectives, activating new possibilities, and reaching for that maximum potential of each student. Interesting to note is the fact that empowerment practices are not limited to teaching methodologies, they can also be applied to assessment practices.

The use of portfolios is highly related to empowerment practices in the sense that its use seeks to celebrate learning evidence and student involvement. Portfolios are owned by the students, which makes them individual unique artifacts. Gomez (https://www.ied.edu.hk/obl/files/electronic_portfolios.pdf) states that portfolios are collections of work in which students showcase their skills, provide evidence of ongoing learning takes places while outcomes are met.

In a study conducted by Miller and Morgaine (2009), in relation to VALUE (Valid Assessment of Learning in Undergraduate Education) of the Association of American Colleges and Universities, they suggest that portfolios, most specifically electronic portfolios (e-portfolios)

- Build learners' personal and academic identities as they complete complex projects and reflect on their capabilities and progress,
- Facilitate the integration of learning as students connect learning across courses and time,
- Be focused on developing self-assessment abilities in which students judge the quality of work using the same criteria experts use,
- Help students plan their own academic pathways as they come to understand what they know and are able to do and what they still need to learn. (p. 8-9)

Miller and Morgaine (2009) also address the importance of the concept of metacognition, as the process in which individuals become aware of their thought processes. In the case of portfolios, students are encouraged to reflect on their work and learning processes, in metacognitive manners. Constant monitoring evolves into systematic reflection so that learning adjustments take place and students become more autonomous, independent, and critical of their strengths and weaknesses. Others have also argued that the use of portfolios results in students reflecting on their development since creating a portfolio demands a lot of effort and commitment (Tartwijk et al., 2007). Portfolios stresses student-centered approaches instead of teacher-directed lear-

ning environments since in teacher-controlled settings portfolios have proved not to be fruitful (Driessen et al., 2005). Portfolios, as empowerment teaching techniques seek to challenge students to be the owners of their learning decisions, be self-directed learners, and dynamically interact in a learning context.

»Methodology

As part of the qualitative research, the study used an inductive approach adapted from Hatch (2002), and in the form of content analysis (domain analysis). Inductive analysis was used since it sought to effectively extract meaning from data. Domain analysis provided a systematic approach to processing data to report representative pieces of descriptive categories. Domain analysis studies semantic relationships that form categories that include other categories (Hatch, 2002; Spradley, 1979). Domain analysis moves from specific elements to general conclusions, with a systematic process of identifying, summarizing, and revising domains.

Specifically, “frames of analysis” (Hatch, 2002 p. 163) were first identified. Then, the included terms (name of the specific elements) to capture the core of the meaningful units which were categorized in order to create domains based on semantic relationships. Once the semantic relationships were established, salient domains that directly answered the purpose of the study were identified. After all salient domains were identified, a code system to keep better and more orderly track of the domains was created. The final step of domain analysis invol-

ved looking for themes. Finally, a meaningful whole was created in order to represent the specific parts of the analysis in order to create “a whole that makes sense” (Hatch, 2002, p. 175). As the summary was put together, data excerpts to support the elements of domains were selected, which became part of the findings.

Data were gathered through the students’ reflection entries at the end of the courses. This qualitative study, based on content analysis, analyzed content taken from a semi-structured questionnaire and a reflective narrative written by the students at the end of the class of two types of portfolios: a vocabulary portfolio and a reading comprehension portfolio. The three different student populations taken into account were from the major of Agronomy. Their participation occurred during the II Semester 2014, I Semester 2015, and I Semester 2016 at Instituto Tecnológico de Costa Rica, Sede Regional San Carlos.

All data were analyzed through critical readings and content coding. The coding looked for the creation of semantic categories through the students’ reflection entries and answers. The three student populations (21 students in total) that were part of this study are from Instituto Tecnológico de Costa Rica, San Carlos. Each student took the course Inglés Técnico para Agronomía, as the last English course belonging to the major of Agronomy during II Semester 2014, I Semester 2015, and I Semester 2016. The following results summarize the students’ constructionist reflections in regards to the use of portfolios, as an empowerment pedagogy strategy, in higher education.

»Results

The use of portfolios in the course of Inglés Técnico was part of a curriculum reform of the Agronomy major, where portfolios sought to shift traditional assessment and teaching practices to more innovative methodological strategies, based on empowerment pedagogy principles. Its main objective was to empower students and provide meaning to their knowledge environment. It also aimed at empowering students so that they can be the protagonists of their own learning and co-construct knowledge as part of it. The use of portfolios challenged the traditional learning formula and celebrated individuals in their academic abilities within their social and personal contexts. The course sought to enhance reading comprehension skills and vocabulary enrichment.

The idea of the portfolios is first presented to the students at the beginning of the course. One entire class is devoted to introducing the topic of portfolios. Students are encouraged to reflect and be critical about the way they use this tool. Even when being formally presented in the first class, the practice of using portfolios is constantly reinforced during the 16 weeks of the semester. At the end, students were requested to write a reflection entry where they had to reflect about the experience of portfolios during the course. Two portfolios were carried out: one about reading comprehension strategies, and another one about vocabulary (agronomic jargon). Both portfolios have some general guidelines, but the most fundamental rule is that students must internalize that both portfolios are a work in progress that reflect growth and decision-making processes every week during the semester.

The reading comprehension portfolio focuses on specific reading comprehension techniques (i.e., scanning vs skimming, using background knowledge, asking questions, identifying the topic, main ideas, and supporting details, among others). The vocabulary portfolio encourages students to create their own meaningful technical glossaries, based on their prior linguistic background knowledge.

Due to the dynamics of the portfolio, students are systematically assessed during the entire semester (4-5 times) using a rubric (See Annexes 1 and 2), as a way to promote critical thinking skills, creativity, a sense of protagonism over their learning process, and an on-going sense of reflective progress. The main objective of the rubric was not to assess learned skills or competencies; instead, it aimed at assessing students' creativity, effort, and progress, as genuine ways of empowerment. As portfolios are part of performance assessment, the focus relies on the process, not the outcome. The professor presented the rubric at the beginning of the courses. As part of the empowerment theory, when students were presented with the rubric, they were provided a space for dialogue, and were encouraged to reflect, question, and propose new assessment criteria for the rubric of the portfolios. In addition, the dynamics of the course encourages that students freely choose the readings to be used during the course based on their professional interests.

The following results represent the constructivist perspectives and reflections of the students. Results include the importance of learning independence (autonomy), the challenge of creativity and critical thinking de-

velopment, and the significance of applied content (theory vs. practice). Students recommended focusing more on reading comprehension and vocabulary (content-based) rather than creativity, transitioning from paper-based to digital-based portfolios (e-portfolios), and promoting collaborative work for the portfolio meaning-making process.

» Learning autonomy

The most prominent result of the study, highlighted by the students, was the importance of learning independence. Students concurred that the methodology, but most specifically, the assessment of the course make them aware of their learning process and demanded that students became responsible for their own portfolios. One particular aspect that stood out was the significance for students to be able to develop their unique skills and strengths through the creation of their portfolios. They embraced the freedom provided and became protagonists of the learning process, in simple aspects such as deciding on the color of the fonts, as well as higher decision-making processes such as how to present reading comprehension strategies or how to select specific readings. Students also celebrated the fact that the portfolios were personalized and distinctive. They were encouraged to claim their individuality through unique presentation. Students voiced their thoughts as follows,

“(portfolios) allow for students to be more responsible”;

“assessment demands much more commitment and hard work”;

“the course and assessment encourages students to develop their own skills and strengths”;

“(portfolios) provides students to have the freedom to look for their personal interest and creative ways”;

“the readings are the best since we can choose them; we can also design how we want to present them, which at the end makes the portfolios way more interesting, unique, and easy”;

“the entire responsibility goes to the students; at the end it is the Students who are fully responsible for their progress”.

» Creativity and critical thinking development

Creativity was a result that has some conflicting views. On one part, students acknowledge the importance of developing creativity and critical thinking skills. On the other hand, they concluded that it was challenging to be creative and critical, and that too much value was put into this criteria. Students clearly stated that even when portfolios make them be more critical and creative, they were also very demanding on students. They coincided that creativity is very important yet it should be given a minor role in the assessment. Students indicated how they believe more value should be placed in content, in the form of reading strategies and vocabulary enrichment. Both must

prevail instead of originality and the development of critical skills. Students stated, *“I think that too much value is placed in creativity”*; *“maybe assessment can be reconsidered so that creativity becomes less”*; *“creativity should not be assessed as a major component, what really matters is content and comprehending the readings”*.

»Applied content (theory vs. practice)

In regards to applied content, students indicated that the methodology and assessment of the course was highly beneficial, not only in the course per se, but also in other courses and even in life. Students internalized that through the use of portfolios they were putting into practice reading comprehension techniques and using field jargon that was pragmatical and meaningful. They concurred that due to the nature of the assessment, they had to be constantly searching and complementing the portfolios, which gave them a sense of genuine learning, not forced, demanded, or imposed knowledge. A common feeling was that students embraced the dynamics of the class as something practical instead of theoretical, *“the methodology and assessment is very dynamic, which drives the students to participate more actively as part of the class, the fact that the class is practical is very positive”*. In addition, they indicated, *“jargon is really important and portfolios make them meaningful for our personal and professional development; we must always be assessing*

the (reading comprehension) strategies and the vocabulary”.

»Collaborative work and feedback sessions

A thought-provoking result of the study advocates for students to be provided with more academic support and guidance through the creation of the portfolio. Students asserted that the course with its methodology and assessment practices is a different class, not normal compared to the rest of the classes. Therefore, it requires more attention to introducing the pedagogical practices. They suggested two specific actions: collaborative work sessions, and feedback sessions. These two actions will allow students to better apprehend the teaching and assessment methodologies; thus that students can succeed in the learning process. These practices must be initiated at the beginning of the class and continue systematically during the time of the course to guarantee students' confidence and learning autonomy. Students stated,

“This class is atypical, very different from others, it requires more time”; *“maybe a collaborative group so that everything covered in class is clear and students can ask questions and get feedback to correct any mistakes.”*

»Electronic portfolios (e-portfolios)

The last result affirms that students suggested they seek to transition from paper-based portfolios to digital-based ones (e-portfolios). Portfolios tend to get heavy to carry and challenging to grade during the semester. Students emphasized on this aspect recommending that e-portfolios become the norm, not only because of the complementary artifacts, but also for all the readings used during the class. Students showed concern about the amount of printing in terms of money and environmental issues.

»Conclusions

Considering the results, it seems mandatory to become aware of how fundamental it is to validate the students' voices as the ones that can enhance the teaching-learning process. Students highlighted the importance of learning independence, the challenge of creativity and critical thinking development, and the significance of applied content (theory vs. practice). As empowerment pedagogy, using portfolios is considered to be an innovative classroom technique. Innovative in the sense that it makes students reflect on their own learning process since it adds meaning to their learning. Students felt they owned their portfolios, which endorses the base of empowerment pedagogy, and promotes students engagement that made them commit to their learning process. As an empowerment pedagogy, what stood out

was the fact that students were protagonist as part of their learning process, which translated into an enhanced motivation for learning.

Using portfolios proved to be a successful experience in the context of higher education. However, it remains a work in progress. Students recommended promoting collaborative work and increased opportunities for feedback sessions for the portfolio meaning-making process as well as transitioning from paper-based to digital-based portfolios (e-portfolios). E-portfolios is an emerging technological possibility which permits multiple functions that are more in accordance with the student's academic and personal needs. The aspect of promoting creativity and critical thinking skills must be consolidated as to make students internalize the importance of such skills.

Using portfolios in higher education is not, and it should not be a "magical recipe" to be implemented in all courses for all levels. One of the limitations of the study is precisely the fact that the use of portfolios cannot be replicated in all student populations.

Empowerment pedagogy pursues rejoicing individuality, and provides meaning to education. Students deserve to be given the power and control over their own personal individual learning processes. To empower students promotes their growth, autonomy, criticism, confidence, and self-reliance. Furthermore, this empowering also implies that students must make their own decisions, justify them, and be consistent and consequent with those decisions.

The role played by the educators, in terms of empowerment pedagogy, must be that of a flexible, supporting facilitator. They also must be accepting of changes and different

perceptions since every single student has individual skills, and processes information differently, which at the end, makes them unique in any educational context. Traditionally, the conception of education has been that in which the educators transfer knowledge and that the students simply delved into that knowledge. Freire (1970) suggests that studying is not simply to memorize knowledge, instead it is more a creating act, a constant reconstructing act that seeks to promote opportunities for criticism and personal development.

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»Annexes

Annex 1. Reading Comprehension Strategies Rubric

CRITERIA	OUTSTANDING (4)	PROFICIENT (3)	AVERAGE (2)	DEFICIENT (1)
Amount of artifacts in relation to learning outcomes	Student presents all artifacts (in class and out of class) related to improving English reading comprehension strategies.	Student presents most artifacts (in class and out of class) related to improving English reading comprehension strategies.	Student presents some artifacts (in class and out of class) related to improving English reading comprehension strategies.	Student presents few artifacts (in class and out of class) related to improving English reading comprehension strategies.
Completion of artifacts	All artifacts are effectively complete (drafts, translations, reading comprehension guides, abstracts, and others).	Most of the artifacts are effectively complete (drafts, translations, reading comprehension guides, abstracts, and others).	Some artifacts are effectively complete (drafts, translations, reading comprehension guides, abstracts, and others).	Few artifacts are effectively complete (drafts, translations, reading comprehension guides, abstracts, and others).
Relevance of artifacts	All artifacts are relevant to the study at hand. Student is careful about selecting artifacts.	Most artifacts are relevant to the study at hand. Student is somewhat careful about selecting artifacts.	Some artifacts are relevant to the study at hand. Student is not very careful about selecting artifacts.	Few artifacts are relevant to the study at hand. Student is not careful about selecting artifacts.
Organization of the portfolio	The portfolio is extremely well-organized and easy to navigate.	The portfolio is generally well-organized and easy to navigate.	The portfolio is organized fairly well. There is some difficulty navigating.	The portfolio is not well-organized. Navigation is difficult.
Writing Mechanics	The portfolio has no errors in grammar, capitalization, punctuation, and spelling.	Most of the portfolio has no errors in grammar, capitalization, punctuation, and spelling.	The portfolio has several noticeable errors in grammar, capitalization, punctuation, and spelling. Some editing and revision are needed.	Noticeable errors in grammar, capitalization, punctuation, and spelling. Major editing and revision are needed.
Creativity	There is outstanding creativity in the portfolio.	There is vast creativity in the portfolio.	There is some creativity in the portfolio.	There is little or no creativity in the portfolio.
Student effort	There is outstanding evidence of student effort.	There is vast evidence of student effort.	There is some evidence of student effort.	There little or no evidence of student effort.
Student progress	There is clear evidence of student progress.	There is vast evidence of student progress.	There is some evidence of student progress.	There is little or no evidence of student progress.

This rubric has been adapted from the University of Wisconsin-Stout's "A+ Rubric."
<http://www2.uwstout.edu/content/profdev/rubrics/eportfoliorubric.html>

Annex 2. Vocabulary Rubric

CRITERIA	OUTSTANDING (4)	PROFICIENT (3)	AVERAGE (2)	DEFICIENT (1)
Amount of glossary words/phrases/idea/concepts in relation to learning outcomes	Student presents abundant glossary words related to improving English reading comprehension strategies.	Student presents sufficient glossary words related to improving English reading comprehension strategies.	Student presents some glossary words related to improving English reading comprehension strategies.	Student presents few glossary words related to improving English reading comprehension strategies.
Completion of glossary words/phrase/idea/concept	All glossary words are effectively complete (definition, examples, synonyms, and others).	Most of the artifacts are effectively complete (definition, examples, synonyms, and others).	Some artifacts are effectively complete (definition, examples, synonyms, and others).	Few artifacts are effectively complete (definition, examples, synonyms, and others).
Relevance of glossary words/phrase/idea/concept	All glossary words are relevant to the study at hand. Student is careful about selecting glossary words.	Most glossary words are relevant to the study at hand. Student is somewhat careful about selecting glossary words.	Some glossary words are relevant to the study at hand. Student is not very careful about selecting glossary words.	Few glossary words are relevant to the study at hand. Student is not careful about selecting glossary words.
Organization of the glossary	The glossary is extremely well-organized and easy to navigate.	The glossary is generally well-organized and easy to navigate.	The glossary is organized fairly well. There is some difficulty navigating.	The glossary is not well-organized. Navigation is difficult.
Writing Mechanics	The glossary has no errors in grammar, capitalization, punctuation, and spelling.	Most of the glossary has no errors in grammar, capitalization, punctuation, and spelling.	The glossary has several noticeable errors in grammar, capitalization, punctuation, and spelling. Some editing and revision are needed.	Noticeable errors in grammar, capitalization, punctuation, and spelling. Major editing and revision are needed.
Creativity	There is outstanding creativity in the portfolio.	There is some creativity in the portfolio.	There is little creativity in the portfolio.	There is no creativity in the portfolio.
Student effort	There is outstanding evidence of student effort.	There is vast evidence of student effort.	There is some evidence of student effort.	There little or no evidence of student effort.
Student progress	There is clear evidence of student progress.	There is vast evidence of student progress.	There is some evidence of student progress.	There is little of no evidence of student progress.

This rubric has been adapted from the University of Wisconsin-Stout's "A+ Rubric."
<http://www2.uwstout.edu/content/profdev/rubrics/eportfolio/rubric.html>