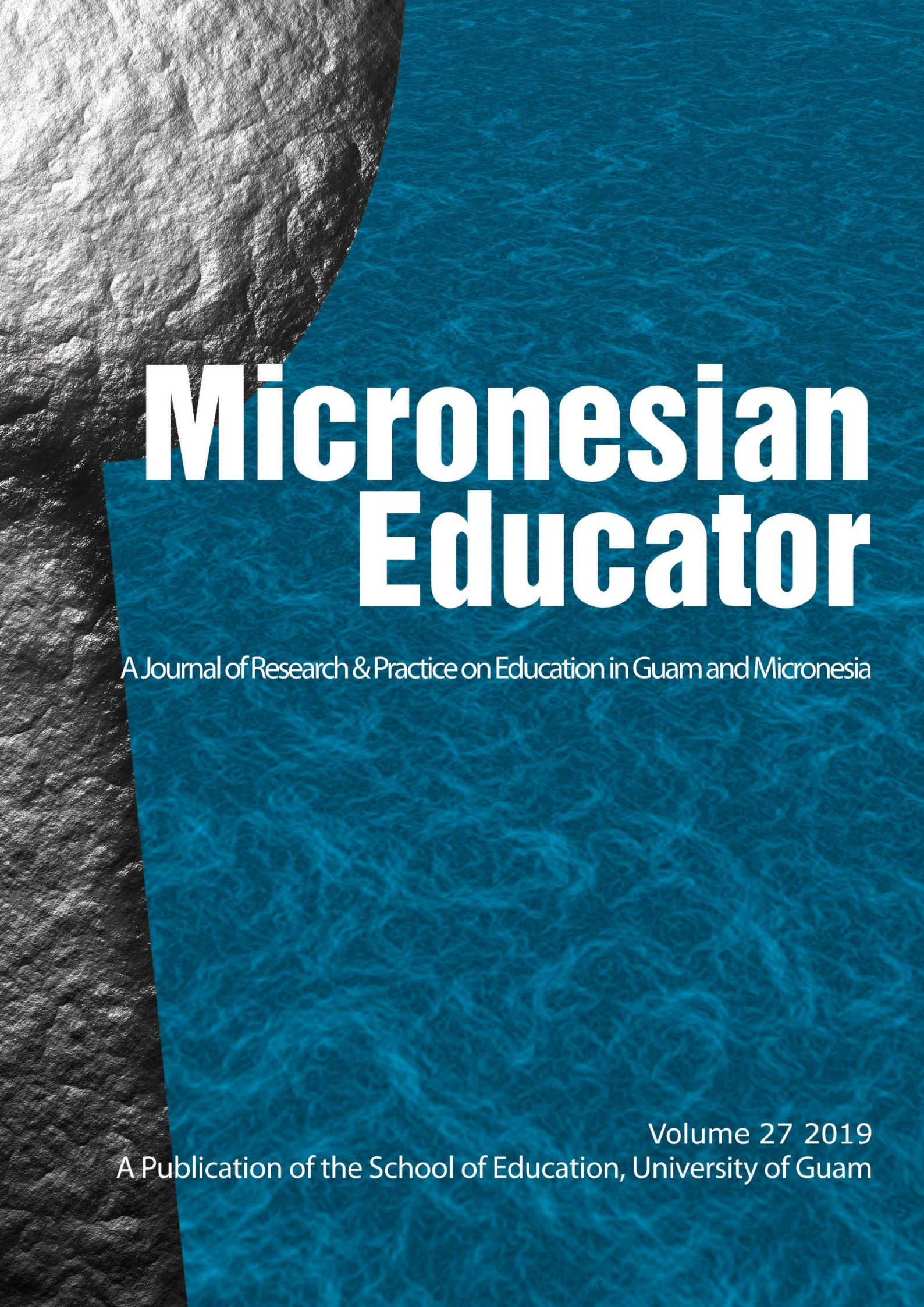

Micronesian Educator

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Editors' Introduction

Welcome to the 27th volume of the *Micronesian Educator*, published through the School of Education at the University of Guam. We are excited to bring you many interesting and thought-provoking articles this semester! As you flip through the pages of this volume, you will see that we have a range of articles from university professors to graduate students who all share the same passion – education and how to improve the way we educate our learners!

In March 2019, the biennial TEAM (Technology, Education, Assessment, and Management Conference was held at the University of Guam. As an interdisciplinary conference, participants came from all over the world to participate. Most participants were from our neighboring country of the Philippines, where we alternate hosting the conference every other year. In commemoration of this year's TEAM Conference, several papers have been published on themes that were presented during the 2-day event.

In addition, we are excited that some of our outstanding graduate student papers are included in volume 27. In a course titled ED690 Special Project in the School of Education, students were to implement and monitor an action research project in an educational setting. They were to research literature on their chosen subject, design a project that could be assessed, and collect data over an extended period of time. The students then analyzed data and used outcomes to draw conclusions and determine whether their hypotheses were supported or not. Five of the papers from this course are published in this volume.

Volume 27 is divided into four sections. Section One consists of research papers by professors at various universities. Section Two consists of five papers from university graduate students enrolled in ED690 Special Project. Part Three consists of critical essays written by a variety of authors from Guam, New York, and Canada. Part Four consists of book reviews written by local critics.

Section One of this volume contains three research articles by professors in the region. The first research paper by **Dr. Yukiko Inoue-Smith** titled "Enhancing College Students' Basic Skills in Quantitative Analyses of Research Data: A Case Study" provides an introduction to quantitative research that is taught to master's level teacher education students in the School of Education at the University of Guam. By using a student-centered language approach, Dr. Inoue-Smith details four specific steps involved in the research-based course: (1) statistical language enhancement through reading analytically; (2) survey plan and instrument development; (3) data collection, processing, and analysis; and (4) project oral presentation and written reflection. A survey that was given to students after the data collection and analysis process reveals that many students do not *really learn statistics* until they start analyzing data from their own research.

"Preparing ESL Students for Autonomy: A Case Study in Macau" by **Dr. Evelyn Doman** is the second research article in this volume. For this study, Dr. Doman administered a pre-test questionnaire followed by interviews to English as a Second Language (ESL) teachers at the University of Macau regarding the independent learning (IL) skills of their students and found that teachers think that students are not prepared for independent learning and that they as teachers must first be trained before they can prepare their students for autonomy. Using these results, Dr. Doman engaged teachers in professional development workshops on independent learning where they were involved in: 1) creating guidelines to provide to students about IL; 2) developing assessments through journals, blogs, online and paper-based reflections, and self-evaluation rubrics; and 3) analyzing the ELC's current IL resources through a SWOT analysis. Results of the treatment showed that teachers felt more comfortable with including independent learning in their curriculum after participating in these training workshops.

Additionally, **Dr. Camarin Meno and Dr. Iain K.B. Twaddle's** article titled "Historical Images of Women in CHamoru Culture" is our fourth article in this issue. In order to understand Guam's high rates of violence against women, this article looks at historical images of women within CHamoru culture. By using various resources including Spanish historical records, CHamoru folklore and legends, academic scholarship, and biography, a trend could be seen in the strength of women within CHamoru culture dating back to the pre-

colonial era, the authors say. Drs. Meno and Twaddle propose that Guam's high rates of violence against women reflect a diminishing of women's power resulting from patriarchal social structures associated with Spanish and American colonialism. By providing explanations for why this trend in violence against women is increasing, the authors challenge members of society to break these terrible patterns.

Section Two of Volume 27 consists of five research papers written by graduate students in the School of Education at the University of Guam. The first by **Thelma Soriano** titled "The Effects of Immersion Teaching in an Elementary CHamoru Classroom" discusses the need to explore and apply teaching strategies that improve student achievement and enhance second language acquisition in the learning of the CHamoru language in the Guam elementary schools. The second paper by **Christine Velasco** titled "Effects of Literacy Learning Centers in Increasing Sight Word Recognition among First-Grade Students in a Public School on Guam" discusses whether or not the use of learning centers in a first-grade classroom increases students' reading skills through improving sight word recognition. The third article by **Sara Manibusan** titled "Establishing a Classroom Job System and the Impact it has on Student Classroom Behaviors" examines the impact a Classroom Job System has on student behaviors in a first-grade classroom on Guam by using a behavior checklist. **Melissa Meno** provides our fourth article in this section titled "Chronic Absenteeism in a Second Chance School: What are the Root Causes and How Do We Mitigate It?" in which documented and undocumented reasons for absenteeism are reviewed in order evaluate the interventions provided for every student procedurally and to identify improvement points for the interventions that are beneficial for solving this problem. The final article in this part of Volume 27 is given to us by **Carla Santelli**. In her study titled the "Impact of Mathematical Learning Centers in a Fourth Grade Class on Guam" Santelli focused on finding the effects of small group student learning centers in a fourth-grade math class on Guam. By using games, interactive materials, and group learning to encourage mathematical skills refinement, she sought to increase student participation and performance during formal mathematical assessments.

Section Three of Volume 27 consists of five critical essays. **C. S. Schreiner**, a professor of English at the University of Guam, writes "Stieglerian Meditations," a series of critically informed depictions of various consumers and their situations within digital culture. The essay Professor Schreiner published in *Micronesian Educator* Volume 26, "Song of the Waif: Heterology of the Bereft," was read by the author at McGill University in Montreal on June 5, 2019. **John Currie**, a poet and teacher from Rochester, New York, writes reader response criticism about the experience of "Returning to Kurt Vonnegut." **Michel Pharand**, who was for many years editor of the journal *Shaw Studies* and curated the Disraeli Archive at Queen's University in Kingston, Ontario, writes about his experience as an editor. **Paulette Coulter**, a local author and teacher, compares two different pedagogies and learning strategies in "A Tale of Two Classrooms."

Section Four of Volume 27 consists of three book reviews. **Christina Lee**, reviews Sayak Valencia's *Gore Capital* (Semiotexte/MIT Press, 2018). **Via Justine de Fant** reviews Jenny Hval's novel, *Paradise Rot* (Verso Books, 2018). **C. S. Schreiner** reviews James C. Scott's *Two Cheers for Anarchism* (Princeton UP, 2012).

Thank you for reading this semester's volume of the *Micronesian Educator*, and feel free to submit an article for consideration for Volume 28 which will be released in January, 2020.

Best,

Dr. Evelyn Doman
Dr. Christopher Schreiner

TABLE OF CONTENTS

Section One

Research Articles

Enhancing College Students' Basic Skills in Quantitative Analyses of Research Data: A Case Study

Dr. Yukiko Inoue-Smith
University of Guam

Abstract

Survey questionnaires are frequently used to collect data for statistical analysis in educational research. The purposes of this study include the following: providing a better understanding of the experiences of master's level teacher education students conducting a small-scale quantitative research; and exploring instructors' perspectives on teaching the course in part by using data that students collected. This approach involves four specific steps: (1) statistical language enhancement through reading analytically; (2) survey plan and instrument development; (3) data collection, processing, and analysis; and (4) project oral presentation and written reflection. The course instructor based the survey on a constructivist *student-centered learning approach.* The study confirms that students benefit from using their own data, despite challenges in learning statistical software, and time constraints that inhibit full engagement in the analyses. The study further supports the conclusion that many do not *really learn statistics* until they start analyzing data from their own research.

Introduction

Quantitative methods, in brief, emphasize objective measurements and the statistical analysis of collected data. In the real world, "Statistics is used not only in the field of mathematics but also in every field…. Individuals confront plenty of graphs and tables that bear information from election results to fluctuations in the stock market every day" (Koparan, 2015, p. 94). Statistics at university courses is studied for the most part as a tool to solve problems, in particular, by emphasizing the teaching of formulas for calculating statistics "without much concern towards the data context or interpretative activities. In other cases, the courses are over mathematised for these students, which often involve meeting concepts of advanced stochastic thinking without any prior or concurrent experience of advanced algebra or calculus" (Batanero, 2004, ¶1).

Batanero (2004) further wrote in the following way: "Although many statistics students are able to manipulate definitions and algorithms with apparent competence, they often lack understanding of the connections among the important concepts of the discipline (Schau & Mattern, cited in Batanero) and they do not know what statistical procedure to apply when they face a real problem of data analysis" (¶1).

It is true that statistics are *not* just numbers or facts *but* methods and rules for organizing and interpreting data. It is also true that students usually "tend to have preconceived ideas and anxieties about statistics classes that can either help or hinder their performance in a statistics course" (Cherney & Cooney, 2005, p. 1).

"Statistics anxiety is widely spread among students mostly in nonmathematical disciplines such as psychology, education, and sociology" (Onwuegbuzie & Wilson, cited in Chau, 2018). "In many social science majors, e.g., psychology, students report high levels of statistics anxiety. However, these majors are often chosen by students who are less prone to mathematics and who might have experienced difficulties and unpleasant feelings in their mathematics courses at school" (Paechter, 2017, ¶1).

Sociology students, on the other hand, "have an aversion to numerical data and it is certainly the case that many find quantitative research methods and statistics courses difficult…. This poses particular challenges for methods teachers who are continually looking for innovative ways to demonstrate the importance of quantitative research skills" (Acton & McCreight, 2014, p. 5).

Students' self-perceptions would affect in statistics performance either positively or negatively (Ncube & Moroke, 2015): "The perceived worth or relevance of statistics in one's academic and professional life, effort put in (attending classes, consultation, or study for every test or examination) and innate ability to learn statistics are also measures of self-perception" (p. 236).

D'Andrea and Waters' (2002) research findings, summarized below, were consistent with their predictions: indicating that their innovations in teaching statistics are effective:

> The use of fictional short stories to provide the context for the statistical problem-to-be-solved would reduce the student's statistical anxiety. However, the expectation that there would also be a change in the attitudes toward the field of statistics was not supported by the data. What the results suggested was that, while the student attitudes toward the statistics teacher and the course were positively affected, their attitudes toward the field of statistics were not substantially changed: they still questioned the relevance of statistics in their lives. (p. 4)

The findings of Salloum, Young, and Brown's (2016) study support Gaise's (cited in Centra & Gaubatz, 2005) argument that: "using real data can improve authenticity and engagement in college level statistics courses… using data that is familiar to them may increase engagement and improve their ability to apply what they learn to their professional settings" (p. 213). There are different types of real data (e.g., class generated, archival, and simulated). Centra and Gaubatz described regarding using archival data (also known as secondary data) as follows:

> Analysis of secondary data cannot be done without sophisticated statistical analysis software programs, and many students have difficulty using these programs. Indeed, learning the technology may be impeding the learning of statistical analyses. Lastly, new instructors of quantitative research methods will likely benefit from a learning community or a workshop on teaching and learning statistics, especially to students in educational leadership programs. Though one instructor sought professional development, both instructors in this study reported simply teaching how they were taught. This approach is effective only when the instructor has a model that used sound pedagogical strategies. (p. 213)

Studying a quantitative analysis "requires pedagogically suitable material for study, but good teaching datasets do not exist. It will require communal effort to create them on the basis of existing research" (Goldstone, 2018, p. 2).

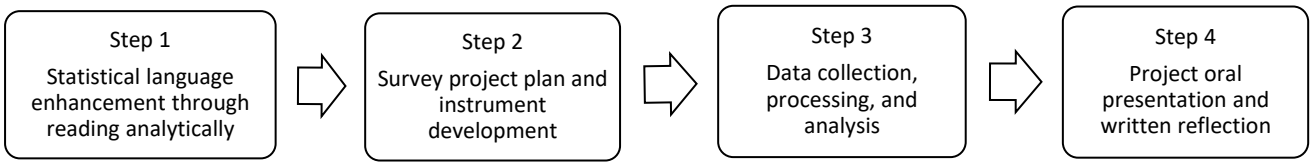
Accordingly, "The application of real data in the teaching of statistics is an approach that has been increasingly recommended…. From a theoretical perspective, the application of real data in teaching statistics aligns several theories of learning" (Neumann, Hood, & Neumann, 2013, pp. 59–60). Such theories of learning include the following: Cobb's constructivist theory of learning (that is, students "will construct knowledge based on their experiences using real data sets" (Neumann et al., 2013, p. 60); and Garfield and Ben-Zvi's theory that "data sets can be used by students to practice calculations, gain experience in the interpretation of results, and develop their statistical reasoning about the problem" (Neumann et al., 2013, p. 60). Additionally, in terms of using real data in quantitative methods training courses, "Student-generated data also gives students experience in research design, data collection and analysis, as well as providing engaging, in-class interaction, and depth of learning in the process" (Diamond & Sztendur, cited in Neumann et al., 2013, p. 60).

"Learning in a course is more complex than merely remembering what students have read or been told" (Garfield, 1995, p. 25): Constructivism is the theory for the "research and reform in mathematics and science education. Constructivists view students as bringing to the classroom their own ideas, material. Rather than 'receiving' material in class as it is given, students restructure the new information to fit into their own cognitive frameworks" (p. 26). Therefore, *constructivist* theory can be applied to teaching and learning quantitative data analysis. "As computational skills become less important owing to the wider use of calculators and microcomputers, more attention can be given to the application of mathematics to real-life problems which require students to collect and analyze their own data" (Morris, 1989, p. 5).

Purpose of the Study

The author of this paper has worked with master's level teacher education students would consider statistics one of their most stressful courses. This study sought to provide a description of a learner-centered, constructivist approach that supported learning in an introductory course in quantitative analysis. To promote step-by-step mastery, the course required students to complete work on their small-scale survey projects (for student-generated data) in four specific steps, as seen in Chart 1.

Chart 1: A Four-Step Approach to the Quantitative Analysis Project



The Study—The Four Steps of Doing Quantitative Data Analysis

Why do students think that statistics is so difficult? One of the explanations for this is that "students' perceptions of difficulty arose from differences between statistical thinking and reasoning as compared to mathematics [and] the use of context and language in statistics" (Leavy et al., cited in Hedges & Harkness, 2017, p. 340).

Bond, Perkins, and Ramirez (2012) tried to answer to an intriguing question: What is the relationship between student conceptualization of statistics and attitudes toward statistics? As an answer, Bond et al. offered "the possibility that student beliefs consist of their content knowledge and conceptual understanding of statistics and that these beliefs then impact student attitudes, although how these beliefs impact their attitudes remains a subject for future research. Collectively, beliefs and attitudes may comprise perceptions of statistics" (p. 18).

Step 1: Statistical language enhancement through reading analytically

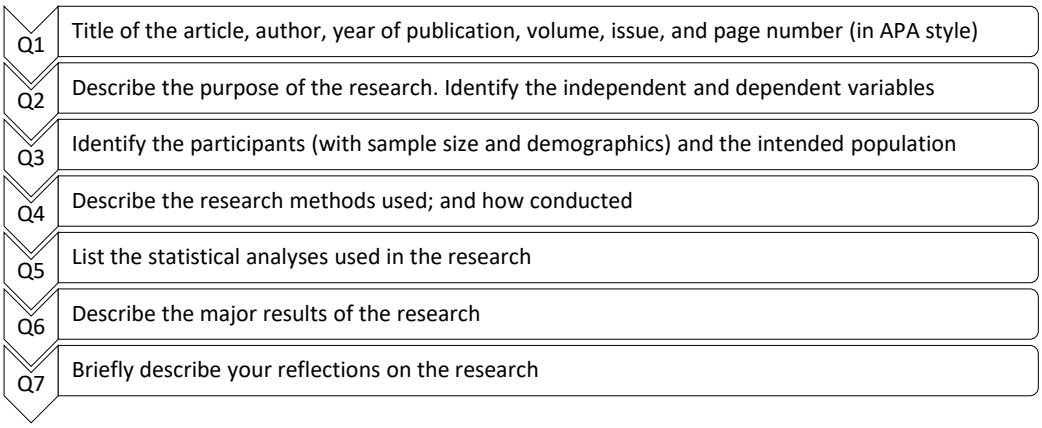
Most students in this introductory quantitative analysis course of this study were K-12 teachers pursing a master's degree in education programs. In addition to varying levels of preexisting statistical knowledge and skills, it seems, the students' varying attitudes toward statistics played a significant role in their performance.

Step 1 tried to enhance students' knowledge of statistical terminology while, simultaneously, to enhance their attitudes. Garfield (1995) observed: "It is important to learn some fundamentals of statistics in order to better understand and evaluate information in the world; [and] learning statistics means learning to communicate using the statistical language, solving statistical problems, drawing conclusions, and supporting conclusions by explaining the reasoning behind them" (p. 26).

Statistical language truly helps individuals to understand a range of statistical concepts and terms with simple explanations: "Learning a new subject requires learning its associated language… using this language can be interpreted as a sign of expertise and mastery of concepts in the discipline (a positive interpretation), or as unnecessary jargon (a negative interpretation)" (Dunn, Carey, Richardson, & McDonald, 2016, p. 8).

In order to enhance their attitude goals as well as statistical language, in addition to the textbook and handouts, students in this course were assigned to read—thoroughly and analytically—two quantitative research journal articles answering seven specific questions as seen in Chart 2.

Chart 2: Guiding Questions for Reading a Quantitative Research Journal Article



Step 2: Survey project plan and instrument development

It should be noted that a survey research is useful for the measurement of attitudes, values, and opinions. Survey questionnaires and survey interviews are the two mostly used approaches in survey research methods. Each approach has advantages and disadvantages. However, compared with survey interviews, survey questionnaires can reach large numbers of people at relatively low costs and can ensure anonymity, in addition to the fact that research questions can be written for specific purposes. Survey questionnaires are therefore extensively used in educational research.

Students in this course submitted their Survey Project Action Plan: indicating their chosen topic (including the purpose of their survey questionnaires), along with identifying necessary steps to complete the project in a timely manner. Students were also advised by the instructor, author of this paper, to choose their topics, as follows: "This is a course assignment and not a master's thesis. But try to select a topic that you really like; otherwise, you cannot put energy into the assignment."

Most students in the course were in-service teachers dealing with many issues in their own classrooms. Though they had little trouble defining topics and purposes for their survey projects, students found constructing survey instruments quite challenging. The author recommended reading two or three publications appropriate to the student's specific purpose before developing their own survey instruments.

On the whole, Step 2 attempted to enhance students' theoretical and practical understanding of four components of the statistical basic procedure, as explained by Franklin et al. (2014): (1) formulate questions (clarify the research problem at hand and formulate questions that can be answered with data); (2) collect data (design and employ a plan to collect appropriate data); (3) analyze data (select and use appropriate graphical and numerical methods to analyze data); and (4) interpret results (interpret the analysis, relating the interpretation to the original questions).

Step 2 also applied the useful insight from Centra and Gaubatz (2005): "Student learning is highly influenced by the effort students put forward. Although an instructor can do much to facilitate learning and can certainly provide some motivation, ultimately students themselves must take some responsibility for their learning in a course" (p. 20). Statistics or quantitative methods courses are no exception. Moreover, meaningful learning does not occur until students construct knowledge themselves. The instructor can stimulate discussions on essential concepts and encourage work that develops students' competencies. The rest is up to the students. As an adage goes, one can take a horse to the pond, but one cannot make the horse drink.

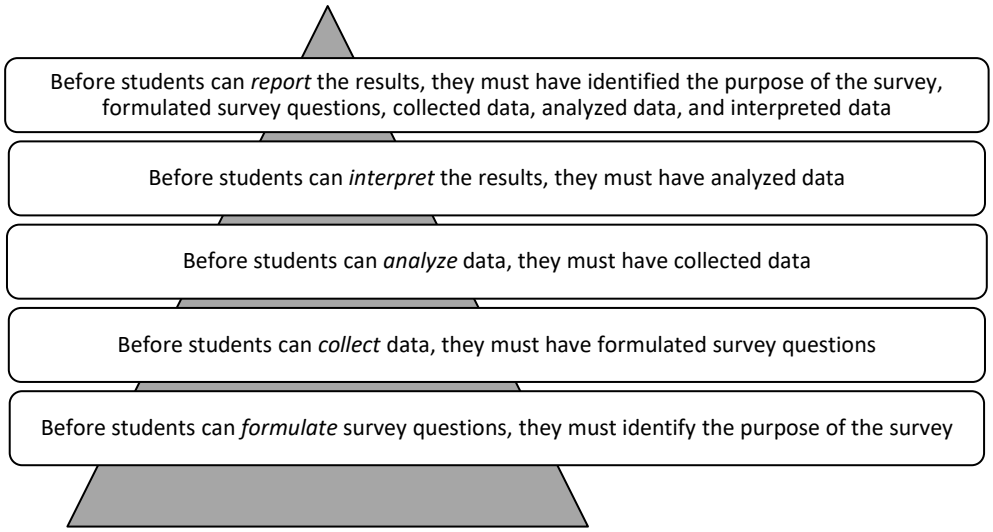
Step 3: Data collection, processing, and analysis

Bloom's 1956 Taxonomy was revised by Anderson and Krathwohl in 2001: Bloom's Taxonomy helps to see more clearly the complexity of the learning process that goes from lower order thinking skills to higher order thinking skills (Ozola, 2012): "Though, on the one hand, these can be considered as separate stages in learning but, on the other hand, it is important to perceive it as mutually linked process" (p. 427). Based on Bloom's Taxonomy, as explained by Ozola, the "learning" process requires five steps:

- before students can understand a concept, they must remember it;
- before students can apply the concept, they must understand it;
- before students can analyze it, they must be able to apply it;
- before students can evaluate its impact, they must have analyzed it; and
- before students can create, they must have remembered, understood, applied, analyzed, and evaluated.

Research, in brief, is generally understood as the organized and systematic methods of finding answers to questions—and so, instructors can use something analogous to Bloom's Taxonomy to inform to the survey project (which was exactly assigned in the course). The sequence of tasks in quantitative analysis of research data is illustrated in Chart 3.

Chart 3: The Sequence of the Quantitative Data Analysis Task



Although there are many software tools for quantitative data analysis, the Statistical Package for Social Science (SPSS) is probably the most popular software program used in social sciences and educational research. What is more, "This year, SPSS is celebrating its Golden Anniversary. Decades before the 'data science' term was coined, SPSS provided the world with a user friendly, reliable, and trustworthy means to yield actionable insights from data" (Stauber, 2018, ¶1).

This course was an introductory course, so students used SPSS for *two* basic analyses: (1) descriptive statistics (cross-tabulation, frequencies, and descriptive ratio statistics); and (2) bivariate statistics (means, t-test, ANOVA, and correlation). Students appreciated SPSS's versatility and flexibility. At the same time, they reported concerns similar to Salloum et al.'s (2016) students, who "wanted additional time and technical assistance learning how to use SPSS. Students were also concerned about interpreting the results. The issues with interpretation were due to not understanding how to read output or the nature of the data—not knowing how the data were collected or a slight mismatch between the research question and the data" (p. 213).

Step 4: Project oral presentation and written reflection

There is a notion that report writing "is one of the most important components in the survey research cycle. Survey findings need to be presented in a way that is readable and technically acceptable…. the overall quality of a project is often judged on how well the report is written and presented" (Queensland Government Statistician's Office [QGSO], 2015, p. 1). A research report should meet the above notion. Furthermore, as emphasized by QGSO, a research report should address the objectives, present clear findings with strong conclusions (and recommendations if appropriate), be accurate and free of errors, use tables, graphs and text appropriately, and be written in a way that will convey the results without overwhelming or boring the reader.

Instead of writing a survey report, students in this course orally presented the results of their surveys in class. This is because oral presentations are commonly assigned in college courses and provide positive learning experiences. Students presented their (statistically) significant findings by creating slide shows using PowerPoint or other presentation tools. PowerPoint can make presentations interactive with hyperlinks and thus encourage active learning. Students were required to compose slides in four main sections: (1) survey goals and objectives (including background information); (2) survey procedures; (3) survey results; and (4) recommendations for future research. Students' oral presentations in the course strongly confirmed Živković's (2014) observation that practicing presentation techniques is "a chance for students to gain insight into knowledge and skills that make a good lecturer, which often turns to become their vocation… sharing their knowledge in a constructive way both for their audience and themselves with structured planning and organization" (p. 469).

Students' oral presentations in this course were assessed by utilizing a scoring rubric. This is because good rubrics take the guesswork out of trying to determine what counts as high quality work (Andrade & Valtcheva, 2008). In particular,

> There is no room for bias or subjective prejudice in rubric utilization because a rubric is impartial. A student either meets that defined objectives or does not. This helps promote fairness and increases satisfaction, since there is no preferential treatment when everyone is measured using the same benchmarks. (Rippé, n. d., 12–13)

It is important for students to reflect on learning. Reflection is the "path to self-knowledge and to greater personal efficacy. Although there are many ways to reflect, the learning journal is concrete evidence of one's evolving thought processes, documenting valuable, often fleeting glimpses of understanding. This tool is central to the pursuit of more thoughtful life" (Jado, 2015, p. 1).

Self-reflection or self-monitoring would certainly facilitate self-regulated learning in the classroom. Students in the course submitted their written reflection (using 100 words effectively) on their survey projects, indicating how to use what they have learned in the course to enhance their research in the future. Their reflections were shared through the online forum as a non-grading assignment. Representative student reflections are briefly listed below:

- "It is great to have a general understanding of basic statistics and terminology"
- "Analyzing and interpreting the results (output data) are not an easy task"
- "*Quantitative* and *qualitative* research are complementary methods and ideally mixed methods might be the best approach"
- "Even doing descriptive statistics with SPSS is quite beneficial for my future research"
- "I know now somehow how to enhance survey instrument validity and reliability"

Students in this course clearly understood the following two statistical concepts: (1) the goal of central tendency is to find the single score that is most typical or most representative of the entire group; and (2) cause-effect relationships cannot be determined by a correlational method. Most of all, students in the course informed that they understood that the "abstract" in a research paper is the *first* thing readers will look at, but it is the *last* thing the researcher will write. These basic concepts are most important to enhance skills in qualitative analysis of research data.

Summary and Conclusion

"In an increasingly data-driven world, statistical literacy is becoming an essential competency, not only for researchers conducting formal statistical analyses, but also for informed citizens making everyday decisions based on data" (Franklin et al., 2014, p. 1); and K-12 teachers "should recognize the features of statistics that set it apart as a discipline distinct from mathematics, particularly the focus on variability and the role of context. Across all levels and stages of the investigative process, statistics anticipates and accounts for variability in data" (p. 1).

"In 2005, the American Statistical Association (ASA) endorsed the Guidelines for Assessment and Instruction in Statistics Education (GAISE) College Report" (GAISE College Report ASA Revision Committee, 2016, p. 2).

The Committee provides six recommendations in terms of *what* to teach in introductory statistical courses and *how* to teach those courses:

1. Teach statistical thinking (as an investigative process of problem-solving and decision-making, and give students experience with multivariable thinking)
2. Focus on conceptual understanding
3. Integrate real data with a context and purpose
4. Foster active learning;
5. Use technology to explore concepts and analyze data
6. Use assessments to improve and evaluate student learning

The above-stated recommendations were, in effect, employed in this introductory quantitative analysis course described herein. Specifically, Step 1 focused on statistical thinking and conceptual understanding to promote mastery of statistical language (employing the recommendations 1 and 2); Steps 2 and 3 involved students in technology-supported active learning, applying quantitative analyses to real data (employing the recommendations 3, 4, and 5); and Step 4 focused on student self-assessments and reflection (employing the recommendation 6).

In quantitative methods courses, student-centered teaching techniques— creating a sense of community in the classroom; and encouraging discussion, debate, and brainstorming (rather than relying only on direct instruction and rote learning)—are tremendously beneficial. In addition, just as instructors must evaluate their own effectiveness, students should reflect on their own approaches to learning. These principles guided the course described in this paper.

Finally, in the future study, the effectiveness of the four-step approach will be systematically evaluated using the varied assessment tools. This is because students in higher education, especially students in teacher education are more diverse; and so, *what* and *how* instructional methods must change to meet the needs of the student body is an ongoing inquiry for teaching introductory quantitative analysis courses.

References

Acton, C., & McCreight, B. (2014). *Engaging students in quantitative research methods: An evaluation of assessment for learning strategies on an undergraduate social research methods module*. The Higher Education Academy.

Andrade, H., & Valtcheva, A. (2008). Promoting learning and achievement through self-assessment. *Theory into Practice, 48*(1), 12–19.

Batanero, C. (2004). Statistics education as a field for research and practice. In M. Niss (Ed.), Proceedings of the 10th International Congress on Mathematical Education, July 4–11, 2004. Copenhagen: IMFUFA, Roskilde University.

Bond, M. E., Perkins, S. N., & Ramirez, C. (2012). Students' perceptions of statistics: An exploration of attitudes, conceptualizations, and content knowledge of students. *Statistics Education Research Journal, 11*(2), 6–25.

Centra, J. A., & Gaubatz, N. B. (2005). Student perceptions of learning and instructional effectiveness in college courses: A validity study of SIR II. The Educational Testing Service, Princeton, NJ.

Chau, Q. (2018). Exploration of statistics anxiety among doctoral students in health sciences related disciplines. Seton Hall University Dissertations and Theses. Retrieved December 1, 2018, from http://scholarship.shu.edu/dissertations/2525/

Cherney, I. D., & Cooney, R. R. (2005). Predicting student performance in a statistics course using the mathematics and statistics perception scale (MPSP). *Transactions of the Nebraska Academy of Sciences, 30*, 1–8.

D'Andrea, L., & Waters, C. (2002). Teaching statistics using short stories: Reducing Anxiety and changing attitudes. Proceedings of the Sixth International Conference on Teaching Statistics, Cape Town, South Africa.

Dunn, P. K., Carey, M. D., Richardson, A. M., & McDonald, C. (2016). Learning the language of statistics: Challenges and teaching approaches. *Statistics Education Research Journal, 15*(1), 8–27.

Franklin, C. A, et al. (2014). *Statistical education of teachers*. American Statistical Association.

GAISE College Report ASA Revision Committee. (2016). *Guidelines for assessment and instruction in statistics education college report 2016*. Retrieved March 3, 2019, from http://www.amstat.org/education/gaise

Garfield, J. (1995). How students learn statistics. *International Statistical Review, 63*(1), 25–34.

Goldstone, A. (2018). Teaching quantitative methods: What makes it hard (in literary studies). In Matthew K. Gold, Lauren F. Klein (Eds.), *Debates in the Digital Humanities 2018.* Minneapolis. University of Minnesota Press. DOI:10.7282/T3G44SKG.

Hedges, S., & Harkness, S. S. (2017). Is GAISE evident? College students' perceptions of statistics classes as "almost not math." *Statistics Education Research Journal, 16*(1), 337–356.

Jado, S. M. A. (2015). The effect of using learning journals on developing self-regulated learning and reflective thinking among pre-service teachers in Jordan. *Journal of Education and Practice, 6*(5). Retrieved November 27, 2018, from file:///C:/Users/SOE%20Faculty%202/ Desktop/QR%20paper%20AY18-19/self-reflection%20%20EJ1083603.pdf/

Koparan, T. (2015). Difficulties in learning and teaching statistics: Teacher views. *International Journal of Mathematical Education in Science and Technology, 46*(1), 94–104.

Morris, R. (1989). (Ed.). *Studies in mathematics education: The teaching of statistics.* The United Nations.

Ncube, B., & Moroke, N. D. (2015). Students' perceptions and attitudes towards statistics in South African University: An exploratory factor analysis approach. *Journal of Governance and Regulation, 4*(3), 213–240.

Neumann, D. L., Hood, M., & Neumann, M. M. (2013). Using real-life data when teaching statistics: Student perceptions of this strategy in an introductory statistics course. *Statistics Education Research Journal, 12*(2), 59–70.

Ozola, S. (2012). Student-centered learning: A dream or reality. Paper presented at the Annual Meeting of the Bulgarian Comparative Education Society (Kyustendil, Bulgaria, June 12–15, 2012). ERIC Reproduction Number ED567102.

Paechter, M, et al. (2017), Mathematics anxiety and statistics anxiety: Shared but also unshared components and antagonistic contributions to performance in statistics. Front Psychol, 8 (1196). DOI: 10.3389/fpsyg.2017.01196.

Queensland Government Statistician's Office. (2015). *Presenting survey results: Report writing.* Retrieved November 24, 2018, from http://www.qgso.qld.gov.au/about-statistics/ presentation/presenting-survey-results.pdf/

Rippé, C. (n. d.). Using rubrics to improve teaching, learning, and retention in distance education. In C. Hill (Ed.), *Faculty development in distance education: Issues, trends, and tips* (pp. 12–13). Retrieved May 8, 2018, from https://www.immagic.com/eLibrary/ARCHIVES/GENERAL/GENPRESS/ F091026F.pdf/

Salloum, S. J., Young, T. V., & Brown, R. D. (2016). Teaching introductory quantitative research methods to doctoral students in educational leadership: Using real data to improve statistical literacy. *International Research in Higher Education,1*(2), 203–214.

Stauber, D. (2018). SPSS: 50 years of innovation. Retrieved November 24, 2018, from https://developer.ibm.com/predictiveanalytics/2018/04/05/spss-50-years-innovation/

Živković, S. (2014). The importance of oral presentations for university students. *Mediterranean Journal of Social Sciences, 5*(19), 468–475.

Preparing ESL Students for Autonomy: A Case Study in Macau

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Abstract

According to a pre-test questionnaire about the independent learning abilities of students and subsequent interviews of teachers at the English Language Center (ELC) at the University of Macau, results showed that teachers think that students are not prepared for independent learning and that they as teachers must first be trained before they can prepare their students for autonomy. To address the needs found on the pre-test questionnaire and as part of an ongoing movement towards encouraging learner independence, teachers engaged in professional development workshops (the treatment of the current experiment) on independent learning (IL), addressing issues of defining, promoting and assessing autonomy in learners. In these sessions, ELC teachers collaborated on: 1) creating guidelines to provide to students about IL; 2) developing assessments through journals, blogs, online and paper-based reflections, and self-evaluation rubrics; and 3) analyzing the ELC's current IL resources through a SWOT analysis. After the treatment period concluded, a post-test questionnaire was administered, and informal feedback sessions showed that teachers felt more comfortable with including independent learning in their curriculum after participating in these training workshops. The teachers' beliefs about the abilities of their students to take on independent learning activities also changed favorably.

Introduction

Learner autonomy has become a buzzword in classrooms today. The underlining feature of autonomous learners is that students can take responsibility for their own learning, identify their own needs, find resources to help overcome their weaknesses, and evaluate their own learning process (Benson, 2001; Palfreyman &Smith, 2003). This ultimately involves more choice for learners, as they wean themselves away from the teacher "teaching" them towards the goal of the teacher "guiding" them. Autonomy is important for a number of reasons, including, but not limited to, preparing students for life-long learning, providing students with skills to seek knowledge themselves, making students more responsible for their own learning, and meeting the technological demands of the 21century (Lamb and Reinders, 2006 & 2008; Benson, 2007)

Getting students to realize autonomy in the foreign language classroom will likely result in a series of successes and failures. Receiving encouragement from their teachers is often the first step in motivating students to take on independent language learning. The teachers will need to provide students with strategies to help to make them more successful in their endeavors.

However, not all teachers feel equipped to introduce, encourage, and then follow-thru on implementing independent learning (IL) into their curriculum. They may often feel that they need to be trained prior to integrating IL into their classrooms. There is a need, therefore, to train the teachers prior to training the students.

In preparation for opening the first Independent Learning Center (ILC) at the University of Macau (UM), teachers and students at the English Language Center (ELC) participated in a longitudinal study over 1 year to learn how best to promote autonomous language learning. The study involved a pre-post test experiment and professional development workshops over the course of one year. Likewise, data in the form of a pre-post test was administered to students both before and after independent learning was promoted in the language classroom. However, for purposes of the current article, only the data gathered from the teachers at the ELC will be discussed. What was learned from this study was that the path to learner autonomy takes on many forms. It was also discovered that autonomy flows on a continuum, with learners always on different points on that continuum, depending on student motivation, interest and various external factors. This paper will focus on only one part of the longitudinal study – a semester's worth of professional development training for the teachers at the English Language Center. The current study uses a pre-post test experimental design. By focusing on an extensive questionnaire distributed to teachers and a follow-up interview given to a smaller

group of teacher volunteers both before and after treatment, teachers' attitudes and perceptions about independent learning (IL) are evaluated.

Literature Review

Considering the abundance of resources available for IL, one would guess that teachers faced an easy task at encouraging students to undertake IL. However, this is not the case in the current context. In order to explore the concept of IL in the Chinese context, a literature review focused on resources on the topic in the Chinese context was necessary.

In a study on learner autonomy among middle school students, Li (2011) found that there are three ways to build learner autonomy: build students' consciousness to learn independently, enhance students' abilities to learn and use English independently, and educate students to explore knowledge independently. In order to accomplish these goals, Li suggested three training methods: first, to teach phonetics to make students read English independently; second, to teacher students how to read, write, listen and speak in English; and third, to make students read independently and to encourage them to ask questions. The results of Li's study show that if students have the ability to learn independently, they will overcome difficulties in learning by themselves, learn more willingly, and increase their interest in learning English.

Wei (2002) spoke about the necessity of cultivating learner's autonomy in the process of foreign language learning and the factors which can promote learner autonomy, such as learner needs, learner choice, teacher support, peer support, self-access support, and self-assessment. Wei also made tentative suggestions as to how to promote learner autonomy in the current pedagogic context, such as by changing the social learning environment, providing various course choices, reforming the teacher evaluation system, and splitting the class according to student's learning ability. For his study, Wei had students keep diaries, respond to questionnaires, interview, and make learning contracts with their teachers. Wei's results show that promoting autonomous foreign language learning in China is a long-term pedagogical goal.

Wang (2002) began with an argument that education and instruction should be aimed at cultivating learner autonomy among English learners through the training of learning strategies. After an analysis of the existing level of self-study at tertiary institutes in Beijing and Hebei province, Wang undertook a two-semester study to cultivate learner autonomy among college students. The study included experimental and control groups and a five-step recursive training model (presentation, modeling of strategies, scaffolding, evaluation and expansion). Results show that strategy training is effective in enriching students' metacognitive knowledge and promoting the establishment of learner autonomy. Wang showed that there is also high co-efficiency between the development of metacognitive performance and academic performance.

Along the same lines, Peng (2002) looked into the possibility of fostering autonomy in English learning among Chinese college students by discussing autonomy in terms of both principle and action in an educational philosophy class. The research adopted a dynamic syllabus with a high amount of learning autonomy among students. Results suggested that teachers and educational authorities should be responsible for the development of learner autonomy just as learners should learn to be responsible for their own learning.

Xu, Peng, and Wu (2004) administered questionnaires and interviews to non-English major college students to learn about their independent learning situations. The results showed that the amount of learning autonomy of college students in China studying English is low due to the long-time examination-oriented style of teaching and customs. This study suggests that the non-English major students have a generally low ability and interest in developing their abilities to learn independently. Xu, Peng, and Wu suggested that teachers should do more to foster independent learning in students. To improve students' autonomy in English learning, they concluded that teachers must help students to re-examine their understanding of the teaching process and help them to realize their own individual roles in the learning process.

Based on a thorough review of the literature on autonomy in China, the following conclusions can be made:
1. Student autonomy is gaining more recognition in this region;
2. Teachers have a role in developing student autonomy;
3. Students need teacher guidance in recognizing the importance of taking responsibility for their learning; and

4. Teachers must first be trained to help promote student autonomy.

Despite the fact that there is a recognized need to promote independent learning within English language classes in China and the region, there are few studies which report on how teachers tackle the issue of independent learning in their classroom. Views of teachers have not been addressed in the research on autonomy in language learning in China, thus creating a perfect opportunity for this study to fill the gap in the literature about teacher beliefs on students' abilities to undertake independent learning. As a pre-post test experiment, this study will also report on changes in teachers' beliefs about how prepared students are for becoming autonomous language learners, a second gap in the current literature in the field. This study focused on the following research questions: 1) What are teachers' beliefs about students' abilities to undertake IL? and 2) Will professional development training on IL alter teachers' beliefs about students' abilities to engage in IL?

Methodology

Participants and Setting

All participants were employed at the ELC full-time at the time of this study. Nineteen Senior Instructors and two Teaching Fellows (N = 21) responded to the pre-test questionnaire and participated in at least 6 months of professional development workshops for this study. The participants (Male = 29%, Female = 71%) came from a number of different countries, including America, Canada, England, New Zealand, the Philippines, Japan, Malaysia, Brazil, and Macau. Most (80%) had spent 10-14 years as an EFL teacher, with one and a half mean number of years spent teaching at the ELC at the time of the study. However, after the initial 6 months, the two Teaching Fellows completed their contracts and terminated their positions at the university, and three Senior Instructors withdrew from the study, bringing the number of participants who responded to the post-test questionnaire to 16.

The participants were purposely selected because they were the current teachers of the English language courses at the university. As the researcher of this study was also the Director of the ELC, teachers were required to attend the professional development series that was offered throughout the one-year period of the study, but their participation in responding to the pre and post-test questionnaires and in the follow-up interviews or informal discussions were voluntary. The response rate for the pre-test questionnaire (n=21) was 100%, while the response rate for the post-test questionnaire (n=16) was 76.19%. IRB was sought for this project, and all participants agreed to the conditions on the consent form, which also allowed them the right to pull out of the experiment at any time.

All participants in this study taught 3-5 sections of a multi-leveled English for Academic Purposes (EAP) course lasting two semesters, a course which satisfies the English requirement for General Education. The course met twice a week for 90-minutes each session for 14 weeks per semester. The objectives of the course were to develop academic writing skills for the students to prepare them to undertake content-based courses through the medium of English. The pedagogy adopted at the English Language Center where the course is housed can be described as theme-structured and task-based. The acquisition of skills is deemed more valuable that the acquisition of language vocabulary or grammar. The course begins with paragraph writing and leads into genre-based five-paragraph essays. Independent learning was considered an outside-the-classroom activity and was generally not related to the materials being studied in class.

Data Collection

This research is designed as a mixed-methods experimental study. Quantitative data is gathered from the results of a pre-post test questionnaire (see Appendix) while qualitative data is derived from teacher comments who volunteered for follow-up interviews and informal feedback sessions. The purpose of the qualitative data is to support and gain further understanding of the meanings behind the numbers of the quantitative data.

A questionnaire (see Appendix) was administered to the participants in this study prior to the beginning of classes and before exposure to the treatment which was in the form of professional development workshops as well as immediately after the end of one academic year and after exposure to the treatment training

workshops. The questionnaire was created by the researcher and a colleague who was actively involved in promoting independent learning in the curriculum. The length of time participants took to complete the questionnaire varied from 25-45 minutes. The survey questions were based on a 5-point Likert scale. All questions were coded from 1-5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree". Teachers were given the opportunity to volunteer for further participation in section 5 of the questionnaire, where they could express interest in discussing independent learning more in the form of an interview. Only teachers who responded positively to this question were asked to provide their name and contact details.

A reliability test was applied first to test the internal consistency by using Cronbach's alpha, and the mean for each item was then calculated, and items with higher use were identified. The Cronbach's alpha was 0.91. The standard of $p < .05$ was used to determine the statistical significance of results, indicating that there are fewer than 5 chances out of 100 for the result to have occurred by chance (Green and Oxford, 1995). An ANOVA was applied to determine if there were any significant differences between the means of the items and the variables of gender, length of ESL teaching, and length of teaching at the ELC. The Pearson Correlation Test was used to identify significant correlations among similar items on the questionnaire.

Follow-up interviews were given 5 days after the pre-test questionnaire was administered. Among the 21 teachers who completed the pre-test questionnaire, 10 volunteered to be interviewed for additional comments last ten minutes each. Among the 16 teachers who completed the post-test questionnaire, 4 teachers volunteered information during informal follow up sessions of 3-4 minutes each after treatment was completed. The four teachers who provided feedback for the post-questionnaire sessions had also been among the participants who volunteered after the pre-test questionnaire.

Non-director follow-up interviews consisted of questions which related to why a teacher answered a questionnaire item the way they did. The interviews were exploratory in nature and allowed the teachers to comment freely on any item related to independent learning. The non-directive nature of the interviews was designed to allow for more spontaneous discussion between the interviewer and interviewee. According to Gray (2009), non-directive interviews, form of unstructured interviews, are aimed to gather in-depth information and usually do not have pre-planned set of questions.

The results of the pre-test questionnaire and the follow-up interviews suggested that a treatment would be necessary to get teachers on board with implementing independent learning in their classrooms. Once it was recognized that teachers needed to be fully trained themselves before they could be expected to have their students engage in IL, a training program was developed. This program is briefly described below.

Treatment: IL Training for ELC Teachers

Over the course of one semester, the ELC held five professional development workshops geared at training teachers about encouraging independent learning to their students. The training took on a strategies approach, in which teachers learned step by step how to effectively promote IL in their classes, with the goal of developing learners' metacognitive skills, i.e. teaching them how to learn.

The first workshop was held at the beginning of the semester and was delivered during the ELC annual retreat. During this workshop, the concept of IL was defined, the benefits were discussed, and the need to encourage students to develop the skills to learn on their own was promoted.

The second workshop began with a look at how independent learning is implemented in other institutions, particularly those in the surrounding region of Hong Kong as well as other universities in Macau. Participants in the workshop discussed how much autonomy learners at UM have by measuring autonomy on a continuum. They looked at the resources available at the ELC – such as software, graded readers, online learning materials, the writing center, and each other as professionals in the field. Five important steps were detailed about what teachers should do with the resources:

1. Teach the students how to analyze their needs (focusing on one specific point at a time)
2. Demonstrate to students what IL resources are available
3. Assign IL tasks for students to try out IL resources
4. Encourage students to set realistic goals and to use materials at their level

5. Encourage students to monitor their own learning

How much autonomy students could and should be given was also discussed. We judged how independent IL should be; that is, should IL be a required part of the course. Ways to foster IL were explored, and those included:

1. Doing a needs analysis of the class
2. Demonstrating IL sites to students in class
3. Taking students to the lab to work on IL in class
4. Taking students to the reading room to read during class time

In the third workshop, teachers at the ELC looked at the SWOT model – the Strengths, Weaknesses, Opportunities and Threats Model– for basing their discussions on the implementation of autonomy at UM and the ELC. Participants then divided into four groups to discuss the four SWOT elements as it relates to the ELC. The session concluded with a sharing of the groups' ideas, a general discussion and a summing up.

The focus of the fourth workshop was to summarize what the teachers had learned so far and to clarify any remaining issues.

A guest speaker was brought in from Hong Kong to speak about assessing IL in our fifth and final PD workshop on IL. Questions that were addressed included:

1. How do we assess students in independent language learning programs?
2. Should we focus on language or learning?
3. If we include learning in the assessment, what criteria to we have to assess how 'independent' students have been?
4. How do we separate 'independent learning' from 'participation in an independent learning program'?
5. What are the ethics of assessing independent learning in programs that are mainly focused on language learning?

At the conclusion of the 5 workshops, teachers were asked to reflect on their training sessions. During this time, teachers expressed that they felt like they better understood what the goals of IL were, that they were more familiar with the resources available, that they felt more confident in promoting IL to the students, and that they could now assess IL and include it as part of their curriculum. By the end of the following semester, all ELC teachers were including IL as 10% of their total class assessment, and each teacher had developed unique ways to assess IL. An interactive Moodle webpage especially designed to store all the IL resources that teachers had recommended was added to the university data and made available to all students at the university, not just for ELC students. Additionally, by the third semester, discussions were already underway about how to link IL to the classwork and to integrate parts of IL into all ELC Moodle courses.

At the end of the five professional development workshop series, a post-test questionnaire with informal discussion about the experience was administered by the author of this article. The post-test data was compared to the pre-test data to see if the treatment was successful in changing teachers' beliefs about independent learning.

Data Analysis

The data from the pre-post test questionnaires were analyzed, and qualitative and quantitative data are presented in this paper. The results of the pre- and post-test surveys were analyzed with SPSS, version 20. The two administrations of the survey were compared to see if there were significant changes in teachers' beliefs about students' abilities to undertake independent language learning.

A one-way analysis of variance on the questionnaire responses were performed to answer one main hypotheses: if there is significant difference between the two administrations regarding what teachers believe about students' abilities to undertake independent learning. When a correlation was performed, the pre-test and during-test were significantly correlated at $p=.044$, when $p<.05$, meaning that the tests measure the same

concepts. The pre-test and post-test were significantly correlated as well (p=.003). Further, the results of a paired samples T-test yield significance at the .0009 level (p<.001), meaning that for the whole group the difference between the pre-test average score and the post-test average score was statistically significant. The T-test was chosen because it assesses whether the mean (average) of two variables are statistically different from each other.

The complete data set for the pre-test and post-test questionnaire responses with their means and standard deviations are provided in Table 1: The first set of questions (Q1 and 2) involved learners' involvement and ability to do IL activities. There were drastic differences in the responses to these questions. While most teachers agreed that learners should be involved in IL (M= 4.3, SD = 0.59), few agreed that they know how to do IL (M= 2.1, SD = 1.11). Comments suggested that students were reluctant to undertake IL unless the teacher showed them exactly what to do. Most of the students, they claimed, were not interested in IL and did not take an active role in bettering their English abilities. In fact, most teachers felt that students who study outside of class are better language learners than those who do not study outside of class (Q6) (M=3.6, SD=1.27).

Table 1:
Descriptive Statistics of Survey Results

	Pre-test			Post-test		
Variable	M	SD	n	M	SD	n
1. Involvement	4.3	0.59	21	4.6	0.43	16
2. Know how	2.1	1.1	21	2.3	1.55	16
3. Completing tasks	4.1	2.33	21	3.5	2.11	16
4. Choice	2.3	1.87	21	3.9	2.09	16
5. Language skills	4.7	0.87	21	3.8	2.22	16
6. Study outside	3.6	1.27	21	4.1	1.11	16
7. Rubric	3.3	0.92	21	3.4	1.08	16
8. Without teacher	4.1	0.55	21	4.3	0.87	16
9. Proficiency	1.5	0.55	21	1.3	0.65	16
10. Time constraints	3.5	0.87	21	3.6	0.88	16
11. Confidence	4.6	0.98	21	4.3	1.21	16
12. Life skill	4.7	1.23	21	4.7	1.23	16
13. Culture	1.3	2.23	21	1.9	1.98	16
14. Report	2.3	0.58	21	3.6	1.33	16
15. Teacher-centered	2.0	1.87	21	2.7	0.98	16
16. Activities	4.7	0.98	21	4.8	0.76	16
17. Rejection	4.7	0.98	21	4.8	0.76	16
18. Teacher help	2.9	1.11	21	3.7	1.44	16
19. Technician	1.4	3.55	21	1.8	3.06	16
20. Adult learners	4.7	0.87	21	4.0	2.09	16
21. Self-access center	4.0	2.65	21	3.8	2.01	16
22. Free to decide	3.6	2.98	21	4.3	1.99	16
23. Non-Western	4.2	2.11	21	3.6	2.09	16
24. Independence	2.1	0.85	21	1.8	0.88	16
25. Group work	2.5	1.13	21	3.8	0.86	16
26. Beginners	1.6	2.66	21	3.6	1.11	16
27. Materials	3.9	0.98	21	4.7	1.09	16
28. Classrooms	3.6	1.87	21	4.9	1.09	16
29. How to learn	3.9	2.54	21	4.6	1.76	16
30. Work alone	3.9	2.09	21	3.2	1.09	16
31. Internet	4.9	2.71	21	4.0	1.98	16
32. Monitor	3.5	1.34	21	4.6	1.08	16
33. Motivation	4.1	0.76	21	4.6	0.98	16
34. Ability	2.5	2.43	21	3.0	1.68	16
35. Teacher	4.3	0.74	21	4.8	0.88	16

36. Success	1.9	2.79	21	2.8	0.90	16
37. Desire	0.8	2.61	21	3.5	0.93	16

This finding was echoed in the qualitative part of the questionnaire in section 3, question 1. When asked "In general, the students I teach English most often to at UM have the ability and desire to learn independently," 11 agreed, 3 disagreed, and 7 were unsure. Among those who agreed to this question and who consented to a follow-up interview, comments included:

> They (the students) are capable of learning if given direction. They certainly have extrinsic motivation although their intrinsic motivation may be weak. For example, students who tell me they hate reading have been motivated to read and enjoy it. (T10)
>
> Generally speaking, students want to improve their English. They always asked me how they could improve their English. (T17)
>
> Many students are especially engaged when a topic of interest is addressed in class. This is seen through voluntary participation during discussion. (T8)

Yet, these 11 teachers did not account for quite more than half of the ELC population. Among the comments of the 47% of teachers who disagreed or were unsure were:

> During the previous semester, I organized some extra curriculum activities as independent learning opportunities, but students were not very motivated to join. (T5)
>
> I think my students are capable, but they may not be motivated to learn because they don't see the need to learn English; therefore, as teachers we have to help our students realize their needs. (T21)
>
> I have the impression that more than 50% of them are forced to take the course just because the university wants them to do it. There are usually only one or two students in the class who tell me that they enjoyed the IL process. (T4)

It appears from the comments that teachers were torn. While they agreed that learners should be involved in IL, they questioned students' ability and motivation to do so. Perhaps as one teacher said, it is the matter of "luck of the draw" if you get students who are motivated in your class or not. Lack of both intrinsic and extrinsic motivation, infrequent chances to use English outside of class, difficulty of the English language, and lack of study skills accounted for most of the reasons why teachers believed that students did not invest in IL during their free time. What was most obvious from the teachers' comments, though, was the need for teachers to try to motivate students more.

The next set of questions focused on the teacher role in guiding students in the IL process. Teachers almost unanimously agreed or strongly agreed that the teacher has an important role to play in supporting IL (Q35) (M=4.3, SD=0.74). This number decreased when asked whether students IL can be developed without the help of a teacher (Q18) (M=2.9, SD=1.11). Even though many of the teachers believed that students can learn how to learn independently by themselves, or without the help of the teacher, they still felt that the learners should have a connection with the teacher, supported by question 24 (M=2.1, SD=0.85) that says that IL requires the learner to be independent of the teacher (16 disagreed).

As the results from the questionnaire showed, teachers feel they are obliged to promote IL to students, but comments showed that they sometimes don't know how. Some of their needs addressed in the comments included the following obstacles to using class time to train students how to become more autonomous in their learning:

1. An activity log cannot be the only way to assess IL (reliability).
2. Teachers do not know how to use resources – especially technological resources (so how can they be expected to train students).

3. There are many constraints on classroom time. There is much classwork that must be completed. Q10 (M=3.5, SD=0.87) showed that 38% of teachers find it impossible to promote IL due to time constraints.
4. Teachers feel the need to treat students like adults, and therefore not to force them to study things they do not want to study.

So, if teachers are important in helping students develop IL skills, how can they best help, and what types of activities should they be promoting. Table 2 presents data regarding teachers felt about certain activities being *desirable* for students to be involved in, as well as the *feasibility* of them undertaking the activities in an IL setting.

Table 2:
Desirability and Feasibility of Learning Activities and Learner Abilities

Variable	Desirability		Feasibility	
	M	SD	M	SD
Web-based	3.14	0.91	3.09	0.94
Projects	3.14	0.96	2.61	1.11
Reading circles	2.66	1.11	2.33	0.96
Text and CDs	2.33	0.91	2.76	0.83
Movies	2.52	1.12	2.76	1.09
Newspapers	2.14	0.96	2.80	1.16
Computer programs	3.00	0.89	3.00	0.94
Identify needs	2.52	1.20	3.04	1.16
Identify strengths	3.14	1.23	3.23	1.17
Identify weaknesses	3.23	1.26	2.33	1.11
Monitor progress	3.14	1.19	2.95	1.11
Evaluate learning	1.90	1.04	2.85	1.19
Learn with groups	2.52	1.16	2.57	1.07
Learn independently	1.71	1.10	2.42	1.24

As can be seen from Table 2, there were discrepancies between the activities that teachers believed that students *should be doing* versus what they believed students were *capable of doing.* Most notable is that of: 1) outside the classroom projects in which most teachers thought this was a desirable activity (M=3.1, SD=0.96), but fewer thought their students could do this (M=2.6, SD=1.11), and 2) reading circles in which most teachers believed that teachers should be involved in reading circles (M=2.6, SD=1.11), but fewer felt that they could actually achieve this (M=2.3, SD=0.96).

What is also interesting about Table 2 is that teachers felt that initially students did not have the ability to do IL (M=1.7, SD=1.10), but that IL became feasible for them (if teachers trained them) (M=2.4, SD=1.24). This data corresponds to the previous questions in which teachers admitted that they needed to be trained about IL before they could properly promote IL to their students.

Assessing IL learning was also an issue that the teachers felt disturbed about. Assessment is always a difficult part of teacher, but the main problem with assess IL was that there appeared to be no way to objectively measure if students' IL had been successful or not; that is, there was no way to test what they had learned outside the class.

From the results of Q7 (M=3.3, SD=0.92), teachers were torn about using a rubric to assess IL. 62% of teachers felt that a rubric should not be used. Objections included that developing a common rubric would be too difficult, that students would not understand the rubric, and that even with a rubric, there were too many subjective items.

Therefore, the question that remained is how teachers could assess IL if they did not use a rubric. Many teachers felt that introducing a rubric into the process meant that it was no longer independent learning but was required learning. Yet, teachers mostly agreed (67%) that students should report on the IL they

undertake, such as through reflective journals, an IL log, or via social media such as Facebook or Twitter, as seen in Q14 (M=2.3, SD=0.58). The students could be assessed on whether they fulfilled the minimal amount of reporting required for IL.

The trend in the responses regarding students' abilities to undertake IL was that teachers believe that Chinese students have become so accustomed to having the teacher lecture and provide them with everything that they need to know that they seldom venture out to learn more on their own, including to improve their English skills. Students use the excuse of being too busy to undertake IL seriously and for intensive periods of time.

The third statement was "In general, I encourage my students how to develop their abilities to learn independently". Most of the teachers agreed with this (15), while only 3 disagreed and 3 said they were unsure. Comments from the teachers who agreed and who shared their reasons during the follow-up interviews included:

> Personally, I prefer to design tasks that can help students find the answers to the questions to get them to learn by doing. They need to be given lots of activities to practice the language and find out ways to improve their English outside the classroom. (T21)
>
> I try to show students that they are capable and have single tasks they can attempt in order to increase self-confidence. (T4)
>
> I don't encourage rote memorization. I ask my students to make decisions about topic they want to work on and think strategically about their use of the English language. (T18)

Among the negative comments were:

> I think I give students points on how to manage their time and present IL resources to them, but I don't feel like I have innovative way of teaching them about IL. In addition, we both tend to allocate our resources on those course objectives that are a large percent of their overall grade. (T1)
>
> This is a new experience for me and to be honest, I have never taught students how to study independently. My view beforehand was that it was the responsibility of students to determine what they would study and what they would not study. Ideally, I would like to treat my students like adults to try and prepare them for the real world. They are responsible for their own action and behavior. I am there to offer advice and help when needed. (T3)
>
> I feel I need to devote too much time to meeting the course objectives, that time spent on IL takes away from time the students need to master course concepts/skills should be fairly assessed on them. (T19)

For the teachers who disagreed, they seemed to share the inadequacy of their training and knowledge of IL as the main problem. Therefore, it was hoped that professional developmental workshops on the topic would make teachers better prepared to introduce IL to their students. When asked about what type of training teachers would prefer, the areas they were most interested in learning more about regarding IL included assessment (11), motivation (4), and resources (3).

Discussion

The Study

Independent learning is still a new concept in China. Students in the K-12 system are not exposed to IL in any apparent form and may become quite perplexed in tertiary-level courses when they teacher introduces concepts like autonomy or IL (Wang, 2002). It is difficult to encourage students to undertake IL in university due to various barriers: lack of motivation, lack of skills, difficulty of the English language, and lack of opportunities to practice English outside the classroom, just to name a few (Wei, 2002; Wang, 2002; Peng, 2002).

Results from the questionnaire showed that:

- Teacher attitudes towards IL were mixed;
- Teachers did not feel experienced enough with resources to introduce them to students; and
- Teachers could not clearly assess IL objectively.

The results were not different from the literature that was found on the topic of IL in China. This study found that teachers believed that various means of assessment were necessary, such as those called for in Wei (2002). Most importantly, the questionnaire identified teachers' apprehensions about introducing IL without being trained first, which echo the findings of Wang (2002) who introduced a five-step training model and Peng (2002) who suggested that teachers need to be held responsible for developing learning autonomy. Therefore, a training period of one semester with time for reflection and experimentation was chosen as the solution to these problems (detailed below).

First, what are teachers' beliefs about students' abilities to undertake IL? The results from the pre-test and post-test questionnaires showed that the treatment of professional development training sessions helped to change the ways that teachers thought about students' abilities to take on independent language learning activities. Overall, there was an aura of negativism regarding independent learning prior to treatment, which changed dramatically to more favorable results after the treatment.

Judging from the change in beliefs, it is suggested that teachers first be trained prior to introducing independent learning in their language courses. There are additional suggestions as well. First, teachers can better prepare themselves. Before they can guide students to the right resources and encourage students to actively engage in IL, teachers must first be "sold" on the idea of IL. Teachers must re-examine their own learning processes so that they can help identify what skills students need to undertake IL (Xu, Peng and Wu, 2004).

Next, will professional development training on IL alter teachers' beliefs about students' abilities to engage in IL? The current study showed the value of professional development training for this set of teachers. It is therefore suggested that teachers must be trained with how to use find resources, how to use the resources, how to teach students to use the resources and how to evaluate if students are using the resources or not (Wei, 2002; Wang, 2002; Peng, 2002). They must also know how to assess IL if that is a graded component of the curriculum. A variety of assessment methods are called for.

Limitations

This study is not without its limitations. The most problematic was the tool that was used in this study. Although the questionnaire was piloted and reviewed by other instructors prior to dissemination, there still remained issues regarding how the questions would be used to answer the research questions investigated. Likewise, it would have been more reliable to administer the same questionnaire again after training to compare the before-training with the after-training results.

A second problem existed in the role of the researcher. As the director of the center where the research was undertaken, teacher participants reported directly to the researcher. This may have affected the way that they responded to the questions.

Conclusions and Future Studies

As part of an ongoing movement towards encouraging learner independence, teachers at the English Language Center (ELC) at the University of Macau engaged in professional development workshops on independent learning (IL), addressing issues of defining, promoting and assessing autonomy in learners. In these sessions, ELC teachers collaborated on creating guidelines to provide to students about IL, developing assessments through journals, blogs, online and paper-based reflections, and self-evaluation rubrics, and analyzing the ELC's current IL resources through a SWOT analysis. Results from questionnaires and informal feedback sessions showed that teachers felt more comfortable with including independent learning in their curriculum after these workshops.

In the future at the ELC, the first independent learning center (ILC) will be opened, and it is hoped that teachers will encourage students to identify their own learning needs and actively use the center in helping

them bridge the gaps in their English language proficiencies. In the proposed ILC, there will be undergraduate and graduate learning advisors who will consult with students one-on-one in assessing their needs. New computers will be bought, and the ILC will be stocked with journals, comics and magazines that students can have at their disposal. In the longer-term, we would also like to devise a new course in Independent studies in English in which students could enroll in a course solely customized to meet their needs.

Independent learning is a growing trend in classrooms around the world. We hope that students in our context in China will grow more accustomed to taking advantage of the abundant resources available for IL. Furthermore, we hope that English language teachers will first learn more about IL themselves so that they are better prepared at training their students for IL.

References

Benson, P. (2001). *Teaching and researching autonomy in language learning.* London: Longman.

Benson, P. (2007). Autonomy and its role in learning. In J. Cummins, & C. Davison (Eds.), *International handbook of English language teaching* (pp. 733- 746). New York: Springer.

Gray, D.E. (2009). *Doing research in the real world.* Thousand Oaks, CA: Sage Publications.

Green, J.M., & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency, and gender. *TESOL Quarterly, 29*(2), 261-297. http://dx.doi.org/10.2307/3587625

Lamb, T. & Reinders, H. (Eds.). (2006). *Supporting independent language learning: Issues and interventions*. Frankfurt: Peter Lang.

Lamb, T. & Reinders, H. (Eds.). (2008). *Learner and teacher autonomy: Realities and responses*. Amsterdam: Benjamins.

Li, Y.L. (2011). Research on how to enhance the students' ability on learning autonomy [对培养学生独立学习英语能力的探讨]. *Modern Reading (Education)* [现代阅读（教育版], *24*(1), 62-63. http://www.cnki.com.cn/Article/CJFDTotal-YDJY201124173.htm

Palfreyman, D., & Smith, R. C. (Eds.). (2003). *Learner autonomy across cultures: Language education perspectives.* Basingstoke: Palgrave MacMillan.

Peng, J.D. (2002). Learning autonomy of English teaching at college [大学英语教学中的"学习者自主"问题研究]. *Foreign Language World* [外语界], *3*(2), 15-19. http://www.cnki.com.cn/Article/CJFDTotal-WYJY200203002.htm

Wang, D.Q. (2002). Training on college students' autonomous English learning ability[大学英语自主学习能力的培养] *Foreign Language World* [外语界], *5*(3), 17-23. http://www.cnki.com.cn/Article/CJFDTotal-WYJY200205003.htm

.

Wei, Y.Y. (2002). Learning autonomy: A new concept in language teaching and learning [促进学习者自主性：外语教学新概念]. *Foreign Language World* [外语界], *3*(1), 8-14. http://www.cnki.com.cn/Article/CJFDTotal-WYJY200203001.htm

Xu, J.F., Peng R.Z. and Wu, W.P. (2004). Investigation and analysis on learning autonomy ability among non-English major college students [非英语专业大学生自主性英语学习能力调查与分析] *Foreign Language Teaching and Research* [外语教学与研究], *36*(1)*, 64-68*. http://dx.doi.org/10.3969/j.issn.1000-0429.2004.01.010

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Appendix

Questionnaire on English Language Teachers' Beliefs about Independent Learning

The English Language Center at the University of Macau strives to encourage independent learning and has built this component into the assessment of students in each of the ELC courses. This goal of this study is to research ways in which independent learning can be developed and promoted by ELC teaching and administrative staff. Participation is voluntary and all teachers and staff of the English Language Center are being invited to contribute. Your responses are important, as they will form the basis of the professional development workshops on independent learning which the ELC will host. There are no right or wrong answers; please respond honestly about your views on independent learning at the ELC at UM. Thank you.

It will take about 20 minutes to complete this questionnaire. To answer, please use your mouse to click on grey boxes (click a second time if you change your mind) or type into grey spaces.

Section 1: Independent learning

Please give your opinion about the statements below by ticking **ONE** answer for each. The statements are not just about your current job and in answering you should consider your experience as a language teacher more generally.

	Statement	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1.	All learners should be involved in independent learning.	☐	☐	☐	☐	☐
2.	Students already know how to learn independently.	☐	☐	☐	☐	☐
3.	Independent learning involves students completing tasks alone.	☐	☐	☐	☐	☐
4.	Students should be able to choose themselves which tasks to complete for independent learning.	☐	☐	☐	☐	☐
5.	Learners with poor language skills are not likely to have the skills necessary to do independent learning.	☐	☐	☐	☐	☐
6.	Students who study outside the classroom are better language learners.	☐	☐	☐	☐	☐
7.	There should be a rubric for measuring independent learning.	☐	☐	☐	☐	☐
8.	Independent learning means learning without a teacher.	☐	☐	☐	☐	☐
9.	It is harder to promote independent learning with proficient language learners than it is with beginners.	☐	☐	☐	☐	☐
10.	It is possible to promote independent learning with the current time constraints in the classroom.	☐	☐	☐	☐	☐
11.	Confident language learners are more likely to learn independently than those who lack confidence.	☐	☐	☐	☐	☐
12.	Independent learning is a crucial life skill.	☐	☐	☐	☐	☐
13.	Independent learning can be achieved by learners from all cultural backgrounds.	☐	☐	☐	☐	☐
14.	Students should not have to report on the types of independent learning that they do.	☐	☐	☐	☐	☐
15.	Independent learning cannot be promoted in teacher-centered classrooms.	☐	☐	☐	☐	☐
16.	Independent learning is promoted through activities which give learners opportunities to learn from each other.	☐	☐	☐	☐	☐
17.	Independent learning implies a rejection of traditional teacher-led ways of teaching.	☐	☐	☐	☐	☐

	Statement	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
18.	Independent learning cannot develop without the help of the teacher.	☐	☐	☐	☐	☐
19.	Independent learning cannot develop without the help of a lab technician.	☐	☐	☐	☐	☐
20.	Independent learning is only possible with adult learners.	☐	☐	☐	☐	☐
21.	Independent learning is promoted by independent work in a self-access center.	☐	☐	☐	☐	☐
22.	Independent learning is promoted when learners are free to decide how their learning will be assessed.	☐	☐	☐	☐	☐
23.	Independent learning is a concept which is not suited to non-Western learners.	☐	☐	☐	☐	☐
24.	Independent learning requires the learner to be totally independent of the teacher.	☐	☐	☐	☐	☐
25.	Cooperative group work activities support the development of independent learning.	☐	☐	☐	☐	☐
26.	Promoting independent learning is easier with beginning language learners than with more proficient learners.	☐	☐	☐	☐	☐
27.	Independent learning is promoted when learners can choose their own learning materials.	☐	☐	☐	☐	☐
28.	Learner-centered classrooms provide ideal conditions for enhancing independent learning.	☐	☐	☐	☐	☐
29.	Learning how to learn is key to developing independent learning.	☐	☐	☐	☐	☐
30.	Learning to work alone is central to the development of independent learning.	☐	☐	☐	☐	☐
31.	Out-of-class tasks which require learners to use the internet promote independent learning.	☐	☐	☐	☐	☐
32.	The ability to monitor one's learning is central to independent learning.	☐	☐	☐	☐	☐
33.	Motivated language learners are more likely to utilize independent learning than learners who are not motivated.	☐	☐	☐	☐	☐
34.	The proficiency of a language learner does not affect their ability to learn independently.	☐	☐	☐	☐	☐
35.	The teacher has an important role to play in supporting independent learning.	☐	☐	☐	☐	☐
36.	Independent learning has a positive effect on success as a language learner.	☐	☐	☐	☐	☐
37.	Students have the desire to learn independently.	☐	☐	☐	☐	☐

Section 2: Desirability and feasibility of independent learning at UM

Below there are two sets of statements. The first gives examples of *decisions* **LEARNERS** might be involved in; the second lists *abilities* that learners might have. For each statement:

a. First say how **desirable (**i.e. ideally), you feel it is.
b. Then say how **feasible** (i.e. realistically achievable) you think it is for *the learners you currently teach most often*.

You should tick **TWO** boxes for each statement—one for desirability and one for feasibility.

	Desirability					**Feasibility**			
	Undesirable	**Slightly desirable**	**Quite desirable**	**Very desirable**		**Unfeasible**	**Slightly feasible**	**Quite feasible**	**Very feasible**
Learners are involved in activities outside the class which promote IL such as:									
Web-based programs	☐	☐	☐	☐		☐	☐	☐	☐
Outside the classroom projects	☐	☐	☐	☐		☐	☐	☐	☐
Reading circles	☐	☐	☐	☐		☐	☐	☐	☐
Supplementary ESL textbooks and CD's	☐	☐	☐	☐		☐	☐	☐	☐
Movies in English	☐	☐	☐	☐		☐	☐	☐	☐
English newspapers	☐	☐	☐	☐		☐	☐	☐	☐
ESL Hardware/software programs in labs	☐	☐	☐	☐		☐	☐	☐	☐
Learners have the ability to:									
Identify their own needs	☐	☐	☐	☐		☐	☐	☐	☐
Identify their own strengths	☐	☐	☐	☐		☐	☐	☐	☐
Identify their own weaknesses	☐	☐	☐	☐		☐	☐	☐	☐
Monitor their progress	☐	☐	☐	☐		☐	☐	☐	☐
Evaluate their own learning	☐	☐	☐	☐		☐	☐	☐	☐
Learn with groups	☐	☐	☐	☐		☐	☐	☐	☐
Learn independently	☐	☐	☐	☐		☐	☐	☐	☐

Section 3: Your learners and your teaching

This section contains two open-ended questions. These are an important part of the questionnaire and give you the opportunity to comment more specifically on your work at the English Language Center at UM.

1. To what extent do you agree with the following statement? Choose ONE answer:

   'In general, the students I teach English most often to at UM have the ability and desire to learn independently.'

   Strongly disagree ☐ Disagree ☐ Unsure ☐ Agree ☐ Strongly agree ☐

   Please comment on why you feel this way:

2. To what extent do you agree with the following statement? Choose ONE answer:

   'In general, in teaching English at the ELC, I encourage my students to develop their abilities to learn independently.'

   Strongly disagree ☐ Disagree ☐ Unsure ☐ Agree ☐ Strongly agree ☐

   Please comment. You may want to explain why and how you promote independent learning.

Section 4: About yourself

Please tell us about your background.

1. Years of experience as an English language teacher (Tick ONE)

   0-4 ☐ 5-9 ☐ 10-14 ☐ 15-19 ☐ 20-24 ☐ 25+ ☐

2. Years of experience as an English language teacher at UM (Tick ONE)

   0-4 ☐ 5-9 ☐ 10-14 ☐ 15-19 ☐ 20-24 ☐ 25+ ☐

3. Highest qualification (Tick ONE)

   Certificate ☐ Diploma ☐ Bachelors ☐ Masters ☐ Doctorate ☐ Other ☐

4. Nationality **:**

5. Gender (Tick ONE) Male ☐ Female ☐

6. At the English Language Center, which classes do you teach the most hours of this semester? (Tick ONE) :

   Pre-GE Levels 0 or 1 ☐ GE Level 2 ☐ GE Levels 3 or 4☐

Section 5: Further participation

1. In the next stage of the study we would like to talk to individual teachers to learn more about their views on independent learning. Would you be interested in discussing this issue further with us?

   Yes ☐ No ☐

2. We are also planning to run a series of training workshops on independent learning for teachers at the English Language Center. Would you be interested in attending these workshops?

   Yes ☐ No ☐

If you answered YES to questions 1 and/or 2 above, please write your name and email address here.

Name:
email:

Thank you for taking the time to respond.

Historical Images of Women in CHamoru Culture

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Abstract

In order to understand Guam's high rates of violence against women, this article looks at historical images of women within CHamoru culture. Several scholarly and literary resources are reviewed, including Spanish historical records, CHamoru folklore and legends, academic scholarship, and biography. Together, these historical resources highlight the strength of women within CHamoru culture dating back to the pre-colonial era. Subthemes emphasize CHamoru women's selflessness, respect for cultural traditions and elders, assertiveness, and strong will. The authors propose that Guam's high rates of violence against women reflect a diminishing of women's power resulting from patriarchal social structures associated with Spanish and American colonialism. These colonial systems displaced traditional CHamoru cultural practices, such as the matrilineal system, that supported women's positions of authority within the family and the community. The paper concludes with a call to all members of the community to work together to challenge the prevailing social structures that sustain violence against women.

Introduction

In November 2018, Guam suddenly drew the attention of the world community as we celebrated the election of our first woman governor, as well as the first women majority ever elected to a legislature in the United States. Following the election results, the people of Guam were exuberant and proud, but probably not surprised, as CHamoru women have always been recognized as strong leaders in Guam's traditionally matrilineal culture. Today, women in Guam play leadership roles throughout all levels of society—in government, in the workplace, within communities, and within families. However, this positive image of gender equality within our island community is sharply disrupted by Guam's disturbing record of violence against women. A quick perusal of Guam's news media reveals almost daily reports of sexual assault, domestic violence, and child abuse. Shockingly, the rates of these crimes are among the highest in the nation. For example, Guam has the second highest rate of rape per capita within the United States—64.2 rapes per 100,000 people. This represents more than double the national average of 25.2 rapes per 100,000 people (Eugenio, 2017). Reflecting on these alarming statistics, one is left with the disturbing realization that thousands of women and girls living in our island community are victims of trauma. In order to make sense of this contemporary paradox, in which CHamoru women can be viewed simultaneously as highly respected leaders within the community and as disempowered victims of violence, this article examines historical images of women within CHamoru culture. To do so, the authors selected several scholarly and literary depictions of CHamoru women from a variety of sources, including Spanish historical records, CHamoru folklore and legends, academic scholarship, and biography.

Spanish Colonial-Era Historical Accounts of CHamoru Women

Pre-colonial CHamoru culture was characterized by a matrilineal caste-based system that emphasized interdependence and cooperation and valued extended family relationships. Modern scholars highlight the egalitarian nature of pre-colonial CHamoru culture in regards to gender roles, with men and women sharing in political and family responsibilities, although CHamoru women enjoyed unique status within the family as lineages were traced through the mothers' line. In fact, historical records indicate that due to their important roles within the family and the community, CHamoru women reserved the right to leave unfaithful and abusive husbands and take with them children and shared possessions (Cunningham, 1992; Driver, 1993).

Guam's earliest histories were compiled by European colonists beginning in 1521, when Portuguese explorer Ferdinand Magellan made landfall in Guam during his famous circumnavigation of the globe. In the decades following the establishment of a Catholic mission in the Marianas in 1668, Jesuit priests and colonial officials

prepared regular annual reports on the progress of the mission in the islands. These colonists also wrote biographies of priests who were martyred during the mission and kept regular correspondence with colleagues residing in the Philippines and other Spanish colonies. Most colonial descriptions of CHamoru women from this period focus on the unique power and status of CHamoru women in traditional CHamoru society. Subsequent accounts from the late seventeenth century onwards, however, demonstrate changing patterns in CHamoru women's roles.

One of the oldest first-hand accounts of CHamoru women was written by Fray Juan Pobre de Zamora, a Franciscan priest who jumped ship in 1602 and spent seven months on the island of Rota, a few miles north of Guam (Driver, 1993). Pobre's narrative predates the formal Spanish colonization of Guam by sixty years, thus offering an important glimpse of pre-colonial CHamoru culture. According to Pobre, CHamoru women could leave their husbands if they mistreated them. Specifically, Pobre explained that if a CHamoru woman was unhappy with her spouse, she could leave her home, take her children and all her belongings, and return only after her husband and his extended family made formal apologies and begged the woman to come back.

This illustration of CHamoru women was supported in later documents as well. Fathers Coomans and Ledesma, writing in the late 1660s and early 1670s, further described the common practice of CHamoru women leaving their husbands if the husband had been unfaithful or if he had severely punished their children (Coomans, 2000; Lévesque, 1995a). In the mid-1670s, Gabriel de Aranda, in a biography of a martyred priest, described how CHamoru women would often leave their husbands due to jealousy, taking all possessions and children with them (Lévesque, 1995b). Sometimes, in response to suspected infidelity, CHamoru women would gather with other members of her clan to destroy the man's property, as illustrated in the following account:

> In such a case, sometimes, when the wife finds herself offended by the husband, she invites the other women in her town and they all grab their hat and spear, and go to the house of the adulterous man, and if he should have some plantation, they uproot it, and destroy it, then they act as if to spear him, and finally they throw him out of his house (Levesque, 1995b, p. 424).

John Callender, who wrote a secondary source history of the CHamoru people in 1768, wrote that CHamoru women maintained authority over all things in the home and were entitled to reprimand and leave husbands in response to undesirable behavior (Lévesque, 1995b). According to Callender, a CHamoru woman could remarry and her children would consider the new husband as their father. Callender also wrote that in these cases, the ex-husband was not punished for harming or even killing the new husband, but was prohibited from harming his ex-wife.

Writings from the late seventeenth century onwards, especially those documents concerned with reporting on the progress of the Catholic mission, seemed to demonstrate a shift in gender roles in CHamoru society. For example, in the "Jesuit Annual Report for 1679-1680," Father Xaramillo provided a general overview of the progress of the Catholic mission (Lévesque, 1996). In one passage of the report, Xaramillo described how CHamoru men had become heads of household in CHamoru society:

> They were used to seeing that the head of the household was the woman, she ordering and the husband obeying, but now everything is in the reverse, the husbands recognizing their own superiority, but subject to the laws and yoke of matrimony (Lévesque, 1996, p. 319).

Father Xaramillo seems to suggest that men had taken over a role that was traditionally reserved for women in the family.

In the "Jesuit Annual Report for 1692-1693," Father Cardeñoso provided another example of changing gender roles (Lévesque, 1997a). In one account, Cardeñoso described an instance in which a CHamoru woman was wrongly accused of adultery. Reportedly, the woman rebuffed the unwanted sexual advances of a suitor other than her husband. In retaliation for being rejected, the suitor made false claims that the woman was engaged in an extramarital affair with him. Cardeñoso explained that the lie could have potentially led to the women's murder by her husband had she not been proven innocent.

Father Bouwens writes in the "Draft annual report 1697-98" that a married woman and her husband had

sought the advice of a priest after the woman had discovered that her husband was making sexual advances to a girl who, by order of the missionaries, was placed into their home (Lévesque, 1997b). Bouwens quotes the young wife saying,

> …you have solicited her twice, although without success because she resisted it. You have insisted that she should sleep inside our bedroom, but I have protested that such a thing is contrary to decency. That is why I have refused to do my duty to you (Lévesque, 1997b, p. 576).

Bouwens' account demonstrates that CHamoru women in the late seventeenth century sought counsel from Catholic missionaries to correct problematic behaviors of their husbands. This presents a stark contrast to earlier descriptions of CHamoru women who left unfaithful husbands and sought help from extended family members to assist with marital disputes.

These historical accounts provide an important glimpse of CHamoru women at the beginning of Spanish colonization. Early depictions clearly illustrate CHamoru women as leaders within the home who did not tolerate poor treatment by their husbands. The records also highlight how CHamoru women maintained their extended family networks and turned to family members during marital disputes. As the Catholic mission took hold in Guam, CHamoru men were increasingly recognized as heads of household. Whereas in prior years, women had the right to punish husbands who mistreated them, CHamoru men in the late seventeenth century appear to have taken on this role and faced less consequences for harming their wives. At the same time, priests were beginning to take over from extended family members in helping women to resolve marital problems.

Women in CHamoru Folklore and Legends

CHamoru women figure prominently in ancient folklore and legends. In Guam's creation myth, two celestial brother-and-sister beings came together to create the world. The sister, Fu'una, took her brother's body and made the sun, moon, and earth. In turn, she transformed her body into a large stone, from which she broke off many pieces that became human beings and populated the earth. Fu'una provides a unique perspective on CHamoru women. As both Fu'una and her brother are responsible for creation, the legend is an important symbol of collaboration and equality between men and women. Fu'una's central role in creating the human race can be viewed as a symbol of motherhood, collaboration, and harmony, suggesting that the traditional roles of CHamoru women as sister and mother revolve around creating and promoting social connection.

Another legend tells the story of how CHamoru women wove strands of their hair together to capture a giant fish that was slowly devouring the island. Ancestral spirits sent the fish as punishment for the people's lack of respect for the earth. Although the men of the island tried to kill the fish, it was the women's sacrifice of beauty, by cutting their hair and weaving it into a net, that captured the giant fish and ended its destruction of the island. This legend suggests that, traditionally, sacrifice was a central part of CHamoru women's roles in the community. The women in the legend sacrificed their beauty for the island's safety and well-being. Furthermore, this particular legend depicts CHamoru women as active and engaged agents in the welfare of their island.

The legend of the White Lady has a few variations but all share the tragic ending in which the ghost of a CHamoru woman dressed in white haunts the Fonte' River bridge in the small village of Maina. In one version of the story, a woman who was betrothed to a Spanish soldier, planned to elope with her CHamoru partner at the Fonte' River bridge. Her father murdered her CHamoru suitor before they could meet, and the woman is said to continue waiting at the bridge. This legend illustrates an image of a strong-willed and tenacious CHamoru woman. In the face of adversity, the White Lady stands firm by her convictions even to the point of death. More broadly, this legend also illustrates CHamoru resistance to Spanish domination.

In the legend of Sirena, a young CHamoru girl was transformed into a mermaid after her mother cursed her into a fish. Sirena, who loved to swim in the Hagåtña River, often ignored the calls of her mother to return home and finish her household chores. One day, Sirena's mother cursed in frustration that her daughter would be better off as a fish. Sirena's godmother, who heard the curse, prayed that at least some part of Sirena would remain human. Sirena then became half-human, half-fish, and disappeared into the ocean. The legend of Sirena is a cautionary tale of the consequences of disobeying one's mother, underscoring the

CHamoru cultural value of respecting one's mother and family. Another interpretation of Sirena is an image of CHamoru women as independent and brave. Although Sirena parts from her family and is destined to a life alone in the sea, she is a symbol of bravery in the midst of the unknown.

The prominence of women in CHamoru folklore is a testament to the central role CHamoru women have historically played in CHamoru society. The fact that these stories are still shared today, in spite of changing women's roles, speaks to the resilience of traditional CHamoru cultural values in the face of outside influences.

CHamoru Women in Health Care Practice Under the U.S. Navy

Anne Perez Hattori's (2004) *Colonial Dis-Ease: U.S. Naval Policies and the Chamorros of Guam, 1898-1941*, is an academic work offering a critical analysis of U.S. naval government policies addressing sanitation and health in Guam during the early 20th century. Hattori's work outlines several case studies, three of which involve CHamoru women in health care practice. According to Hattori, the *suruhana*, or female traditional healer, was an important source for physical and spiritual health among CHamorus, a modern incarnation of pre-colonial spiritual healers known as *kakahna*. The *pattera*, or traditional midwife, was also an oft-consulted folk healer who assisted with births. During the naval administration of the island, both the *suruhana* and *pattera* slowly came under control of the U.S. Navy, which saw their procedures as antiquated and controlled their practice by requiring them to obtain licenses and restricting their ability to make or prescribe herbal medicines. The naval government also opened a Western-style nursing training school; yet CHamoru trainees were consistently discriminated against at the hospital and given menial jobs not assigned to their Caucasian counterparts.

In the face of these barriers and difficulties, CHamoru women reacted with a spirit of resistance and appropriation. Although *suruhana* and *pattera* were widely criticized by the naval administration, these folk healers continued to practice with a dedicated clientele of CHamoru men and women. In spite of discriminatory practices at the hospital, working-class CHamoru women continued to sign up for courses at the nursing training school in order to earn money to provide for their families. Rather than passively submit to unfair or discriminatory practices, CHamoru women in these roles continued or modified their work in order to meet their own needs. These descriptions of CHamoru women depict a sense of unwavering resistance to foreign domination and control, in addition to a quality of selflessness and dogged determination to further oneself and one's family in spite of racism and other obstacles.

The Story of Mariquita

Mariquita: A Tragedy of Guam, written by Chris Perez Howard (2000), is a book about the life of Mariquita Perez Howard and the effect of World War II on the young Mariquita, her family, and the island of Guam. Howard, who is the first-born son of Mariquita, wrote his mother's biography to develop a deeper understanding of himself and his culture, and to tell his mother's tragic story.

Howard begins his tale in 1938, describing the beautiful and gifted Maria Aguon Perez, better known as "Mariquita." At age 19, Mariquita was an ambitious student and a stenographer for the Guam Congress. In the summer of 1938, Mariquita was introduced to Navy serviceman Edward Neal Howard ("Eddie") and the two eventually married. Howard proceeds to describe their romance and how in spite of cultural differences, Mariquita remained steadfast in her cultural traditions and introduced these traditions to Eddie. In 1941, just after the birth of Mariquita's second child, Japanese forces invaded and quickly occupied Guam. Eddie was sent to a labor camp in Japan and Mariquita and her family remained in Guam, enduring poverty, forced labor, and beatings from Japanese soldiers. In spite of these hardships, Howard describes Mariquita as compassionate and selfless, as she often volunteered to take the labor assignments of those younger than her. When Mariquita returned home during the weekends, she worked to care for her children and extended family, farming at her family ranch to barter for food and goods with other locals. As Mariquita worked for the officers' headquarters, she understood that she might be forced to perform sexual favors, yet she vowed to respect her marriage and reject any propositions, even if that meant risking her life. On July 18, 1944, Mariquita was admonished for arriving late for an inspection. She was reportedly sequestered in the head officer's quarters for the entire day and then disappeared that same evening. Her loved ones believe she died resisting the sexual advances of the senior officer, staying true to her desire to honor her marriage even to the point of death.

As depicted in her son's story, Mariquita embodies the image of a strong CHamoru woman. She is illustrated as determined and clever, but also compassionate and loving to her family and those around her. Mariquita is also described as having high moral character and integrity, remaining loyal to her cultural values and also to her marriage in the face of adversity.

Contemporary CHamoru Women Organizers in Guam

Laura Torres Souder's (1992) *Daughters of the Island: Contemporary Chamorro Women Organizers in Guam* provides perhaps the most comprehensive analysis to date of the roles of CHamoru women in modern society. In *Daughters of the Island*, Souder profiles the lives of nine leading CHamoru women who were active in formal positions of leadership and in grassroots organizations. According to Souder, her case studies represent a sizeable cross-section of CHamoru women involved in community and church-related volunteer work. Souder's analysis highlights a unique style of community organizing among CHamoru women that often operated within Western frameworks, but was rooted in traditional cultural values. Souder's participants maintained extensive familial networks that helped promote their volunteer work, and called on maternal relatives, especially elders, for advice and support. The concept of feminism was anathema to most of Souder's participants, who collectively claimed that they did not need to be "liberated." Souder's final analysis was that in spite of a general impression that CHamoru women were becoming more modern or Americanized as they began to enter into leadership positions, their new roles were consistent with traditional, pre-colonial roles of CHamoru women, who enjoyed a high status in local politics and in the community.

One pronounced theme in Souder's depiction of CHamoru women was a sense of strength. Souder's participants appear to exemplify a quality of selflessness, seeking power and influence for the betterment of the broader community. Despite their prominence, Souder's participants were also humble and respectful towards their elders, depicting a sense of quiet strength that is both authoritative and assertive, but also modest, in that the participants were receptive to feedback and advice from others. Their adherence to cultural values and rejection of Western feminism show a strong sense of personal and cultural integrity.

Today, one of the most recognized CHamoru women's organizations is *Fuetsan Famalao'an* ("Strong Women"), a group of women leaders in Guam who have played a prominent role in protesting the military build-up. In 2006, *Fuetsan Famalao'an* members began calling upon government leaders to evaluate the social impact of the proposed build-up, particularly its effect on the well-being and safety of Guam's women, children, and families, as well as on the environment and other community concerns. Led by prominent CHamoru leaders, including former senators Judith Won Pat and Hope Cristobal, *Fuetsan Famalao'an* members exemplify Souder's image of strong CHamoru women embracing traditional roles to address contemporary social problems (Camacho, 2010; DeLisle, 2015).

Summary

A few common themes are evident in this review of the historical literature on CHamoru women. A theme of selflessness runs throughout most of the works, from the mythical character of Fu'una to the caring and compassionate Mariquita, who each sacrificed something of themselves for the sake of others. Deference and respect for cultural traditions and elders are also highlighted as central themes, exemplified by Souder's women organizers and Mariquita. Finally, assertiveness and strong will are some of the most prominent themes throughout, especially when CHamoru women are depicted in situations of adversity or when their culture and values are threatened. These traits are observed in Hattori's discussion of *suruhana*, *pattera*, and CHamoru nurse-trainees in the early twentieth century who pursued health care careers in spite of colonial discriminatory practices. Finally, Spanish colonial-era documents highlight how a spirit of strong will among CHamoru women and families protected CHamoru women from mistreatment from their husbands.

Conclusion

The historical sources reviewed above, each in their own way, highlight the strength of women within CHamoru culture dating back hundreds of years. The diminishing of women's power and authority within the home, the family, and intimate relationships, which has led to high rates of violence against women in Guam, likely occurred as Spanish and American patriarchal values displaced traditional CHamoru practices. The social

structures associated with patriarchy that promote and sustain violence against women continue to this day through American colonial rule and cultural hegemony. Thus, despite the strong roles played by women within CHamoru culture today, significant work remains to be done to ensure that gender equality is valued and practiced at all levels of society, including the home and intimate relationships, so that women are safe from domestic and sexual violence. To achieve this aim, the community—including women and men from all sectors of life—will need to work together to challenge the dominant social structures and values that leave many women vulnerable to violence despite their historical and continuing strength and prominent social roles.

References

Camacho, K. L. (2010, June). Fuetsan Famalao'an: Chamorro women's activism in the wake of 9/11. *CSW Update*. Retrieved from https://csw.ucla.edu/wp-content/uploads/sites/35/2017/07/CSW_update_Jun10.pdf

Coomans, P. R. (2000). *History of the mission in the Mariana Islands: 1667-1673*. (R. Lévesque, Ed. & Trans.). (Occasional Historic Papers Series No. 4, 2nd Ed.). Saipan, CNMI: Division of Historic Preservation.

Cunningham, L. (1992). *Ancient Chamorro society*. Honolulu, HI: The Bess Press, Inc.

DeLisle, C. T. (2015). A history of Chamorro nurse-midwives in Guam and a 'placental politics' for indigenous feminism. *Intersections: Gender and Sexuality in Asia and the Pacific*, 37. Retrieved from http://intersections.anu.edu.au/issue37/delisle.htm

Driver, M. G. (1993). *The account of Fray Juan Pobre's residence in the Marianas 1602*. (MARC Educational Series No. 20). Mangilao, Guam, U.S.: University of Guam, Micronesian Area Research Center.

Eugenio, H. V. (2017, January 24). Spotlight on Guam's high volume of sexual assaults. *Pacific Daily News*. Retrieved from https://www.guampdn.com

Hattori, A. P. (2004). *Colonial Dis-ease: U.S. Navy health policies and the Chamorros of Guam, 1898-1941*. (Pacific Islands Monograph Series No. 19). Honolulu, HI: University of Hawaii Press, Center for Pacific Studies.

Howard, C. P. (2000). *Mariquita: A tragedy of Guam*. Hagåtña, Guam: Cyfred.

Lévesque, R. (Ed.) (1995a). *History of Micronesia: Vol. 5. Focus on the Mariana mission, 1670-1673.* Gatineau, Quebec: Levesque Publications.

Lévesque, R. (Ed.) (1995b). *History of Micronesia: Vol. 6. Revolts in the Marianas, 1673-1678.* Gatineau, Quebec: Levesque Publications.

Lévesque, R. (Ed.) (1996). *History of Micronesia: Vol. 7. More turmoil in the Marianas, 1679-1683.* Gatineau, Quebec: Levesque Publications.

Lévesque, R. (Ed.) (1997a). *History of Micronesia: Vol. 9. Conquest of the Gani Islands, 1687-1696.* Gatineau, Quebec: Levesque Publications.

Lévesque, R. (Ed.) (1997b). *History of Micronesia: Vol. 10. Exploration of the Caroline Islands, 1696-1709.* Gatineau, Quebec: Levesque Publications.

Souder, L. M. T. (1992). *Daughters of the island: Contemporary Chamorro women organizers on Guam* (2nd ed.). Lanham, MA: University Press of America, Inc.

Section Two

Action Research

The Effects of Immersion Teaching in an Elementary CHamoru Classroom

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Abstract

The CHamoru language is in a state of vulnerability so it is imperative to explore and apply teaching strategies that improve student achievement and enhance second language acquisition. This study aims to analyze and compare the effects that two-way immersion (TWI) and full immersion teaching the CHamoru Language. It was conducted in an elementary school on Guam, the participants included two groups within a CHamoru Language and Culture classroom ranging in age from eight to ten years old. Students of both groups were administered a pre-test prior to the intervention and a post-test at the conclusion. Findings from this study showed that there was greater improvement in the intervention group, where the two-way immersion teaching method was used. The results from this study will help to establish which instructional approach provides greater improvement in the CHamoru Language and Culture classroom in an elementary school. Information and recommendations will be shared with the appropriate school district personnel.

Introduction

One language dies every two weeks and by the next century, half of the 7,000 languages spoken will vanish (Rymer, 2012). The CHamoru language is listed as vulnerable (Evans, 2011) as there are fewer and fewer CHamoru speakers on Guam today. Within the past twenty-eight years, there has been a significant drop of over 9000 speakers of the indigenous language of Guam (Eugenio, 2016). Currently, 16% of CHamorus are CHamoru speakers with 80% of those speakers over the age of 50 (Souder, 2017; Eugenio, 2016). Furthermore, a survey done by Pa'a Taotao Tåno' (2010) indicated that the younger generation, the under-18 group, struggled the most with the CHamoru language in overall comprehension (Pa'a Taotao Tano, 2010; Eugenio, 2016).

Background and Problem

The decline in CHamoru language speakers goes back to Guam's Colonial History. According to Lujan (n.d.), when the Spaniards, Japanese and Americans each imposed their value systems and beliefs upon the CHamorus, the CHamoru language was impacted. Lujan (n.d.) states that during their respective eras, they educated the CHamorus in what was considered the appropriate manner. Furthermore, being fluent in Spanish, Japanese, or English, depending on which power governed the island, was vital to obtaining a high status or position, especially a well-paying job (Lujan, n.d.).

During the U.S. Naval Government rule, on January 23, 1900, Captain Leary, Guam's first appointed governor, through General Order 13, Article 4, required all residents to learn how to read, write, and speak the English language. According to Campbell (n.d.), this was considered to be vital in order for the CHamorus to improve their mental condition as well as to help their children who were required to attend school in the new language. Eventually, in 1917, General Order 243 banned the speaking of the CHamoru language and recognized English as the only official language of Guam. The natives were punished for speaking their indigenous language (Campbell, n.d.).

When the Japanese government was in control of the Island of Guam, from December 1941 through July 1944, they also imposed their language and culture. Children and adults were required to attend school, where they were taught in the Japanese language (Palomo & Aguon, n.d.).

Furthermore, Lujan (n.d.) explains that the CHamoru people were resilient and adapted to each colonizing power. However, it came at a hefty price as their culture and language became secondary to the culture and language being imposed at that particular time. As a result, the CHamoru language became a casualty of invasion, marking the beginning of the decline of CHamoru language speakers.

In 1974, through Public Law 12-132, in addition to English, CHamoru also became an official language of Guam. Furthermore, in 1977, Public Law 14-53 authorized the Board of Education to "initiate and develop a bilingual, bi-cultural education program emphasizing the language and culture of the Chamorro people". To ensure that

we preserve, protect and promote the survival of the language and heritage of the CHamoru people of Guam, in 1991, Public Law 21-34 mandated that CHamoru Classes be taught in all Guam Department of Education Public Schools. The Guam Education Policy Board (GEPB) formalized the initiation of the schedule for all CHamoru Language and Culture Classes with Board Policy No. (Guam Education Board, n.d.). At the elementary level, students in kindergarten through the 2nd grade are taught the CHamoru Language and Cultures for twenty minutes a day, totaling one hundred minutes on a full week of classes. Students in the 3rd grade through the 5th grade are in the CHamoru class for thirty minutes a day, totaling one hundred and twenty minutes in a full week of classes. Students in both middle and high school receive only one year of CHamoru instruction.

The Guam Department of Education established the CHamoru Studies and Special Projects Division (CHSSPD) to provide and implement educational programs that will revive and maintain the language and culture of the indigenous people of Guam (CHamoru Studies & Special Projects Division, n.d.). The CHSSPD has gone to great lengths to provide all CHamoru Language and Culture teachers with professional development opportunities so they remain current with effective teaching methods and strategies.

Currently CHamoru teachers are required to use the full immersion teaching practices in their classroom. From the moment students walk into the CHamoru classroom, students should be immersed in the CHamoru language, therefore the only language they should be hearing is the CHamoru language. Lessons, activities, and instructions must be entirely in CHamoru. According to R. Laguana (personal communication, 2008), when students hear the language constantly, especially in the CHamoru classroom, they will eventually acquire the language and speak it more frequently. However, according to Jimmy Teria, School Program Consultant, CHSSPD, the outcome of these mandates has not generated "a new generation of speakers" (Eugenio, 2016).

In an effort to fulfill CHSSPD's mission to sustain, encourage, and advance the CHamoru Language and Culture (CHamoru Studies & Special Projects Division, n.d.), this action research aims to study the impact that two-way immersion teaching (TWI) and full immersion teaching have on students learning the CHamoru language in an elementary school. TWI integrates the use of students' first language (L1) and the target or second language (L2) being taught (Christian, Howard, & Loeb, 2000). In full immersion teaching, students are taught using only the L2. At the onset of full immersion teaching, students are introduced to L2 for a minimum amount of time (ex. 30 minutes a day) in one or two subjects. The amount of time progressively increases to fully immersing the students in the L2 for the entire day in all subjects (Akcan, 2005). The results of this study will shed light on which teaching method may be most effective for learning the CHamoru Language in elementary schools on Guam.

Purpose

The purpose of this study was to explore the effects of two-way immersion and full immersion teaching in the CHamoru Language and Culture class. The research questions guiding this study were:

1. What effects does two-way immersion teaching have on student achievement in elementary school students in the CHamoru class?
2. What effects does full immersion teaching have on student achievement in elementary school students in the CHamoru class?
3. Which instructional approach provides greater improvement?

Review of Literature

The purpose of this study is to look at the effects that full immersion teaching methods have on students' language attainment compared to the outcomes using two-way immersion teaching techniques. Understanding the effects of these teaching practices will be beneficial in our efforts to develop speakers and further preserve the CHamoru language.

There may be great value in developing the ability to communicate in multiple languages (Christian, Howard, & Loeb, 2000). Research has indicated that when a student gains academic knowledge and skills through one language, it paves the way to acquire similar knowledge and skills in another language (Christian, Howard, & Loeb, 2000).

Second Language Acquisition

In addition to having a first language, Second Language Acquisition (SLA) is the process of acquiring or learning a second language (Hudspath-Niemi & Conroy, 2013). Using the first language, as support, when teaching a second language is beneficial in that it allows students to make connections with their existing knowledge, which facilitates the process of understanding (Madriñan, 2014).

There are several stages of second language acquisition that teachers must understand and consider. The first stage is the pre-production stage. At this stage, students may have some words in their receptive vocabulary, but they are not yet speaking. The teacher uses visual aids, repetition, and total physical response (TPR) to enhance student's comprehension and understanding (Madriñan, 2014). Students in the pre-production stage can follow simple directions in the target language, without actually speaking the language (Escamilla & Grassi, 2000). The second stage is called the Early Production stage. At this stage, students can repeat words that they hear regularly (Escamilla & Grassi, 2000) and say simple phrases (Madriñan, 2014). The third stage is speech emergence. Here, students are able to create simple sentences and gradually produce more complex phrases (Escamilla & Grassi, 2000). The final two stages are Intermediate and Advance Fluency. At these stages the students are able to engage in fluent conversation in the target language (Madriñan, 2014).

Two-Way Immersion Teaching

Two-Way Immersion (TWI) teaching, also referred to as dual-language education (Farver, Lonigan, & Eppe, 2009), share the same features as bilingual education programs (Christian, Howard, & Loeb, 2000). There are 90 categories of bilingual education models, which are classified as either weak or strong (Zelin, 2017). TWI falls under the strong bilingual education model. An important feature of TWI is the use of L1 as the language of instruction (Rodriguez & Higgins, 2005). According to Collier, (1989); Ervin-Tripp, (1974); & Krashen & Biber, (1989), "education in both L1 and L2 supports linguistic and cognitive development" (as cited in Rodriguez & Higgins, 2005, pg. 241).

Two-Way Immersion programs began in the late 1980's and early 1990's. Most of these programs integrate English and another language into classroom instruction (Christian, Howard, & Loeb, 2000). The goals of a TWI program are the development of high levels of proficiency in children's primary language (L1) and their secondary language (L2), improve grade level academic achievement (Christian, Howard, & Loeb, 2000), and to preserve or increase children's skills in both languages (Zelin, 2017). Moreover, research in some TWI programs points to higher grade point averages among students taught using this method, thereby increasing enrollment in post-secondary education (Fortune, n.d.).

Teaching children through L1, while providing support in L2, gives them greater opportunities to attain higher levels of oral proficiency (Christian, Howard & Loeb, 2000) and has positively affected their academic achievement (Tong, Lara-Aleco, Irby, & Mathes, 2011). Common skills that stimulate the use of both languages transfer from L1 to L2, which facilitates second language acquisition (Christian, Howard, & Loeb, 2000). Furthermore, some researchers suggest that children should be taught to read in the language they know best, their L1, because, according to Cummins (1979), literacy skills that they developed in L1 transfer to L2 (as cited in Farver, Lonigan, & Eppe, 2009, pg. 705).

Two-Way Immersion programs can be implemented in various ways. One way is by content area, in which certain subjects are taught in the new language, while the other subjects are taught in the first language. Another way of implementing TWI is by time, where the language of instruction alternates days. A third way to use TWI is by person, where one teacher uses only English and another teacher uses another language (Christian, Howard, & Loeb, 2000).

The percentage of time spent teaching in each of the two languages may also vary. Most elementary programs begin with the 90/10 model. In the 90/10 model L1 is used 90% of the time, while L2 is used for only 10% of the time. The percentage of time spent in L2 gradually increases each year until both languages are proportionately taught at 50% each (Christian, Howard, & Loeb, 2000).

A 50/50 TWI program was established in Arlington, Virginia and serves over five hundred students. The students changed language of instruction, and typically teachers, halfway through the school day. The program

began in three elementary schools, continued through middle school, and finally into high school. On their statewide tests, students enrolled in these TWI immersion programs did well or better than other students, who were not in the TWI immersion programs, from across the state (Christian, Howard, & Loeb, 2000).

In another study that took place in a Head Start preschool program located in California, ninety-four Spanish-speaking English Language Learners (ELL) participated in a study that examined the impact of an emergent literacy intervention program (Farver, Lonigan, & Eppe, 2009). The students in this study were placed into three groups: (a) Spanish only, the control group, where no changes were made, (b) a group that received instruction in English only, and (c) a group that received instruction first in Spanish and then transitioned into English. Students in both the English-only group and the transitional group scored significantly higher in the English language assessment for Receptive Vocabulary (students point to the picture of an object for a given word). Definitional Vocabulary (students are shown a picture and are asked to identify and describe it), Blending (students are asked to blend words, syllables, or phonemes to create real words), and Print Knowledge (tests that measure knowledge of print concepts such as letter-sound identification or letter-name identification) than the students in the control group. However, the students in the transitional group scored higher in the Definitional Vocabulary and Print Knowledge than the children in the English-only group. In this study, the impact of the intervention depended on the language of instruction (Farver, Lonigan, & Eppe, 2009).

A study was conducted in Bogotá to determine whether or not the use of L1 as a support in an L2 classroom increases understanding among kindergarten students. The participants in the study were all Colombian and had little or no previous exposure to English (Madriñan, 2014). Two lesson plans for read alouds were designed, one used strictly English as the language for instruction and the other used both Spanish and English. During the English only lesson, student participation was low and there were more class interruptions. On the other hand, during the lesson using both Spanish and English, where code switching (alternating between both languages) was used, there were fewer interruptions and a higher level of student participation. In the activities following the lessons, both groups performed well. However, the study also found that there were no main differences in the level of understanding between the two different lessons. Therefore, the language of instruction was not a factor in determining understanding during the reading activities. It is important to note that the teacher used the same strategies during both lessons (Madriñan, 2014). Additionally, in Texas, Cárdenas-Hagan, Carlso, & Pollard-Durodola (2007) conducted a study of Spanish speaking English Language Learners (ELLs) from kindergarten through the second grade. The study was to determine the effects of L1 and L2 proficiencies and the language of instruction that students receive on the relations between their L1 ability and their development of early literacy skills in L2. The primary language for students who participated in the study was Spanish. The students had minimal or no English language skills upon entry into kindergarten. The language of instruction for the study included: (a) English only; (b) transitional bilingual, where L1 was initially used, with progressive shifts to English, and (c) dual language, or two-way immersion, where students were instructed equally in L1 and L2. The study spanned across the state, which totaled 97 kindergarten groups: 34 groups were in the English only program; 38 groups were in the transitional bilingual program; and 25 groups were in the dual language program.

Student performance was examined at the beginning of the school year and then again at the end of the school year. The results of the study suggest that there is a relationship between L1 abilities and L2 acquisition (Cárdenas-Hagan, Carlso, & Pollard-Durodola, 2007). Kindergarten students who could speak and comprehend in Spanish were able to pick up skills in English more quickly than peers who didn't have the same skills in their native language.

Full Immersion

The goal of full immersion, or one-way immersion, programs is to promote second language acquisition, increase proficiency in that language (Li, Kirby, Cheng, Wade-Woolley, & Qiang 2012), achieve high levels of success, become bilingual, and to develop a sense of multiculturalism (Akcan, 2005). In one-way immersion programs, instruction is solely in the second language. Children, especially at an early age, learn language through purposeful, real, past and present experiences. In order to learn a language, children must use that language, otherwise learning will not happen (Akcan, 2005). Learning a language is a multifaceted process that is further complicated by various factors, including the language of instruction and first language (Tong, Lara-Alecio, Irby, & Mathes, 2011) Consequently, teachers need to provide learning experiences that are meaningful and interactive. (Akcan, 2005)

The effectiveness of a full immersion program depends on the time of implementation. Studies have shown that there is a higher level of achievement in L2 competence in early immersion programs as opposed to late immersion programs (Li, Kirby, Cheng, Wade-woolley, & Qiang 2012). At the elementary level, students initially learn through oral language, therefore, teachers need to immerse students in the oral language early on (Akcan, 2005). One way to do this is through reading, which can increase vocabulary knowledge which empowers students to engage in conversations in the new language (Akcan, 2005).

For example, in a German Immersion program in Milwaukee, Wisconsin, students in a first-grade class were immersed in the German language through read alouds. In an effort to make the reading activity purposeful and interesting, the teacher selects stories that were in line with the week's overall learning theme. The teacher used strategies that aimed to develop oral language during this time. First, she built and developed students background knowledge. Second, she used comprehension questions throughout the read aloud to promote student conversation and engagement. Finally, she used small reading groups, which were tailored to each group's proficiency level. Through their learning experience, these strategies were very useful in that children were able to increase their vocabulary knowledge, improve their comprehension skills and engage in class discussion (Akcan, 2005).

Chiappe, Siegel, and Wade-Woolley (2002) conducted a study of native English and English as a second language (ESL) students in kindergarten. In this particular study, the researchers found that both groups performed relatively well in English acquisition when they were taught using English immersion (as cited in Cárdenas-Hagan, Carlson, & Pollard-Durodola, 2007, pg. 250).

Variables Inhibiting Second Language Acquisition

An extreme challenge of immersion teaching is motivating students to use the second language within the language classroom and more importantly outside of the language classroom, when they are collaborating with their peers (Fortune, n.d.). Some studies suggest that students' learning a second language lack grammatical accuracy, essential lexical abilities, and native pronunciation. These challenges become even greater when taking learner differences, such as student's language proficiency and literacy development, into consideration, especially when teaching and learning happens in two languages (Fortune, n.d.).
Some of the challenges of immersion programs include scheduling and balancing students' educational priorities (Fortune, n.d.).

Summary

The literature presented in this review provided multiple methods of acquiring a second language. The two-way immersion method in the Bogota study provided much of the framework for my intervention as you will see in the method section of this research endeavor.

Methodology

This study was conducted during a six-week period in a CHamoru Language and Culture Classroom at a public elementary school during the school year 2018-2019. The goal of this study was to determine which immersion teaching method would most improve student achievement and enhance second language acquisition.

Population

The participants in this study included 2 groups: the intervention group, which consisted of 4th grade students ages eight to nine and the control group, which consisted of 5th grade students ages nine to ten. There were nineteen students in the intervention group, eleven boys and eight girls. All of the students in the intervention group were of CHamoru ethnicity. There were a total of 20 participants in the control group, nine boys and eleven girls. Sixteen students were of CHamoru and four were Chuukese.

Materials

Materials for this research project included pre- and post-tests that consisted of ten matching items, written in CHamoru. PowerPoint presentations and pictures were used to deliver the lessons on the theme of school community. Activities included a Wheel of Fortune game and a matching game that all students were able to participate in through PowerPoint. Students were also given word sort and word search activities, that were completed in small groups, in pairs, and independently. Students' journals were also utilized for students to write vocabulary words, phrases, and other pertinent information relative to the lesson.

Procedure

At the start of the study, students were administered a paper and pencil pre-test, written in CHamoru, assessing their knowledge of the school community members. During 4th grade CHamoru, I taught a lesson using the two-way immersion approach. During 5th grade CHamoru, I taught the same lesson, using the full-immersion approach (no English was spoken). Activities and lessons for both groups were identical. At the end of the lesson, participants were given a paper and pencil post-test. Data was collected from pre- and post-tests to determine student growth. Data collected was also used to determine which approach had a greater impact on student achievement.

Permission to conduct this study was obtained from the University of Guam Committee on Human Research Subjects and the Guam Department of Education Research, Planning, and Evaluation Division. Liabilities or endorsements will not be assumed by either of the aforementioned entities. Informed consent was obtained from the students' parents, and assent forms were obtained from the students. Only those students who provided the parent informed consent and student assent were allowed to participate in this research study. Once the study commenced, if at any time a student felt uncomfortable and did not want to continue participation in the study, then the student was allowed to be removed from the study without penalty or negative repercussions. Confidentiality of students will be maintained—no students were identified in this study. All identifying information was removed. Only the teacher-researcher will have access to this information, which will be kept in a secured file.

Data Collection and Analysis

Data collection consisted of pre- and post-test results. A pre-test was administered to the 5th grade control group and the 4th grade intervention group prior to the lesson. In the control group, only the CHamoru language L2 was used, as this is the requirement of the CHSSPD. In the intervention group, both the English language (L1) and L2 were used in the classroom.

The pre-test, written entirely in L2, assessed students' prior knowledge on the members of the school community and their roles. There were 10 items on the test which required students to match the school community personnel with their respective roles. The same test was administered at the conclusion of the lesson to assess individual student growth. No items were changed for the post-test. Additionally, the pre- and post-test results were used to compare the overall gains in order to determine which teaching method was more effective.

Table 1: *Intervention group pre- and post-test results by student*

	Pre Test	Post Test	Percentage Point Difference
Student 1	40%	80%	40
Student 2	40%	80%	40
Student 3	20%	80%	60
Student 4	20%	20%	0
Student 5	--	80%	--
Student 6	20%	80%	60
Student 7	40%	100%	60
Student 8	20%	10%	-10
Student 9	40%	80%	40
Student 10	20%	80%	60
Student 11	--	20%	--
Student 12	10%	50%	40
Student 13	10%	20%	10
Student 14	0%	20%	20
Student 15	20%	60%	40
Student 16	40%	50%	10
Student 17	--	40%	--
Student 18	30%	100%	70
Student 19	10%	60%	50

Student performance, in the intervention group, on the pre- and post-test is shown in Table 1. Lessons on the unit on community helpers were given in CHamoru and English (L1). Activities were in L2, however, instructions were translated to L1 when students needed clarification. The pre-test was given the day before the lesson was taught. Students scored an average of 24 percent. One student didn't get a single item correct, this was a result of rushing or guessing the answers as he was the first to complete the test. He didn't make any attempt to read the items on the test. Overall, the low scores may also be a result of students' lack of understanding of the CHamoru words relevant to the lesson on the roles of the school community.

The post-test showed great improvement as the class average rose to 58%. Although the average score is still below passing, the results are positive, indicating that new knowledge and understanding of the language was acquired.

The one student that guessed during the pre-test, student 14, took the time to read the items during the post-test and was able to get more items correct. This is likely a result of now understanding some of the CHamoru vocabulary and phrases that pertain to the roles of the school community. While the grade was not a passing grade, the results were still positive as the student showed some improvement.

There were 3 students who did not take the pre-test, however their post-test results are reflected in Table 1 in an effort to demonstrate how motivation can impact student achievement. For example, student 5 was absent when the pre-test was administered. She is a high achiever and extremely motivated. She was an active participant throughout the lessons and activities. She works well with others and often takes on a leadership role. She also has a very good retention of what she learned in previous lessons as she frequently displayed her prior knowledge during daily lesson reviews. Furthermore, her grandparents speak to her in CHamoru on a regular basis.

Table 2: *Control group pre- and post-test results by student*

	Pre Test	Post Test	Change in Percentage Points
Student 1	0%	30%	30
Student 2	20%	40%	20
Student 3	20%	100%	80
Student 4	30%	60%	30
Student 5	0%	20%	20
Student 6	--	100%	--
Student 7	10%	30%	20
Student 8	40%	40%	0
Student 9	40%	100%	60
Student 10	20%	30%	10
Student 11	10%	10%	0
Student 12	20%	10%	-10
Student 13	--	50%	--
Student 14	20%	20%	0
Student 15	10%	70%	60
Student 16	--	80%	--
Student 17	10%	0%	-10
Student 18	30%	20%	-10
Student 19	10%	80%	70
Student 20	10%	90%	80

Table 2 shows the results of the pre- and post-test of students in the control group. In the control group, instructions were entirely in L2. Furthermore, directions for the activities were also entirely in L2. No translations were given when students needed clarification. When students asked for clarification, directions and examples were repeated, slowly using L2. Lessons and activities used in the control group were identical to the ones used in the intervention group. No items were changed.

The pre-test was given the day before the lesson was taught. It was obvious that a few of the students didn't read the questions and completely guessed their answers. The other students tried their best, however, they either lacked an understanding of the CHamoru vocabulary used to describe the roles of the school community or the roles of the school, in general. The average score on the pre-test was 18%.

The mean score on the post-test was 49%, showing a huge improvement from the pre-test results. Three students showed negative change, 3 students showed no change, and the rest of the students, 65% of the class, showed positive gains in their post-test scores when compared to their pre-test scores.

The positive results are indicative that new knowledge of CHamoru vocabulary were gained during the lesson. However, the number of students who didn't show improvement is fairly high when compared to the intervention group.

There were 3 students who didn't take the pre-test; however results of the post-test are indicated in Table 2 to show that student motivation and exposure to the CHamoru language can impact student achievement. For example, students 6 and 16 both live with their grandparents, who speak the CHamoru language at home.

Student 6 is a very quiet student who absorbs information well. She is also self-motivated and is a high achiever.

Table 3: *Intervention group and control group pre- and post-test class average and percentage point difference*

	Pre-Test Average	Post-Test Average	Percentage Point Difference
Intervention Group	25%	61%	36
Control Group	18%	44%	26

Table 3 shows a comparison of the pre- and post-test averages for both groups. These results compare only the students who took both tests. The pre-test average in the intervention group was higher than the control group's pre-test average.

Although the average score for the post-test was a 61% for the intervention group, it is important to note that eight students or 50% scored between 80 - 100%. In contrast, only four students, or 24% of students in the control group scored between a 70-100%.

Discussion

The following discusses the strengths, limitations, and implications of this study.

Strengths

Throughout the study, daily lessons, activities, games and assessments were identical for both groups. Although there was a significant increase in test scores for the intervention group, when compared to the control group, results showed positive results in both groups. These results indicate that while the language used for instruction and learning makes a huge difference in student achievement, carefully designed lessons and activities that constantly engage students are just as important.

Limitations

There were a few limitations to this study. The first limitation was the length of the study. Although it took 6 weeks to complete this study, which consisted of one lesson, a clearer picture would be to break down how much time students actually spent in the CHamoru classroom each day during this 6-week period. The school day begins at 8:15 am and ends at 2:43 pm, that totals seven hours and thirty-eight minutes, with a grand total of 2,290 minutes a week that students are on campus. For the primary grades, kindergarten through 3rd grade, they spend one hundred minutes a week, or roughly 4% of their day in the CHamoru classroom. In the intermediate grades, 4th-5th grade, 150 minutes a week, or 6% of their time is spent in the CHamoru classroom.

The second limitation is that this is a small-scale study that involved one class, one school. These results aren't generalized across all language acquisition.

Implications

While GDOE, through the CHSSPD, is pushing for full immersion in the CHamoru class, it's not feasible with the short amount of time allotted during the school day. Furthermore, the language has to be practiced outside of the CHamoru classroom, while students are on the school campus, so that students are immersed in the CHamoru language the entire school day. This would require other school faculty and staff to use the CHamoru language as well.

Members from the household also must take a more proactive role in practicing the language at home. Future research on this topic may include an outreach program for other faculty, staff and members of the household.

The same lessons can be taught to these individuals to further enhance their knowledge of the lessons that the students are being taught in the CHamoru classroom.

References

Akcan, S. (2005). Supporting oral second language use: A learning experience in a first grade German immersion class. *Early Childhood Education Journal*, *32*(6), 359–364. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ732358&site=eds-live

Betances, S. (2017, August). *Literacy and culturally relevant pedagogy: Dual language literacy workshop.* Presentation. Hagåtña, Guam.

Campbell, B. L. (n.d.). General Order No. 12. Retrieved from https://www.guampedia.com/us-naval-era-general-order-no-12/

CHamoru Studies & Special Projects Division - DIBISION INESTUDION CHAMORU. (n.d.). Retrieved from https://sites.google.com/a/gdoe.net/dibision-inestudion-chamoru-yan-espesiaat-na-prugraama-siha/home/mision

Christian, D., Howard, E. R., & Loeb, M. I. (2000). Bilingualism for all: Two-way immersion education in the United States. *Theory into Practice*, *39*(4), 258.

Cunningham, C. (2000). *Translation in the classroom: A useful tool for second language acquisition.* Retrieved from https://www.birmingham.ac.uk/Documents/college-artslaw/cels/essays/secondlanguage/cindyc2.pdf

Escamilla, K. & Grassi (2000). *A brief description of second language acquisition.* Retrieved from https://www.researchgate.net/publication/242579123_A_Brief_Description_of_Second_Language_Acquisition

Eugenio, H. V. (2016). Keeping Chamorro language alive. Guam Pacific Daily News, Retrieved from https://www.guampdn.com/story/news/2016/08/20/keeping-chamorro-language-alive/88987310/

Evans, L. (2011). Endangered languages: The full list. Retrieved from https://www.theguardian.com/news/datablog/2011/apr/15/language-extinct-endangered

Farver, J. A. M., Lonigan, C. J., & Eppe, S. (2009). Effective early literacy skill development for young Spanish-speaking English Language Learners: An experimental study of two methods. *Child Development*, *80*(3), 703–719. https://doi.org/10.1111/j.1467-8624.2009.01292.x

Feinauer, E., Hall-Kenyon, K. M., & Davison, K. C. (2013). Cross-language transfer of early literacy skills: An examination of young learners in a two-way bilingual immersion elementary school. *Reading Psychology*, *34*(5), 436–460. https://doi.org/10.1080/02702711.2012.658142

Fortune, T. W. (2018). What the research says about immersion. Retrieved November 28, 2018 from http://carla.umn.edu/immersion/documents/ImmersionResearch_TaraFortune.html

Gerber, M., Jimenez, T., Leafstedt, J., Villaruz, J., Richards, C., & English, J. (2004). English reading effects of small-group intensive intervention in Spanish for K–1 English Learners. *Learning Disabilities Research & Practice (Wiley-Blackwell)*, *19*(4), 239–251. https://doi.org/10.1111/j.1540-5826.2004.00109.x

General Order 13 (1900). In Guampedia. Retrieved from https://www.guampedia.com/leary-general-orders/

General Order 243 (1917). In Guampedia. Retrieved from https://www.guampedia.com/us-naval-era-language-policies/

Guam Education Board. (2009). *Instructional subjects and time on task for elementary schools.* Retrieved from https://sites.google.com/a/gdoe.net/guam-education-board/GEB-Policies

Harris, J. & Duibhir, P. (2011). *Effective language teaching: A synthesis of research.* Retrieved from https://www.unifg.it/sites/default/files/allegatiparagrafo/06-07-2017/harris_and_o_duibhir_effective_language_teaching_a_synthesis_of_research.pdf

Hudspath-Niemi, H.S. & Conroy, M.L. (2013). *Second Language Acquisition and Second Language Learning* [PowerPoint slides]. Retrieved from http://documents.routledge-interactive.s3.amazonaws.com/9780415621946/Second_Language_Acquisition_and_Second_Language_Learning.pptx

Kim, Y. K., Hutchison, L. A., & Winsler, A. (2015). Bilingual education in the United States: An historical overview and examination of two-way immersion. *Educational Review*, *67*(2), 236-252. doi:10.1080/00131911.2013.865593

Li, M., Kirby, J. R., Cheng, L., Wade-Woolley, L., & Qiang, H. (2012). Cognitive predictors of English reading achievement in Chinese English-immersion students. *Reading Psychology*, *33*(5), 423–447. https://doi.org/10.1080/02702711.2010.528663

Lindholm-Leary, K. (2012). Success and challenges in dual language education. *Theory into Practice*, *51*(4), 256–262. https://doi.org/10.1080/00405841.2012.726053

Lujan, P. C. (2018). Role of education in Guam's indigenous language. Retrieved September 26, 2018 from https://www.guampedia.com/role-of-education-in-the-preservation-of-guams-indigenous-language/

Madriñan, M. S. (2014). The use of first language in the second-language classroom: A support of second language acquisition. *Gist Education and Learning Research Journal,* 9, 50-66. Retrieved from https://eric.ed.gov/?id=EJ1062663

Pa'a Taotao Tano' Chamorro Language Assessment Survey (CLAS) Project Report (2010). Retrieved from http://pacificnewscenter.com/wp-content/uploads/2010/09/chamreport.pdf

Public Law 12-32, 12th Guam Legislature (1974). Retrieved from http://www.guamlegislature.com/Public_Laws_12th/PL12-132.pdf

Public Law 14-53, 14th Guam Legislature (1977). Retrieved from http://www.guamlegislature.com/Public_Laws_14th/PL14-053.pdf

Public Law 21-34, 21st Guam Legislature (1991). Retrieved from http://www.guamlegislature.com/Public_Laws_21st/P.L.%2021-34.pdf

Ramos, F. (2007). What do parents think of two-way bilingual education? An analysis of responses. *Journal of Latinos & Education*, *6*(2), 139-150. doi:10.1080/15348430701304807

Rodriguez, C. D., & Higgins, K. (2005). Preschool children with developmental delays and limited English proficiency. *Intervention in School & Clinic*, *40*(4), 236. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=16266069&site=eds-live

Rymer, R. (2012). Vanishing voices. *National Geographic*. *222*(1*),* 60-86 Retrieved from https://www.nationalgeographic.com/magazine/2012/07/vanishing-languages/

Souder, L.M.T. (2017, August). *Literacy and culturally relevant pedagogy: Dual language literacy workshop.* Presentation. Hagåtña, Guam.

Tong, F., Lara-Alecio, R., Irby, B. J., & Mathes, P. G. (2011). The effects of an instructional intervention on dual language development among first-grade Hispanic English-learning boys and girls: A two-year longitudinal study. *Journal of Educational Research*, *104*(2), 87. https://doi.org/10.1080/00220670903567364

Yi-Chun, P. & Yi-Ching, P. (2010). The use of L1 in the foreign language classroom. *Colombian Applied Linguistics Journal, 12*(2)*, 87-96.* Retrieved from http://www.scielo.org.co/pdf/calj/v12n2/v12n2a07.pdf

Effects of Literacy Learning Centers in Increasing Sight Word Recognition among First- Grade Students in a Public School on Guam

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Abstract

The purpose of this research study was to determine whether or not the use of learning centers in a first-grade classroom would increase students' reading skills through improving sight word recognition. During both pre-intervention and intervention phases of the study, students were introduced to five Fry List sight words each week. The intervention phase introduced literacy learning centers with a variety of interactive activities to help students focus on using the new words in interesting and engaging ways. A post-test was administered at the end of the pre-intervention and the intervention phases and improvement in word recognition was compared. The results of the post-tests showed that there were differences in sight word improvement on the post-tests. There were also notable improvements in students' ability to recognize the sight words in a variety of printed material following the intervention.

Introduction

In first grade, students are still building their foundation for reading. Establishing reading skills is a fundamental part of education as reading is incorporated into all subjects in school. The ability to read and comprehend printed material forms the foundation for learning not only at the students' current grade level but throughout their entire academic careers and adult lives. This study was designed to increase student reading fluency through the use of literacy learning centers to improve recognition of basic sight words.

Background and Problem

Students may fall below expected grade level skills if they are unable to read, and basic sight word recognition is an important aspect of beginning reading. First-grade students are expected to enter the class able to read a few simple sight words learned in kindergarten, however, not every student retained these basic skills. Sight words are those words that occur frequently in speaking and reading. They are often small, hard to define words, meant to be read quickly after seeing them rather than deciphering them by sounding individual letters. Sight words include the most common words such as from, and, if, of, and the. The students use these words in everyday speaking, and reading fluency is improved when they recognize these basic words on sight.

In a typical first-grade class, there is a wide range of student ability to recognize and remember these basic words on sight. This inability may frustrate students, lower reading proficiency and hinder their ability to gain pleasure from reading. While recognizing that first-grade students tend to have a very short attention span, teachers at this grade level must do everything they can to assist students in gaining the skills needed for reading proficiency.

One way to do this that has been shown to be effective in other classrooms is through the use of student-centered activities such as learning centers. Learning centers may increase students' interest and engagement in learning and enhance skills that have already been taught (Lanaux, Vice, & Fasching-Varner, 2014).

Purpose

The purpose of this study was to increase reading skills among students in a regular first-grade class on Guam. The project was intended to enhance student engagement through the use of literacy learning centers to reinforce understanding and use of sight words from the Fry List.

The overall goal of the study was, through the use of literacy learning centers, to engage students in activities that practice the use of sight words in fun and interesting ways and ultimately increase student ability to quickly recognize and use Fry List sight words in daily assignments. Improvement or changes in sight word fluency following the intervention were documented by outcomes of a post-test.

This study was guided by the following research question: Will the use of literacy learning centers in a first-grade class on Guam increase basic sight word recognition?

Review of Literature

A great deal of research has been conducted to study the needs of first-grade students and methods that most enhance students' ability to read. One of these methods includes the use of literacy learning centers to engage students in interactive activities that help students focus on and practice important skills in an interesting and fun way. The use of learning centers may be an effective way to encourage recognition and retention of grade level appropriate sight words.

Literacy

In general, literacy is the ability to read and write ("Literacy," 2019). With all the new and developing outlets in the 21st Century, literacy has evolved. In addition to traditional forms such as papers and books, literacy also involves the use of technology. Literacy incorporates collecting information through reading and conveying the information through different outlets (Pilgrim & Martinez, 2013).

A list of 1,000 of the most commonly used English words was composed by Dr. Edward Fry in 1980, called Fry words. Fry words are taught in Elementary school right after students perfect their letter name and sound recognition. Students are expected to be able to read at least 20 words by the end of kindergarten and 100 words by the end of first grade (Bales, 2018). Building literacy fluency in students includes teaching sight words. Sight words are meant to be read by sight (Phillip, 2012). Since Fry words are frequently used words in the English language, they are commonly used as the sight word list for students.

Before students learn to read, they build their phonics skills. Phonics instruction is when students learn that each letter forms a sound. Sounds of each letter is used when decoding words to read (Phonics Instruction, 2017). Along with phonics instruction for literacy, sight word instruction is an important aspect in teaching students how to read fluently.

After effective sight word instructions, students demonstrated an increase in sight word recognition and reading confidence (Hayes, 2016). A comparison of results from sight word recognition from the use of flash cards and multisensory approach with kindergarten students was done by Phillip and Feng (2012). The multisensory strategy included writing words in the air, hand chopping words on their arms by spelling, and writing each word on a bumpy surface. The results showed that students are able to read and recall more sight words after the addition of the multisensory strategy (Philip, 2012).

Student-centered Learning

"Student-centered learning is an instructional approach in which students influence the content, activities, materials, and pace of learning" (Froyd & Simpson, 2010). "During student-centered learning, teachers change their role from a teacher to a facilitator in which they guide students to stay on track with their goals" (Wangid, 2014). An example of a student-centered activity is when students collaborate to build a tall tower out of sticks and tape to be strong enough to withstand an earthquake. The teacher does not tell students how to build the tower, but the teacher can remind the students of their goal. Student-centered learning provides many benefits for students.

Student-centered learning occurs when students are actively involved in increasing their knowledge or skills (Wangid, 2014). During student-centered learning, students find more significance in the learning as the activities keep them engaged as well as build on students' knowledge as students learn in different ways (McCombs & Whistler, 1997). When creating student-centered learning, teachers can look at the different learning styles of students and use that information to help students remain independent through student-centered learning. Teachers can also guide students in figuring out how they learn best so they can use different techniques in which students learn best (TEAL, 2018).

Motivation is an important aspect in student-centered learning as it conveys the desire to learn (Green, 2015). To help students become successful in student-centered learning, teachers may build on students' positive

expectations, create a supportive learning environment, and lead students to discern the value of learning goals. Students' positive expectations can rise due to previous student achievements. A supportive learning environment helps students know that their needs and individuality are important. For students to have positive views of learning goals, intrinsic motivation works best which can be built from allowing students to make choices of activities they perform for their learning goals (Green, 2015). With the inclusion of student-centered learning in the classroom, students demonstrated higher performance during exams in contrast to the year students did not participate in interactive student-learning (Armbruster, Patel, Johnson, & Weiss, 2009).

Learning Centers

Learning centers are areas in a classroom with activities that students are able to do independently, as a way for them to practice a skill they were already taught (King-Sears, 2007). Learning centers are self-regulating activities that are used to reinforce knowledge and skills. "Academic self-regulation is not a mental ability, such as intelligence, or an academic skill, such as reading proficiency; rather, it is the self-directive process through which learners transform their mental abilities into academic skills" (Zimmerman, 1998). After a science lesson of identifying different forms of matter, students can participate in a learning center where they cut pictures of objects from a magazine to sort into the different forms of matter.

Self-regulation consists of forethought, performance control, and self-reflection (Zimmerman, 1998). Through learning centers, students go through the three aspects of self-regulation. Before students participate in learning centers, setting up learning centers in a classroom requires preparation for the teacher which includes the first phase of self-regulation, forethought, which incorporates students setting goals and teachers' modeling expectations (Schunk & Zimmerman,2006). During the first weeks of implementation, teachers should guide students to make sure that students are using the learning centers correctly as well as answer students' questions about the learning centers. After a week of participating in learning centers, students are able to work independently (Lanaux, Vice, & Fasching-Varner, 2014). The performance control phase comprises of what students' experience through the use of learning centers such as collaborating and solving problems. The self-reflection is the last phase in which students think about and respond to how they performed during learning centers. Students consider the strategies they used, what they learned, and what changes to make for the next time they work on those skills they practiced during centers (Schunk & Zimmerman,2006).

In order for learning centers to be successful it is important to establish and enforce rules and procedures from the beginning. Wills offers several helpful suggestions. First, students need to know what the rules are, procedures, and behavioral expectations. Keeping the same structure for activities in learning centers help students get used to being independent as they become familiar of how to complete each center (Wills, 2018). Make students practice learning center procedures until they are able to do the learning centers independently (King-Sears, M.E., 2007). Students should know what their learning objectives are for each center.

Students should know what to do after completing a center, so they continue to stay engaged. Having nothing to do can lead to misbehaviors and loss of important learning time so having additional learning centers can be beneficial for early finishers to participate in to continue working on learning goals ("Learning Stations," 2011). Teachers can have students use a check list so both students and teachers can track their progress (King-Sears, M.E., 2007).

Although a great deal has been written about the use of learning centers to promote literacy learning, not enough research has been done on Guam on the value of using learning centers to improve early childhood literacy through increasing knowledge of sight words. This study hopes to help fill this gap in general knowledge.

Methodology

This study was designed to determine whether or not the use of literacy learning centers is an effective method of increasing student reading fluency by building greater skill in recognition of basic sight words.

Population

The participants in the study included 19 first-grade students ages 6-7 years old (10 boys and 9 girls) in a public school on Guam. The participants' ethnicities included Chamorro, Chuukese, Palauan, and Filipino and 9 students had English as their second language. A majority of the students were from a low socioeconomic background. Before the pre-intervention phase the students were assessed on letter naming recognition and letter sound recognition. All 19 students were able to identify all letter names and sounds. No student names were recorded for this study as students' identities were kept confidential.

Materials

40 sight words from the first 100 Fry List words were selected and used for the study. Fry words are 1,000 frequently used words that were put together by Dr. Edward Fry. The words are the most commonly used and read words in the English language ("Fry Sight Words List," 2018). Literacy learning centers were introduced and included materials for such activities as fishing for sight words or word matching. The same sight words were used for all students.

Procedure

The study took eight weeks to complete and was implemented following IRB approval and obtaining parental consent. The first four weeks were the pre-intervention phase and the second four weeks constituted the intervention phase.

During the first four weeks, students were taught sight words without the use of learning centers. Students participated in learning centers during the last 4 weeks. An oral pre-test of five sight words randomly chosen from Fry's sight word list were given on the first day of each week. After the pretest, students were taught the same five sight words through whole class instruction.

At the beginning of the pre-intervention phase all students were given an oral pretest. Then, each week they were exposed to five new sight words through whole class reading drills using PowerPoint which presented individual slides of each word along with a photo, a sentence using the sight word, and a song using the sight word. Students also practiced spelling with a partner, using words in sentences, and whole class activities such as BINGO. On the last day of each week, students were given an oral post-test using the same list from the pretest words taught that week.

During the last four weeks of the research, after all students took the pretest, students were again exposed to the five new sight words each week through whole class reading drills using PowerPoint which presented individual slides of each word along with a photo, a sentence using the sight word, and a song using the sight word. Students also practiced spelling with a partner and using words in sentences. Students were then paired with a partner to work on an assigned learning center. Students participated on two learning centers a day, once during morning ELA block and once during the afternoon ELA block. Each of the students' names were on a clothespin and clipped on a letter representing a learning center. Each learning center was labeled with a letter. Students knew which learning center they were assigned to by looking at their name clip on the pocket chart. On the last day of each week, students were given an oral posttest using the same list from the pretest words taught that week.

Data Collection and Analysis

Data was collected throughout the pre-intervention and intervention phases of the study. The students were orally tested on Monday for the pre-test and Friday for the post-test on their recognition of the week's Fry List words. The results of the tests were recorded as the number of words correctly identified by the student. The data was compared using the total increase of the words recognized during the pre-tests and post-tests. The test outcomes of the pre-intervention phase were compared to the test outcomes during the intervention phase.

Limitations

Limitations of this study include the small sample size with a class of only 19 students and the time limit. The small sample size and time limit was due to the study being an action research quasi-experiment. The study was done with students that were already enrolled in the class. In addition, this study might benefit from a longer period of implementation. The research of this study may not be generalizable to other populations.

Research Question and Hypothesis

Research Question: Will the use of literacy learning centers in a first-grade class on Guam Increase students' basic sight word recognition?

Hypothesis: The use of literacy learning centers in a first-grade class on Guam will have a positive effect on students' basic sight word recognition.

Results

As stated in the research question, this study was implemented to determine the effectiveness of the use of learning centers to increase word recognition among first graders in a public school on Guam. Results of outcomes on pre- and post-tests of Fry List sight words during the pre-intervention and intervention phases were compared to determine the impact of the intervention.

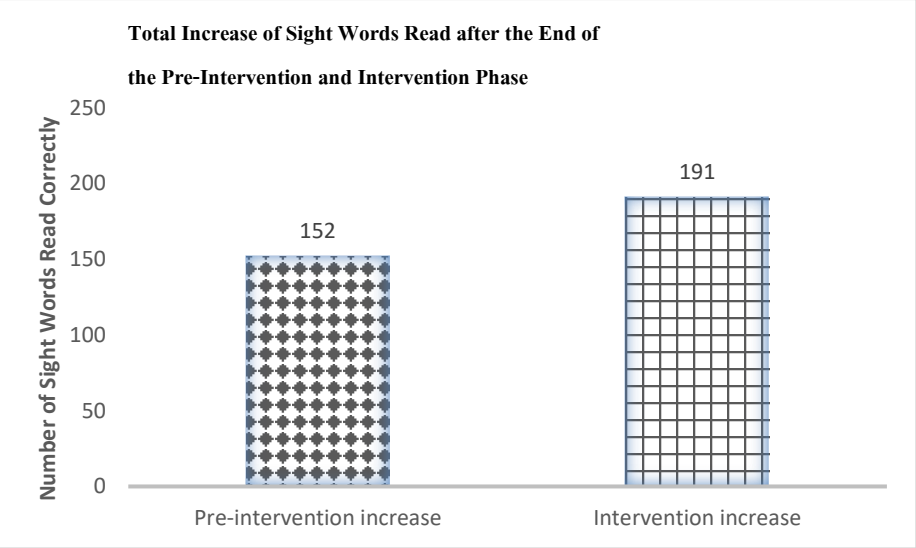

Figure 1. Total increase of sight words read from the pre-intervention and intervention phase.

The total increase of sight words read correctly was calculated by finding the difference of the total of words read from the pre and post test results from the full duration of each phase. Figure1 shows that there was an increase of sight word recognition from 152 words in the pre-intervention phase to 191 words following the intervention phase. The results show that there was an increase in total word recognition in both the pre-intervention phase and the intervention phase. However, on closer examination there was a notable improvement in the outcomes of the post-tests following the implementation of the learning centers.

Although there was an overall improvement in the class as a whole, what may be even more significant is the improvement made by individual students. Among individual scores, table 1 shows that 15 of the students' word recognition increased at the end of each phase.

Table 1: *Total Words Read per Student and Comparison of Improvement from Pre-Intervention and Intervention Phase*

Total Words Read per Student and Comparison of Improvement from Pre-Intervention and Intervention Phase			
Student	**Pre-intervention**	**Intervention**	**Improvement**

	Pre-Intervention	Intervention	Pre-Intervention	Intervention	Pre-Intervention	Intervention
1	20	20	20	20	0	0
2	2	13	3	15	11	12
3	8	19	9	19	11	10
4	13	19	8	18	6	10
5	4	17	3	17	13	14
6	0	7	0	18	7	18
7	0	7	1	5	7	4
8	20	20	20	20	0	0
9	6	15	7	19	9	12
10	7	19	5	20	13	15
11	1	16	1	19	15	18
12	1	10	0	9	9	9
13	1	9	0	13	8	13
14	20	20	20	20	0	0
15	20	20	20	20	0	0
16	0	8	1	15	8	14
17	4	15	3	16	11	13
18	7	19	8	20	12	12
19	3	15	3	20	12	17

Four of the students who demonstrated a zero improvement for both phases were already able to read all the sight words during both pre and post tests for both phases. Students participated in building sentences using all sight words during the use of learning centers, which maintained skill-building for all students.

Two students demonstrated a decrease in improvement with the comparison of the pre-intervention and intervention phase. Student number three had a one-point decrease in contrast to the pre-intervention phase as they were able to recall one more word during the pre-test from the intervention phase. Student number seven was absent multiple days during the study. Two students, student number 12 and 18, demonstrated the same amount of improvement for both the pre-intervention and intervention phase. The hypothesis was not supported with these students as they did not demonstrate a higher improvement in sight word recognition after the interventions phase.

The hypothesis was supported with the results of the 11 students who demonstrated an increase in their sight word recognition in the intervention phase in comparison to the pre-intervention phase.

Conclusions

Student engagement and on-task behaviors were noticeably improved during the intervention phase. This agrees with the literature as student learning centers are meant to keep students engaged in the learning activities. The results are viable enough to continue using learning centers in the classroom for increasing student word recognition and promoting student engagement. The data from the research activity is useful in showing not only overall class performance, but also in determining which students most benefit from the use of learning centers in increasing their sight word recognition and which students may require different interventions.

Recommendations for this study would include the use of pre-test outcomes in determining specific sight words to use in the centers rather than utilizing pre-selected words. Students may also benefit from being allowed to have a choice of which learning center they prefer to participate in on a given day rather than being assigned a center. Further research might include a longer period of time for implementation of the intervention.

References

Altun, M., Hazar, M., & Hazar, Z. (2016). Investigation of Effects of Brain Teasers on Attention Spans of Pre-School Children. International Journal of Environmental and Science Education, 11(15), 8112-8119.

Armbruster, P., Patel, M., Johnson, E., & Weiss, M. (2009). Active learning and student-centered pedagogy improve student attitudes and performance in introductory biology. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2736024/

Bales, K. (2018, August 19). Fry Instant Words vs. Dolch Sight Words. Retrieved from https://www.thoughtco.com/what-are-fry-words-4172325

Froyd, J., & Simpson, N. (2008, August). Student-Centered Learning Addressing Faculty Questions about Student- centered Learning. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.526.348

Green, P. (2015). How to Motivate Students. *AAPT Studies in Pedagogy,1*, 47-60.

Hayes, C. (2016). The Effects of Sight Word Instruction on Students' Reading Abilities. Retrieved from https://fisherpub.sjfc.edu/cgi/viewcontent.cgi?article=1327&context education

King-Sears, M.E. (2007). Designing and Delivering Learning Center Instruction. Intervention School & Clinic, 42(3), 137-147

Lanaux, C. F., Vice, K. E., & Fashing-Varner, K. J. (2014). Chaos in the Classroom: Center Learning in a 1st Grade Setting. *Networks: An Online Journal for Teacher Research,16*(1), 498-498. Retrieved from https://newprairiepress.org/cgi/viewcontent.cgi?article=1048&context=networks

Learning Stations. (2011). Retrieved from http://2differentiate.pbworks.com/w/page/860074/Learning Stations

Literacy. (2019). Dictionary by Merriam-Webster: America's most-trusted online dictionary. Retrieved from https://www.merriam-webster.com/

McCombs, B. & Whistler, J. (1997). *The learner- centered classroom and school: Strategies for increasing student motivation and achievement.* San Francisco: Jossey-Bass Publishers. Retrieved from https://eric.ed.gov/?id=ED423496

Pattillo, J., Vaughan., E. (1992). Learning centers for child-centered classrooms. Washington D.C: National Education Association Publication. Retrieved from https://eric.ed.gov/?id=ED344675

Phillips, W. E., & Feng, J. (2012). *Methods for Sight Word Recognition in Kindergarten Traditional Flashcard Method vs. Multisensory Approach*. Retrieved from https://files.eric.ed.gov/fulltext/ED536732.pdf

Phonics Instruction. (2017, August 12). Retrieved from http://www.readingrockets.org/article/phonics-instruction

Pilgrim, J., & Martinez, E. (2013). Defining Literacy in the 21st Century: A Guide to Terminology and Skills. *Texas Journal of Literacy Education*. Retrieved from https://www.researchgate.net/publication/288246131_Defining_literacy_in_the_21st_century_A_guide_to_terminology_and_skills

Schunk, D. H., & Zimmerman, B. J. (2006). Influencing Children's Self-Efficacy and Self- Regulation of Reading and Writing Through Modeling. *Reading & Writing Quarterly,23*(1), -25. Retrieved from https://libres.uncg.edu/ir/uncg/f/D_Schunk_Influencing_2007.pdf

TEAL Center staff. (2018). Student-Centered Learning. *Teaching Excellence in Adult Literacy,*2-11. Retrieved from https://lincs.ed.gov/state-resources/federal-initiatives/teal

Wangid, M. N. (2014). STUDENT-CENTERED LEARNING: SELF-REGULATED LEARNING. 161-165. Retrieved from https://core.ac.uk/reader/33525966.

Wills, D. (2018, June 07). How do I start centers in Kindergarten... let me show you! Retrieved from https://mrswillskindergarten.com/start-stations-fitting/

Zepke, N., & Leach, L. (2010). Improving student engagement: Ten proposals for action. *Active Learning in Higher Education, 11*(3), 167–177.

Zimmerman, B. J. (1998). Developing self-fulfilling cycles of academic regulation: An analysis of exemplary instructional models. In D. H. Schunk & B. J. Zimmerman (Eds.), Self-regulated learning: From teaching to self-reflective practice (pp. 1–19). New York: Guilford Press.

The Impact of a Classroom Job System on Student Classroom Behaviors

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Abstract

This action research study examined the impact a Classroom Job System has on student behaviors in a first-grade classroom on Guam within a seven-week timeframe. The research sample consisted of seven students (two girls and five boys, ages six to seven). Student behaviors were observed using a behavior checklist during a three-week pre-intervention period. The checklist was revised for the intervention period so that it focused only on the most frequently occurring undesirable behaviors that were observed during pre-intervention. The checklist was used to determine whether student behaviors were improving as a result of the Classroom Job System. A behavior was considered *undesirable* if the teacher had to repeat directions, or if the students needed reminders to follow everyday classroom procedures and routines. A Classroom Job Chart was created using the most frequently occuring undesirable behaviors from the behavior checklist. The study was designed so that each student was assigned a specific job from the Classroom Job Chart. Jobs were rotated weekly so that each child had a different responsibility each week and the opportunity to manage every job. The results from the pre-intervention and last three weeks of intervention were compared to look at any differences in behaviors.

Introduction

A teacher is likely to encounter student behaviors that he or she would like to improve in the classroom. This action research study examined non-disciplinary student behaviors, behaviors that generally involve following classroom procedures, before and during the implementation of a Classroom Job System in hopes of improving student behaviors.

Background and problem

In a first-grade classroom on Guam, students were having difficulty following directions the first time they were given and remembering to follow everyday classroom procedures and routines. These behaviors, which were observed throughout the school day, are considered problematic because students were relying on the teacher to give repeated directions or reminders. These interruptions can disrupt teaching and learning processes (Emmer and Evertson, 2013), and can lead to teacher stress, emotional exhaustion, and burnout (Hultell, Melin, & Gustavsson, 2013).

Purpose

The purpose of this research study was to improve student behaviors in a first-grade classroom using a Classroom Job System. This intervention required students to have a different responsibility each week. By being placed in charge of accomplishing a specific responsibility, it was hoped that the children would develop a greater understanding of its importance and be more motivated to engage in desirable behaviors. The results from three weeks of pre-intervention and last three weeks of intervention were compared to look at any differences in behaviors.

This study was designed to answer a specific research question: Will establishing a weekly Classroom Job System for students in a first-grade classroom on Guam have a positive impact on student behaviors within a seven-week timeframe?

Literature Review

A great deal of research has been done to show how classroom management, implementing daily routines or procedures, and teaching students about responsibility can be beneficial for both teachers and students. There were several interesting studies that gave insight into implementing a system of classroom jobs.

Classroom Management

According to Emmer and Evertson, "Classroom management includes the set of activities and strategies that teachers use to guide student behavior in the classroom" (2013, p.1). The goals of classroom management include promoting student cooperation and engagement so that teaching and learning can flourish. It also promotes order and regularity which allows teachers to focus on instruction. Effective classroom management doesn't just happen, there are planning and interactive aspects of classroom management that must be undertaken. Planning aspects include organizing the classroom's physical space; establishing rules and expectations; promoting positive behavior and discouraging negative behavior; and creating lessons that encourage student involvement and engagement. Interactive aspects include a set of teacher behaviors and strategies that take place in real-time, such as monitoring and interacting with students; offering support and feedback; redirecting student behavior; and working with students to keep them engaged (Emmer and Evertson, 2013).

Research shows that many teachers consider classroom management and discipline as primary concerns in the area of teaching (Ayebo & Assuah, 2017). Poor classroom management creates an environment that is not suitable for learning (Emmer and Evertson, 2013) and failure to use proper classroom management has become a notable contributor to teacher failure amongst novice teachers (Greenlee & Ogletree, 2003). In addition, poor classroom discipline and management is considered the second greatest cause of teacher burnout (Hultell, Melin, & Gustavsson, 2013). Teacher education programs are now placing more emphasis on preparing teachers to make effective classroom management decisions (Ayebo & Assuah, 2017).

Studies suggest that effective classroom management has positive effects on students (Gage, Scott, Hirn, & MacSuga-Gage, 2018; Stronge, Ward, & Grant, 2011). A meta-analysis on the connection between classroom management and students' behavior and academic achievement was conducted by Korpershoek, Harms, de Boer, van Kuijk, and Doolard (2016). Their study showed that effective classroom management decreases problem behavior and increases academic achievement.

Routines or Procedures

All classrooms with good classroom management will have rules and procedures (Emmer and Evertson, 2013). Lester, Allanson, and Notar describe classroom management as the key to learning, and routines as the foundation of classroom management (2017). Routines not only create and maintain classroom order, they also save large amounts of time that could be spent on teaching and learning (Emmer and Evertson, 2013; Lester, Allanson, & Notar, 2017). Teachers with established routines reported having fewer discipline problems (Lester, Allanson, & Notar, 2017).

Emmer and Evertson describe routines, or procedures, as a way to "communicate expectations for behavior" (p.28, 2013). Lester, Allanson, and Notar explain how routines give students "a feeling of doing the right thing at the right time" (p.405, 2017). While rules define a general standard and prevent certain behaviors from occurring, routines help students reach a desired outcome (Emmer and Evertson, 2013). Classroom procedures can be used for morning routines, collecting assignments, class discussions, and entering and exiting the classroom.

Routines should be established at the beginning of the school year so that the students know what is expected of them for the rest of the school year (Lester, Allanson, & Notar, 2017). Implementing routines takes time and effort. Lester, Allanson and Notar suggest that it can take up to a few weeks for routines to be taught, modeled, and rehearsed until desirable outcomes are reached (2017). Procedures should be written down and shared with the students and even the parents, so that the expectations are clear and organized (Emmer and Evertson, 2013; Lester, Allanson, & Notar, 2017). However, simple procedures that are used frequently do not need to be written down because the students are able to learn them quickly (Emmer and Evertson, 2013).

Teaching Responsibility and Classroom Jobs

Breaux and Whitaker define responsibility as "being accountable for someone or for something (2013, p.42)." Many teachers fail to prioritize this aspect of classroom management because it can take time away from instruction and often requires a great deal of effort, but sufficient evidence suggests that parents, educators,

and community members consider it to be a top priority (Marzano, 2005). Marzano recommends making time to teach students about responsibility because it will benefit teachers and students in the long run (2005). Teaching students about responsibility will improve the amount of time spent on teaching and learning by creating fewer classroom disruptions and conflicts. It also prepares students to be good community members, helps create a more positive classroom environment, and leads to better academic achievement (Marzano, 2005; Carbonero, Martín-Antón, Monsalvo, & Valdivieso, 2015). Researchers have found that students with greater responsibility had better attitudes towards their studies, and therefore, had better academic results (Carbonero et al., 2015).

According to Breaux and Whitaker, responsible people are more likely to behave appropriately than people who are irresponsible. It has been suggested that by giving an irresponsible person some responsibility, he or she may become more responsible (2013). If we want students to be more responsible, they need to be trusted with responsibilities (Lewis, 2018). Classroom jobs are an effective way to teach responsibility in the classroom (Lewis, 2018; Smith and Dearborn, 2016). It gives students the opportunity to be responsible in a meaningful way by taking responsibility for completing tasks that help their teachers and classmates (Wilson, 2012). When implemented correctly, the Classroom Job System can prevent students from arguing over special job tasks, and it give teachers more time for planning and instruction (Smith and Dearborn, 2016).

Tips for implementation

Angela Watson, a National Board Certified Teacher with a Master's Degree in Curriculum and Instruction, offered some helpful tips to implement a Classroom Job System. First, she suggests creating a list of all your routine tasks. This should include regular classroom tasks that the teacher wants the students to perform automatically without direct supervision. According to Watson, jobs may be added or deleted throughout the school year as the needs in the classroom change. She recommends assigning a job to everyone in the class so that no student feels left out (Watson, 2010).

Watson continues her recommendations saying it is important to find a way to display the classroom job assignments (2010). Beth Lewis, a schoolteacher and former writer for ThoughtCo., highlights the importance of describing each job and emphasizing the importance of every job before it is assigned (2018). Both researchers stress the importance of ensuring students fully understand what each job entails. Watson suggests that a display that is sturdy and visible to everyone in the classroom is a good way to make sure the teacher and the students have a visual reminder of their jobs. She explains that one purpose of doing this is so that the teacher is able to see the job assignments from anywhere in the classroom and can call on students when they are needed (2010).

Another suggestion that Watson offers is to decide how to assign the classroom jobs. One way would be to have a rotation system so that every student will get to do every job the same number of times (2010). Lewis suggests that rather than having the teacher assign jobs, it works well to have students fill out a classroom job application form. In the application, students will list their first, second, and third choice jobs (2018). Another method is to allow students to select their jobs from a prepared list. Watson explains her preference for allowing students to select their jobs. Based on her classroom experience, she noted that students were more motivated to complete their jobs properly and do them to her standards when the students chose their jobs. She found that jobs were less likely to be completed to the best of the student's ability if the jobs were assigned to them (Watson, 2010).

In her list of tips, Watson says that the teacher must determine ahead of time how long students will keep their classroom jobs. She suggests assigning classroom jobs for at least a week, but notes that some groups of children may do well even if they switch jobs less frequently such as monthly or every two weeks. Watson believes that when students hold a job for a longer period of time, it becomes more automatic and the students do a better at performing their jobs. Both Lewis and Watson note the importance of using the Classroom Job System consistently. Lewis recommends assigning a specific time during the day for the jobs to be performed (2018) and Watson offers that tasks should only be completed by the student assigned to do it. Tampering with the system will disrupt the flow of the classroom (Watson, 2010).

Lewis goes a step further and says that it is important that teacher not only see that a job is completed, but to also monitor the students' job performance. She encourages teachers to keep an eye on the students when

they perform their jobs and to talk to the students about how to improve if they are not doing the job properly. She suggests that the teacher should even consider firing the student if things do not improve and to find a replacement (2018).
Many of the helpful tips provided by Watson and Lewis were used during the implementation of the Classroom Job System in hopes to create a successful system that will improve students' behaviors and teach them to be more responsible.

Methodology

This action research study was designed to improve non-disciplinary student behaviors in a first-grade classroom using a Classroom Job System. It was hoped that by increasing student classroom responsibility for jobs on the list, students would subsequently perform these jobs routinely and completely.

Population

The study was conducted at a private, college preparatory school located on the island of Guam. The school serves 515 students from Pre-k3 to 12th grade. The students come from middle to upper socioeconomic class families who can afford to pay the school's high tuition. Currently, one out of four students receive tuition assistance, such as Financial Aid or Supplemental Scholarships. The school provides a rigorous educational program intended to help students get accepted into the most selective and prestigious colleges and universities worldwide, thus the student's ability levels are generally above average compared to most public schools on Guam.
The participants of this study were seven 1st grade students ranging in age from six to seven years old. The class included two girls and five boys. One student is an English Language Learner and one student may have attention deficit difficulties. Three students have been identified as Asian, three as Pacific Islander, and one as having two or more ethnicities.

Materials

A behavior checklist was used daily to observe student behaviors. The behavior checklist included a list of undesirable behaviors that might be remedied by implementation of a system of classroom jobs. It was not a disciplinary behavior checklist. Table 1 shows a comparison of the Initial Behavior Checklist to the Final Checklist.

Table 1: *Comparison of Initial and Final Behavior Checklists*

Initial Behavior Checklist	Final Behavior Checklist
1. Unpack all materials in the morning	1. Unpack all materials in the morning/ pack all materials for dismissal
2. Take materials out from desk or cubbie for activities	2. Clean up desk area before morning/ afternoon recess
3. Pack all materials for dismissal	3. Pick up materials from the floor
4. Clean up desk area before morning recess	4. Keep backpacks and lunch pails organized and neat
5. Clean up desk area before afternoon recess	5. Write name and date on papers
6. Pick up materials from the floor	6. Change shoes/ put shoes away on the shelf
7. Keep backpacks and lunch pails organized and neat	7. Push in chair when leaving desk area
8. Write name and date on papers	

9. Change shoes	
10. Put shoes away on the shelf	
11. Push in chair when leaving desk area	
12. Keep the Classroom Library Bookshelf organized and neat	

The Initial Checklist consisted of 12 behaviors that the teacher identified as undesirable. A behavior was considered *undesirable* if students were not performing regular classroom tasks automatically and needed to be reminded of what to do, or if the job was done so poorly that it needed to be done again. The number of behaviors were narrowed down to seven after the pre-intervention phase. *Take materials out from desk or cubbie for activities* and *keep the Classroom Library Bookshelf organized and neat* had the least amount of behavior marks, so they were not included in the Final Checklist. Some behaviors were combined since they could be listed under the same category.

Table 2 shows the list of classroom jobs that was created after the pre-intervention phase. A Classroom Job Chart was created using the most frequently occurring undesirable behaviors from the behavior checklist. Every student had a specific job. The Folder and Planner Checker was in charge of checking and reminding his or her classmates to take out their folders and planners in the morning. The job also required the student to distribute the folders and planners to his or her classmates at the end of each day. The Desk Detective was in charge of cleaning and reminding his or her classmates to clean their desks before going out to recess. The Desk Detective also checked and reminded his or her classmates to clear their desks before dismissal. The Floor Monitor's job was to make sure the floor was clean by picking up materials or trash from the floor or telling his or her classmates to pick up after themselves. The Bag Manager organized the backpacks and lunch pails in the morning before the start of class and throughout the day. The Paper Collector distributed and collected papers from their classmates. The student was also in charge of reminding others to write their name and date on their papers. The Shoe Patrol reminded his or her classmates to change into their indoor or outdoor shoes, made sure his or her classmates put their shoes on the shelf, and kept the shoe shelf organized and neat. The Chair Monitor was in charge of pushing in the chairs or reminding his or her classmates to push in their own chairs. The student also helped put the chairs on top of the desks at the end of the day.

Table 2: *The Most Frequently Occurring Undesirable Behaviors with the Matching Classroom Job*

Final Behavior Checklist	Classroom Job List
1. Unpack all materials in the morning/ pack all materials for dismissal	1. Folder and Planner Checker
2. Clean up desk area before morning/ afternoon recess	2. Desk Detective
3. Pick up materials from the floor	3. Floor Monitor
4. Keep backpacks and lunch pails organized and neat	4. Bag Manager
5. Write name and date on papers	5. Paper Collector
6. Change shoes/ put shoes away on the shelf	6. Shoe Patrol
7. Push in chair when leaving desk area	7. Chair Monitor

The Classroom Job Chart showed the student job assignments. The jobs changed weekly so that each child had a different responsibility each week and the opportunity to manage a new job. The Classroom Job Chart was posted on the wall of the classroom so that the children and teacher could view it regularly.

Procedure

The study was conducted after obtaining IRB approval, permission from the headmaster of the school where the study took place, and parental consent for each participant. First, student behaviors were observed using a behavior checklist during a three-week pre-intervention period. Then, a Classroom Job Chart was created using the most frequently occurring undesirable behaviors from the behavior checklist. When the Classroom Job System was first implemented, the teacher read books about 'responsibility' and discussed what it means to be responsible. Coincidentally, the character virtue that the students were learning in their Religion class was also 'responsibility.' The teacher went over what each classroom job entailed and specific instruction was given on what qualified as successful completion of each classroom job.
Jobs were rotated weekly so that each child had a different responsibility each week. Classroom jobs were announced at the beginning of each week and students were reminded of their job at the beginning of each day. Additional reminders were given to students if needed.

Accomplishment of classroom jobs were noted daily and students who completed their assigned jobs successfully were rewarded with a star beside the student's name on the posted job list. If the student needed many job reminders throughout the day, or if the job was not completed satisfactorily then the student did not receive a star for that day.

In order to maintain a equitable representation of behaviors before and during the intervention period, data was collected during a three week period of each phase. The first four weeks of the intervention phase was used to allow students to familiarize themselves with the new job system and to have an opportunity to become accustomed to being responsible for their specific jobs. Data was collected during the last three weeks of the intervention phase to match three weeks of data collection during the pre-intervention phase.

Students who performed their job successfully with few reminders had their photo posted on ClassDojo, an online app and behavior management system used to share photos, communicate with parents, and award or take away points for behavior. In addition to the ClassDojo points that the students earned for other positive behaviors, they also received a point for every star they received from the Classroom Job System. Students were able to redeem their ClassDojo points for specific in-class rewards.

Data collection and analysis

Data was collected on a daily basis using the behavior checklist, and the results were tabulated weekly. Results of the study were compiled both as a total of undesirable behaviors in all job categories as well as a total of behaviors within each job category. The amount of change determined the success or failure of the Classroom Job System. The amount of change was calculated by subtracting the total number of undesirable behaviors observed during the intervention period from the total number of undesirable behaviors observed during the pre-intervention period. Descriptive statistics were used to describe the results of this study. Data showed that the Classroom Job System was an effective intervention in improving student behaviors.

Limitations

Limitations of this study would include the small sample size. In addition, the participants were students in an elite private school rather than a typical public school. These factors may prevent the results of the study from being generalizable to other populations. Due to the limitations, further research is needed.

Research Question with hypothesis

Research Question: Will establishing a weekly Classroom Job System for students in a first grade classroom on Guam have an impact on student behaviors within a seven week timeframe?
Hypothesis: The Classroom Job System will result in an overall improvement in classroom

behaviors.

It is expected that there will be an overall improvement in the number of undesirable behaviors and that the teacher will not have to repeat directions as often or give as many reminders because the Classroom Job System will place each student in charge of helping others. However, it is also anticipated that some students' behavior will not improve, and specific students will continue to rely on repeated directions and reminders.

Results

This study was designed to determine whether establishing a Classroom Job System in a first-grade classroom on Guam would improve student behaviors. Although these behaviors are termed undesirable, they are not disciplinary or misbehavior difficulties that disrupt classroom learning. These are generally classroom environment and responsibility issues that should be improved.

The research question specifically asks whether establishing a weekly Classroom Job System for students in a first-grade classroom on Guam would have an impact on student behaviors within a seven-week timeframe. In order to answer this question, a behavior checklist was used to record student behaviors during the pre-intervention and during the intervention period. The entire study lasted a total of 10 weeks: three weeks of observation before the Classroom Job System was implemented and seven weeks of intervention. However, only data from the pre-intervention and last three weeks of intervention were collected.

Results of the study were compiled both as a total of undesirable behaviors in all job categories as well as a total of behaviors within each job category. As shown in Table 3, the total number of undesirable behaviors observed in all categories during the pre-intervention period was 160. During the implementation of the Classroom Job System, a total of 83 undesirable behaviors were observed in the same amount of time.

Table 3: *The Total Number of Undesirable Behaviors Observed Before and During Intervention*

	Pre-intervention Period	Intervention Period	Change in Undesirable Behaviors
Total Number of Undesirable Behaviors Recorded	160	83	-77

Before the implementation of the Classroom Job System, the number of undesirable behaviors was significantly greater than during the intervention period. Eighty-three undesirable behaviors during the intervention indicates that more work is needed, but this number shows a decrease of 77 instances of undesirable behaviors observed.

In addition to compiling the outcome of the study as a total of undesirable behaviors in all categories, interesting information is provided by examining the behaviors individually. Table 4 shows that there was an improvement in all seven behaviors listed in the behavior checklist; however, all behaviors did not improve equally.

The least amount of improvement recorded was for *keeping the backpacks and lunch pails organized and neat*. This behavior only improved by one behavior mark. However, it was also the least problematic behavior to start with, receiving the lowest number of undesirable behavior marks during the pre-intervention period. This was followed closely by *pushing in chairs when leaving the desk area* which showed an improvement of three fewer occurrences.

Table 4*: The Total Number of Undesirable Behaviors Observed Weekly in Each Category*

Behavior	**Pre-intervention Period**		**Intervention Period**	

	Week 1	Week 2	Week 3	Total		Week 8	Week 9	Week 10	Total	Change in Undesirable Behaviors
Unpack *all* materials in the morning/ pack *all* materials for dismissal	7	3	9	19		1	1	1	3	-16
Clean up desk area before morning/ afternoon recess	6	4	5	15		0	5	0	5	-10
Pick up materials from the floor	21	13	6	40		13	4	5	22	-18
Keep backpacks and lunch pails organized and neat	7	4	2	13		6	3	3	12	-1
Write name and date on papers	6	8	4	18		0	2	1	3	-15
Change shoes/ put shoes away	13	11	13	37		5	8	10	23	-14
Push in chair when leaving desk area	12	3	3	18		6	3	6	15	-3

The behavior that showed the most improvement was for *picking materials up from the floor*. It was observed 40 times during the pre-intervention period, receiving the highest number of undesirable behavior marks out of all the behaviors listed. During the last three weeks of intervention, the number of undesirable behaviors for *picking materials up from the floor* decreased by 18 behavior marks. *Unpacking all materials in the morning/ packing all materials for dismissal* followed second with 16 less occurrences recorded as a result of the Classroom Job System. W*riting name and date on papers* came third with 15 less behavior marks and *changing shoes/ putting shoes away* came fourth with 14 less behavior marks.

Data also shows that certain jobs were more challenging for students than others, such as the *Floor Monitor* and *Shoe Patrol* position. *Picking materials up from the floor* and *changing shoes/ putting shoes away* had the highest total during the pre-intervention as well as during the intervention period. The study showed that that even the most responsible students needed verbal reminders when serving as *Floor Monitor* or *Shoe Patrol.*

The hypothesis stated the Classroom Job System will result in an overall improvement in classroom behaviors. However, it was expected that some students' behavior will not improve, and specific students will continue to rely on repeated directions and reminders. The hypothesis was shown to be correct. Some students were able to complete their job automatically with little to no verbal reminders; however, these students were responsible and didn't have a problem following classroom routines before the start of this study. For some students, assigning them a job and posting a visual reminder was all they needed to help them complete tasks routinely. These students may have needed some verbal reminders to complete their job or follow classroom procedures. There were a few students who needed frequent reminders to complete their job. These students showed little improvement in following classroom procedures.

Conclusions

Based on this study and other research, classroom jobs are an effective way to teach students to be more responsible (Lewis, 2018; Smith and Dearborn, 2016). The results from this study showed that giving students responsibility does in fact improve student behaviors. Before the implementation of the Classroom Job System, students were not completing routine tasks automatically and they were relying on the teacher to give them reminders. This can lead to teacher stress, emotional exhaustion, and burnout (Hultell, Melin, & Gustavsson, 2013). During the intervention period, students were not given as many reminders because the Classroom Job System encouraged them to take charge. They were proud of the fancy job title that they were given, and they enjoyed completing their jobs. They also looked forward to their new job assignment each week.

The Classroom Job System did require a great deal of research, planning, and effort. Certain jobs needed to be done more frequently which may have required more attention and reminders. The Floor Monitor and Shoe Patrol position, for instance, needed many reminders because they were required to do their job often. Other jobs only needed to be done during a particular time of the day, so reminders were not always needed. A better way of assigning classroom jobs that are more frequent would be to assign more than one student that position. One student could be in charge of doing the job in the morning and another student could do the job in the afternoon. This way, one student would not be overwhelmed by the job task and they would put more attention and effort in completing their job. The outcome of this study agrees with significant research outcomes found in the literature and demonstrates that the use of a Classroom Job System can be an effective classroom management strategy.

References

Ayebo, A., & Assuah, C. (2017). Exploring teachers' knowledge of classroom management and control. *Malaysian Journal of Learning and Instruction, v14 n1 p169-185.* Retrieved from https://eric.ed.gov/?id=EJ1150471

Breaux, A., & Whitaker, T. (2013). Three ways to better behavior. *Education Digest*, *78*(5), 41. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=84525217&site=ehost-live

Carbonero, M., Martín-Antón, L., Monsalvo, E., & Valdivieso, J. (2015). School performance and personal attitudes and social responsibility in preadolescent students. *Anales De Psicología / Annals of Psychology*, *31*(3), 990-999. https://revistas.um.es/analesps/article/view/analesps.31.3.181161/181021

Emmer, E. T., & Evertson, C. M. (2013). Classroom management for middle and high school teachers (9th ed.). Upper Saddle River, NJ: Pearson.

Gage, N. A., Scott, T., Hirn, R., & MacSuga-Gage, A. S. (2018). The relationship between teachers' implementation of classroom management practices and student behavior in elementary school. *Behavioral Disorders*, *43*(2), 302–315. https://doi.org/10.1177/0198742917714809

Greenlee, A. R., & Ogletree, E. J. (2003). Teachers' attitudes toward student discipline problems and classroom management strategies. (ERIC Document Reproduction Service No. ED 364330).

Hultell, D., Melin, B., & Gustavsson, J. P. (2013). Getting personal with teacher burnout: A longitudinal study on the development of burnout using a person-based approach. Teaching and Teacher Education, 32, 75-86.

Korpershoek, H., Harms, T., de Boer, H., van Kuijk, M., & Doolaard, S. (2016). A meta-analysis of the effects of classroom management strategies and classroom management programs on students' academic, behavioral, emotional, and motivational outcomes. Review of Educational Research, 86, 643–680. doi:10.3102/0034654315626799

Lewis, B., (2018, June 19). Classroom jobs for elementary school students: teaching responsibility with job applications and more. *ThoughtCo.* Retrieved from https://www.thoughtco.com/Classroom-jobs-for-elementary-School-students-2081543

Marzano, R. J., Association for Supervision and Curriculum Development. (2005). A handbook for classroom management that works. Alexandria, Va: Assoc. for Supervision and Curriculum Development. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=335506&site=eds-live

Rawlings Lester, R., Bolton Allanson, P., & Notar C. E. (2017). Routines are the foundation of classroom management. *Education*, *137*(4), 398. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=123871878&site=eds-live

Smith, R., & Dearborn, G., (2016). Classroom jobs. *Conscious Teaching.* Retrieved from http://www.consciousteaching.com/ccm2toolbox/calendars/elementary/resources/EW1.Jobs.pdf

Stronge, J. H., Ward, T. J., & Grant, L. W. (2011). What makes good teachers good? A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education, 62,* 339–355. doi: 10.1177/0022487111404241

Watson, A. (2010, July 18). Ideas for classroom jobs & classroom helper system [Web log post]. Retrieved from https://thecornerstoneforteachers.com/class-jobs/

Wilson, M. B., (2013, August 23). Classroom jobs. *Responsive Classroom*. Retrieved from https://www.responsiveclassroom.org/classroom-jobs/

Chronic Absenteeism in a Second Chance School: What are the Root Causes and How Do We Mitigate It?

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Abstract

The project was conducted to examine documented and undocumented reasons for absenteeism as perceived by students, faculty, and staff at J.P. Torres Success Academy, a credit recovery high school on Guam. It was the purpose of this paper to evaluate the interventions provided for every student procedurally and to identify improvement points for the interventions that are beneficial and to recommend additional interventions that are specific to the unique factors of this student demographic. This paper encapsulates a review of risk factors that lead to poor attendance and investigates the reported and unreported reasons students provide for their absences. Program data have been reviewed and summarized for impact and implications for interventions to increase the attendance and graduation success for every student. Teachers, staff, and students were surveyed on their perceptions on the interventions utilized when students are absent, as well as other risk factors. The results were used to evaluate the effectiveness of the school's interventions and the impact on students' graduation success rate. The survey was also used to collect additional information on undocumented reasons for absenteeism unique to this group of students.

Introduction

The students attending JP Torres Success Academy (JPTSA) have been given a "Second Chance" to recover credits in order to graduate with a high school diploma. Most students are adults, between the ages of 18 and 22 years although there are a few who are 17 years old, as well. These second chance students are given more flexibility during their school day to move about the campus, freer than students at the other high school campuses on Guam.

Background

Students miss school for a variety of reasons. According to Balfanz and Byrnes (2012), you have students who *can't* go to school due to illness, mobility, family responsibilities, employment, or incarceration. You also have the students who *won't* attend school to avoid bullying, unsafe conditions such as violent neighborhoods, harassment, and/or embarrassment. Then you have the students who *don't* attend school because they or their families may not see the value in education, they believe that they have something better to do, or there simply isn't anyone to stop them from not going to school. According to the U.S. Department of Education, students who miss more than 15 days in the school year are considered chronically absent (2016). Chronic absenteeism has been a hidden educational crisis that is now coming to the forefront of the national educational system. Under the *Every Student Succeeds Act* (ESSA) which has replaced *No Child Left Behind* (NCLB), absenteeism will be added as a nonacademic accountability indicator that schools will be required to report in order to receive federal funding (2015).

Problem

The biggest issue facing an academically successful program at the school is the high rate of absenteeism. JPTSA offers alternative solutions for students who have challenges attending classes, such as online learning and course by conference; however, students are still absent from the learning. The average daily attendance at JPTSA is approximately forty-eight percent according to data collected from the school's student information database. This means that almost half of the students who are enrolled at the Academy attend classes on a daily basis. This indicator, however, does not give the complete picture which would indicate the students who are chronically absent. That data is collected manually by school staff. Walking into an empty classroom on any given day is disappointing for the teacher who has worked diligently on a lesson and looks forward to executing it. This is the story of JPTSA: sparsely filled classrooms in a school meant to give students who have failed in traditional public high schools and who have previously committed to attend classes in

order to finally achieve their high school diploma. Before students are accepted into JPTSA, they are interviewed for positive commitment to the program and assurances of daily attendance.

Purpose

The purpose of this research is to answer the following questions: 1. what do students at JPTSA, a Second Chance Project, say are the reasons for poor attendance; 2. what do the faculty and staff of JPTSA say are the reasons for students' poor attendance; 3. what are the students' perceptions on the interventions and supports offered by JPTSA; and 4. what are the faculty and staff perceptions of the interventions and supports that they offer for the students of JPTSA?

The answers to these questions will provide important evidence between the perceptions teachers have on student absences and the factors students say contributes to their absences. The effectiveness of school-based interventions may be impacted by the answers provided. In asking these questions, the school community must examine whether or not there are adequate supports in place to help this specific group of students succeed; and if these students feel like they have a safe place to learn and belong.

Review of Literature

JPTSA is an alternative school designed to help students recover credits in order to achieve a high school diploma. These students have been given a "second chance," perhaps even a third and fourth chance to meet this goal. The educational history of these students is one of difficulties and challenges, and, in most cases, chronic absences have compounded the existing academic gap resulting in course failures, behavioral issues, and dropping out of their previous high schools.

Chronic Absenteeism Defined

The U.S. Department of Education (USDOE) released a report in June 2016 of data that was collected from almost every public school in the nation regarding absenteeism. Chronic absenteeism, as defined by USDOE in their 2016 report, *Chronic Absenteeism in the Nation's Schools: An Unprecedented Look at a Hidden Educational Crisis*, means that a student has been absent at least fifteen days out of the school year. Some states have defined it as a student missing at least ten percent of the school year, or approximately eighteen days, and is different from truancy (Balfanz and Byrnes, 2012). In general, chronic absenteeism is missing at least fifteen to eighteen days of school for any reason, excused or unexcused. Truancy is missing school due to unexcused reasons only. However, chronic absenteeism is rarely measured, therefore it often goes unchecked until a problem arises and the student has already fallen behind academically (Balfanz and Byrnes, 2012).

Research shows that absenteeism widens the academic gap between students with high absenteeism and those that attend school regularly. Students need to be present to succeed.

In the midst of lost instruction comes accountability of student results. It is important to note that in a nation which requires high stakes achievement tests as an indicator of student success and as a prerequisite for the school's federal funding, chronic absenteeism plays a huge role in low test scores (Adams, C. J., 2017). Chronic absenteeism has been said to be the best predictor of dropping out of high school even as early as the middle school years. This early indicator drives the development of school improvement action steps to address absenteeism. Schools do their best to ensure that students receive the supports that they need to learn and thrive, however students must understand the importance of learning and attend school every day in order to gain these supports (Balfanz and Byrnes, 2012). Schools have relied on data collection to identify demographic information and the groups that are impacted by challenging factors.

One critical source of data collection comes from the Civil Rights Data Collection (CRDC). The CRDC compiles data to be utilized in an attempt to reduce and ultimately eliminate chronic absenteeism so that all students, regardless of privilege or background, are able to reach their full potential (USDOE, 2016). According to the report, over 6 million students were chronically absent in school year 2013 – 2014. That equates to approximately 14 percent of the national public-school student population, or about one in seven students who are missing school ten percent or more of the school year. Chronic absenteeism shows no disparity in gender and is about equal among male and female students. The report also gives a breakdown of which

ethnicities are prone to chronic absenteeism, with sixty-five percent of Native Americans and Pacific Islanders missing at least three weeks or more of school per year. Black students were more likely to miss 36 percent of the school year, and Hispanic students were likely to miss 11 percent (USDOE, 2012). The criticality of the information goes further than just race.

Chronic absenteeism is higher among English language learners and students with disabilities. The Office for Civil Rights oversees the equitable education of language learners. The Individuals with Disabilities Education Act (IDEA) is in place to safeguard students with disabilities access to a free and appropriate education, however, chronic absenteeism becomes a barrier to achieving that goal (USDOE, 2012). The educational supports for English Language Learners and students with disabilities are compromised by chronic absenteeism. The effects can be seen throughout the school levels.

Chronic absenteeism is lowest among elementary school students, at 11 percent, and highest among high school students, at almost 20 percent (USDOE, 2012). Chronic absenteeism in early childhood has been shown to prevent students from reaching early learning milestones. Kindergarten students who are chronically absent are more likely to perform lower academically in first grade and are more likely to read below grade level by the time they reach the third grade (Balfanz and Byrnes, 2012) (USDOE, 2016). These students who do not read proficiently by the third grade are far more likely to drop out from high school. This further suggests that students with chronic absenteeism from elementary to high school are likely to drop out (Rafa, A., 2017).

Causes of Chronic Absenteeism

What are the root causes of chronic absenteeism? Balfanz and Byrnes (2012), give three broad categories for why students miss school: those that cannot, those that will not, and those that do not. There are students who miss school simply because they cannot attend due to illnesses, family responsibilities (i.e., taking care of children and/or other sick family members), employment, or incarnation in the juvenile system. For some of the students at JPTSA, they cannot come to school because they have been remanded to the adult correctional facility. You also have students who will not go to school for such reasons as fear of being bullied, or the schools are located in unsafe neighborhoods. Students may be embarrassed or harassed because of their sexual orientation or background. Then there are the students who choose not to go to school because they or their families do not see the value in education, they have something or someplace better to be, or there isn't anyone to stop them from skipping school (Balfanz and Byrnes, 2012). It is critical to delineate the demographic groups into the differing broad categories of absenteeism as defined by Balfanz and Byrnes in order to apply appropriate school level interventions. It is important to note the groups that are impacted by chronic absenteeism.

Some data show that students who are disadvantaged have a more difficult time attending school. The 2013 – 2014 Civil Rights Data Collection showed that chronic absenteeism is higher among disadvantaged areas such as inner cities or rural or underdeveloped areas. Students who live in poverty are two to three times more likely to be chronically absent (Chang & Romero, 2008). Many of these students are absent due to reasons beyond their control, such as unstable housing, unreliable transportation, and a lack of access to health care. These students face the most harm because the communities in which they live lack the resources necessary to help them make up for lost days. Some parents may be too exhausted from working multiple jobs, while some parents work night jobs and are too tired to wake up in the morning and get their children to school on time; or students may be too embarrassed to go to school because they lack clean or appropriate clothing to bear inclement weather such as rain or snow (Chang & Romero, 2008).

Another documented cause is identified in students who are impacted by mobility. Mobility characterizes students who are transient due to families moving from home to home. There is a high correlation between mobile students and poor attendance. Students who are mobile miss school while they are in the process of moving and trying to find a new home. According to Chang and Romero (2008), one of six children have attended more than three or more schools by the time he or she has even completed the third grade. Students may still be affected by moving even after they have already settled in their new location. They may be stressed from moving and have adjustment issues due to moving so often and face challenges in building new relationships with peers and adults in the schools. Students who are more transient due to change of homes often come from families that are dealing with serious life events including job loss, divorce, domestic abuse, foster care placement and poor housing (Chang & Romero, 2008).

Health issues can also play a role in school attendance when dealing with students who live in poverty. When students come from poverty, families often lack the resources to cope with serious illnesses. They may not have access to health care that helps prevent illness, leading to children missing more school due to illness. Economically poor families are also more likely to live in neighborhoods that are affected by environmental toxins and air pollution, which lead to a higher prevalence of chronic disease, and can also exacerbate already present chronic illnesses such as asthma (Chang & Romero, 2008).

Chronic absenteeism may also be a result of a reluctance of parents to send their children to school because the parents did not have a positive experience in the school system. This does not mean that parents do not want their children to be successful, rather, the intention could be to protect them. The parents themselves just may not have developed the skills, knowledge, or beliefs to help their children and support their education, and for these parents, the idea of schools may evoke memories of failure and alienation, rather than positive feelings of hope and possibility (Chang & Romero, 2008).

Impact of Chronic Absenteeism

It is important to identify the varying negative outcomes as a result of chronic absenteeism. By doing so, schools and other organizations can mitigate the impact and provide appropriate supports to lead to projected positive outcomes. When reviewing the negative outcomes, most of the focus is on the individual and their school challenges. However, research has shown some examples of negative outcomes impacting the individual into adulthood via long-term societal issues. Chronic absenteeism has been identified as one of the three leading early indicators that students will drop out from high school (McKee & Caldarella, 2016). When a student drops out of school, the individual becomes an adult who is unable to enter the economy and is unable to support themselves with an income. When an adult lacks a high school diploma, the work and development opportunities are narrower or even nonexistent. A person in the community without a reliable income places a burden on the government (McKee & Caldarella, 2016).

Students who are adults in the community must seek assistance from the government to receive medical and dental services. However, these services may not be enough to sustain a healthy progressive life. These individuals are less likely to seek out preventive healthcare. Eating healthier is unaffordable and proper nutrition is jeopardized. The lack of income results in limited to no access to healthcare; and subjects the individual to poor health and is an indicator for shorter lifespan (U.S. Department of Education, 2007).

Another societal impact due to chronic absenteeism is reflected in the penal system. Students who do not graduate and are unable to enter the economy legitimately are more likely to turn to crime to survive. When a student is chronically absent, the research has shown it to be a progressive declination in becoming a contributing member of society. Therefore, they are ill-prepared and lack the essential skills to be a functioning adult in the community. Many of them turn to criminal activities to sustain a viable livelihood to exist. Statistically this results in more than half the country's prisons are populated by high school dropouts (U.S. Department of Justice, 2002). As a result of the impact, it is critical to mitigate these factors that are early indicators for chronic absenteeism.

Approaches to Decrease Chronic Absenteeism

Although there may be many causes for chronic absenteeism among school age children, one thing is for certain, the issue must be addressed and this requires a shift in policies and practices for the schools and districts (Absenteeism: Beyond Reporting, 2015). This shift must directly address the barriers that students face in learning, how to re-engage those students who have been disconnected from the classroom curriculum, and also re-engage those families who have separated from their schools (Absenteeism: Beyond Reporting, 2015).

Mentorship programs are initiatives that serve to connect the community with the school and the student. Originally, mentorship programs asked for volunteers from various sectors of the community, such as from local businesses, to come into the schools for as little as an hour a week (Wienberger & Forbush, 2018). These volunteers spent time in the schools to help students by giving advice or providing support and advocacy.

Today, these volunteers not only give their time during school hours, but also in after-school programs which may be located at the school or elsewhere (Wienberger & Forbush, 2018).

Mentors provide much needed support for disadvantaged students, but mentorship models need to be created and framed in such a way to provide appropriate interventions and supports. This first comes in the form of education and training of mentors on the reasons that cause chronic absenteeism. Only when they are aware of the source of the problem can they truly help (Wienberger & Forbush, 2018).

Another way that schools can tackle chronic absenteeism is to change how they approach learning. For many students, chronic absenteeism is a result of separating from the learning, and thus the school. Students who are not able to succeed in traditional public schools would most likely not be able to succeed in any other school that conducts educational programs the same way, with the same curriculum and the same attitudes. Schools must make the effort to change. Teachers' attitudes must change from controlling and indifferent to that of support and attentiveness and the curriculum needs to change from "the same old thing" to one that is engaging, obtainable, and offers options (Absenteeism: Beyond Reporting, 2015). The curriculum should tie in to student experiences and background, build on previous learning, and designed to correct problems such as absenteeism by relating it to real life and real life needs (Absenteeism: Beyond Reporting, 2015).

Most policies that address absenteeism are reactive and negative. These need to change to more positive and proactive policies and procedures. Phone calls and letters that go home with students seem to only remind parents that they are not doing a good enough job parenting their children (Absenteeism: Beyond Reporting, 2015). These phone calls and letters often state only the negative consequences that will follow absenteeism. Instead, schools should try praising the effort of these students when they actually do show up for school and using a positive approach. Proactive policies on absenteeism would focus on efforts of prevention and on early intervention (Absenteeism: Beyond Reporting, 2015).

Literature shows that chronic absenteeism has a negative impact on graduation rates. Most students who are accepted into JPTSA have already had issues with chronic absenteeism, which led to the lack of credits and their referral to JPTSA. In addition, research shows that students whose first language is not English also have a lower success rate in school. JPTSA has a significant ESL population, many of whose literacy skills need strong academic support. In general, the causes of the high level of absenteeism at JPTSA, and GDOE in general, has never before been studied. Therefore, this study sought to determine the root causes of absenteeism and examine possible interventions to address the needs of the students.

Methodology

This action research project was designed to identify documented and undocumented reasons students with chronic absenteeism provide to school officials in order to determine whether the current intervention supports are adequate and effective for these at-risk students. This research project is also intended to determine whether these at-risk students perceive a positive relationship with the learning supports provided by the school.

Population

J.P. Torres Success Academy services students from all around the island. The current student population is 129. Forty-eight percent of the student population is Chamorro. Thirty-three percent are Chuukese. Four percent are Belauan. Asian and Pohnepeian both make up three percent of the population each. The remaining student population is made up of other ethnicities. Forty-nine students completed and returned the surveys. Of the forty-nine students, forty-seven were eighteen years old and above, while two were seventeen years old. The seventeen-year-old students were asked to take the surveys home to complete and to get signed parental approval.

There are twenty-nine staff members at JPTSA. All were given surveys, but only seventeen surveys were completed and returned. Every staff member plays an important role in the education of students at JPTSA. Support staff, as well as teachers, take part in providing interventions and support for struggling students.

Materials

A student perception survey was developed to gather pertinent demographic information of the student population to aggregate the at-risk students due to chronic absenteeism; and to collect perceptions of the learning supports. A faculty perception survey was developed to collect perception data from teachers and staff regarding the learning supports provided by the school. The survey included demographics, such as age, village of residence, and ethnicity. For students, the first part of the survey asked them what the reasons are for their absences. They were allowed to circle all reasons that applied and add in reasons that were not included. The second part of the survey included a Likert Scale for ten perception questions on the interventions and supports offered by the school. There was one open-ended question that asked for recommendations to encourage a higher attendance at JPTSA. The faculty and staff surveys were similar, with a few changes in the wording to indicate their perception of the interventions and supports that they provide to the students of JPTSA.

Procedure

The student perception survey was disseminated via teachers during the intervention period to ensure that all students in the school population were given the opportunity to complete the survey. Students were given ample time during the 30-minute period to complete the surveys. A total of forty-nine completed the surveys representing thirty-nine percent of the student population. The faculty perception surveys were hand-delivered to teachers and staff. The teachers and staff were given one week to complete and submit the surveys. A total of nineteen teachers and staff members completed the surveys representing sixty-six percent of the faculty.

Data collection and analysis

Data from forty-nine surveys representing thirty-nine percent of the student population were compiled and collated. Descriptive statistics were used to describe the results of this study. Results of the student perception survey were compared against the results of the faculty/staff perception survey.

The JPTSA teachers have not been held accountable to entering daily attendance into the school's database, therefore retrieving attendance data from the database was not an option. The school clerks who write daily student "admit slips" for those who were previously absent were also not recording this in the school database. School attendance data, both daily attendance and absences, were, therefore, collected manually by researching the spreadsheet that was created by school personnel who take attendance daily. This information is not recorded in the school database. Reasons for absences were also collected manually by going through the excuse notes given to school personnel by students as they come back to school.

Limitations

Even though the surveys are anonymous, and respondents cannot be identified, it is possible that outcomes may be influenced by participants' desire to sound good or to not look bad in their responses. The results of this study may not be applicable to other populations.

Research Question 1: What are the reasons students give for their poor attendance?
Hypothesis 1: Most students will indicate illness as the main reason for their absence.

Research Question 2: What are the reasons teachers perceive for students' poor attendance?
Hypothesis 2: It is hypothesized that staff will not indicate illness to be the main reason for student absences.

Research Question 3: What are the perceptions students have of the interventions and supports provided by JPTSA?
Hypothesis 3: It is hypothesized that students of JPTSA will have a negative perception of the supports and interventions provided by the school.

Research Question 4: What are the perceptions staff have of the interventions and supports provided by the school?

Hypothesis 4: It is hypothesized that the staff will have a positive perception of the supports and interventions that they provide for the students of JPTSA.

Results

Students who attend JPTSA, a Second Chance Program, have had a difficult journey in their quest for a high school diploma. For many of them, attendance has been a critical issue and still continues to be. Many of the students at JPTSA can be considered chronically absent, missing more than ten percent of the school year. This action research was intended to answer four questions: 1) What are the reasons students give for having poor attendance; 2) What are the reasons teachers perceive for students' poor attendance; 3) What are the perceptions students have of the interventions and supports provided by the school; and 4) What are the perceptions teachers have of the interventions and supports provided by the school? The data summary from the student perception surveys and the faculty perception surveys were analyzed to address the research questions of the study.

The results of the student perception surveys come from forty-nine students with a history of chronic absenteeism. An important part of the process was intended to gather perception data particularly from this demographic of students who have had a history of chronic absenteeism. The 49 students represent roughly 39% of the total student enrollment. Nineteen staff members returned completed surveys. These nineteen staff members represent roughly 66% of the total staff.

What are the reasons students give for having poor attendance? When looking at the data, it was essential to compile the undocumented reasons students may have for being absent from school, in order to determine whether there are indicators that compound the risks of not graduating from high school. The highest responses given as a reason for being absent were due to illness at 63% and transportation problems at 59%. About 29% of the survey respondents selected caring for family members as the reason for being absent. 10% of the respondents claim that work/employment is an obstacle to attending classes. The smaller results come from not being motivated at 4% and other (due to negativity) at 2%.

Students and staff were not limited to how many reasons they could indicate for absences. The survey asked them to indicate all reasons that apply for absences. Many of the survey respondents indicated more than one reason for student absences. Students are not merely absent due to one reason every time. They face many different obstacles, especially with this age group and demographic. Many of the students who attend JPTSA are young parents and/or are caretakers for other family members, such as parents or grandparents. Many of them work to support their families, and many of them take on the role of the main financial supporter of their household.

Table 1: *Comparison of Reasons given for Student Absences by Students and Staff*

REASONS FOR ABSENCES	STUDENT RESPONSES %	STAFF RESPONSES %
Illness	63	58
Transportation problems	59	89
Incarceration	0	21
Don't like teachers/staff	0	11
Work/employment	10	80
Caring for family members	29	84
Not motivated	4	80
Don't like the courses	0	11
Don't feel like they belong	0	0
Other	2	5

What are the reasons teachers believe account for students' poor attendance? 89% of the teachers and staff surveyed believe that transportation plays a major role in student absences. 84% also believe that students miss school because they are taking care of family members. 80% perceive that students lack the motivation

to come to school and miss school due to work or employment. 58% of the teachers and staff surveyed believe that students miss school due to illness. 21% of the teachers and staff believe that students are out of school because they are incarcerated. An equal 11% was reported by teachers and staff that they perceive students to be absent because they don't like the teachers or staff of JPTSA or they don't like the courses offered at JPTSA. 5% reported that they believe that students are absent from learning because they just don't care, which was indicted under "other."

The hypothesis for the second research question is correct. Teachers/staff did not perceive illness to be the main reason for student absences. Instead, they believe that other barriers such as transportation, work, caring for family members, and not being motivated play a more integral role in student absences.

While conducting this research it was noticed that teachers and staff at JPTSA are not inputting attendance according to policy and procedures; however, students do submit excuse notes to the main office where they are given admit slips back to class. A review of these admit slips from the beginning of the school year, August 17, 2018, to the end of the first block, January 8, 2019 was done to determine what documented reasons students give for being absent.

Table 2: *Documented Reasons for Absences from Student Excuse Notes*

REASONS FOR ABSENCES	No. of Responses
Illness	295
Transportation problems	56
Other (Personal/family issues)	34
Caring for family members	30
Work/employment	17
Other (Administrative issues: IDs, housing)	5
Incarceration	4
Not motivated (lazy)	2

Students reported that illness was the main reason for being absent, followed by transportation problems, personal/family issues, caring for family members, work/employment, having to go get various identification cards and fix housing issues, incarceration, and lastly just plain laziness. These reasons are in line with the survey answers given by students as to why they do not attend classes regularly.

It was hypothesized that students would indicate that illness is the main reason for being absent from school. According to the survey and the data collected from student excuse notes, this hypothesis is true. As stated in the Literature Review, many students from disadvantaged families lack the resources to get the proper medical and dental assistance they need. This may be the case as to why so many students at JPTSA are absent and indicate illness as the reason.

The next two questions of the action research: What are the perceptions students have of the interventions and supports provided by the school; and what are the perceptions staff have of the interventions and supports provided by the school, is addressed in the second half of the survey. The students and staff were surveyed using a Likert Scale to rate their perceptions of the interventions and supports offered by the school. The data of the survey was examined to see if any gaps in perception exists between students and staff regarding supports and interventions.

Table 3: *Results from Student Perception Survey*

	QUESTION	No Answer	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
1	I come from a household that valued education.	0/0%	0/0%	0/0%	22/45%	27/55%
2	I believe that attending classes is important for my academic success.	0/0%	0/0%	1/2%	12/24%	36/73%

3	The teachers of JPTSA motivate me to attend my classes.	0/0%	0/0%	0/0%	23/47%	36/53%
4	The staff of JPTSA motivate me to attend my classes.	0/0%	1/2%	1/2%	23/47%	24/49%
5	I believe that the school cares when I am absent.	1/2%	0/0%	2/4%	25/51%	21/43%
6	The school contacts me when I am absent.	2/4%	8/16%	15/31%	16/33%	8/16%
7	The school works with me to improve my attendance.	1/2%	2/4%	4/8%	18/37%	24/49%
8	I have a good relationship with the teachers and staff of JPTSA.	4/8%	1/2%	1/2%	26/53%	17/35%
9	I feel that the JPTSA curriculum is challenging and meaningful for my future.	0/0%	1/2%	0/0%	23/47%	25/51%
10	I believe that JPTSA gives me options to make decisions that impact my attendance.	1/2%	0/0%	1/2%	17/35%	30/61%

Table 4: *Results from Staff Perception Survey*

	QUESTION	**No Answer**	**Strongly Disagree 1**	**Disagree 2**	**Agree 3**	**Strongly Agree 4**
1	I believe that my students come from a household that value education.	0/0%	2/11%	8/42%	9/47%	0/0%
2	I believe that attending classes is important for student academic success.	0/0%	0/0%	0/0%	4/21%	15/79%
3	The teachers of JPTSA motivate students to attend classes.	0/0%	0/0%	0/0%	14/74%	5/26%
4	The staff of JPTSA motivate students to attend classes.	0/0%	0/0%	0/0%	8/42%	11/58%
5	I care when students are absent.	0/0%	0/0%	1/5%	10/53%	8/42%
6	I contact my students when they are absent.	0/0%	0/0%	8/42%	8/42%	2/11%
7	I believe that I work with students to improve their attendance.	0/0%	0/0%	4/22%	8/42%	6/32%
8	I believe that I have a good relationship with my students.	0/0%	0/0%	0/0%	7/37%	12/63%
9	I feel that the JPTSA curriculum is challenging and meaningful for my students.	0/0%	0/0%	0/0%	16/84%	3/16%
10	I believe that JPTSA gives students options to make decisions that positively impact their attendance.	1/5%	0/0%	0/0%	10/53%	8/42%

Survey questions 3, 4, 5, 6, 7, and 8 were specifically identified to correlate the perceptions referencing interventions. The information provided by the perceptions surveys helps to identify the gaps that create misconceptions in the applicability of the interventions and supports as provided by the school program.

Survey questions 3 and 4 ask for how students perceive whether the faculty and staff motivate them or not to attend classes. For questions 3 and 4, both the students and faculty/staff agree to strongly agree that the faculty and staff motivate the students to attend classes. This positive perception can be a strength of the culture of the school. As a strength, it can be a leverage point if the strategies utilized can be identified and replicated for standard practice. The school can identify and collect the strategies teachers and staff use to motivate the students to attend school and create a toolkit for that purpose.

For question 5, it asks whether students believe that the school cares if they are absent. The perceptions between the students and the staff were equivocally high with 94% and 95% respectively agreeing to strongly agreeing. Although the percentages were high in agreement, it is important to determine why 6% of the students do not feel that the school cares; and why 5% of the teachers feel like they don't care. Question number 5 warrants an intervention specifically for the small number of students who may become disenfranchised from the school.

Guam Department of Education has policies and procedures to address truancy and absences. The procedures are designed with interventions and supports at differing levels in the process. The procedures are mandated for all public schools. However, these procedures are designed for students who are not of compulsory age. The students who attend JPTSA are of compulsory age, which makes the applicability of these procedures a conundrum. Question 6 addresses the perception that the school will contact the students when they are absent. However, both the students and faculty show a low perception at 51% and 47% respectively disagreeing to strongly disagreeing that the school contacts the students when they are absent.

Question 7 leads to the policies and procedures referenced earlier, showing that 86% of students and 74% of teachers agree to strongly agree that the school works with the students to improve their attendance. In turn, 14% of students and 26% of teachers disagree to strongly disagree that the school works with the students to improve their attendance. These numbers suggest that the school revisits the policies and procedures that address student absenteeism. The disparity in the perception warrants a review of teacher training when working with students to improve attendance.

Survey question 8 addresses the student-teacher relationship of JPTSA. Eighty-eight percent of the students believe that they have a good relationship with the teachers, while 100% of the teachers believe that they have a good relationship with the students. 12% of the students disagree to strongly disagree that they have a good relationship with the teachers. This number is worth investigating of a negative relationship—otherwise it will become an indicator for disengagement that leads to dropping out.

The students were surveyed to determine if they come from homes that values education. 100% responded that they agreed to strongly agreed with the statement, "I come from a household that values education," showing a highly positive value of education indicated by the students. Meanwhile 67% of the teachers surveyed disagreed to strongly disagreed with this statement as it relates to the students. They do not believe that the students' families greatly value education.

The results from the Likert survey for the students disprove the hypothesis for the third and fourth research questions on how students and the teachers and staff members perceive the supports and interventions provided by the school. Students have a more positive perception, while the teachers and staff have a more negative perception. This gap in perceptions is an area that needs to be addressed.

The students, faculty, and staff who participated in this survey were asked to identify any improvements that could be made to increase student attendance at JPTSA. Suggestions made by students are shown in Table 5 and suggestions made by the faculty and staff are shown in Table 6.

Table 5: *Student Suggestions to Help Increase Student Attendance at JPTSA*

Suggestions	Number of Similar Comments
Later start time.	5
Have more fun activities.	4
Nothing – students need to allow faculty/staff to help.	4
Better/cleaner restrooms.	2
Nothing – it's perfect.	2
Longer lunch period.	1
Make learning fun.	1
Have night school.	1
School should remind students about their attendance.	1

Table 6: *Faculty/Staff Suggestions to Help Increase Student Attendance*

Suggestions	Number of Similar Comments
Have creative activities.	5
More pick up sites.	4
Improve social emotional supports.	2
Develop a reward system.	2

Later start time.	1
More teamwork.	1
More rules that show we are taking charge/consequences for absences.	1
Move to a better location.	1

Five students and one faculty/staff member suggested a later school start time. Classes at JPTSA begin at 6:45 am. Students must get up even earlier than that to catch the bus to the school. For those students who are parents and have children in daycare, the start time conflicts with the opening time of daycare centers, most of which open at 7:00 am. The early start time also poses issues for students who are employed and work late nights but need to wake up early to get to school on time.

Students, faculty, and staff seem to agree that there needs to be more fun or creative activities to entice students to come to school. Five teachers/staff and four students suggested that the school include more engaging or fun activities for the students. Six students who answered this part of the survey think that there aren't any improvements that need to be made and that students need to be open to receiving assistance from the teachers and staff of JPTSA.

Four teachers/staff suggested that there be more pick-up sites for students who live in the central and northern villages. Currently there are two pick-up sites in the north and one site in the central. Students must provide their own transportation to these sites where a bus picks them up and transports them to JPTSA. Students who lack transportation from their home to the pick-up sites are more likely to be absent.

Interestingly enough, one suggestion from a teacher or staff is to have more rules and consequences for students with high absences, while another suggested a reward system for good attendance. This shows the disparity among the attitudes of the employees of JPTSA in which one calls for punitive action and the other for positive reinforcement.

Conclusions

The foremost recommendation concluded from the results of this research project, is for JPTSA to implement an absenteeism program with fidelity. The inconsistency of adherence to the district's truancy and attendance policies and procedures is an important item found from the study. Additionally, the existing truancy and attendance policies and procedures are designed for students who are of compulsory school age. However, the demographic addressed in this research study are students who are generally above compulsory school age, making the applicability of the district's policies and procedures difficult to address. These difficulties have impacted the perceptions reflected in the data summary.

The school needs to develop an absenteeism policy with procedures for truancy and attendance explicit to the non-compulsory aged demographic of JPTSA, then document absences, collect data, review policies and update procedures as needed. This would allow the data to drive decisions to mitigate the risk-factors found in outcomes of this study.

The following are recommendations to promote attendance at JPTSA based on the findings from student, faculty and staff surveys:

- Utilize information from the surveys that show a large disparity between student beliefs and those of faculty and staff in devising a suitable absenteeism policy that supports students and school programs.
- Develop interventions specifically for the small number of students who have indicated that they do not feel that the school cares when they are absent in order to prevent these students from becoming disengaged and possibly dropping out.
- Review training for teachers and staff of JPTSA to promote understanding of student needs and difficulties related to school atte4ndance, especially those who are of non-compulsory school age and therefore do not fit into the applicability of policies and procedures developed for students who are of compulsory age.

- Further investigate the perception that students have regarding their relationship with the teachers or staff at JPTSA and provide professional development to teachers and staff so that they can cultivate positive student-teacher relationships; otherwise the negative perceptions may become factors for disengagements that lead to non-attendance or dropping out of school entirely.
- Finally, a strength identified in the survey is that the students felt motivated by both the faculty and staff to attend classes at JPTSA. The strategies that teachers and staff utilize to motivate students should be identified and replicated as a standard practice for all those involved with the education of this unique group of students.

In general, the outcome of this study can be deemed successful as it adequately identified factors which directly contribute to student absenteeism. In addition, it revealed a previously unknown difference in the perceptions between students and school faculty and staff regarding difficulties students encounter with school attendance and reasons for chronic absenteeism. Perhaps, most importantly, it identified an area where policies and procedures need to be evaluated, selected and implemented to which students, faculty and administrators must strictly adhere. The implementation of a truancy and absenteeism policy appropriate for the nontraditional students of JPTSA would be a needed first step toward improved school attendance and a higher rate of graduation success.

References

Absenteeism: beyond reporting and beyond another special initiative. *Addressing Barriers to Learning* Vol. 21, #2. (2015, November 30). Retrieved December 06, 2018, from https://eric.ed.gov/?id=ED565297

Adams, C. J. (2017, January 04). ESSA highlights absenteeism as a key challenge for schools. Retrieved December 06, 2018, from https://www.edweek.org/ew/articles/2017/01/04/essa-highlights-absenteeism-as-a-key-challenge.html

Balfanz, R. (2016, October). Missing school matters. Retrieved December 06, 2018, from http://journals.sagepub.com/doi/abs/10.1177/0031721716671898

Balfanz, R., & Byrnes, V. (2012, May 16). The importance of being in school: a report on absenteeism in the nation's public schools. Retrieved December 06, 2018, from https://www.attendanceworks.org/importance-school-report-absenteeism-nations-public-schools/

Chang, H. N., & Romero, M. (2008, September). Present, engaged, and accounted for: the critical importance of addressing chronic absence in the early grades. Retrieved December 06, 2018, from http://nccp.org/publications/pdf/text_837.pdf

Chronic absenteeism in the nation's schools. (2016, October 27). Retrieved December 06, 2018, from https://www2.ed.gov/datastory/chronicabsenteeism.html

Cooper, L. (2016, September 14). Chronic absenteeism is most severe in impoverished districts. Retrieved December 06, 2018, from https://www.edweek.org/ew/articles/2016/09/14/chronic-absenteeism-is-most-severe-in-poor.html

Kearney, C. A., & Graczyk, P. (2013, July 20). A Response to intervention model to promote school attendance and decrease school absenteeism. Retrieved December 06, 2018, from https://link.springer.com/article/10.1007/s10566-013-9222-1

Nauer, K. (2018, October 03). Battling chronic absenteeism. Retrieved December 06, 2018, from https://www.kappanonline.org/nauer-battling-chronic-absenteeism-new-york-elementary-school/

Rafa, A. (2017, June). Chronic absenteeism: a key indicator of student success. Retrieved December 06, 2018, from https://www.ecs.org/chronic-absenteeism-a-key-indicator-of-student-success/

Report: 6 million students miss too much school. (2016, August 01). Retrieved December 06, 2018, from https://www.districtadministration.com/article/report-6-million-students-miss-too-much-school

Sheldon, S. B., & Epstein, J. L. (n.d.). Getting students to school: using family and community involvement to reduce chronic absenteeism. Retrieved December 06, 2018, from https://files.eric.ed.gov/fulltext/EJ794822.pdf

Todd McKee, M., & Caldarella, P. (2016). Middle school predictors of high school performance: a case study of dropout risk indicators. *Education*, *136*(4), 515–529. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=116218138&site=ehost-live

U.S. Department of Education. National Center for Education Statistics. (2007). *Dropout rates in the United States: 2005*. Washington D.C. Retrieved from https://nces.ed.gov/pubs2007/2007059.pdf

U.S. Department of Justice. (2002). *Correctional populations in the United States, 1998* (NCJ-192929). Washington D.C.: Government Printing Office. Retrieved from https://www.bjs.gov/index.cfm?ty=pbdetail&iid=690

Weinberger, S. G., & Forbush, J. B. (2018, September 21). The role of mentors in reducing chronic absenteeism. Retrieved December 06, 2018, from https://www.kappanonline.org/weinberger-role-mentors-reducing-chronic-absenteeism/

Impact of Mathematical Learning Centers in a Fourth Grade Class on Guam

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Abstract

This study focused on finding the effects of small group student learning centers in a fourth-grade math class on Guam. It was conducted with 11 students (four boys and seven girls), over an eight-week period, which included a pre-intervention control period and an intervention period. The study compared data to determine any changes in student performance and engagement. The intervention, applied two times weekly, used three mathematical learning centers through which students would rotate during the class period. The learning centers included games, interactive materials, and group learning to encourage mathematical skills refinement. The goal of this intervention was to increase student participation during whole group mathematics classes, as well as student performance during formal mathematical assessments. The purpose of this study was to improve student academic performance and participation during whole group instruction, through the use of student-centric learning centers.

Introduction

This study focused on finding the effects of small group student learning centers in a fourth-grade math class of 11 students (four boys, seven girls) on Guam. The study aimed to measure any resulting changes in student performance or engagement in math by using three small group learning centers that supported group learning through the use of interactive materials and games to reinforce mathematical skills over an eight-week period. Prior to employing the intervention, the teacher relied heavily on teacher-lead instruction and use of worksheets with limited interactive activities. Over an eight-week period, which included a pre-intervention control period and an intervention period, the teacher applied the intervention two times weekly to allow for mathematical instruction prior to reinforcing the skills with the learning stations.

Background of the Problem

Prior to conducting this action research study, students demonstrated suboptimal academic performance and uneven participation in class during traditionally conducted math lessons. Students in the fourth-grade math class, which relied heavily on teacher lead instruction, worksheets, questioning strategies, and light use of manipulatives, typically resisted participating or asking questions during whole group instruction, and generally lacked confidence with their abilities. Both the lack of participation and questions pointed towards a fear of failure and an absence of intrinsic motivation to learn and understand concepts beyond simply attaining acceptable grades. Additionally, several students needed consistent redirection and often required content and skills to be retaught or re-explained during independent practice periods.

The lack of engagement with the material, and the suboptimal academic performance of several of the students, lead to the development of a study to determine whether a more student centric, interactive approach would affect the level of engagement and participation during whole group instruction. Additionally, the study determined whether learning centers raised skill performance levels by increasing the level of engagement. Due to student interest in small group, skill-based activities in other content areas, the study applied this environment across three learning centers used two times a week during the intervention period. Following instructional classes that taught the new skills, a math class solely dedicated to learning centers for skill reinforcement. The purpose of this study was to improve student academic performance, and participation during whole group instruction, through the use of student-centric learning centers and a more creative, collaborative approach to learning.

Purpose

The purpose of this study was to find whether the applied intervention had any effect on levels of students' academic performance or their engagement during whole group math lessons. The results of the study would be used to develop best practices in the classroom, and to support the student learning environment by providing a more fluid, student-focused learning experience. The study aimed to improve the learning

environment and learning experiences of the students by increasing student directed engagement with the content material, communication between peers, and personal confidence in the skills and abilities in mathematics. Additionally, the study sought to improve students' intrinsic motivation in learning the material, while helping students to begin approaching mistakes as an opportunity for everyone to learn and benefit in the whole group environment.

This study primarily sought to answer two specific questions.

1. What effect do small group learning centers have on student engagement during whole group instruction in a fourth-grade math class?
2. What effect do small group learning centers have on students' academic performance in a fourth-grade math class?

Review of the Literature

The study was designed to determine whether the use of learning centers twice a week impacts student learning outcomes and engagement during instructional classes. Though plenty of literature exists examining the use of learning centers, research specifically related to intermediate classrooms on Guam or the Pacific Region is limited. This study will contribute to the field of knowledge as it pertains specifically to Guam, and to learning center usage in general.

Motivation

Motivation, the force which drives humans to learn and achieve is a vital element in the classroom. Two different types of motivation exist that affect students in various ways. Extrinsic motivation, or the motivation to achieve in order to gain an external reward, inspires a behavior only performed for the sake of the reward (Santrock, 2011). Intrinsic motivation comes from within, resulting in the desire of performing an activity simply for the enjoyment and pleasure of the act itself, rather than for an external gain (Jenkins, 2005; Santrock, 2011). While extrinsic and intrinsic motivation can work together simultaneously to drive students, many studies and experts agree intrinsic motivation is the most necessary to ensure continued student success (Santrock, 2011; Weidinger, Steinmayer and Spinath, 2017). As Santrock (2011) described, a student who enjoys a subject due to personal interest, may in turn wish to study more and receive a good grade. This scenario would demonstrate a internally motived student, who subsequently wishes to succeed extrinsically with their grades. High extrinsic motivation, when not accompanied by a high level of internal drive, is linked to undesirable achievement results, lower levels of personal motivation and a tendency to lack persistence on difficult tasks (Santrock, 2011). In comparison, high intrinsic motivation, regardless of whether paired with high extrinsic motivation, illustrates a positive correlation with high grades, test scores and later success (Corpus & Wormington, 2014; Santrock, 2011). According to Weidinger, et. al (2017), intrinsic motivation provides the most advantageous learning environment as learning occurs due to appreciation of an enjoyable and satisfying activity. For this reason, creating a classroom environment that fosters and encourages the development of intrinsic motivation is vital (Santrock, 2011).

Intrinsic Motivation and Growth Mindset

The internal drive of intrinsic motivation plays a key role in developing life-long learners. Intrinsically motivated students are often characterized by a growth mindset (Boaler, 2016). This mindset is demonstrated by students' willingness to learn from their mistakes rather than become discouraged by them, and therefore grow in expertise as they learn and improve (Aditomo, 2015). Mindset greatly influences student motivation when faced with failures or success (Aditomo, 2015). Individuals with a growth mindset see mistakes as vital to learning (Rhew, Pire, Goolkasian & Cosentine, 2018); valuing the learning process over only achieving a positive result, this compliments intrinsic motivation by focusing on the personal growth over an extrinsic validation (Aditomo, 2015). Growth mindset oriented individuals persevere through tasks, self-regulate their learning with continued attempts to improve intelligence for the sake of learning, and find pleasure in the small personal improvements and achievements (Ng, 2018). Students with a growth mindset do not allow mistakes or challenges to deter them (Ng, 2018). As a growth mindset protects students from the negative consequences of repeated mistakes and failures (Aditomo, 2015), it encourages and effects the motivational response to ensure learners experience more joy in learning and personal growth.

An intrinsically motived student aims to develop an understanding of the content resulting from a love of learning, instead of as a result of achieving higher grades or teacher approval (Voke, 2002). Learning, for the internally motived student, happens as a result of enjoyment of the act of learning, and the positive feelings that result from engaging in an gratifying activity (Weindinger, et. al, 2017). Thus, those students demonstrating an internal drive to learn, generally engage more with the material being taught, and gain a superior learning experience (Voke, 2002). This eagerness to learn drives students to engage in active learning, ask questions to further their knowledge, and share in whole group instruction. Subsequently, this promotes a better understanding of lesson content. Student engagement functions as a key element in student learning (Voke, 2002), and teachers need to foster and access students' intrinsic motivation in the classroom.

The most successful students have both a growth mindset and high intrinsic motivation. Growth mindset, positively impact internal motivation by encouraging continuous attempts to learn, while intrinsic motivation creates the drive to learn (Ng, 2018). Both growth mindset and intrinsic motivation are interrelated, key elements of learning and academic performance (Ng, 2018), and must be accessed to create the optimal learning environment. As these two elements combine to create an ideal environment and an ideal state for the learner, teachers need to develop opportunities that support the development of both growth mindset and internal motivation (Ng, 2018; Weidinger, et. al, 2017).

To inspire a growth mindset, teachers need to create an environment where students feel safe to fail, and that encourages persistence to learn from their mistakes (Boaler, 2016). Additionally, to support intrinsic motivation, teachers need to foster a safe and challenging environment that promotes authentic learning experiences with relevant work (Voke, 2002), and use activities that create bridges between learning and fun (Sullo, 2009).

One way teachers can encourage a growth mindset while simultaneously promoting intrinsic motivation is through the use of centers-based learning. Learning centers allow for a sense of autonomy and self-direction which are key in supporting intrinsic motivation and growth mindset development (Ng, 2018). As students immerse themselves in an enjoyable and appropriately challenging experience, the persistency in which they approach learning increases (Santrock, 2011). By providing socially inclusive experiences with the subject content, students can utilize and hone their skills in a way that intrigues students while stimulating a level of satisfaction and challenge in the centers (Santrock, 2011). Learning centers, according to Santrock (2011), encourage students to take responsibility for learning through engaging with the material, and developing the resiliency to persistently apply effort to a task to achieve mastery, rather than simply aiming for an acceptable grade.

Benefits of Learning Centers

Learning centers are highly valuable instructional tools which can be applied to all age groups and may be adjusted for a variety of subjects and purposes, including skill practice and concept introduction, while providing an effective way to initiate games (Hanson, 2016). Learning centers are specifically designated areas of the classroom where students can interact with the material in a variety of ways that reinforce or extend learning in a student driven environment that do not require the aid of a teacher to support exploration and learning (Voltz, Sims, & Nelson, 2010). In a small group, students spend a given amount of time at each center before moving to the next, thus allowing the students to explore a variety of content areas appealing to different learning styles (Voltz, et al., 2010). Centers allow for differentiation in the classroom to support each learner (Voltz, et al, 2010), and present an opportunity to focus on a specific skill or content area to encourage learner development.

Using this instructional method in the classroom has several academic benefits. With easy differentiating, the centers can engage students of all academic levels by allowing each student to practice the skills at their own pace, and on their own level (Hanson, 2016). By providing a risk free environment in which students have the freedom to explore their mistakes with multiple attempts in learning, the centers further develop growth mindset, and intrinsic motivation. As such, the content becomes more accessible and personalized to the individual (Voltz, et al, 2010). Due to their flexible nature, learner centers inspire a adaptable, open classroom that considers both the desired lesson content and the individual learner. Because they take the individual into account, centers allow students to make small choices to self-direct their learning. Choices, no matter

how small, allow for self-determination in the learning process, which plays a large role in developing internal motivation (Ng, 2018).

As centers can constantly be adjusted to new skills and content areas, a new experience can be presented to the students each time they visit a center. Centers should present unique and appropriately challenging learning opportunities for the students (Voltz, et al, 2010), which can be presented in an on-line or off-line form (Tucker, 2017). The novelty helps to stimulate intrinsic motivation in students as they attempt to complete the appropriately challenging task (Voltz, et al, 2010). Designing activities that have intrinsic worth increases engagement, interest and curiosity (Ng, 2018).

The small group nature of learning centers can have positive relationship benefits between students and the teacher, as well as between peers. Student can work together in centers to learn from each other, discuss ideas, and help each other develop skills (Tucker, 2017). Quiet students may be more willing to participate and ask questions in the less intimidating small group environment (Tucker, 2017). The centers allow teachers to better observe student progress and support individual students needing assistance, especially if the center rotations include a teacher-based center (Tucker, 2017). With the inclusion of a teacher-based center, teachers can apply a more direct focus on the addressing the needs of each child (Tucker, 2017).

Regardless of the form they take, centers provide an opportunity to maximize classroom resources and student learning (Tucker, 2017). Each student has a chance to develop their understanding, take ownership of their learning and to experience positive, motivation-building experiences with the content. Through centers, students may become more engaged with the material, develop a stronger intrinsic motivation, and increased confidence. As a result, students may be more willing to voluntarily participate and ask questions in a whole group setting.

Learning centers can provide a variety of activities to fit student interest and needs by including manipulatives, additional worksheets, group work and games to develop skills. Centers also provide a platform in the classroom for game-based learning. While all centers can provide learning opportunities, games present a fresh take on learning through an enjoyable social activity. By promoting opportunities to learn without the pressure of grades, games help develop the persistency inherent to a growth mindset (Jenkins, 2005).

The Use of Games to Promote Learning

The use of games can regularly be seen in early childhood classrooms to promote skill development, learning, and the exploration of interests (Ramani & Eason, 2015). In recent years, early childhood classrooms have begun moving away from games to provide more academically intensive lessons (Ramini & Eason, 2015), a trend which only increases through the grade levels. Teachers can, and should, supplement lessons with games that integrate fun and novel learning experiences from which students of all ages and levels can develop problem solving and decision-making skills (Justice & Ritzhaupt, 2015). Through the inclusion of games and the development of a connection between fun and learning, teachers create an exciting experience with a learning environment that supports inclusive and active learning (Sullo, 2009). In-game successes help students build confidence in their skills and may further encourage a willingness to participate through either voluntarily asking or answering questions during whole group instruction. Games, furthermore, integrate motivational enhancing components into the curriculum, and the classroom (Ng, 2018), by making subject matter more genuine and stimulating in the context of learning (Santrock, 2011). As such, games should be incorporated with more frequency to address content areas in the curriculum (Sardone & Devlin-Scherer, 2016).

According to Jenkins (2005), games develop a connection between the content material and the students' intrinsic motivation to learn as they participate in a relevant social activity. Furthermore, games not only access but support intrinsic motivation, as they allow student autonomy, and self-direction, both elements key to developing internal drive (Ng, 2018). Games do this by encouraging students to direct their own knowledge and highlighting the process of learning rather than the results (Jenkins, 2005). Motivation additionally increases through the goal-oriented nature of games, while simultaneously offering opportunities to safely make mistakes (Sardone & Devlin-Scherer, 2016). In-game reward and achievements entice effort and encourage resiliency in both high and low achieving students (Ng, 2018), as they appeal to the satisfaction of completing a task over receiving a grade and create an environment that allows for continuous attempts in

learning. This opportunity to safely fail supports the development of a growth mindset, which then has the potential to further support the intrinsic motivation to learn and create life-long learners (Ng, 2018). Games encourage experimentation and understanding through exploration of failure, thus reducing the anxiety many students feel when faced with potential failure in the classroom (Jenkins, 2005). This also promotes a growth mindset among students.

Sardone and Devlin-Scherer (2016) state games provide considerable educational benefits. Learning through games not only creates an opportunity for students to take charge of their learning, but also encourages an internal motivation to learn, and helps to develop a growth mindset. Games create "immersive experiential learning environments (Sardone & Devlin-Scherer, 2016, p 215)," which demonstrate higher positive brain activity effects, greater retention, higher levels of cognition, and act as a bridge between the student and the content as students apply their knowledge. During play, students communicate and collaborate for a deeper learning experience, enhance their problem-solving skills. Games provide an easy opportunity to promote learning and reinforce skills through play that clearly relates to specialized knowledge with obvious academic benefits (Jenkins, 2005).

Learning centers provide students the chance to practice and apply their skills in a risk-free environment that encourages intrinsic motivation and growth mindset, while small group environment allows for social interaction and peer supported learning. Including games in centers creates an engaging and enjoyable activity that supports students' interaction with the content knowledge to further drive the development of intrinsic motivation and promote a growth mindset. Centers and games create options for students to demonstrate their abilities, explore their mistakes and exercise their autonomy. All of these elements combine to generate a learning environment that fosters the growth mindset and intrinsic motivation necessary for improved learning experiences, and a love of learning.

Growth mindset and intrinsic motivation work together to act as the strongest factors in improving learning, academic achievement and student growth. By supporting development of growth mindset and intrinsic motivation through the use of learning centers and games, the intervention should improve student academic performance, and enhance their desire to participate and ask questions in whole group instruction. This study will determine if the use of learning centers in a fourth-grade math class improves academic performances on final tests and increases the level of participation in a whole group setting.

Methodology

This study focused on finding the effects of small group student learning centers in a fourth-grade math class. The intervention used two student directed learning centers to support student exploration of content material and development of skills, and one teacher-led small group center to focus more specifically on the learning needs for each student. The study aimed to measure any resulting changes in student performance or engagement in math by comparing data collected on the two equitably difficult mathematical chapters taught during the pre-intervention and intervention periods of the study.

Population

The data presented represents a fourth-grade class of four boys and seven girls, ages eight to ten, in a high achieving private school on Guam. As such, the majority of students in the school come from a higher socioeconomic status, with families that place a high value on education and academic performance. Furthermore, students need to test into the school, and thus, generally enter the school as high achievers. Of these students, four speak two languages at home. Though none require services for learning English as a Second Language (ESL), one student does continue to utilize school provided ESL tutoring by choice. Tutoring services have also been continuously utilized by three other students throughout their educational careers. All students receiving tutoring services do so at the request of their families, rather than any academic necessity. Additionally, two students moved to Guam from another country. Another two students come from military households, though the parents in the family were born and raised on Guam. The remaining students have all been Guam residents since birth. None of the students have been diagnosed with learning disabilities. All are of various Asian, Chamorro, and Caucasian decent.

Materials

Throughout the study, which examines students' academic performance, and engagement during whole group instruction, data was collected using the same materials. Participation was recorded using an observation tally sheet to mark each time a student participates by asking a question, or voluntarily answering a question or sharing knowledge. Academic performance was measured by comparing a pre-test for each stage of the study with a post-test, both of which will be supplied by the McGraw-Hill 4th grade mathematical textbook. All data will be collected, correlated and compared using Excel.

Prior to conducting the intervention, much of the instruction relied on the McGraw-Hill "My Math" workbook for grade four, as well as McGraw-Hill supplied supplemental worksheets. The control period also included a light use of manipulatives, such as counting blocks. Additionally, the class would use individual whiteboard math problem practice, in which the class would answer a teacher supplied problem on their individual white boards and share their various strategies for solving the problem with the class. Finally, much of the class relied on questioning strategies, rather than just direct instruction.

The intervention continued to utilize the math workbook during instructional days, and during the intervention at the teacher lead center. Additional centers included board games, card games, matching activities, partnered activities, and real-life application of the content. The board games included a basic colored board with colored mathematical cards of varying levels of difficulties for the students to draw depending on the color of the square on which the student landed after rolling the dice. Students had to solve the card in order to roll and move forward on their next turn. Some centers included various of card games, such as "WAR," "Memory," and "Go Fish" that allowed students to practice their multiplication skills and strategies. With the matching activities, students worked with a partner to determine various representations of a problem or match the problem and solution. Other types of centers included partnered work, in which students would create problems for each other within the parameters dictated by the directions of the centers. All centers provided a more interactive approach towards learning the material by including social interaction and peer supported learning to encourage math talk.

Procedure

The study, which lasted eight weeks total, included a four-week pre-intervention unit that maintained the existing classroom and lesson structure. This structure relied heavily on teacher lead lessons, use of the students' math workbooks, questioning strategies, and light use of manipulatives. With seven lessons in the chapter, and two lessons covered per week, the pre-intervention control period lasted four weeks.

The intervention period lasted for four weeks studying a unit of approximately equal difficulty to the pre-intervention unit. During the intervention, learning centers were used two times a week during regularly scheduled math lessons. The instructional math lessons alternated daily with the intervention activities to teach skills and ensured student understanding of mathematical concepts.

Students rotated through three learning stations remaining at each station for 10 to 15 minutes to experience both individual and group learning. The center rotation includes two student directed learning centers to engage learners, and also included a teacher-led center. Learning stations supported student's practice of math skills, as well as communication and verbalization by including activities such as mathematical based board games, computer activities, card games, partnered activities, manipulatives and mathematical challenges, among other similar activities. One station involved small group lessons with the teacher with a focus on precise areas of improvement for a more specific and student focused experience. Center activities varied by lesson, with some activities being repeated for more than one learning center session depending on student interest and understanding.

Both the control period, and the intervention period utilized the same data collection methods. A pre-test prior to the instruction of the unit, a post-test at the conclusion of the unit, and formative assessments applied throughout, measured student performance of mathematical skills. A teacher observation tally sheet recorded the frequency of questions asked and answered by individual students during the instructional lessons. Marks were given to an individual only if the student provided and appropriate response to a question, rather than checking any student who raised their hands to avoid counting students who raised their hands for other purposes.

Data collected during the control stage of the study was compared to the data collected during the intervention. Due to school scheduling during the time of the study, the math class schedule operated on a four-day week instructional plan. Additionally, due to scheduling of school breaks, the intervention period was divided by a three-week winter break. To lessen possible impacts of the break on the study results, the post-test for the intervention was divided by lesson content and delivered at two separate points. Prior to break, students were tested on only the content learned at the time, while the remaining content was taught and subsequently tested after returning from break.

Data Collection and Analysis

Data collected from the four-week control period was compared to the data collected during the four-week intervention period. The pre-test and post-test for each stage of the study, demonstrated student performance and growth throughout the control period and intervention. A comparison of the percentage difference between the pre-test and the post-test in each phase of the research demonstrated the learning growth achieved by the students and provided data to determine what effect the intervention period had on academic performance. Additionally, a teacher observations tally sheet monitored student participation in the form of volunteering information and asking questions throughout the two stages of the study. When compared, the data collected during the control period and the intervention period provided insight into what effect the intervention had on student participation levels in a whole group environment. All data collected used Excel to assemble and communicate the outcomes of the study using descriptive statics.

Limitations

The validity of this study many be affected by the small class size, which has only 11 students. A more diverse classroom population might produce different results. As with any academic outcome, student absences could affect the results of this study. As such, the results of this study may not be generalizable to other groups of students.

Research Questions and Hypotheses

Research Question 1: What effect do small group learning centers have on student engagement during whole group instruction in a fourth-grade math class?
Hypothesis 1: Small group learning centers in a fourth-grade math class will increase student engagement during whole group instruction.

Research Question 2: What effect do small group learning centers have on students' academic performance in a fourth-grade math class?
Hypothesis 2: Using small group learning centers in a fourth-grade math class will improve students' academic performance.

Results

This study examined whether the use of learning centers increase classroom participation among students in a fourth-grade mathematics class. Further, the study aimed to determine whether the learning centers increase students' academic performance on chapter tests.

The first research question focused on whether the learning centers would increase student participation during whole group setting through both voluntarily answering questions or sharing knowledge, and their willingness to ask questions. Following the completion of the study, all data collected throughout was compiled and correlated to analyze the effect that learning centers had on student engagement in a whole group setting, and overall student academic performance. Table 1 demonstrates the total participation for individual students and calculates the difference between total participation in the control and intervention period to measure any positive or negative changes.

Table 1: *Comparison of Student Total Participation during Control and Intervention Period*

Comparison of Student Participation Total during Control and Intervention Period							
	Control Period			Intervention Period			
Student	Voluntary Answer	Questions Asked	Total Participation	Voluntary Answer	Questions Asked	Total Participation	Total Difference
1	78	4	82	84	12	96	14
2	61	6	67	72	2	74	7
3	35	2	37	72	5	77	40
4	10	0	10	5	1	6	-4
5	82	5	87	70	7	77	-10
6	13	1	14	13	2	15	1
7	0	0	0	0	0	0	0
8	33	0	33	39	1	40	7
9	103	1	104	49	4	53	-51
10	0	0	0	5	0	5	5
11	55	2	57	52	2	54	-3
Total	470	21	491	461	36	497	6

As Table 1 demonstrates, students' willingness to share knowledge and respond to questions varied, with six students increasing their participation, through voluntary response, or asking questions. One very introverted and shy student remained the same with no change in participation. While the whole group voluntary response for Student 7 did not increase, the small group option helped the student to engage in math talk and work on communication on a smaller scale, as is consistent with the literature. Four students appeared to have decreased their participation levels, however, this is due in part to other students participating more, and class absences. Of those four, Student 11 and Student 9 missed one week each during the intervention period due to absence, which could account for the difference in participation. Additionally, though one student decreased their number of questions, and three maintained their number of questions, seven students increased their willingness to ask clarifying questions in a whole group environment.

Six students increased in their overall total participation, with Student 3, a previously unconfident mathematics student, increasing the most by participating 40 more times, and Student 10, a quieter student, participating five times. According the literature, this may be due in part to the student becoming more comfortable participating in smaller groups and practicing their communication and math skills on a more manageable level to build their confidence and encourage greater whole group participation. As the quieter, less confident students tended to increase their participation, the total overall class participation somewhat increased with students participating a class total of six more times during the intervention period.

The minor increase may be further explained and examined when comparing the level of participation lesson to lesson for each of the seven lessons during both the control and intervention periods. Figure 1 illustrates the total level of class participation, calculating both voluntary responses and questions asked together, measured for each lesson. Figure 1 also calculates the average between all lesson participation in the control and intervention stages to calculate any gains or losses in the total level of participation for the whole class throughout both stages of the study.

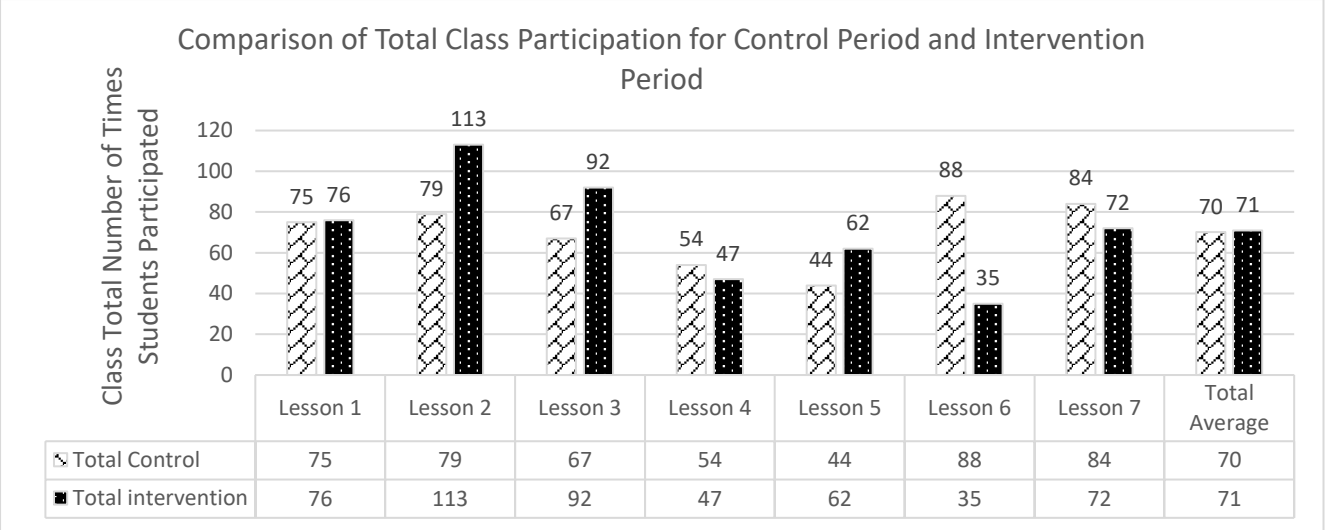

Figure 1: Comparison of the Total Class Participation for Control and Intervention Periods

While Table 1 illustrates the individual changes in participation, the total class participation by lesson is demonstrated in Figure 1, which shows the class total for the number of times students participated during each lesson taught in the control and intervention periods. When viewed lesson to lesson, three lessons decreased, and four lessons increased by varied degrees, with the overall total average of class participation remained about equal between the control and intervention periods. The most notable change, seen in lesson 6 for each period, may be explained by lesson 6 of the intervention occurring the day after students returned from their three-and-a-half-week winter break. Even with the discrepancy on lesson 6, students increased their lesson to lesson participation by a great enough amount to make up for the drop. Lesson 1 of the intervention occurred prior to the initiation of the centers, as such calculations for lesson 1 show the instructional day in which the students learned the math skills to be focused on during the centers for the following day.

While the students greatly anticipated and enjoyed the learning centers, the results of the study showed only minor changes to student participation between the control and intervention periods lesson to lesson. As such, with no notable increase in participation, hypothesis for research question 1 was not strongly supported. Regardless of the magnitude of the increase, the positive trend suggests that students may increase in participation over time, with consistent and regular use of learning centers.

This study not only looked at the participation outcomes, but also examined the overall level of academic achievement using a pre and post-test comparison for both the control and the intervention period. The second research question aimed to determine whether the use of learning centers would increase student performance on chapter tests with the hypothesis predicting academic performance would improve. The outcomes for student academic growth are demonstrated in Figure 2 with a comparison of the academic results and growth in the control and intervention period.

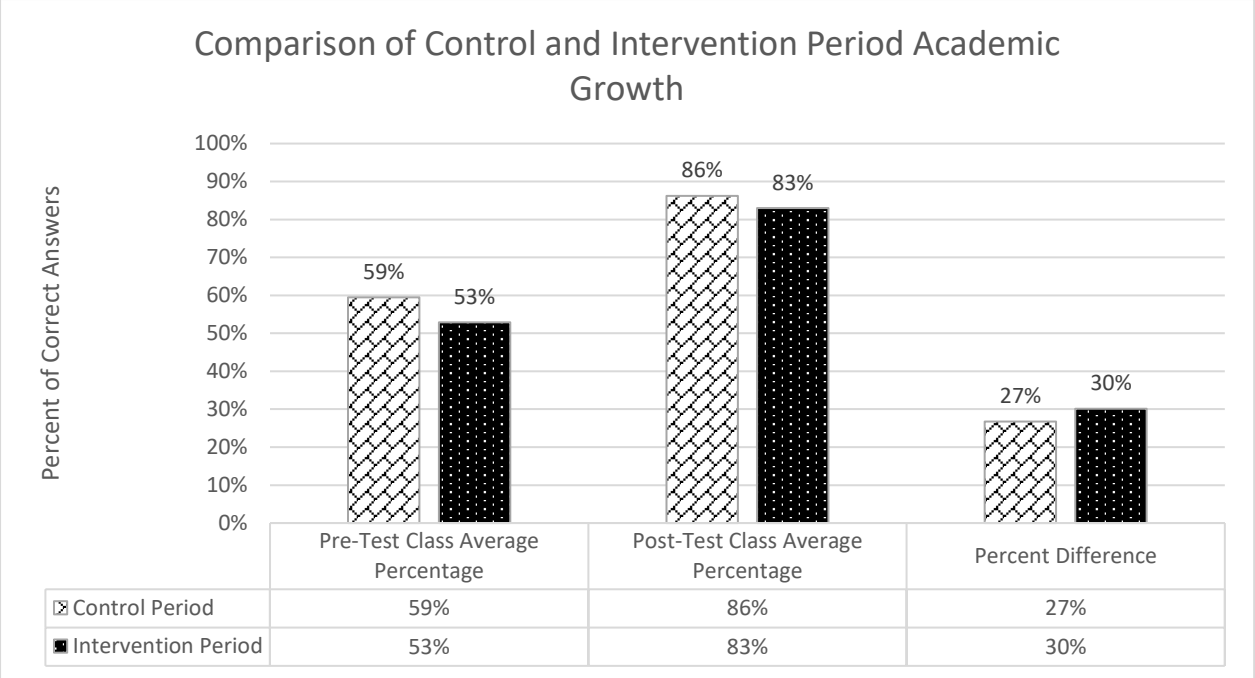

Figure 2: Comparison of Control and Intervention Period Academic Growth

Figure 2 presents the data collected on student academic performance during the control and intervention period by comparing the class average for both pre-tests and post-tests and comparing the amount of change to illustrate academic growth and understanding. The students began the control period with a 6% higher average on their pre-test when compared to the intervention pre-test indicating that the intervention content may be slightly more difficult. This higher pre-test average also demonstrates a stronger, more developed base of understanding for that content material. Students additionally demonstrated a 3% higher post-test score during the control period than the post-test for the intervention period. When viewed as only the test score averages, it would appear to disprove the second hypothesis, however, the important aspect is the overall growth between each period's pre-test and post-test.

As the students started the control period with a higher level of understanding, and a stronger foundation, students had an easier time building new knowledge. In contrast, students began the intervention period needing to construct a larger base of knowledge before they could master further material. Figure 2 illustrates a positive percent difference for both the control and intervention periods, calculated by finding the difference between the pre and post-tests for each phase of research.

As students worked with partners in every center, they found, examined, discussed and corrected mistakes in real time. Using the learning centers, students worked through problems and concepts together with shared ideas and tactics. This helped them to better and more ably master the information. While the overall score of the intervention period showed lower average post-test scores when compared to the control period counterpart, the post-test score actually demonstrated a 3% higher academic gain during the intervention, thus indicating students performed better, and acquired a better conceptual understanding during intervention period. The students increased their test results by 30% between the pre-test and the post-test of the intervention. The 30% gain in the intervention compared to the 27% gain shown from the control period's pre-test and post-test demonstrated a higher acquisition of skills and knowledge on slightly more challenging content.

With learning centers, the students' engagement with the content material and ownership of the learning resulted in increased academic growth when compared to the control period. Presenting the conceptual material to students in interactive and novel manner helped to cement the information for the students. This supports the second hypothesis that learning centers will improve student academic performance through increasing the levels of engagement with the content material.

Conclusions

While the results do not strongly support the hypothesis that mathematical learning centers will contribute to increased student participation in whole group settings, the results demonstrate a trend toward the positive effects of using learning centers in math classes. This is consistent with the literature on the subject. The data demonstrates an increase in skill acquisition and overall academic growth resulting from the intervention. This positive trend could potentially increase as the students use centers over an extended period of time.

Although the use of learning centers did not greatly improve student confidence and willingness to voluntarily participate in whole-group classroom discussions, they all enjoyed and looked forward to participating in the small group activities of the learning centers. As an additional support for the shy students, the ability to choose their own partners helped them to feel more comfortable and engage more easily with peers and content material. Furthermore, student attitudes towards math class definitely improved as the students enjoyed the academic and social interaction the centers provided. Students looked forward to center days, repeatedly requested to do centers, and generally required much less redirection to stay on task while participating in center activities. This increase in attention carried over even to the teacher-led center where students completed an independent practice worksheet.

While this study used learning centers twice a week, going forward in math classes, centers will only be used once a week to practice all the skills learned, with at least one additional center option to be provided to allow for more student choice regarding the specific skill area. As centers take extensive planning and often required more teacher preparation, using centers only once a week will be more manageable, while also giving the students something to look forward to at the end of each week. There are a number of mathematically appropriate commercial games could also be made available at a permanent math center for early finishers to utilize during free time.

Though the academic performance of students on post-tests following the implementation of mathematical learning centers was not hugely improved from the pre-intervention phase, the fact that students showed more improvement even with slightly more difficult content is noteworthy. More importantly, however, learning centers had a positive impact on attitudes toward math class and student focus on completing math activities. The more enthusiastic attitudes, in fact, contributed to an overall more positive classroom environment. These factors certainly recommend the use of mathematical learning centers in a 4th grade classroom.

References

Aditomo, A. (2015). Students' reponses to academic setback: "growth mindset as a buffer against demotivation. International Journal of Educational Psychology, 4(2), 198-222. doi: 10. 17583/ijep.2015.1482

Boaler, J. (2016). *Mathematical mindsets: unleashing students' potential through creative math, inspiring messages and innovative teaching*. San Fransisco, CA. Jossey-Bass.

Corpus, J. H., Wormington, S. V. (2014).Profiles of intrinsic and extrinsic motivations in elementary school: a longitudinal analysis. *The journal of Experimental Education*, 82(4), 480-501. doi: 10.1080/00220973.2013.876225

Hanson, P. (2016) Student-led learning centers in secondary classrooms. *Leveraging Student Led Classrooms.* 11(21). Retrieved from: http://www.ascd.org/ascd-express/vol11/1121-hanson.aspx.

Jenkins, H. (2005). Getting into the game. *Educational Leadership*, 62(7), 48-51. Retrieved from: http://www.ascd.org/publications/educational-leadership/apr05/vol62/num07/Getting-Into-the-Game.aspx.

Justice, L. J., & Ritzhaupt, A. D. (2015). Identifying barriers to games and simulations in education. *Journal of Education Technology Systems*, 44(1), 86-125. Doi: 10.1177/0047239515588161

McGraw-Hill Education. 2016. *My Math Grade 4 (v. 1).* Columbus, Ohio.

Ng, B. (2018). The neuroscience of growth mindset and intrinsic motivation. *Brain Sci*, 8(2): 20. Doi: 10.3390/brainsci8020020

Ramani, G. & Eason, S. (2015). It all adds up: learning early math through play and games. *Kappan*, 96(8), 27-32.

Rhew, E., Piro, J., Goolkasian, P., & Cosentino, P. (2018).The effects of a growth mindset on self-efficacy and motivation. *Cogent Education*. doi: 10.1080/2331186X.2018.1492337

Santrock, J. (2011). *Educational psychology, 5th edition.* New York, NY. McGraw Hill.

Sardone, N.B., Devlin-Scherer, R. (2016). Let the (board) games begin: creative ways to enhance teaching and learning. *The Clearing House*, 89(6), 215-222.

Sullo, B. (2009) Chapter 4: Discover the power of internal motivation. *Motivated student: unlocking the enthusiasm for learning*. Retrieved from: http://www.ascd.org/publications/books/109028/chapters/Discover-the-Power-of-Internal-Motivation.aspx.

Tucker, C. (2017). The techy teacher/stations: a shift that's worth it. Educational Leadership, 74(6), 86-87. Retrieved from: http://www.ascd.org/publications/educational-leadership/mar17/vol74/num06/Stations@-A-Shift-That's-Worth-It.aspx.

Voke, H. (2002). Motivating students to learn. *Info brief*, (28). Retrieved from: http://www.ascd.org/publications/newsletters/policy-priorities/feb02/num28/Motivating-Students-to-Learn.aspx.

Voltz, D. L., Sims, M.J., & Nelson, B. (2010). Chapter 1: gathering and using the best methods for instruction. *Connecting teachers, students, and standards*. Retriever from: http://www.ascd.org/publications/books/109011/chapters/Gathering-and-Using-the-Best-Methods-for-Instruction.aspx.

Weidinger, A., Steinmayr, R., & Spinath, B. (2017), Math grades and intrinsic motivation in elementary school: a longitudinal investigation of their association. *British Journal of Educational Psychology*, 87, 187-204. Doi: 10.1111/bjep.12143

Section Three

Critical Essays

Stieglerian Meditations

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Internet Culture, "A Septic Tank in Which Spirit Decomposes"

A common but misguided reader response to Bernard Stiegler's critique of the impulsive, uncritical and now largely algorithmically automated fusion of digital media and human culture is that he is "against technology." This is the same (misguided) response I receive when teaching Stiegler's writings, albeit politely whispered beyond hearing range. This response can arguably be ascribed to an ignorance of dialectical thinking. The productive negation that is indispensable to dialectical thought--critical thinking--is perceived as "negativity" and shunned as such, although progress and change demand it. The fact is that Stiegler has argued for a new industrial model and attention economy of "cooperative digital technologies" that can empower, and not disable, memory and invention, that can enable and diversify, not short-circuit and disable, forms of human individuation and freedom.[1] The impression that Stiegler is against technology arises in part from what Byung-Chul Han has described as "an excess of positivity" in today's consumers of technology, whom he calls "achievement subjects."[2] In their *can do* world of measured performativity, consumers cheerfully adopt new technologies to optimize their performance outcomes. In the same spirit of chasing performance outcomes, the schools likewise focus on teaching the correct adoption of technologies and apps as tools for human optimization, without teaching the critical thinking that interrogates, on a case by case basis, the actual pertinence of such tools and the costs they exact from human autonomy, creativity, and intelligence. According to Stiegler's research, these costs are prohibitive and must be carefully reconsidered. Casual readers who are unaccustomed to Bernard Stiegler's critical observations will giggle uncomfortably when reading words like "stupidity," assuming he writes with tongue in cheek about their reified and compulsive behaviors, but his prolific philosophical analyses are deadly serious: "The consumer, in short, becomes nothing more than an instance of purchasing power, which is to say of heedless consumerism, and thus an 'agent' in the heedless destruction of the world."[3]

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Citizens of hyperindustrial democracies, blessed with great universities, libraries, and research institutes, know how to shop. They are enthusiastic consumers, having long ago traded the Platonic virtue of *knowing* for the fool's gold of *having*. Their foremost priority is not enlightenment or the abolition of poverty and racism, but *broadband connectivity* to optimize the online shopping experience and social media interactivity. According to Bernard Stiegler, they have been grammatized, spellbound and commodified by a relentless cascade of commercially disseminated programs and platforms, devices and algorithms, together known as the *culture industry*, that capture attention and personal data, subliminally implant tertiary retentions (screen memories eclipsing biographical memories: *The films I've seen are the places I've been*), then short-circuit or bypass psychosocial individuation (personal development) for preformed, curated or choreographed collective individuations and interindividuations. For Stiegler, the verb "to grammatize" serves as the original umbrella concept for all the ways the spontaneous flow of human consciousness is discursively schematized and governed by language, cultural institutions, and industries. Interindividuations are a special case of disindividuation comprising *indeterminate personae* whose desires situate them *between* idolized celebrities and Instagram influencers, much like Buridan's Ass in philosophy, which, situated between a bucket of water and a pile of hay, can't decide whether to drink or eat, and perishes as a result. Such a fatal crisis of decision making is less likely for humans than mules due to algorithmic automisms that make personal choices for us. A stalemate or aporia could feasibly develop if the decision process is left up to friends chatting and exchanging opinions on social media. For example, a consumer deliberates for hours with friends on social media whether to color their hair like Taylor Swift or Jennifer Lopez. But this interindividuational ambivalence is resolved if the consumer shops for hair color independently on amazon.com or another site with personalized algorithms which suggest a specific color based on previous purchases and search results. Which is the more preferred outcome, socially mediated indecision or automated decision making? The selfhood of the interindividuated being, transfixed as it were in a hall of mirrors on Instagram between Taylor Swift and Jennifer Lopez, signifies a mode of being neither better nor worse than those who are joyful in their unfreedom as they become members of a collective fandom, or successfully imitate a celebrity. Both cases are, according to Stiegler, disindividuations, base or "stupid" forms of being alive that have undergone *proletarianization* and

automatization, embodying the "most recent stages of the ongoing process of grammatization, that is, of the discretization and technical reproduction of human fluxes and flows."[4]

If, as Stiegler argues, "Digital automatons have succeeded in short-circuiting the deliberative functions of the mind," so-called human behavior operates at a level of functional passivity, its decision-making "functionally tied to drive-based automisms" that synthesize market trends and personal data to make consumers feel like they are exercising taste and selectivity.[5] This means that shopping and decision-making involve an automatic and automated channeling of libido (desire) based on market trends and personal data. This means that nuanced thoughts and decisions regarding one's lifestyle, one's diet, education, work, relationships, health, personal time (*Lebenszeit*) have become mediated and automated by drive-based consumer marketing and mass media that control the attention economy, which is always also a libidinal economy. According to Stiegler, the industrial and algorithmic production of memories, cognitive styles, and tastes creates the illusion of choice and selectivity in gullible individuals, such that as one shops on Amazon or listens to music on YouTube, one feels one is exercising his freedom, when in fact one is exercising his unfreedom, his purchases and listening tastes being algorithmically preselected. The mass synchronization of standards and tastes within the global marketplace online is, for Stiegler, a sort of "septic tank in which spirit decomposes."[6]

What troubles Stiegler is that the untold hours spent by consumers online do not, for the most part, strengthen their sovereignty as individuals, as free spirits, but unmoors them from whatever autonomy--if any--they have established. The hours spent browsing, shopping, video game playing, watching movies, downloading music, messaging, tweeting, exchanging "likes" and following and emulating various influencers, are not hours of developmental progress in which users become more individuated and less enslaved by taking selective ownership of a stock of knowledge (*Wissenvorrat*) and leveraging it to increase one's power and quality of life. The time that is wasted online is amorphously distracted lifetime (*Lebenszeit*) and does not fortify expertise and mastery, but further enslaves and alienates users in engrossing and entertaining trivial pursuits whose intricate engineering remains incomprehensible and exclusive. Instead of using precious time to grow up and exercise one's powers of self-determination (*Selbstbesinnung*), consumers of digital culture stymie their own maturation in binges of marathon gaming, shopping, and Netflix viewing. The knowledge and wealth gaps only widen between swarms of awe-struck users and richly compensated high-tech software developers. Stiegler calls this process the "proletarianization" of consumers, which he traces back to "a loss of knowledge resulting from exteriorization" described by Marx in the *Grundrisse* (1857).[7] Proletarianization is, according to Stiegler's analysis, a synonym for stupidity.

First Meditation: MARSHA AND ROBERT GET PROLETARIANIZED

In human experience the spell is the equivalent of the fetish character of merchandise.
--Theodor Adorno, *Negative Dialectics*

Marsha has just finished posting some new pics on Instagram of her wearing her new Lululemon fitness wear, more specifically, a pair of "Hotty Hot Shorts II," which she had stared at with wonder and envy on an influencer's site until she finally went to Lululemon's online store, pulled out her Chase Explorer Card and "just did it" as Nike used to say in their commercials. The bold and alluring fashions or "lifestyle apparel" of Lululemon associated with fitness or "wellness" strongly appeal to Marsha's body and self-imagery, and she began exercising in earnest for the first time in her life so she would have an excuse ("create the opportunity" she told her spouse) to purchase the new fashions on her Chase Explorer Card. Marsha felt that by using the card, which gives United mileage with every transaction, her husband, Robert, would be less intolerant of her new spending spree, but he still expresses disapproval, albeit silently, grinding his teeth, and dreaming of smoking, of really enjoying a cigarette, something he stopped nine years ago when their first child was born. He is glad Marsha goes for a daily run, and even accompanies her on weekends, but he finds the Lululemon prices appalling (skimpy "Hotty Hot Shorts II = $58) and unjustifiable given the savings one can pocket by buying generic fitness wear at Kmart. When he first suggested this alternative venue for sportswear, marital intimacy came to a standstill; cooking and laundry likewise. He had to pick up his dinner at Burger King until he apologized for invoking the K word. When he first allowed a grimace of sarcasm to disrupt domestic harmony,

Marsha snapped: “You are not on Instagram, so you don’t know anything about this. Not a freaking clue!” She also argued that Lululemon was not just about “shopping,” as if shopping itself is vulgar, that there are ethical issues at stake as well, and one has to be a conscientious shopper. She said she was impressed that Lululemon complied with the Modern Slavery Act of 2015 and the California Transparency in Supply Chains Act 2010. She explained to Robert, a lawyer who she felt was strangely unapprised of such matters, that Lululemon’s COC or Code of Conduct sets out a zero tolerance approach to practices of forced or involuntary labor, child labor, or human trafficking of any kind within their operations and supply chain.

All this talk about corporate ethical codes and practices strikes Robert as a ruse of the culture industry, a consumerist fable, a way for the bad conscience of materialist atheism to mitigate its self-consciousness and guilt. The one philosophy course he took in college, which he attended while high most of the time, and for which he received the grade of “C,” inscribed his worldview with a critical edge that often compels him to take an antithetical view of things. He thinks of himself as a sort of sentry of the dialectic. If you say “Nice day today,” he will reply, “Really? How do you know that?” or “What is your evidence for that observation?” Although he never attends church and likes to quote Marx to the effect that “religion is the opium of the masses,” he has a mildly flattering impression of himself as a *spiritual person* due to the amount of time he spends reading. He read somewhere—was it in a book by Ivan Illich?--that reading, along with prayer, is an attentional form that established what Westerners call the “self” or “selfhood.” Reading serves as an inner retreat for preservation of the soul, free from digital distractions and the lures of materialism. “Humans are not born with a soul,” he likes to argue with neighbors during summer barbecues. “They build their soul book by book, prayer after prayer, in acts of attentional focus.” Likewise, he discovered—probably in Ivan Illich—that reading instils calmness and patience in readers.[8] This would explain the rise of attention deficit disorder, as children turn to Gameboys and smartphones instead of books. No one knows where Robert is coming from when he utters such oracular insights at barbecues, but they deeply offend the Catholics who reside in the neighborhood; often Marsha ends up apologizing for her spouse’s arrogance. Deleuze would say that Robert is the sort of nomad who, while staying in one place, pursues a “line of flight” with certain images and ideas that contest (deterritorialize) the local order of things. He does so because he vaguely but stubbornly thinks of himself as *philosophical.* The faded memory of Robert’s college philosophy class is, seventeen years later, his alone, and has grown integral to his retentional (mnemonic) continuum and hence to his selfhood on a tacit or subconscious level. Stiegler would find here understated but noteworthy evidence of individuation linked to the philosophic memory trace—“secondary retention”--and its future activation of amateurish philosophical musings.[9] Assessment officials would call this intermittent awakening of the philosophical impulse a *long-term learning outcome*.

It is significant, however, that this is not how things play out for the self-understanding of an American who privileges action over thought. Robert will overlook the mnemonic traces appreciated by Stiegler and, out of impatience, misrecognize himself as a *man of action* and not as a thinker. When Robert gets into a philosophical mood, thinking brings him little comfort. He gets into arguments with neighbors and offends the religiously devout. Thinking is an intermittent disturbance, an abrupt awakening, an inconvenient upheaval of spirit in the horizon of what we take for granted. In a thoughtful mood, Robert asks himself: How does one know, in the postmodern epoch, whether one’s feelings and motives are genuine or simulated? Was it all a matter of language games, as Wittgenstein argued? Did Marsha’s materialist atheism, as he liked to think of it, only dialectically reinforce his own private transcendental illusion of a soul? Perhaps *thinking itself* is unreliable, being preconditioned by language, and *only action* can provide a sense of wellbeing. But to give up on thinking is to exclude the spiritual dimension of existence, of this he is certain. To overcome this binary conflict between the *vita activa* and *vita contemplativa*, he slowly begins disburdening himself of material possessions, to be less distracted and more available for spiritual exercises like reading and meditation. Neighbors and friends take notice of his garage sale and initially attribute it to financial hardship, but they gradually come to admire Robert for rebelling against the crass materialism of which they are all guilty. Marsha scowls but appreciates the additional space that becomes available in the garage and basement. Meanwhile Robert remains unsure, after years of neglecting his powers of intellection, how to replace his mode of having with a lifestyle based on a mode of knowing and thinking. If you do not live an academic life, how do you center your energy in the life of the mind? Where does the culture industry provide sustenance and support for those nonacademic citizens who seek to devote their lives to thinking for its own sake, a noble spiritual effort which Aristotle called *Theoria* (theory) and *Sophia* (wisdom)?

All of this so-called downsizing is not an original idea with Robert, although *he feels like it is* due to the admiration of envious neighbors whose homes are glutted with material belongings, and who marvel at Robert's austerity. He has been using a mobile app for downsizing called "Downsize!" to which television programs and YouTube clips called attention before Robert ever heard of it. Regardless, downsizing makes Robert believe that he is, in Stieglerian terms, transindividuating,[10] tailoring or tweaking his own individual lifestyle towards *niche specificity*, a spiritual style and order of things, although he is in fact *disindividuating* himself by *collectively individuating* with thousands of other media consumers using downsizing apps, according to the trend of downsizing—a trend as fashionable as the Lululemon lifestyle of consumers participating in expensively-garbed fitness culture. As we said, neighbors and coworkers less privy to the world of trendy apps have been duly impressed with Robert's transformation, and often request his assistance--for pay--in adopting a "downsizing philosophy." Their own *desire for a guru* of domestic rebirth has *conjured or produced such a guru* in Robert. He accepts this role because it coincides with his own desire for self-transcendence and is none too fussy about its source.

Consequently, Robert establishes a lucrative consultancy (with a YouTube demo) in downsizing, the time required for which diminishes his efforts at spiritual progress. A digital app is truly effective when it convinces a user like Robert that he is being original and autonomous, not unoriginal and heteronomous. Someone might argue that by monetizing the idea of downsizing, Robert has cleverly reindividuated himself. Others might argue that Robert has become distracted from his original purpose, to free his existence for the life of the mind, and is now exploiting himself,[11] that is, exploiting (monetizing) the freedom he gained for himself by downsizing. The latter would insist that where Robert is genuinely individuated is along a rustic and faded thread of memory linking him to philosophy as critical dialectics. He shares this with no one else in his neighborhood or workplace. The episodic impulses and intensities that are generated along that thread, that buried and faint libidinal economy producing pleasure in thinking, in arguing for the soul at summer barbecues, individuate him more than the trend of downsizing, but he *misrecognizes himself for a man of action*--again, a fairly typical outcome for an American male—and continues growing his consultancy, not his spiritual life.

Martha finds exercise boring, has *always found it boring*, but the Lululemon clothing, exciting... She interrupts her running constantly to take selfies wearing her Lululemon apparel. The problem that gnaws at her of late is that she feels restless soon after posting new pics. She is not fully at ease until she receives responses to new pics, but she can hardly post continuously. When she first began using Instagram, responses from her followers usually produced a subdued tingling, a feeling of momentary exhilaration; then there would be a temporary lull in her posting activity, accompanied by the rather pleasant feeling that she is buoyant and not sinking into oblivion, that she is catching up with the influencers. But now her flotation gives way to sinking, to fading away beneath the waves, and she once again feels compelled to post more pics when flotation starts feeling like sinking.

Martha is most joyful and "herself" not when she is jogging or doing yoga, but when she is using one or more of her digital devices; this togetherness or cohesion that she feels as an *integral selfhood* is remarkable insofar as she is fully exteriorized by her wired and wireless activities, colonized and enslaved by her devices, apps, and platforms, which are the nodes of the control society described by Deleuze.[12] It attests to the brilliant design and coding of all such devices and attention capture techniques that they simulate in Marsha's brain an experience of self-expression and individuation while her brain is grammatized and colonized for commercial advantage. This algorithmically simulated experience of selfhood gives Marsha pleasure and builds her confidence while her personal data is harvested for corporate enrichment. Deleuze says that surveillance and discipline, as understood by his friend, Foucault, are no longer administered in some tangible institutional structure or system of confinement, some visible disciplinary infrastructure, but entirely through the continuous, seamless communication networks that billions of people join in the gregarious spirit of proletarian sharing and mutual appreciation.

Second Meditation: JIMMY THE GAME BOY

Jimmy is a second-year college student majoring in Math with a minor in Communication. Since childhood, his sole preoccupation has been playing video games. He is considered bright, something of a math whiz, always scoring well above average on standardized tests. He has a hazy expectation of himself doing coding when he

"grows up," although he also thinks about being a technical writer, along the lines of Kurt Vonnegut, praised by his high school English teacher, but whom Jimmy never read except for the story, "Harrison Bergeron." (The only thing he recalls about the story, which he hurriedly scanned before class, is that a rogue genius named Harrison Bergeron is shot and killed with his beautiful lover in midair by a third-person shooter. Jimmy does not recall that they are shot by authorities for the crime of *being themselves*, that is, for being smart and lovely.) Jimmy has never taken time to research either coding or technical writing as possible careers, and his college major was a last minute decision, for lack of better ideas, because he had a vague notion math leads to a career in coding. All such practical tasks, no matter how profoundly they might impact his life, are perceived as nuisances that threaten to take him away from gaming; his homework has always been accomplished in brief, breathless intervals between bouts of gaming; likewise eating; and even urination is often delayed or deferred while gaming until Jimmy's bladder is ready to burst.

One of the tragic outcomes of our "always plugged in" cultural decadence is that over time, young people engrossed in their favorite modes of attention capture within popular culture (video game playing, watching movies, downloading music, messaging, tweeting, etc.) become so niche specific that they lose their desire to communicate with others not similarly engrossed or addicted, such as their teachers, parents, and grandparents. There is undoubtedly a stock of knowledge *(Wissenvorat)* associated with video gaming, and Colin Milburn goes so far as to argue that video games "provide a grammar, a vocabulary, a regimen for dealing with rapid technoscientific change and its worldly ramifications,"[13] but if we look back to Jimmy's childhood, we will see a gamer obsessed with specific games who becomes socially isolated and prefers to keep company with like-minded gamers. This is a common outcome of digital existence or "screen life," that while platforms and apps appeal in theory to the gregarious instincts of so-called digital citizens, in practice those citizens use filtering mechanisms (both technical and psychosocial) to become ever more isolated and uncivil in their communicative behavior. The utopian promise of the internet as a horizon of unlimited openings to otherness and diversity yields, in practice, a closed universe, or rather, a concatenation or endless series of "subuniverses" as defined by William James.[14] The openness of human consciousness is a potential force for hospitality, for welcoming others who teach us to overcome ourselves and initiate new projects in the days ahead. But in many cases the digital industry perverts this spirit of hospitality by bolstering narcissism and consumer avarice—in other words, crude self-interest.

Outside of gaming and his gaming subuniverse, Jimmy's basic knowledge of the lifeworld, i.e., his *savoir faire* and *savoir vivre*, is proletarianized, that is, rendered stupid, which thwarts his intellectual and emotional development at a time Jimmy should be maturing. His compulsive gaming renders him "minor" or immature in Stiegler's sense, derived from Kant's notion of the unenlightened individual moored in heteronomy or unfreedom. For example, until recently Jimmy has never shopped for clothing, opened a bank account, or taken himself out for something to eat, fast food or otherwise. He would rather open a can of tuna, mix in some mayonnaise, and eat it with a fork from the can while gaming, than bother to purchase a tuna sub at Subway. For most of his developing years, between five and eighteen, which includes almost all of his childhood and adolescence, Jimmy played electronic games, first on the Nintendo Gameboy, arcade stuff, then *Donkey Kong*, *Super Mario Brothers*, etc., then on more sophisticated platforms, both consoles and PC-based, large-scale interactive multiplayer games online such as *Minecraft* and *World of Warcraft*, and has of course played today's (Third-Person Shooter) *Fortnite*, towards which, now that he is "older," he expresses indifference; but before that he played *Mortal Combat*, *Grand Theft Auto* in all its releases, *Call of Duty: Finest Hour*, *Resident Evil 4*, *Mass Effect 2*, *Portal 2*, Half-Life 2, *Fallout*, *Chrono Trigger*, *Super Mario World*, *Metroid Prime*, *Doom*, *Diablo*, *Legend of Zelda: Ocarina of Time*. He has never been fond of the movie games, sports games, and large-scale fantasy games. Given his tight schedule as a college student on work-study, he avoids playing most of the new games; if he has the time, he prefers to go back to the "classics" of which he has a vast and impressive collection.

If we return to Jimmy's younger days to look at his social life, we see that most of his free time outside of school was spent playing video games; he preferred making friends both online and offline with fellow gamers who speak the same argot (specialized language) and share the same stock of knowledge (*Wissenvorat*). His involvement in gaming gradually became more selective, and Jimmy thought of himself as a self-determined (*Selbstbestimmt*) gamer and not a trendy follower or member of a global herd of media consumers. As with users of social media whose algorithms tailor the semiotic milieu to simulate personal experience and keep them engaged online, generating billions of dollars in clickbait income for the incorporated platforms, Jimmy was convinced that he was an individual while being disindividuated into highly compulsive if not automatic

consumer behavior. Stiegler would say he felt transindividuated, or cognitively diversified, but this sensation was largely illusory so long as Jimmy only *consumes* games and does not *contribute* to their artistry or technical innovation. For example, for a long time he was totally captivated by so-called *stealth games* ("stealth mechanics") such as Hideo Kojima's *Metal Gear*, especially *Metal Gear Solid*, and limited his company to guys who played *Metal Gear* games. He felt this niche defined him as an individual, blind to the fact that hundreds of thousands of gamers felt the same way at the same time.

Hence gaming has had a profound effect on Jimmy's socialization, first providing him with a general feeling of belonging to a new, capacious community online, and then a more maverick feeling of specialization. His acts of selectivity simulate individuation with gestures or signs of aesthetic and/or intellectual discrimination, a certain snobbishness which masks the underlying reality of his commercial disindividuation into a sub-collective (subuniverse) of synchronized players all of whom favor the same mass-produced games created and licensed by companies such as Valve and Electronic Arts. This simulated persona of a *selective player who doesn't follow trends,* who is something of a rebel or hacker in the making, makes Jimmy appear shy or evasive in public, a somewhat withdrawn fellow to people who are not gamers, although he is fully "himself" (whatever that means: e.g., expressive vs. flat affect) when he is online or chatting with gamer friends in the hallways at school. An onlooker who observes Jimmy for a while would say that although he is self-possessed in his own rigid, sort of defensive way within his circle of competence, his social skills seem crude and undeveloped when he is in a public setting, as if mildly autistic: "Jimmy seems withdrawn but not unfriendly. If you can draw him out by speaking of video games, he is both polite and personable." If he is forced by circumstance to interact with people who are not gamers, such as teachers, classmates, and family members, he seems a bit impatient, as a rule, and taciturn; and also avoids eye contact. He remains a virgin in his second year at college, and has not dated anyone of either sex, ever. A psychologist might argue that these symptoms are manifestations of addiction. If one observed Jimmy in a strictly academic setting, during the course of a normal school day, it would be convenient but mistaken to diagnose his overall behavior as impaired by Attention Deficit Disorder, if the latter is presumably involuntary. In fact, Jimmy can pay attention when he desires to, or forces himself to, without Adderall, as when he became absorbed in dystopian novels in his senior year and read both *1984* and *Brave New World* from cover to cover. In a manner of speaking, he approached those novels as he would a video games, with rapt, undivided attention. But generally, as is true for most serious gamers, his intelligence and willpower are not powerful or effective enough to overcome the distinct, persistent phenomenological impression that reading a novel is a slower, more strenuous, and less exciting experience than playing a video game.

Our brief observations in the phenomenology of gaming raise the issue of Jimmy's education and intellectual development, or enculturation (*Bildung*), which would seem, like his social life, to be profoundly affected by his years spent playing video games. Although he achieved above average grades throughout his schooling, these outcomes did not reflect his actual intelligence, and were mediocre compared to the results he could have achieved had he applied even a portion of the attentional force he spent on playing video games. Hence his total yield or epistemological gain in knowledge acquisition was modest given the number of years he was enrolled in school, and it has only been in college that he has begun to apply relatively undistracted attentional power to his studies, easily achieving a 4.0 grade point average. He wears eyeglasses now, the consequence of screen "burn," and his memories of childhood are marked largely by transition points to different games that captured his attention and focus at that time. Denial functions within his memory to preserve his wellbeing by preventing Jimmy from fully grasping the amount of precious lifetime (*Lebenszeit*) he sacrificed for the sake of gaming over the years of his childhood and adolescence, making others wealthy by squandering the treasure of his attentional life, which was *unconsciously monetized within the new attentional economy* in which *attention is the currency*. Likewise, he has never fathomed, in his self-understanding, what Stiegler calls his "integration into standardized and grammatized routines," or, put another way, the production of his proletarian selfhood as a consumer of video games by the culture industry (video game industry) for its own profit, effectively enslaving him. Remarkably—and sadly--enough, he has always seen himself as a master, a Lord in the world of gaming. His email namesake says it all: LordJim92@gmail.com. This arguably explains why Jimmy does not recall the plot details of "Harrison Bergeron." His selective memory, according to Freud, deliberately covers up the fact that Harrison and his lover are smart nonconformists who refuse to be proletarianized, that is, who resist being "dumbed down" by a legally enforced, universal reduction of intelligence. In this way, Jimmy's memory protects his self-understanding (*Selbstverstehen*) from realizing that in his own historical time it is not law enforcement that proletarianizes people, but the culture industry—Electronic Arts, Activision, Netflix, Facebook, Instagram, Amazon. Even Kurt Vonnegut himself would be

astonished that it is *culture* that does this to people, not *government*, that so many people could be entertained to death or enslaved *voluntarily* by commercial attention capture technologies, and that a book series called *Dummies Guides* could become explosively popular among students by the next millennium.

Third Meditation: PRESTIGE MOTORS, INC., or, AUTO-COMMODIFICATION

Rodney is a second year student who has yet to declare a major. He would like to be an automotive engineer but is terrible at math; lately he has been thinking about majoring in business. He would like to have his own automobile detailing shop—"Rodney's Custom Detailing." Between classes, Rodney loves to sit by himself in his spanking new candy-apple red Honda Civic with an icy cold AC and a custom built, large-and-loud exhaust system, the latter—that's right, just the exhaust system-- costing him six months of paychecks from his part-time job at Pizza Hut. The guy who sold him the Honda said it didn't need a new exhaust system or anything else: "Save your money for the monthly payments, kid." Rodney hates being called "kid," but he hates it even more when his older brother puns on his name and calls him "Hot Rod." ("Hey, Hot Rod: how much horse power in that Civic?") Rodney went ahead and purchased the new exhaust system, which depleted his savings account to such an extent that he could not afford to buy the required textbooks for the semester. This addition to his car was frankly cosmetic, but it made Rodney feel stronger and rather breathless, like he had just left Paradise Fitness Club after completing a tough workout regimen.

When Rodney sits in his car, the aura of the thing supplants his body awareness, not so much erasing his body as retrofitting it with metallic splendor. He feels like a Transformer! Such is the spellbinding reverie of self (auto) commodification. Bernard Stiegler invokes Felix Guattari's concept, "machinic enslavement," to describe the phenomenon of owning and driving a car, which involves the mode of reverie experienced by Rodney:

> Driving my car 'automatically,' that is, 'without thinking,' and in this sense 'unconsciously,' one part of me is totally enslaved to an engine and a mechanical vehicle that it 'serves' by 'using it,' while an 'other' part of 'me'—which is, however, perhaps not completely me or my ego, but rather *also* this obscure zone of intermittences that is the *id*—finds itself in a greatly dis-automatized mode: the mode of reverie, akin at times to floating attention, which is always at the origin of thinking that goes off the beaten track.[15]

Secretly, Rodney would rather *be* the car than himself; he often feels like an unsightly presence or feature that detracts from rather than adds value to the Honda. Sometimes Rodney gets physically excited if the automobile aura is intense, as it is on clear, sunny days, and this embarrasses him as if caught doing something "dirty." To regain his composure he combs his hair and chews gum, occasionally revving the engine by pumping the accelerator. When he drives back and forth through the commercial district of Tumon on weekends, the gruff, cacophonous exhaust makes him feel sort of tough, but that muffler, sounding more like a Dust Devil than a Hellcat, annoys people who walk their dogs to get some fresh air, or jog to consolidate their mindfulness. Back on campus, he wears dark "yakuza" sunglasses as he lingers in his car; their shading effect, compounded with the darkened windshield, almost totally blinds him, rendering reading impossible. But he never reads in his car, instead listening to trending tunes on the radio at a high volume that makes his Bose speakers excessively vibrate on the bass end. He would hate to be seen reading in his car! What would people think? Now, if reading was a trend, that's a different story. When everyone was reading Harry Potter, he lugged it around to be *seen* with it.

Rodney will never listen to music that is not trending, or do *anything* that is not trending. And even when he hasn't finished his homework for his next class, he abstains from reading and writing, mostly because his car is so aesthetically captivating that it utterly distracts his limited powers of attention. (It is said that humans have an attention span of eight seconds, briefer than a goldfish.) When he listens to the radio, he savors the vibration of 30 watts of RMS stereophonic power to each channel, distributed to six speakers, which soothes his fundamental insecurity about his skinny legs and eyeglasses. Rodney holds his breath when he observes fellow students crossing campus with smartphones in hand, or parking their cars, hoping they appreciate his car when they pass by. Although Rodney uses his smartphone as a companion, an invisible interlocutor, like everyone else when he walks to class, he resents, like a jealous lover, the way smartphones draw attention away from his car. (All those self-absorbed people….why don't they look around?) Rodney desires *their* desire

for his car: that's secretly why he bought it—to feel *their* desire, boosting the *prestige* he desperately desires for himself in order to be recognized as a valued or valuable person. In this regard he conforms to the master/slave dialectic described by Alexandre Kojeve in his lectures on Hegel.[16] The idea of being recognized in class for business acumen as a Marketing major, or as an effective speaker in Communication, has never occurred to him because the classroom is not a space of recognition, but a place to slouch or sleep until class is over. The classroom is a space of learning devoid of prestige, not a space where prestige can be recognized. On campus these days, one is no longer recognized for knowing something, but for owning something like a hot car, for having a hot girlfriend, or for playing certain video games in class that are trending, such Grand Theft Auto or, more recently *Fortnite*.

As we said, it is crucial to Rodney that everyone notice his car and admire it with a smile or envious glance. If no one looks, he feels annihilated. The metallic and carbon-fiber exoskeleton of his Honda embodies all of the value he attributes to his existence but is too reticent, too shy, too terrified to affirm or showcase in the flesh. Sometimes he drives around in search of a parking spot closer to the building where he has a class. He avoids out-of-the-way spots where his car will go unappreciated. Sometimes he opens his windows and turns up the volume of his radio to get attention, seemingly oblivious to the fact that classes are being taught and his music penetrates the walls and windows. The only thing that worries him is that, when classmates peer at his car and sway to the music, the sunlight is angled *just so,* to his disadvantage, and they look past the body of the car, its metallic splendor, and see *his* body, which hides away in the tinted darkness like a burrowing mole, or a little mushroom under the basement steps.

Fourth Meditation: THE YOUNG GIRL'S COGNITIVE SATURATION

Fly away, my sun-bewildered pages! Let's run at the waves and be hurled back to living…the wind is rising…we must try to live!–Paul Valéry, "The Graveyard by the Sea"

The Young Girl is on the beach smoking a Marlboro Menthol Light, listening to rap music on her smartphone, and reading the assigned text "The Spell" in Adorno's *Negative Dialectics* on her new Kindle Fire with a Cloud Drive and Cloud Player with its incredibly cheap download service for Kindle editions.[17] While getting a cigarette she found a note--one of many she writes to herself--in her Gucchi handbag that says READ ADORNO FOR THE QUIZ. She flunked the last quiz in philosophy class and promised herself to do better on the next one, mostly because her boyfriend is the TA in that class and will see the quiz scores. He is so freaking cute that she actually pays attention during his discussion sessions! Her smartphone, loaded with social media apps, which keeps bleeping and dinging in her Gucchi handbag, can also be used for reading assignments, but the screen is smaller than the Kindle's. She keeps adjusting the screen of her Kindle Fire because of the sunlight on the beach, but drifts seamlessly into using the browser and checks her text messages and tweets. There is a reminder of a big holiday sale at Forever21.com, another sale at Macys, Nordstrom, another at Victoria's Secret; Amazon's shopper algorithm "personally" recommends several books, films and cosmetic products; United Airlines has a "limited time offer "of discount prices for flights to Manila. This is only a small sampling of what the Young Girl receives within the span of a few minutes. Come to think of it, she hasn't taken a selfie yet of herself on the beach reading in her new bikini, so she gets her smartphone out of her Gucchi handbag and take some selfies and posts them to her Instagram account. In one of them she poses with her Kindle like a good student, holding it in her left hand while she selfies with the right hand.

The Young Girl wants to be a good student but there is so little time, and so much information! On the one hand she feels "chill" on the beach, but on the other hand she feels a sense of incipient panic as she struggles to comprehend Adorno's obtuse style of writing in "The Spell." She makes a personal list of things to do, but loses her list among all the stuff she carries around. One or two of the tasks from the list come to mind during the day, and she attends to those. BUY EYE SHADOW AT ABC. WRITE PROPOSAL FOR ENGLISH PAPER. Even to read one essay by Adorno takes forever when there is so much going on in her world, so many images to process and post on Snapchat, so many incoming things demanding her attention. OMG! The Young Girl is saturated!

Such saturation, Bernard Stiegler argues, induces spiritual toxicity:

> Intoxication is the result of saturation, which particularly affects the higher functions of the nervous system: conception (understanding), perception, and imagination, that is, intellectual, aesthetic, and affective life—*the mind in all its dimensions*. Here is the source of every form of spiritual misery. Call these the cognitive and affective forms of saturation typical of hyperindustrial society… Cognitive and affective saturation cause individual and collective, neurological and psychological, cognitive and personality, congestion, comparable to the paradoxical effects of the urban congestion that result from excessive traffic…Just as cognitive saturation induces a loss of cognition, that is, a loss of knowledge, and a confusion of minds, stupefying consciousness so that it becomes increasingly unconscious, so too affective saturation engenders *generalized disaffection*.[18]

Just thinking about her recent visit to her professor's office is exhausting, more saturation, the arrested avalanche of books in her professor's office, how if you turn this way or that way you only see books, and even near the ceiling, stacked and hovering, near collapse, were books and more books! She is not the only English major who says books are too heavy. The new English majors don't have books. They have Kindles and smartphones. To be sure, reading novels on smartphones wastes precious class time when it's hard to discern the text in the tiny screen, and the e-book has different page numbers. But realistically speaking, smartphones outnumber books in class; when will the professor get this *sea change* through his thick head? Most of the younger professors don't order books anymore, and their offices are empty and tidy, some file cabinets for decoration and a desktop PC. Almost all books seem available in Kindle versions, and they even list the electronic versions first before the real books which are like SO expensive. *Negative Dialectics*, which she saw on her professor's shelf, and which is where the assigned essay "The Spell" comes from, is $11.55 to rent through Kindle, whereas it is $20.87 to rent in paperback and $25.12 to BUY, but who would ever purchase buys books anymore and especially *Negative Dialectics*? But will it help to download *Negative Dialectics* to finish her exegesis of "The Spell"? Will reading more Adorno only confuse her? Well, the book can be borrowed or "rented" on amazon.com; there is no commitment required, just a look-see to check it out. Reading is rentable, and ownership, or intellectual sovereignty, the autonomy of grasping someone else's ideas and making sense of them and setting them to memory, an autonomy always elusive to begin with, yet always indispensable for developing critical acumen, is more elusive than ever with the ephemeral clouds that know what the Young-Girl is reading and that can take away the electronic books in the blink of an eye. Her boyfriend, Ternus Inwood, one of three philosophy majors at the university, wrote a poem for her private enjoyment about the experience of reading Adorno:

Who is Adorno to write such a thick tome
About the affinity of identity and nonidentity.
"Identity is the primal form of ideology."
You have to download *Negative Dialectics*
To your Kindle, or find the Pdf file online.

The professor said he will check to see if
We own the book, which is really annoying!
The philosophers were annoying until now.
Make them go away by not paying attention.

Hegel gone, zip-zap, his *Science of Logic* gone,
Hegel and Kant have gone into the Clouds
With clunky cloudy words like *Aufhebung,*
And Schelling and Fichte all wordy and wooly;
Aristophanes put Socrates in the Clouds.

The browser of the Kindle Fire is so cool
You can check for texts and Tweets while
Pretending to read Tolstoy's *Resurrection*,
Or you can shop while the professor fails
To stir attention for more than eight seconds.

Everyone here is gone, in chairs but not here,

Watching a film on Netflix or texting a friend!
Everything is too long and boring, all books
Tolstoy's *Resurrection* is absurdly long and *The Mayor of Casterbridge* is very old and very long, and
The professor is like a book, so we are gone
As he quotes Adorno: "The force that shatters
The appearance of identity is the force of
Thinking."

The Young Girl thinks Adorno's essay on "The Spell" is scary and interesting when he says that "the spell seems to be cast upon all living things." It sounds like a story or fairy tale but it is neither, and whatever it is, it is hard to read on the beach in such bright light, and she keeps adjusting the Kindle shading function to get the screen more readable. She also puts more sunscreen on her legs, which are getting pretty toasted, and takes more selfies. Meanwhile her BFF Sarah is texting her about some guys she has met down by the Fiesta Resort. The Young-Girl is somewhat disappointed in the Kindle Fire, and wishes she had downloaded it through her I-Phone. But she received the Kindle Fire as a birthday gift from her auntie, who is a school teacher, who belongs to the International Reading Association, and is always promoting literacy. She finds it kind of offensive that her auntie does that, as the Young Girl is an English major and doesn't need people pushing LITERACY in her face. Like, get a life auntie!

The screen is still too bright and the Young-Girl cannot make out all the hard words of "The Spell" so she puts the Kindle Fire down on her blanket and strolls down to the water in her black Gucci bikini. She twirls the faux gold-plated hoops on the hip of her bikini and thinks she is so HOT…. *I'm HOT* she thinks. *I'm HOT*, *therefore I am*. When she sticks her toes in the seawater, her narcissism suddenly feels really strange, like she is the only one there and there is absolutely no sound—no people, no surf, no wind, no cars in the background. The touch of the water, the sensation, makes her momentarily forget to check her toenail art, delicate little butterflies above a field of sunflowers. The detail on each nail is so incredible; all her girlfriends are jealous about this nail art, and here she sticks her toes in the seawater like an idiot! Like, wake up Little Susie! When she was young, the Young-Girl used to always swim in the sea, but in the last few years it has gotten too weird and she almost never goes in, although she loves the sea and the smell of her Ralph Lauren tanning lotion. That's probably why she does not get wet, because then she has to reapply the lotion, which is $60 a tube, although technically you do not have to reapply the lotion for 12 hours. Plus her hair—she had a new tint and that would get screwed up by the seawater.

Fifth Meditation: THE COLLEGIATE ANARCH

The Young Girl's boyfriend, Ternus Inwood, whom you will recall is a philosophy major and the TA in her philosophy class, is the only one among their fellow students who does not use social media; nor does he have a Kindle; nor does he have a compulsive relation to his cell phone, which is internet-disabled, and which he uses for basic purposes of communication, much like he does the internet when he uses his laptop. However, Ternus is not "against technology," as some of his classmates whisper behind his back; he just takes a critical stance with regard to the cultural ubiquity of digital technology and the gullible manner with which consumers adopt it; but he does so without fanfare, since his viewpoint represents a personal and not public philosophy. The most overt sign of his critical stance is when, every so often, he good-naturedly scorns students on campus for "hiding inside their phones" by calling them "scombies" or smartphone zombies.[19]

Ternus is a longhaired, bellbottomed student who thinks and acts like he teleported from 1970 into 2019. He eccentrically conducts himself as an aloof stranger, a transcendental onlooker for whom everything is under the "suspension" of the phenomenological epoché. In short, he takes nothing for granted; the phenomena he perceives are not taken as customary or habitual, but reveal themselves as if for the first time, each transparent in the full depths of its intentional matrix as a revelation of cultural decadence. It follows that no one from 2019 can imagine how appalled Ternus remains by the spectacle of a campus on which every student is preoccupied with a smartphone. The isolation of individuals in this community is stunning; so too is the

relative homogeneity of body comportment in space, almost all bodies restricted to gestures that merely correlate with smartphone manipulation and taking selfies. As for the lack of lively interaction between students, verbal and physical, that is the most incomprehensible phenomenon for Ternus. There seems to be a total lack of psychophysiological connection between fellow students, who prefer to communicate by smartphones rather than in person.

Strange! The contrast with campus life in 1970 could not be more extreme: back then, although there are loners like himself, many students intimately discuss politics and current events with their friends and classmates, usually under trees on campus, or in the coffee house in the basement of the student union; while others throw Frisbees and listen together to blaring music emitted from large speakers, not privatized headphones; while still others are intensely preoccupied with reading paperbacks and newspapers, or writing their thoughts down in a journal. Compared to that historical epoch, the campus of 2019 seems as if someone or something cast a spell on the entire student population, making them taciturn, utterly gullible consumers of digital devices. Their mute awe before and servility to all such gadgets and the geniuses that invent them robs students of their confidence, and they rarely assert themselves in class. Ternus can't help but wonder if more than a few of them are *pretending* to be conversing on their smartphones, as if they are terrified of being alone, or rather, of being *seen* alone, without friends nearby. This fear of course deters students from reading a book in public, or catching up on an assignment, or just bird watching on the edge of campus overlooking the sea. For students in 2018, those seem like lonely activities engaged in by lonely people. He is unaware of any celebrities, such as Justin Bieber and Kanye West, who are known for reading books or bird watching. Rather, they are known and beloved, like their President, for not reading anything at all. If you watch a film or football game on your smartphone, or listen to music, those are not considered lonely pastimes because they are inherently noisy and animated, involving lots of antic people. They continue the antic, bouncing, rowdy, unfocused behavior of characters in the cartoons viewed by most of the students in childhood. After watching some of these cartoons in the lobby of a dental clinic, Ternus is convinced that they contribute to the epidemic of attention deficit disorder that afflicts many of the students on campus.

Ternus secretly thinks of himself as a sort of "anarch" like Martin Venator, the narrator of Ernst Junger's dystopian novel, *Eumeswil*. The anarch is an anarchist in stealth mode, almost in hibernation, keeping a low profile while maintaining his spiritual integrity and inner freedom. "The anarch differs from the anarchist in that he has a very pronounced sense of rules. Insofar as and to the extent that he observes them, he feels exempt from thinking."[20] In effect, the anarch of Eumeswil relies on the smooth operation of the sociopolitical order so that he doesn't have to think, since thinking will make him stand out and appear subversive. The soft-spoken, innocuous public persona of the anarch, Martin Venator, guarantees that he will be above suspicion, and this persona encourages the dictator and his administrators to trust him and let him work in their headquarters. He does not even instigate or endorse what James Scott calls "infrapolitics," the everyday grassroots anarchic behavior of disgruntled workers and civilians who do not assemble as a group in public rebellion, but engage in "foot-dragging, poaching, pilfering, dissimulation, sabotage, desertion, absenteeism, squatting, and flight" to incrementally destabilize the totalitarian order and hinder its economy.[21]

Even the Young Girl doesn't know that Ternus conceives of himself as an autonomous agent, like Martin Venator, who hides his freedom, his anarchic spirit within conciliatory and servile behaviors as a vassal of the State. Ternus, like his avatar, Martin, is appalled by the digital colonization of the lifeworld, but pretends to go along with things and respect those with authority on campus, meanwhile seeking an opportunity to escape into nature, *disappear* there, which Martin himself plans to do if the totalitarian order collapses. But Ternus has not prepared a clandestine shelter for his ultimate flight into nature, as Martin has done. For this reason Ternus often asks himself, "Where does Martin find the time to construct his secret hideaway among the reeds near the sea, when in fact his situation is far more dangerous than mine?" All appearances suggest the same, that the world of *Eumeswil* is much more precarious beneath the façade of civil equilibrium presided over by a tyrant. Like the world that Ternus inhabits, Eumeswil is a technocracy, with most aspects of life automated for convenience and safety, but the way people cope with totalitarianism in Eumewil is by dumbing themselves down, simplifying their thoughts and expressions in public, and thereby diminishing the anarchic threat posed by their intelligence and creativity.

Unbeknownst to his girlfriend, the Young Girl, Ternus Inwood spends an increasing amount of his leisure time brainstorming his exodus from the congested, frankly claustrophobic horizon of digital culture. He constantly browses the real estate web sites such as Zillow for remote properties in Vermont and Maine where he can

retreat into the forest and build a cabin with his own hands. His acute, perspicacious analyses of contemporary digital trends and consumer behavior have caught the attention of his professors, some of whom, personally offended by the candor of his observations, take him as a crackpot, a troublemaker, while others encourage Ternus to pursue advanced research in digital studies at a handful of prestigious doctoral programs. He is currently weighing his options, meanwhile firming up his knowledge of anarchism by carefully reading and annotating what classmates would cursorily dismiss as a "heavy" paperback tome: *No Gods, No Masters: An Anthology of Anarchism*.[22]

NOTES

[1] Bernard Stiegler, "Memory," in *Critical Terms for Media Studies*, eds. W.J.T. Mitchell and Mark Hansen (Chicago: University of Chicago Press, 2010), 84.

[2] Byung-Chul Han, *The Burnout Society* (Stanford: Stanford UP, 2015), 9.

[3] Bernard Stiegler, "Memory," 69.

[4] Bernard Stiegler, "For a Neganthropology of Automatic Society," in *Machine* (Minneapolis: University of Minnesota Press, 2019), 26.

[5] Bernard Stiegler, "For a Neganthropology of Automatic Society," 26.

[6] Bernard Stiegler, *Technics and Time 3: Cinematic Time and the Question of Malaise*, trans. Stephen Barker (Stanford: Stanford UP, 2011), 74.

[7] Bernard Stiegler, *States of Shock: Stupidity and Knowledge in the 21st Century,* trans. Daniel Ross (London: Polity Press, 2015), 127.

[8] Ivan Illich, *In the Vineyard of the Text* (Chicago: University of Chicago Press, 1993), 63.

[9] Bernard Stiegler, *States of Shock: Stupidity and Knowledge in the 21st Century* (Cambridge, UK: Polity Press, 2015), 113.

[10] Bernard Stiegler, *States of Shock,* 54.

[11] Byung-Chul Han, *The Burnout Society*, 11.

[12] Gilles Deleuze, "Control and Becoming," in *Negotiations*, trans. Martin Joughin (New York: Columbia UP, 1995), 174.

[13] Colin Milburn, *Spawn: Gamers, Hackers, and Technogenic Life* (Durham, NC: Duke UP, 2018), 22.

[14] Alfred Schutz, *The Structures of the Lifeworld*, trans. Thomas Luckman (Evanston: Northwestern UP, 1973), 22.

[15] Bernard Stiegler, *Automatic Society: The Future of Work* (Vol. 1), trans. Daniel Ross (Cambridge: Polity Press, 2016), 127.

[16] See Alexandre Kojeve, *Introduction to the Reading of Hegel: Lectures on the Phenomenology of Spirit*, trans. James Nichols Jr. (Ithaca: Cornell UP, 1980).

[17] See Tiqqun, *Preliminary Materials for a Theory of the Young-Girl*, trans. Ariana Reines (Cambridge: Semiotexte/MIT Press, 2012).

[18] Bernard Stiegler, *Uncontrollable Societies of Disaffected Individuals*, trans. Daniel Ross (London: Polity Press, 2013), 86-87.

[19] Roberto Simanowski, *The Death Algorithm and other Digital Dilemmas* (Cambridge: MIT Press, 2018), 21.

[20] Ernst Junger, *Eumeswil*, trans. Joachim Neugroschel (New York: Telos Press, 1993), 121.

[21] James Scott, *Two Cheers for Anarchism* (Princeton: Princeton UP, 2012), xx.

[22] See *No Gods, No Masters: An Anthology of Anarchism*, ed. Daniel Guérin. (Oakland, CA: AK Press, 2005).

On Returning to Kurt Vonnegut's *Slaughterhouse-Five*

John Currie, Rochester, New York

Be in nothing so moderate as in love of man.
Robinson Jeffers, "Shine, Perishing Republic," 1925

After a fresh read (actually two), I realized *Slaughterhouse-Five* is a far more indignant, ambitious, and, for me personally, disturbing novel than I ever remembered or gave it credit for. It's not funny, cute, whimsical, eccentric uncle Kurt. The ambitiousness of the novel is hinted at in its allusions too numerous to mention here, among them Lot's wife, the poets Theodore Roethke and William Blake, Celine, the Gospels, Christian eschatology, *The Brothers Karamazov*, certainly Darwin, the Serenity Prayer, and something that almost slipped my attention entirely, J. D. Salinger's superb short story, "For Esme – with Love and Squalor." The latter recreates some of Salinger's mental anguish after participating in D-Day and the liberation of a camp, as well as his resurrection from that anguish. One can read parts of *Slaughterhouse-Five* as science fiction. But the time travel suggesting that genre is here more a solid (I almost want to say, naturalistic) way of communicating the flashbacks and dissociations of the PTSD of a veteran of traumatic war experiences. Using his experiences, Vonnegut wants to write, *the* word on all war, and given the time of its publication, be *the* anti-war voice amidst those commenting on Vietnam. Vonnegut wants even to go beyond those aims. He wants his novel to explore in original ways life's unanswerable questions.

To look more deeply into *S-5*, let's start with Salinger. Salinger participated in D-Day. He later saw the camps in the Dachau complex. An early Salinger story, "The Magic Foxhole" (1944), deals with the landings at Normandy. The narrator focuses on a chaplain, the only survivor of his wave of assault, crawling on the sand of the beach, struggling to find his glasses. He's soon killed. The metaphor here, that the old eyes of faith have lost their clarity will surface in *Slaughterhouse-Five*: Billy Pilgrim, our main character, marries into the profession of optometry, providing glasses and presumably clarity for any or all. (The fact is that Billy profits mostly making *protective* glasses for foundry workers.) For the post-combat Salinger, like Vonnegut, the question "Where is God?" became one that haunted. They each provided different responses. Salinger's response offers a promise of a return to sanity; Vonnegut's, only protection from what has happened and will happen anyway.

They didn't arrive at their positions without cost. Salinger sought help for a nervous condition at the end of the war while in Germany. Asked a number of questions, he didn't fool around about whether he liked the Army; he restrained himself. He did not want a psychological discharge. He was afraid what that would mean for his future as a writer. Salinger responded confidently, yes; he liked the Army. Remarkably he immediately returned to duty and participated in the de-Nazification of Germany. That decision gave him grounds for a later comment to his daughter (Vonnegut would have a similar experience): the smell of burning flesh never leaves the nose.

Here's a brief summary of "For Esme – With Love and Squalor": The narrator, whom we infer is Salinger himself, is spending the last hours before shipping out for the D-Day invasion. Instead of finding a whorehouse as some might have, he wanders into a church, where his attention is arrested by the voice and appearance of a young girl (Esme) in choir practice. By chance the two meet a little later in a tea shop, Esme accompanied by her little brother Charles, and chaperoned by her governess. Esme, astoundingly precocious, and the narrator have a rather profound exchange. We learn Esme (she claims she has a title) and Charles are bereft of parents. She spells out for the narrator (to protect her younger brother) that her father was "s-l-a-i-n in North Africa" and her mother is dead (from what causes we're not told). The young girl is wearing an enormous wrist watch. The whole scene is touching and innocent, the last innocent scene the narrator will have for – forever? When Esme hears that the narrator is a writer, she extracts from him the promise to write her a story about "squalor," of which presumably the narrator is presently ignorant. There is also a promise to stay in touch, Esme offering to send the first letter so as not to compromise the narrator. She offers the wish that he survives the war with all his "faculties intact."

The scene changes. In narrating the "squalor" part of the story, Salinger refers to himself as Sergeant X. We find him in the middle of a breakdown. His hands shake, he has a facial tic, he chain smokes, hasn't been able to sleep for some time. There is no overt description of the horrors of war. One detail that serves this purpose is a book by Goebbels, *Die Zeit Ohne Beispiel* (*The Time Without Example*), previously owned by a low-level Nazi woman whom X arrested. X examines it and finds it has an inscription, "Dear God, life is hell." X pauses.

> Then with far more zeal than he had done anything in weeks, he picked up a pencil stub and wrote down under the inscription, in English, "Fathers and teachers, I ponder 'What is hell?' I maintain that it is the suffering of being unable to love."

Suddenly, about to write down Dostoevsky's name under the quotation from *The Brothers Karamazov*, X notices "with fright that ran through his whole body – that what he had written was almost entirely illegible." That fright is similar to the one that must have gripped the chaplain who couldn't find his glasses (or clarity) in "The Magic Foxhole." We know Sergeant X fears for more than his sanity. This is a life and death struggle.

X continues to chain smoke, face twitching, hands shaking. Slumped at his desk at one point, X notices a piece of mail, a small package. From the number of addresses on it he can tell it has had a long journey through the war from post to post to find him. In it is a note from Esme and her father's watch. She presents the services of this watch and offers it as a "talisman." X notices the crystal of the watch has been cracked in transit.

> He wondered if the watch was otherwise undamaged, but he hadn't the courage to wind it to find out. [Is Salinger stuck in time, in hell forever?] He just sat with it in his hand for another long period. Then, suddenly, almost ecstatically, he felt sleepy.
>
> You take a really sleepy man, Esme, and he *al*ways stands a chance of again becoming a man with all his fac – with all his f-a-c-u-l-t-i-e-s intact.

The name Esme means "love or beloved." She has redeemed Sergeant X.

Vonnegut *must* be thinking about these moments in Salinger's "Esme," published some 19 years before *Slaughterhouse-Five*, while he was working on his own war novel. At one point, he places his main character, Billy, in 1948, in a V.A. near Lake Placid, NY rooming with a fan of the perennial Vonnegut stunt double, the science fiction writer Kilgore Trout.

> Rosewater said an interesting thing to Billy one time about a book that wasn't science fiction. He said that everything there was to know about life was in *The Brothers Karamazov*, by Fyodor Dostoevsky. "But that isn't *enough* anymore. . . ."

This is the degree to which Vonnegut was affected by the war. Salinger writes a short story in which at first Dostoevsky's words are indecipherable, but in which later his main character finds the redemptive power of love to be a personal truth – and adequate to his situation (thanks to Esme). Vonnegut pushes beyond Dostoevsky, and *Slaughterhouse-Five* represents his claim to the territory he found. And that begs the question of whether this ground is inhabitable.

Vonnegut too was branded by his WWII experiences. He didn't get off to an easy start either. Just months before he was shipped off for active duty in Europe as an intelligence scout, his mother committed suicide. He was soon thrown into the fire at the Battle of the Bulge. In its aftermath, he and a few other stragglers were captured and eventually brought to Dresden. What was supposed to be good luck, being a prisoner in an "open city," one with a civilian population only, without any munitions factories or war supporting industries to make it into a bombing target, turned into a nightmare that would give Vonnegut an indelible apocalyptic but atheistic vision.

As in "Esme" *Slaughterhouse* begins with a first-person narrator who seems to be the work's actual author, in this case Vonnegut. He tells us that twenty-three years ago he thought it would "be easy . . . to write about Dresden." His daughter Nanette is quoted as saying while Vonnegut was composing *S-5* it was like "living with

an elephant for 15 years that was trying to give birth to something twice its size." The writing of *S-5* clearly was a long labor of love, one not indicated by the deceptive ease and simplicity of the novel's style.

Also, as in Salinger's "Esme," Vonnegut has an encounter with someone of the opposite sex – but here it is a post-war encounter. She is not a young innocent; she is Mary O'Hare the wife of an Army buddy who served with Vonnegut and with him witnessed and survived the firebombing of Dresden. A further parallel is that like Esme, Mary has a request of the narrator. Esme prefers Salinger write a story of squalor. Mary berates Vonnegut because she thinks he will write a book glorifying war in such a way that in its film version John Wayne or Frank Sinatra would star. Both Salinger and Vonnegut write in answer to the respective requests, Vonnegut promising if he ever finishes the book, there won't be a part for either of those two actors. He tells her he will title the book "The Children's Crusade" (which in fact is *S-5*'s subtitle), and just as in Salinger Vonnegut dedicates his work to the woman who made a request of him as a writer. During the same evening of Vonnegut's encounter with Mary, her husband and Vonnegut's war buddy, Bernard V. O'Hare, reads from a book about the Children's Crusade. Similar to any of the Crusades, it is a sad, abhorrent chapter in the history of Christianity. Thirty thousand children, most poor and destitute, volunteered for this particular crusade, thinking they were simply going to Palestine. "About half of them drowned in shipwrecks"; "then half got to North Africa where they were sold." Some mistakenly "reported for duty at Genoa, where no slave ships were waiting." These were "given a little money and a lot of advice and sent back home." Mary O'Hare, who we have come to see regards all wars as children's crusades, applauds the people of Genoa.

The name Salinger gives himself within the frame of the narrative, Sergeant X, is a generic name, a thin disguise for any soldier of some sensibility. The name Vonnegut gives his wartime soldier, Billy Pilgrim, certainly doesn't have any martial associations: Billy – a forever young innocent's name, perhaps even a waif; Pilgrim – one who journeys toward a sacred place, a crusader. In keeping with his promise to Mary O'Hare, Vonnegut presents his WWII soldier, not as a hero, but as just one more children's crusader, misused by powers and principalities. (Of course, there are other associations, but those go beyond my purpose here.)

Billy becomes "spastic in time." Over the course of the novel Billy finds himself randomly visiting points in his lifetime. On his wedding night, siring a son who will grow up to be a juvenile delinquent but who will "straighten out" as a Green Beret in the Vietnam War. As a widower, being nagged by a daughter who worries he has dementia. Wandering around in the company of three other American soldiers, cut off from their company, in a forest after the Battle of the Bulge. Or, more pleasantly, after his abduction by extraterrestrials on the planet Tralfamadore, a subject in their zoo with the mate they have found for him, a porn star, Montana Wildhack. Or, as mentioned before, recovering from the war in a Lake Placid VA, and rooming with Eliot Rosewater. To say the novel doesn't proceed along the lines of linear time is an understatement. However, one is never confused. Unless one tries to determine what moment in Billy's life is what most of us would think of as the present.

The exigency is always Germany after the Battle of the Bulge and Dresden, to both of which Billy is pulled back often enough for Vonnegut to give his reader an idea of what it was like to have been there. (At one point the actual Vonnegut interjects. He calls Dresden before the bombing "Oz.") Billy and a few other Americans with their German guards hear the air raid sirens and go below ground into one of the chambers of a slaughterhouse, slaughterhouse-five, surrounded by animal carcasses hanging from the ceiling. The bombing begins and sounds like "giants walking around above ground," and the bombing lasts. When it is once again silent, they emerge, virtually the only survivors of a burnt and bombed out city. (Remember Lot's wife? Vonnegut looks back, again and again. In the frame he says the novel "was written by a pillar of salt.")

Dresden caused Billy to become "unstuck in time," as much as his abduction later by the Tralfamadorians, who take him through a time warp. In the aftermath of Dresden, Billy (like Vonnegut) participated in the forced "Easter egg hunt" for bodies, until he was liberated. The irony of the phrase "Easter egg hunt" alone reveals that the bombings helped decimate not only some beautiful architecture, some humans as full of wonder and goodness as you or I, all the innocence of childhood, but also the traditional meanings Christianity had provided Western Civilization. The Russians soon enough freed Billy from the Germans, but there was no real "liberation" from Dresden. No resurrection. Spring and birds eventually returned, though not as an Emersonian or Thoreauvian spiritual rebirth either, but according to Darwin, where Vonnegut tells us things survive because they were meant to. One has to ask if Vonnegut found any redemption for himself in writing

his novel. Certainly it met the standards Mary O'Hare had laid out for him ahead of time. You won't see Frank Sinatra or John Wayne in the film version.

The answer comes partly when the reader sees Vonnegut does not write merely to get the trauma out of his system. He writes to expose how deadly (and unnecessary) was the bombing of Dresden. In one of Billy's time travels, he is in a Vermont hospital. The plane he was flying in along with a host of other optometrists on their way to a convention in Montreal has crashed into Sugarbush Mountain. Only Billy and the co-pilot survive, but Billy has a severe brain injury. His roommate in the hospital is a retired Air Force Colonel who (conveniently) is writing a history of the wartime Air Force. Through him we learn, a) how beautiful a city Dresden was, and, b) the cost in lives of the civilian population who lived there: 135,000 lives, besting Hiroshima's 71,379. Vonnegut also has Colonel Rumfoord pass on the received opinion that both *had* to be done. Vonnegut's novel brings to our attention the cost of war (remember it's always a "children's crusade") in human lives and asks – with authority – why? His is an anti-war novel, much more so than Salinger's short story was.

Vonnegut takes a step back into *The Brothers Karamazov* and beyond through a Rosewater summary. Instead of Ivan's "Grand Inquisitor" poem we have something from a Kilgore Trout novel, *The Gospel from Outer Space.*

> . . . . a visitor from outer space, shaped very much like a Tralfamadorian, by the way . . . . made a serious study of Christianity, to learn, if he could, why Christians found it so easy to be cruel. . . . He supposed that the intent of the Gospels was to teach people . . . . to be merciful, even to the lowest of the low.
>
> But the Gospels actually taught this:
>
> *Before you kill somebody, make absolutely sure he isn't well connected.*
>
> The flaw in the Christ stories . . . . was that Christ, who didn't look like much, was actually the Son of the Most Powerful Being in the Universe. Readers understood that, so, when they came to the crucifixion, they naturally thought, and Rosewater read aloud again:
>
> *Oh, boy – they sure picked the wrong guy to lynch that time!*
>
> And that thought had a brother: *"There are* right people *to lynch."*
>
> Who? People not well connected.

That visitor from outer space leaves behind the gift of a new Gospel in which Jesus really is no one special, and so when he is executed no one thinks much about it.

> And then, just before the nobody died, the heavens opened up, and there was thunder and lightning. The voice of God came crashing down. He told the people that he was adopting the bum as his son . . . . God said this:
>
> *From this moment on, He will punish horribly anybody who torments a bum who has no connections!*

Some might see what Vonnegut writes here as blasphemy. Indeed, the book has been banned in some school districts for being anti-Christian. Some defenders of the book may see this as a distillation of Vonnegut's new humanism. Personally, I'd like to see Kilgore Trout's "Gospel" unearthed in some archeological site in the Middle East and become a subject for scholars like Elaine Pagels. While Vonnegut has a point about how Christianity has been misread or misinterpreted by some, or to be more accurate, by those well-connected, I see what he has written here as the good news of the actual Gospels as sometimes modeled by the likes of Dietrich Bonhoeffer or Walter Wink.

Time travel is not unique to Vonnegut's *Slaughterhouse-Five*, where, as I mentioned, it seems to serve as an expression of PTSD flashbacks and dissociative states. You can find this sort of thing in Walker Percy's *The Second Coming*, where blended into the narratives are realistic dissociative flashbacks to a hunting accident involving the main character, Will Barrett, and his father. There they keep recurring until Barrett discovers what his father in that incident was trying to tell him. In Percy all the travels back in time are driven by a search to find meaning, even in the father's later suicide. Billy Pilgrim does no active searching in *Slaughterhouse-Five.*

Instead there is stasis. Time is static. The Traflamadorians conceptualize it as seeing the whole of a mountain range. One can see backwards, as Billy can, as well as forward (Billy has seen his death many times). Present moments are "structured" as they have to be structured. Things are as they must be, a kind of Stoic fatalism. As far as I can tell, Billy never *does* anything; he is simply there when things happen.

On the wall in Billy Pilgrim's Optometry Office is something we're told gives his patients comfort, the Serenity Prayer:

God grant me
the serenity to accept
the things I cannot change,
courage
to change the things I can,
and wisdom always
to tell the
difference.

The same prayer can be found inscribed on a "locket containing a photograph of [his Tralfamadorian zoo mate, Montana Wildhack's] alcoholic mother" and hanging between Wildhack's breasts. (Is this locket Vonnegut's equivalent of the watch Esme gives Sergeant X?)

In my reading of *Slaughterhouse-Five*, characters can only "accept" what is, and that acceptance is the protection (not clarity) Billy's safety glasses provide. This fatalism allows for neither the agency to change anything (remember Tralfamadorians tell Billy that only "earthlings talk about free will") nor does the fatalism allow any wisdom to discern between moments we must accept and those that can (and perhaps must) be changed. In fact, by titling the novel after the place Slaughterhouse-Five, the physical structure that protected Billy (and Vonnegut) from dying in the Dresden firebombing, one wonders if both ever actually left it. Put another way did Slaughterhouse-Five (the physical structure and the novel) *save* Billy/Vonnegut? Perhaps both found there Blake's "eternity in a grain of sand." (There were no flowers left to suggest heaven.) Here I find Vonnegut at his most resigned and despairing. Most of the time I hold to a faith that I can act (not to mention a faith that as in the Salinger short story makes redemption possible). But who am I to take exception to Vonnegut? If a Holocaust survivor has lost faith in God after experience in the camps, I'd be the last to tell her she was mistaken. I can only suggest a reader not stop at Vonnegut, but take a look at different responses to the horrors of WWII, say of E. B. Sledge and Ernest Gordon. I would be remiss if I did not say in the spirit of full disclosure that while I have no experience as a wartime soldier, I have found at different points after traumatic events in my own life that a loving gesture became a saving grace. Does this indicate chance, luck, or some transcendent, redemptive power? You decide. I have my own answer.

Confessions of a Copyeditor

Michel Pharand
Kingston, Ontario, Canada

After two decades of university teaching—of perpetual standing and incessant speaking—I've reinvented myself as a freelance copyeditor: I now sit in silence before my computer screen.

(Well, OK: I sometimes speak to my computer screen….)

I've also done my share of editing. The difference? Editors do the driving while copyeditors help editors avoid potholes. Both are solitary endeavors pitting eye against word. In fact they involve paying attention to *every single* word.

I date my earliest lesson in that neglected skill to 1990, during my dissertation defense, when I was asked by a committee member, "What exactly does Bernard Shaw mean when he writes about the 'modern social orgasm'?!" (Laughter all around—thank goodness.)

The mistranscribed *mot juste* was, obviously, 'organism'.

For copyeditors the devil is in the details. Always. We spot typos, refine punctuation, adjust formatting, check quotations. One of my clients writes: "Ever hear the phrase, 'It is better to rule in Hell than to serve in Heaven?' That sentence is from Dante's *Divine Comedy*." Well, he was on the right track—but was quoting Milton's *Paradise Lost*.

Copyediting has added new (and undreamed-of) colors to my cultural palette. I've read memoirs and short stories; I've delved into bioethics and the philosophy of religion; I've explored strategic patenting and eco-innovation; and I now know something about Bedouin marriages, Internet use in Cuba, traffic congestion in Beijing, yak herding in Nepal, and the pit latrines of Malawi. Not as thrilling as Keats first opening Chapman's Homer, mind you, but nonetheless an overture onto unknown—and often unexpected and fascinating—worlds.

Copyeditors, in fact, are extremely lucky: we're paid to read. Thanks to one academic press, I've read books I'd always meant to read, such as *Uncle Tom's Cabin*, and books I thought I'd never have to read, such as *On the Origin of Species*. I've even read books I thought I could *avoid* reading, such as Wittgenstein's *Tractatus Logico-Philosophicus*. (Every single word.)

They say "Even Homer nods." Well, so do editors. (Hence copyeditors.)

Take *The Rights of Man* (1791) by Thomas Paine. The editor wanted to include the famous caricature (by James Gillray) of a young Britannia clasping a tree while Paine the corset-maker, his face mottled with red blotches, tugs at her laces, one foot on her capacious behind. The editor's caption described Paine as "quite drunk." Alas, no. Paine suffered from rosacea, which Gillray grossly exaggerated for comic—if cruel—effect.

They also say "A little knowledge is a dangerous thing." A few years ago I was assigned to copyedit *Literary Theory and Criticism: An Introduction*, so I braced myself for the usual onslaught of Byzantine jargon. *Au contraire*. This purportedly 'scholarly' textbook was riddled with slang and with countless outlandish and bizarre statements: "Medieval dramas weren't much to write home about." I agree, but still…. "Oedipus had a hot wife." Well, perhaps, but…. And—roll over, Sigmund—"Gertrude was a woman with whom Hamlet had some pretty serious mommy issues."

I was bemused and baffled. So, mounting my copyeditorial high horse, I fired a broadside at my unsuspecting editor: "Students may interpret the countless slang terms and expressions," I chided, "as an attempt to 'dummy down' a difficult topic."

It turns out *I* was the dummy: the manuscript had once been earmarked for publication as *Literary Theory and Criticism for Dummies*. Wish I'd known.

* * *

If copyediting keeps me at my desk, editing has taken me on the road. Some twenty years ago I was asked by Carcanet Press to edit *The Greek Myths*, a volume in the collected works of Robert Graves. Thanks to a University of Ottawa travel grant, I landed on the island of Mallorca, where Graves had relocated in 1929 after saying "Good-bye to all that."

I spent a week in his charming village, Deià, and an unforgettable day in his house, now a museum but at the time still the home of his widow, Beryl, who graciously served us tea. I worked in Graves's study at the very desk at which he'd written *The Greek Myths*. I took down from his library shelves the very sources he had consulted to write his book.

It's not skydiving, but the experience was, in its own way, exhilarating. (The hefty Carcanet edition weighs in at 793 pages. The Greeks had *lots* of myths.)

Some years later, I was driving across the USA to examine Shaw's letters to his publishers for an edition by University of Toronto Press. I traveled to archives in North Carolina, Texas, Rhode Island, and New York State. (Shaw wrote *lots* of letters.)

My return journey from Cornell University, however, had a less than exhilarating *dénouement*. Fresh from Ithaca, I arrive at the Canadian border:

"How long were you out of the country?"

"Two days, sir."

"What was the purpose of your visit to the United States?"

"I was at Cornell to look at some unpublished letters."

"Letters?" (Glances at my passport. Short pause.) "I see. Anything to declare today?"

"No, sir." (Longer pause.)

Our fine Canada Border Services guard exits his little booth, strides over to my shiny new rental car, and peers into the rear window: "Nothing to declare, eh?"

"Nothing, officer."

"So … whose letters were you were looking at anyway?"

"Bernard Shaw's letters, sir."

"I see. And does he know you were looking at his letters?"

"Actually," I started chuckling, "he's been dead for—"

"Park over there and remain in the vehicle. I'll be over shortly."

(Note to self: never chuckle at border guards.)

When it was clear I posed no imminent threat to national security, I was handed my passport and duly allowed back into Canada, where I continue to practice Jonathan Swift's dictum:

"Blot out, correct, insert, refine,
enlarge, diminish, interline."

A (Short) Tale of Two Classrooms
Paulette Coulter, University of Guam

An ordinary Monday afternoon, September 18, 2017, except for a change of schedule. The hallway of one of the older buildings on campus is dim, lined on one side with lockers and on the other with glass cases that contain drawings and other artifacts created by last year's art students. Ahead, a classroom door opens. Instead of a rush of sound from exiting students, the line of students presses into the room almost silently. By the time I'm there, the students are seated at any of the room's four tables or standing at the counter that runs the length of the room on the hall side. Each person is either unpacking personal work or is already engaged in working on a linocut. The room is nearly silent and remains so for the space of eighty minutes. I am, for the first time, present in Dr. Irena Keckes's printmaking class.

Creating a linocut (relief carving in a linoleum block—not vinyl tile) or a woodcut (relief carving in a block of wood) print or an intaglio (inscribed metal) print is an intensely physical task. (Many books are available to the reader interested in printmaking, including the following: d'Arcy Hughes & Vernon-Morris; Fick & Grabowski; and Saff & Sacilotto.) First, the student artist creates a drawing. Some do this directly on the chosen matrix, some on paper. If done on paper, the drawing can be transferred to the matrix through re-creation or by tracing over carbon paper. Then the artist carves away the negative space of the design with a variety of carving tools. To create the printing block, whether linoleum (but not vinyl tile!) or wood, and the ensuing printed piece of art requires attention (to avoid cutting oneself) and muscle (to remove material from the matrix to create an image). One student, after working for more than half a class period on carving the intricate design of a sea turtle's back, puts her head down on the table, clenching and unclenching her right hand to relax it. She places the carving tool just outside her reach.

In one of the first classes I observe, Camille, one of two advanced students, stands at the counter along the hallway wall. She removes a sheet of metal from between two layers of paper, then moves further down the counter to a toolbox and extracts a burin. The tool looks like a double-ended crochet hook, though the end is a sharp point, not a hook.

"You use the burin to scribe the metal for dry point," she says, "and that raises the edges along your lines. The paint sticks to those edges, or burrs, and that's what makes the print."

"Joleen did a drypoint of my parents' wedding picture for the art show," I say.

"Oh, yes," Camille smiles.

"Do you mind if I watch?" I ask, feeling a little more confident about being here.

She nods.

My untrained eye sees little of her design on the metal sheet, some long, thin lines that look like the stems of flowers. She works several areas of the metal. Clearly, removing even fine lines of metal for the design requires concentration and pressure on the burin. I watch while she works, occasionally taking a walk among the rest of the students, and pausing to watch someone run a linocut through the mid-sized press in the room. Mostly, and thankfully, Camille concentrates, ignoring me as I watch. I tell her she can tell me to go away if my presence bothers her. After she finishes the lines she has added, she starts to ink the plate. The ink is black and thick, like tar. She takes it from the tin container with a putty knife, spreads it on a small sheet of glass, first with the knife, then with a brayer (a small, hard rubber roller) and a dauber, and exerting great pressure, spreads it onto the metal sheet of her design. After covering the entire plate with ink, she waits briefly, takes a cloth, and, just as laboriously as she applied the ink, begins to rub it off.

"Do you think you'll print today?" I ask.

"I don't know," she responds.

She rubs away at the ink on the plate. Again it requires intense effort: the metal must be completely clean to make a print, with ink remaining only in the burrs of the lines of her drawing.

Which amazes me more, I do not know: her concentration, the intense labor of scribing the metal, or the delicacy of the image when she removes it from the press? Dr. Keckes also comments on the fineness of the

lines, how smooth and clean they are. As I glance again at the image when Camille places it on the drying rack, I glimpse what appear to be faces in the flowers or fruit growing on her plant.

* * * * *

Most of the writing classrooms, by contrast, are smaller than the art room, though in a newer building. In most of them the tables are arranged in two rows perpendicular to the door and window walls, two chairs to a table. If we rearrange the tables for group work, they will be back in the two rows when we return to class the next time. While the rear wall of the room is blank, a whiteboard and a viewing screen are mounted at the front, thus defining the workspace. In most rooms a projector hangs from the ceiling. The students, for the most part, sit in two rows facing the front of the room, where a separate table and chair are provided for the instructor.

This arrangement gives the impression that the teacher is the dispenser of the coins of knowledge, supporting the false notion of what Paolo Freire, and Russell Hunt after him, has called the "banking system" of education: the teacher dispenses knowledge like coin, and when the students have collected enough coin, they can move on, graduate. For a writing class, the layout of the classroom is less than optimal: there is little space in the room for anything other than the twenty adult bodies at the ten tables. Books, notebooks, laptops crowd the table surfaces, leaving little space for actual writing to take place, though writing is what the course is designed to accomplish and what I try to attain in my classes. Nor does the room have a printer, for the obvious reasons of cost, maintenance, and potential theft. We shuffle chairs and people to conduct group work, including peer reviews. Any lapse of attention in the writing classroom may be interpreted by the students as the beginning of recess and result in disruption. Most of the students are in the class because they have to be.

Yet the table-and-chairs arrangement is better for writing than the individual chairs with the tilted arms that end in a partial desktop. These chairs provide little room for writing, the writing surface barely large enough to hold a laptop computer, much less notes and books. The tilt of the arm and of the desk surface also makes for a moderately risky setting for a laptop.

* * * * *

In the printmaking class I see a remarkable degree of instructor participation, as Dr. Keckes helps each student—the advanced students as well as the beginning—to prepare the ink for application to the matrix; she takes the sticky ink from the container, spreads it on the glass, thins it with linseed oil if necessary, even assists in applying the ink to the matrix if she believes the inking is insufficient for a successful print. She also helps with cleanup as the end of class time approaches: cleaning brayers, returning ink to the sealable tin, cleaning the inked glass, ensuring the most commonly used press, made by the Conrad Machine Company, has been left in order, with the glass clean and the blankets in place.

When I asked Dr. Keckes if her active participation is a matter of personal teaching style or typical of art classes, she replied that printmaking is a "how-to" class and that the students are still learning. Signs mounted above the glass-topped counter also instruct the students on expected practice.

I take an opportunity to interview Danielle and Camille, enrolled in the Advanced Printmaking class, during one class period.

"Why printmaking?" I ask. This question surprises Danielle. I know some of the answer, of course, but the question nags me. First of all, I know printmaking is Dr. Keckes's specialty. Large plywood matrices she has carved are stored in this classroom. They demonstrate a mastery of the form I have never previously seen and include multicolor printing from a single matrix, a two-foot by two-foot piece of plywood. The printmaking courses are also requirements for art majors, and both Danielle and Camille are art majors.

"I never looked at it from that perspective," Danielle states. "Can I think about that and come back to it?"

"Sure," I say, and we go on to other questions.

"Do you have a syllabus?"

"Yes." Of course.

"What year are you?"

Danielle is a senior, she says, and Camille tells me she is a junior.

"How does the printmaking class feed into the other art classes and draw upon the work done in those classes?"

There are three levels of the printmaking class, they tell me, and the course catalog actually shows two levels of advanced printmaking. Basic Design or Drawing I is the prerequisite for basic printmaking, and basic printmaking is the prerequisite for the intermediate class, which is the prerequisite for the advanced printmaking courses. Camille has taken both the beginning and intermediate classes, and Danielle has done the beginning class and been admitted to the advanced class with instructor approval, based on other work she has done with Dr. Keckes. While Camille has been working on dry point, I have watched Danielle printing both linocut and serigraph (silk screen).

When we return to the question of "Why printmaking?", I am surprised and not surprised by their answers: surprised by their self-awareness and not surprised because they are essentially the same answers given by nearly everyone who knows and loves their work.

Both Danielle and Camille love the process of making prints. Yes, it is difficult; yes, it takes time, they agree. "The process of printmaking, the development of the line work and texture always creates an element of surprise when you run your first print and see it for the first time," Danielle comments.

I can understand this element of surprise because what the artist sees on the matrix is one thing; the print is a mirror image. The experience is rather like the surprise we feel when we see a photo of ourselves rather than our mirror image, to which we are usually more accustomed.

"When you do a drawing or a painting, you can always see where it is going," Camille comments. "But the first print is always a surprise!" Camille also notes that the advanced art students have a great deal of freedom to develop themselves, and doing a print of a drawing one has done previously becomes an extension of that drawing.

Both Camille and Danielle consider that printmaking has developed their patience. In the process of carving a matrix, "For example, in the fine pattern of a cat's fur," Danielle says, "you find a rhythm."

This is the same, I think, as finding one's zone, as in Zen, or of flow, as in Mihaly Csikszentmihalyi's *Flow: The Psychology of Optimal Experience.* This "finding the zone" or flow is experienced by artists, writers, scientists, engineers, and athletes alike when they love and "get into" their work.

I leave the interview with Danielle and Camille with a clearer understanding of the students' point of view on printmaking, but I also want to learn the instructor's point of view.

* * * * *

This control of some aspect of life may be the key difference in the rhetoric of the classrooms described herein. Printmaking is an art class for art minors and majors; the beginning class is for both majors and minors, and the intermediate and advanced classes for majors. My class, EN111, Writing for Research, however, is an introductory and gateway university English class; students must take and pass the course with a grade of C or higher. Yet each class is a way to learn to control some aspect of life, to gain confidence by acquiring competence.

Unfortunately, in the matter of learning to write for academia, the results are not as immediate as carving and printing a linocut or a dry point. The greater results (feedback) in writing are delayed (though feedback is obviously given via grading and conferences) to later successes in classes in the student's career if the student continues to practice the principles taught in Writing for Research.

* * * * *

The layout of the learning environments also speaks something.

The art classroom contains five tables. One table, the smallest, is the teacher's. It is at what I would call the front of the room, the end of the room where students enter. Three of the other tables, the first and third of which are more nearly square and the second of which is like two long easels facing each other at the high edge, form a long row perpendicular to the windows. If one faces this row, the three are at the left of the room, and a fourth table, to their right, is perpendicular to them. To the right of this fourth table are a small and quite old press with a warning sign to use only with supervision and a large press I have not yet seen used; in front of the large press is the mid-sized press (suitable for a piece of paper about eighteen by twenty-four inches) that is used nearly daily. Students can and do sit on all sides of the three nearly square tables. Rightmost in the room is the counter with the glass plates that are used as surfaces for inking the matrices. This counter is the part of the room nearest the small press. Above the counter are computer-printed signs about placing materials on the press and keeping the counter neat. By contrast, and as noted above, the layout of the EN111 classroom is two parallel rows of five tables and ten chairs each spanning the room from doorway to the windows.

* * * * *

When Dr. Keckes is available for an interview, we sit down together at the glass-topped counter. She is a slim woman who often wears black. This day she wears black slacks, a black shirt, and a black apron with the word ELAM (in yellows and greens) for the Elam School of Fine Arts, University of Auckland, where she received her Ph. D., on the bib. The black contrasts sharply with her blondeness. When she talks about her teaching and art, she glows and her eyes sparkle. I ask first about her approach to teaching, and, as noted earlier, she remarks that her students are *learning*, and so she teaches one-on-one for some parts of the process. "Printmaking is a process," she says, and the process is time-consuming, as well as both physically and mentally challenging.

Because it is a process type of course, her students must have basic concepts and then learn their application in the medium. They acquire patience, develop problem-solving methods, and practice perseverance. They learn to work with the body as well as the mind. They need to learn to make decisions: "How will they use their materials?" They also need to learn the preparatory work and how to clean up after themselves. They become very focused. Some of that focus is necessary so they don't cut themselves with the sharp carving tools, she acknowledges.

"There is a difference between knowing how [in principle, I think] to do the required assignment, but they have to get the feel, too," Dr. Keckes says. Having the feel is *really knowing*. I think then of learning to drive, and how different it is for the beginning driver before they acquire the seat-of-the-pants knowledge of the experienced driver, or the difference between the beginning writer and the experienced writer. These skills are a matter of feel, no matter how unscientific that may sound.

Dr. Keckes tells me that the preceding day was a critique day. "The second piece of work is better than the first," she says, and I nod. "The class and the experience offer students lots of personal reward. Students become gentler, more accepting of themselves as they are. They learn to go about doing things by themselves."

When I ask how the printmaking class feeds into the other art classes and draws upon the work done in those classes, we decide to restrict the answers to the visual arts. "In the visual arts," she says, "students learn the language, the vocabulary of the visual arts; they learn composition; they learn problem solving. For example, Basic Design is a conceptual class, where lecture is more common. Here in printmaking, the emphasis is on process. Students take what they learn from each class and apply it in their other classes."

The students in the printmaking class are all majors or minors. Majors, according to the University of Guam Undergraduate Course Catalog, take sixty (yes, 60) semester hours of art. What concerns Dr. Keckes is how her students will grow and change and apply what they have learned in the printmaking class in further studies.

To conclude the interview I come back to my nagging question: "Why printmaking?" Dr. Keckes's response is unequivocal. Her face lights up even more, her eyes flash: "I love it!" She adds, "It is a process in which I can lose track of time, in which I feel whole. I am involved mentally and physically. I enjoy it. I am most satisfied in that place."

That place is, I think, the zone or the flow identified earlier.

* * * * *

How then do we as teachers get our students to that zone or that experience of flow?

Adam Alter in his book *Irresistible,* on the addictiveness of electronic technologies, suggests that one way to break technological addictiveness is to use one of its addictive ploys, that is, to *gamify*. As a teaching tool, Alter states, games offer "active, hands-on experience rather than passive instruction," which should make life easier for both student and teacher. Gamifying involves feedback and rewards, including badges and other symbols of ranking; games also have specific rules and use competition as a motivating force.

How are these traits apparent in the two teaching examples? I would like to suggest first that not all of the traits of gaming are necessary in the classroom. Being consistently ranked last might be more of a demotivating force than a motivating force. In a children's classroom, it might be considered public shaming. Rather than gaming, play might be the better objective for the classroom. Play was, and is, obvious in a tie-dyeing experience I had previously shared with a number of colleagues: we were doing it for the fun of doing it, for enjoying the company, for trying something. This was rather like the printmaking students seeing their linocut print for the first time. By contrast, in the writing classroom, while I scaffold tasks to build the skills of paraphrase, summary, quoting, and citation to create annotated bibliographies, for example, a certain part of me does not want to gamify the process of doing research and academic writing, for both are serious business.

* * * * *

Instead of gamifying the learning environment, perhaps reconceptualizing learning as a form of play may be more appropriate. Where gaming conceptualizes play as competitive, having a winner and a loser, real play does not. One study, by Buckley, Doyle and Doyle, of gamifying at the undergraduate and postgraduate level in a business class at the University of Limerick revealed a gender difference among the participants. More males than females were interested in the competition of gaming. More particularly relevant than competition to the classroom might be the element of creativity as applied to learning in visual art, writing (even if not creative writing), science, engineering, athletics: nearly any subject matter. Accidentally, while mining the Internet for ideas on the use of technology in teaching, I discovered the Deep-Play Research Group at Michigan State University (though the site is no longer there). My first encounter was in "Twisting Knobs and Making Connections" an article by Henriksen and Mishra and the Deep-Play Research Group on creativity, which was the group's focus. One of my EN111 students that semester used the article for a discussion of applications of social media in advertising, a fine example of creativity and making connections.

The Deep-Play Research Group, represented by Punya Mishra, Matthew J. Koehler, and Danah Henriksen, has proposed a set of seven cognitive skills necessary for trans-disciplinary creativity — the space for making connections. These skills are: "perceiving, patterning, abstracting, embodied thinking, modeling, play, and synthesizing." Here play is not considered as unscientific or as time frittered away, but as an essential cognitive skill and a habit of mind. The skills are further defined in the article referenced above and available online.

Many adults probably think of play as things to do for fun or as wasted time. Play, though, is also a form of "active, hands-on experience," as Alter suggests. Deep-play, as defined in "The Seven Trans-Disciplinary Habits of Mind" is "creative, seeking to construct new ways of being in the world" (Mishra, Koehler, & Henriksen). Deep-play is the way composers and musicians play with sound to create new music, the way poets and other writers play with meaning, rhythm, rhyme, and reason in making story and other text, the way scientists create new medicines and other solutions to the problems of mankind, the way artists play with color, shape, and composition to create a new image or a new take on an old one. Deep-play is what we can ask of our students when we hand back a paper and suggest they "play" with the idea some more: look at it from another angle, turn it inside out, do a treasure hunt for related ideas in media both on and beyond the Internet, in art, film, books, journals, magazines, newspapers. The Deep-Play Research Group calls part of this search trans-disciplinary. Others may describe it as multi-modal. The difference between deep-play and ordinary play is "its open-endedness and that needs to be considered when thinking of including play in the classroom," say the Deep-Play researchers. The result may be no single correct answer, but many possibilities. The open end is where we and our students may go on to other things, what Gilles Deleuze and Felix Guattari call a "line of flight," a way out of one place and possibly into many others.

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To conclude, I return to the question, "Why printmaking?" Individually and historically printmaking is an old art. Individually, we have all "printed" when we walked through mud or wet sand for the first time and noticed what we had done or when we have eaten something with our hands and then touched something else. Some of us went on to touch many times, to see what would happen—adding an element of play (as in playing with food) to the experience. Historically, printmaking began in China after the invention of paper in 105 A. D., the Washington Printmakers Gallery tells us, and showed up in Europe by the 15th century, as did the printing press. Many books on prints and printmaking, the history and the processes, are available through Amazon.com and other booksellers.

We say, too, that a book is or is not "in print," and our students ask if they can leave class to go to the lab and print their papers. What is more important, though less easy to grade than any paper, is the imprint of our students (and ourselves) on the material we read and write, actually making it a part of ourselves and letting it change us, thereby having us also change both content and context of that material, for now we have a share in it. We know from multiple sources (for example, the writing of Katerina Martin Teaiwa and Paula Gunn Allen) and especially from everyday life that each of us interprets the same events or experiences in our own ways, on the basis of preceding experience. We know, too, from neuroscience that the brain changes as it learns, and isn't that the point of college and university, beyond grades and graduations, *learning* and thus changing ourselves? Furthermore, through participating in the broader perspectives of art or writing personal perspectives can be shared, be known, become a part of the total body of knowledge and in that way add the students' perspectives to that body of knowledge.

In the printmaking class students seem to willingly and knowingly acquire a new, and perhaps difficult, skill; in a tie-dyeing experiment with my colleagues, the participants were self-aware of the mutual support among the group; and in the EN111 class, students acquire, sometimes with difficulty, basic research and academic writing skills necessary for success at the university. At best, the most desirable learning outcome is to become responsible for one's own learning.

The physical setting for group learning affects both teacher-class and individual interactions. Experience suggests different arrangements support differing types of interaction. Experience also suggests that gamifying learning may not be appropriate in all settings; ranking students visibly may result in demotivation of those consistently ranked lower, and competition is not a universally inherent trait.

A special thank you to Dr. Irena Keckes and her printmaking class,
and to Dr. Andrea Sant, who assigned this immersion task.

Works Cited

Alter, Adam. *Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked.* Penguin Press. 2017.

Buckley, Patrick, Elaine Doyle, and Shane Doyle. "Game On! Students' Perception of Gamified Learning," *Educational Technology & Society,* vol. 20, no. 3, July 2017, pp. 1-10. JSTOR, https://www.jstor.org/stable/26196115.

Csikszentmihalyi, Mihaly. *Flow: The Psychology of Optimal Experience*. 1990. Kindle ed., Harper Perennial Modern Classics. 2008.

d'Arcy Hughes, Ann, & Hebe Vernon-Morris. *The Printmaking Bible: The Complete Guide to Materials and Techniques*. Chronicle Books 2008.

Fick, Bill, & Beth Grabowski. *Printmaking: A Complete Guide to Materials & Processes* 2nd ed., Laurence King Publishing. 2015.

Freire, Paolo. *Pedagogy of the Oppressed*. (Available online at several sites as a pdf file.)

Gunn Allen, Paula. "Kochinnenako in Academe: Three Approaches to Interpreting a Keres Indian Tale." *Feminism Redux: An Anthology of literary Theory and Criticism*, edited by Robyn Warhol-Down and Diane Price Herndl. Rutgers UP, 2009, 284-302.

Henriksen, Danah, & Punya Mishra,. & Deep-Play Research Group. “Twisting Knobs and Connecting Things: Rethinking Technology and Creativity in the 21st Century.” TechTrends, vol. 28, no.1, 2014, pp. 15-19. (Now available at doi:10.1007/s11528-013-0713-6.)

Hunt, Russell. “Four Reasons to be Happy about Internet Plagiarism.” *St. Thomas University*. 2002-2010, http://www.stu.ca/~hunt/4reasons.htm. Accessed 7 Aug. 2018.

Mishra, Punya. *Punya Mishra’s Web: Living at the Junction of Education, Creativity, Technology & Design*. 2019, https://www.punyamishra.com.

Mishra, Punya, Matthew J. Koehler, and Danah Henriksen “The Seven Trans-Disciplinary Habits of Mind: Extending the TPACK Framework Towards 21st Century Learning,” *Educational Technology*, vol. 51, no. 2, Jan. 2011, pp. 22-28. (Now available as a pdf at https://www.researchgate.net/publication/267719396_The_7_trans-disciplinary_habits_of_mind_Extending_the_TPACK_framework_towards_21st_Century_Learning.)

Saff, Donald, &Deli Sacilotto. 1978. *Printmaking: History and Process.* Edited by Rita Gilbert. Holt, Rinehart, and Winston. 1978.

Teaiwa, Katerina Martina. Preface. *Consuming Ocean Island: Stories of People and Phosphate from Banaba*, by Katerina Martina Teaiwa, Indiana UP, 2015, pp. xv-xvii.

Section Four

Book Reviews

Valencia, Sayak. *Gore Capitalism.* South Pasadena, California: Semiotext(e), 2018.

Reviewed by CHRISTINA LEE, University of Guam

There is a man who comes in every so often at the bar that I work at. He's a gangster and a drug dealer who, judging by all the men who follow him around and by the fact that he pays for everything, appears to be pretty high up in the gang hierarchy. Not much is known about him, including his real name. What we do know is that he sells methamphetamines, or "ice" as it's known on Guam, and that he has no qualms in generously spreading his money around as he'll usually hand every single person a fifty-dollar bill (or more) for no other reason than for simply being in attendance. However, these minute impressions of him are not what makes him an interesting figure. Rather, it's the way in which he appears to be sincere and kind. After not seeing him for several months, he asked me how my mother was doing. He had remembered what I had confided in him all those months ago about how my mother was distraught over a positive test result for cancer (the results ended up being declared as a false-positive). I couldn't help but feel stunned, amazed even, at his concern, nor could I prevent the feelings of loyalty that began to brew at that moment.

He's a mild version of what Sayak Valencia describes as the heroic gangster, best personified in the characters of the television show *Sons of Anarchy*. The show revolves around a motorcycle "club" whose members deal in the illegal importation and sales of guns, but they also perform various acts of charity for their community. In *Gore Capitalism*, the figure of the heroic gangster is a derivation of the masculine archetype of the mafioso, which is claimed to be the "new, true rock star of the twenty-first century;" equally celebrated and reviled. For Valencia, the idolized figure of the mafioso rock star emerges in the era of gore capitalism and particularly in the city of Tijuana, Mexico. Gore capitalism is the result of neoliberal influences and the move toward globalization and is characterized by hyperconsumerism and the "necropolitical commercialization of murder." Tijuana, which borders the United States, feels the effects of gore capitalism the most as death becomes a business in itself and the cadavers that accumulate become commodities.

Valencia calls Tijuana, her birthplace, the unofficial "capital of gore," and her connection to this city of necrosis and murder is made apparent by her attentive observations about its current state of affairs. She is a philosopher-activist and performance artist who teaches Cultural Studies at the El Colegio de la Frontera Norte in Tijuana. Also known as El Colef, the institution is known for its research regarding the complexities that arise from areas situated near the U.S.-Mexico border. However, her work is not limited in scope nor is it single-minded as she also focuses on transfeminism, which offers mobility and connotes a beyond-borders approach. She also argues that Mexico is the perfect starting point for analyzing and critiquing the globalist current of today's capitalist framework as the actions of the First World always affects and disturbs the Third World.

Valencia's argument for gore capitalism begins with an "Advertencia," or warning: She will not perpetuate traditional hierarchies or binaries that permeate Western thought. It is important for her to make this distinction, to draw the line in the sand in order to combat the derealized perceptions of the Third World. In doing so, places like Mexico become foregrounded in the truest sense without being stained in immutability and seemingly pointless violence. Her line of thinking embodies many strains of Gilles Deleuze and Félix Guattari's philosophy, and the dedication in the beginning of the book is evident of their influence: "To everyone who is engaged in daily rebellion grounded in their own minority becoming." In order to enter into a *becoming-minority*, to break from the Nietzschean "eternal return" that typifies and harms the individuals in Tijuana, masculine discourses and "abstract discourses disconnected from the body" must be upended and uprooted. Therefore, she steers away from the Freudian-tinged postcolonial body and instead underpins her analyses using the Deleuzian *schizophrenic* and the subjectivities that form under late-stage capitalism, and Giorgio Agamben's take on Foucault's biopower, with the very real dead bodies and the "specialists" who inflict violence on these bodies as anchors to the reality that the Third World faces. The warning also serves in giving credence to the galvanizing tone that she carries throughout much of the book. We can hear and feel the urgency and the commanding presence of her voice when she says, "We do not seek saviors or discourses of salvation." Valencia means business and we want to listen to what she has to say.

What follows the warning is a poetic and acutely aware vignette that looks into the heart of Tijuana as an "arboreal metastasis." Labeled "El Inicio / The Beginning," this section provides brief glimpses of the "paradox" of Tijuana, where "half of the half does not compute" and to leave is to always return; "*esto es Tijuana.*" She uses striking and macabre imagery embedded with semiotic codes that mean nothing to us yet; juxtaposing

the ordinary with the provocative: "*Crunchy, spicy and totally addictive-fabulous blends. Depictions of sodomy, bestiality, alternative sexual practices, racial and ethnic stereotypes*." The descriptions are unsettling, and they portray the ashen images of the reality of life in the city where a "dismembered torso [is] strewn across the highway," or where a "*frontera*-woman looks like death and walks with one hand on her revolver." These images are not meant to arouse pity nor are they meant to shock and awe; it is simply what it is.

In "The Breakdown of the State as a Political Formation," Valencia delineates the link between globalization and gore capitalism. Globalization is arranged and forms under a capitalist system and it allows the capitalist framework of the First World to extend its reach and dominance, affecting the Third World in sometimes gruesome and horrifying ways. In following the "logic of capitalism," the state undergoes a "breakdown" in which it is no longer a political entity but becomes an entity that is ruled by the economy, or essentially, the market. The citizens of the First World become addicted to consumption, and so do the citizens of the Third World. But the demands of the market and the fulfillment of those demands, which are subjected onto the citizens of both populations via the Spectacle, are realized in very different ways on each side of the border. Mexico, having to cater to the West's solicitation of drugs and prostitution, finds itself in a precarious state of violence as it seeks to meet those needs. Furthermore, the projection of capitalist consumerism and wealth onto the Other is problematic because they become absorbed and attached to these projections. In order to fulfill these demands, in order to survive according to the "logic" of the market, violence is necessary.

In the following section, "Capitalism as Cultural Construction," Valencia states that any analysis of the capitalist system, and what it has evolved into, must be predicated on real life actions and events. She says that capitalism "has transcended its theoretical confines to become pure reality, physically palpable, and so close to us in space and time as to make its theorization difficult." Examining reality instead of limiting the construct of capitalism to a metaphysical space also prevents the tendency to derealize the Third World which is one of Valencia's major concerns. Ultimately, there is nothing more real than the number of dead bodies that continues to climb.

Valencia also asserts that the capitalist system is inherently patriarchal. Therefore, the individuals, societies, or governments that fall under the hegemonic purview of First World capitalism also participate in masculine discourses. These masculine discourses espouse the traditional male role of man as the provider. In Tijuana, this patriarchal sub-archetype manifests in the subjectivities she calls *endriago* subjects, or individuals who engage in what Valencia describes as "gore practices." The *endriago* subject, unable to find work or mobility in a system in which the odds are stacked against them (especially since this current era of capitalism requires excessive consumerism), uses whatever means necessary in order to participate in the system. Thus, in order to protect their profits, their businesses (in drugs or human trafficking), or their only means of surviving, they kill, and oftentimes they do so in grotesque ways.

Yet, the *endriago* is not necessarily a villain. The *endriago* subject can take on the form of the heroic gangster who is loved and revered by his community. But, he is also not a liberator or a protector. Therefore, Valencia takes care to avoid any Manichean categorization of these subjectivities that she labels and defines. The *endriagos*, from the lens of necropolitics, are "free subjects," yet they are also "subject to economic dynamics." These subjectivities, because they feel powerless, *resort* to gore practices in order to gain capital and to exist within the First World capitalist framework. They survive through violence. So, the idea of "work" has shifted, taking on the shape of gore practices. Through gore practices, the *endriago* subject moves from the very margins of society or poverty into a position of wealth and status. Death is their work and they do strive to do it well. By selling or profiting from death through methods of torture or dismemberment, they are empowered socially and economically as individuals. More importantly, they receive affirmation of their masculinity and individual power. Thus, gore practices offer empowerment, or, that is, *necroempowerment*.

The *endriago* subject and necroempowerment are the most interesting concepts in Valencia's book. The case she makes for the genesis of the *endriago* subjectivity and its mode of articulation through the methods that are aligned with necroempowerment is compelling. Her most intriguing insights can be found in the section "The New Mafia," where she examines the semiotics of violence and death that are used by the *endriago* subject. These semiotic codes can be found in the particular way a body is destroyed or the way a person has been tortured or murdered. The method and manner in which bodies are mutilated and disposed of, which can range from amputations to the immersion of bodies into baths of acid, is a calling card or a unique "signature;" a trademark of sorts that allows for the act of violence itself to become hyper-specialized,

modified, and tailored according to the *endriago* individual. The *endriago* subjects are then "hyper-specialists" who also market themselves through the way they deal death. Valencia also states that these trademarks of violence also carry the implications that the body can be "re-conceptualize[d]… as a cartography prone to rewriting," almost as if the *endriago* works to carve out the mappings of their own space, or where they are situated within the First World capitalist bacchanal that is largely indifferent to them.

In "Necropolitics," she further solidifies her analyses of the *endriago* subject and necroempowerment in mapping out the mechanics of biopower and its place in the patriarchal system, while taking into consideration the role of media. Using Agamben's "bare life," or the "object of biopolitics," and Achille Mbembe's argument of "sovereignty over death," Valencia makes the case for necropolitics, in which the body is a "critical commodity" along with the processes of life and death: "There is a hyper-corporalization and a hyper-valorization applied to the body… The market has capitalized life itself through this endangered corporality, as the body has become an ever-more-profitable commodity." Necropolitics arises out of resistance to biopolitics, but Valencia warns that "deifying individuals who use dystopian strategies… the logic of consumption and markets to legitimate themselves through violence and killing" is problematic, "dangerous and acritical" because the *endriago* are not "resistant subjects" and they should not be heralded as such.

Valencia then examines the use of media in reifying violence in a way that allows for the distancing or the derealization of real-life horrors. She uses the example of *The Sopranos*, a show that aired in the late 90s to the early 2000s that featured an Italian-American mafia. She says that the show, and others like it, demonstrate how the "underworld" can be "glorify[ied]… as a cult object and elevat[ed]… for acceptance and legitimacy." Although her argument that the media plays a significant role in "acclimating the public to the violence of gore capitalism" is not unfounded, it still sounds like the same argument that's been made many times over in regard to the presence of violence in the media. In predictable fashion, she also mentions the controversial video game *Grand Theft Auto*. However, she does attempt to reframe it within the context of gore capitalism, stating that the criminals that are playable in the game are *endriago* subjects because the main goals of the game are to rob, have sex, and murder (in particular, women). She also mentions though that she isn't out to "satanize or condemn" these types of games, but more so to show what the "virtual crystallization" of gore capitalism looks like. Yet, I still can't get on board with the almost outdated argument of media and video games desensitizing individuals to the real presence of violence. However, I do appreciate the connections she makes between the "gore" in gore capitalism and the gore that is present in movies and television shows. As in, the real blood and death of people is as outlandish, brutal and garish as the gore that is presented in movies.

In the final chapter, "At the Brink of El Bordo, I Become Blade: Gore Capitalism and Feminism(s)," Valencia finally gets to the crux of her book. She proposes a brand of transfeminism that would combat the "hegemonic, capitalist, and heteropatriarchal masculinity" that underscores gore capitalism. She describes transfeminism as "not only a social movement made up of women, but also as an epistemological category for the conception and creation of new, non-dystopian—feminine and masculine—identities." She had been planting the seeds for transfeminism all along. Yet, after all that had been discussed, it feels almost like a side note or a P.S. She also seems to have lost some of her vigor. Her provocative force and tonality are gone. And so are the riveting examples and descriptions. Instead, we are treated to Judith Butler's theory of gender performativity which Valencia refashions in order to fit into the context of what she calls "transfeminist subjects." A transfeminist subject is a resistant subject. However, she warns that we must avoid labeling it as the "par excellence" of subjectivities, which is a strong point to make as it avoids excluding other subjectivities that may form in resistance to gore capitalism. Lastly, this section is dense and lackluster as it alludes to all the previous precedents already set in feminist movements and theories, such as the concept of intersectionality. These ideas are certainly *not* unimportant, but it would have been interesting to see what other dimensions or facets she could have explored or touched on at the very least.

The concluding section, "El Mero Inicio / The Very Beginning," is where Valencia's fire is rekindled. She recounts an experience she had in which she witnessed a torso (with head still intact) falling out of a pick-up truck. This serves as her wake-up call, and it should serve as ours too: "That dead man tells me that I am responsible for his dismemberment, that my passivity as a citizen is crystallized in impunity."

Gore Capitalism does not fail in bringing some new concepts into the ongoing discussions of violence, feminisms, and the implications of an exceedingly consumerist world. Moreover, Valencia's style and the way

she disperses concrete examples in between all the “heavy” material makes the text very readable, which suggests that she wants her work to be accessible, not alienating. Some sections are more engrossing than others, but her fervor and passion for the subject is felt throughout. This is the kind of book that makes you want to do something, and not just in the generic sense of “I want to make a difference.” Rather, it transforms feelings of complacency into exigency. It’s the kick in the butt that we all need.

Hval, Jenny. *Paradise Rot: A Novel.* Translated by Marjam Idriss, Verso, 2018. E-book.
Reviewed by Via Justine De Fant, University of Guam

Jenny Hval, also known as Rockettothesky, is a singer, songwriter, and novelist from Norway. She is best known for her art, which is multidisciplinary in nature, interweaving performative styles with intricate layers of sound and visuals. Her music along with her world acclaimed album *Blood Bitch*, a concept album that explores vampirism and menstruation, experiments with techno and polyphonic sounds found in gothic metal, Neofolk, and electric pop. She is known to push the boundaries of societal norms and she treads the waters of taboo topics dealing with the flesh, womanhood, sex, and identity without fear. While she primarily writes and performs music, her creative writing is only an extension of the themes her compositions constantly seeks to explore. While *Paradise Rot* may be Jenny Hval's debut novel, it is not her first time pushing the boundaries of art into more transgressive and avant garde territory. Originally published as *Perlebryggeriet* (Pearl Brewery) in 2009, Hval's work was picked up by Verso in 2018 and translated into English by Marjam Idriss.

Filled to the brim with decaying apples and psychedelic imagery and the permeating scent and feel of urine, the contents of *Paradise Rot* delivers all that the title suggests. Jo, a Norwegian foreign exchange student, find herself in Aybourne, Australia in search of a place to stay. She finds it difficult to connect to her fellow exchange students and struggles to integrate herself into her new environment, often reminiscing about her home in Norway. After a long and fruitless search for temporary housing, she comes across Carral Johnston, a slightly older and charming woman who is on the hunt for someone to share her supposedly haunted apartment. Originally a brewery, the ceiling-less three-story building comprised of mezzanines and plasterboards that don't quite fit, is an intricate labyrinth of secrets and revelations that reflect the minds of its residents.

While the girls may seem like polar opposites, Jo being a reserved and awkward virgin and Carral a carefree and confident enigma, they settle into a symbiotic relationship that serves as a catalyst for Jo's sexual awakening. For half the novel, the two dance around their turbid love affair and attraction, unsure of how the other truly feels. It is not until Jo meets their neighbor Pym that she is forced to face her attraction to Carral. Pym, a journalist, is described as "a tall, ruddy and broad-shouldered man with a whisky bottle in his hand." He instantly takes a liking to Jo and probes her mind, questioning her interest in mycology, while indulging in whisky, cigarettes, and bad poetry. Pym's presence begins to disturb the fragile peace that Jo and Carral seem to establish. It isn't until after a night of drinking and debauchery that the two girls take an irrevocable and fateful step that sends them both spiraling down the rabbit hole of bodily excretions, kept secrets, and eroticism. Set in the first person, the novel places readers in the eyes of a girl struggling to find her place in a foreign country all while battling the intrigue of a relationship that is twisted and discomforting in its own right.

Much like Hval's music, *Paradise Rot* has a musicality and tone to it that follows a steady tempo before dropping into an intense, pulsing rhythm that can be best described as psychedelic love affair that never truly reaches a resolution. The two women are inexplicably attracted and deep connection, but ultimately understand that there is a hidden toxicity that threatens their peace. Both struggle with the outside world and choose, instead, to isolate themselves in their home. Uncaring of the growing fungi and critter populations of maggots, spiders, and flies, their apartment soon turns into a hovel. Carral brings home a large basket of apples that start to go sour faster than they can consume them and the girls, instead, find themselves consumed by the acrid and sickly sweet scent of rotting fruit and insects that the waste invites. A spider crawls itself into Carral's open mouth and she is too distracted by her book to notice or care. During a bath Jo's hand grazes a mushroom that has started growing in between the tiles: "The warm spores from its surface melted into slime on my fingers, slipping between the grooves in my skin." Both women become one with the bizarre world of this converted brewery where everything seems to be alive, turning into a sort of fungi themselves; but rather than growing on the walls, they attach themselves to one another.

The most impactful scenes in the novel are, surprisingly, not the repulsive or uncomfortable interactions with maggots or rotting apples or piss; they are the moments where the women share an intimacy that goes beyond physical attraction. Plagued by an unknown illness, Carral seeks Jo's help in shaving her already balding head. It is a heavily charged moment of vulnerability. Jo narrates: "I was cutting more and more from her

naked head, I noticed that I was crossing a line, that I gleaned and gathered something painful from her that didn't fall to the floor, but that braided itself into my body from hers." These moments, however, are not all free from the grotesque yet intriguing creativity of Hval's imagination. At one point in the novel, the women share a deep conversation as they lay together in a bed soaked with urine and tears that eventually dries and sticks to their skin even after a long shower. Hval's fearless writing is what attracts and repulses the reader's senses, a feat only a true artist can achieve.

While there are many instances in the novel that weave together golden lines of imagery and experience, however, there were also times where the writing seemed to be trying too hard to be profound, making it cumbersome to dissect the prose in order to find a deeper meaning where there really was none. There were a number of gratuitous descriptions like, "Her handshake was soggy and her skin felt smooth like the peanut butter on the white bread in front of me" and "In house after house I left my name and the hostel's phone number, like a dog marking lampposts" that took me out of this bizarre world instead of keeping me in it.

Most concerning of all was how detached the protagonist seems. It became difficult to connect to Jo whose personality seems only to hinge on her interest in mycology and her relationship/not relationship to Carral. Apart from her curious situation, she was, overall, uninteresting and hard to relate to. She is supposed to have trouble integrating herself into the community and admits to having issues with speaking English, but more than one character in the novel comments on how well she speaks for a foreigner. Considering how easily everyone in the novel takes a liking to her, it seems that she is projecting feelings of isolation where there are none.

Moreover, other characters like May the Chinese foreign exchange student, seems too stereotypical to be real. While spooning a small packet of Jam, Jo wisely comments that it would be easier for May to use a knife, to which the latter blushes. May is characterized most by her physical appearance, with her "thick, black hair" and her inability to speak fluent English, which seems to correlate to her incompetence as shown in the jam scene. The only other character Jo connects to, aside from Carral, is Franziska, who is an older German woman who seems only to be introduced to serve as a *deus ex machina* when Jo decides she should no longer stay with Carral. Carral seemed to be the only truly interesting character. She is a bit reckless, mysterious, and harboring an illness that is never revealed to the reader. For a while, Carral was the only character I cared to know more about, but was never truly given that satisfaction. Pym, himself, was integral to the progression of the plot, but also fell flat. We don't know much about him except that he writes bad poetry and has an unsubtle desire to bed both women. While leaving a reader wanting more is a crucial aspect of any good novel, the resolution felt lacking; loose ends were left untied. What is Carral suffering from? What's the real reason Jo leaves? Where does Pym go? Perhaps this ambiguity is the whole point Hval is trying to make. It is possible that the ending is purposefully unclear so that the novel reflects the confusion and uncertainty of events and people that both confound us change us in irrevocable ways. In this regard, it is up to the individual reader to decide what the message is.

The novel, while not without its flaws, is a sensation-filled testament to a young woman's sexual awakening. Often times, there is confusion and denial mixed in with the desire and inexplicable attraction for those who find themselves in the LGBTQ experience. Rarely do emotions not conflict and Hval expresses this sentiment well, especially for her queer audiences. The writing in the novel, while sometimes excessive, was overall enjoyable. Hval does a superb job in blurring the line between the beautiful and the grotesque, challenging our perceptions of what should disgust us but ultimately compels us to keep reading. She is unapologetic and unafraid of the sheer amount of intermingling of period blood and steady streams of urine and milky white substances, of yeast-scented fingers and of masturbation. She pushes us outside our comfort zones by depicting raw and honest experiences of women who find more solace in their silo of rot and eroticism than the structured and ordered world outside.

***Two Cheers for Anarchism*, by James Scott. Princeton University Press, 2012.**
Reviewed by C. S. SCHREINER, University of Guam

The last thing you might expect from a book about anarchism is that it strikes you as suitable for a course on critical thinking. But that is precisely what occurred to me as I read *Two Cheers for Anarchism* while taking a break from grading quizzes from my Introduction to Critical Thinking course (CT 101). The effect of this lucid, frankly clever book is like an axe compared to the rubber mallet of an academic textbook. Anarchism as typically understood is not a topic that receives treatment, critical or otherwise, in your standard textbook in critical thinking. Nor, more disappointingly, does anarchism appear as a key concept—or even a minor one--in *Critical Theory: The Key Concepts* (2015). No wonder that James Scott, a professor of Political Science at Yale, modestly offers two cheers in support of anarchism, and not a parade, or hot new social media trend. He calls his subdued version of anarchism "infrapolitics," a primarily subaltern practice that occurs "outside the visible spectrum of what usually passes for politics."[1] Scott fills out his definition as follows: "Quiet, unassuming, quotidian insubordination, because it usually flies below the archival radar, waves no banners, has no officeholders, writes no manifestos, and has no permanent organization, escapes notice" (12). The question is, what does insubordination have to do with critical theory? I think it functions much like the antithetical "negative" component of dialectical critique. But it also signifies a resistance to accepting statements at face value, a stubborn incredulity before or mistrust of public pronouncements by politicians and corporate spokesmen who appear to be concerned for the welfare of rich and poor alike.

James Scott concretely articulates the continuing critical pertinence of anarchistic thinking in a deft blend of historical context and contemporary case studies. For Scott, another anarchistic method besides infrapolitics (foot-dragging, absenteeism, poaching, trespassing, etc.) is the practice of creatively conceptualizing civic projects such as urban planning, elderly care facilities, war memorials, and forestry and gardening, in a manner that values improvisation and unorthodox thinking to achieve cooperative (mutually beneficial) results while avoiding a rank-based hierarchy and governmental oversight and legitimation. It is a kind of *thinking otherwise* that values the fragile ecology of grassroots community initiatives and vernacular forms of expression that are threatened with extinction by global forces of standardization and internet commerce: local literatures and languages, oral legends; music; indigenous farming methods; small shop and market proprietorship by vendors who know their cliental on an intimate basis. All of these are anarchic insofar as they operate in sustainable ways without the heavy-handed dominance of corporate and state governing bodies. By critically distinguishing these off-the-grid or under-the-radar lifeworld structures in detail, James Scott's "process oriented" method of "anarchism as praxis" (xii) showcases concrete applications of critical thinking that are remarkably diverse, yet linked by an implicit theory of general ecology.[2] The potential opportunities for this style of anarchistic thinking seem unlimited compared to textbook exercises in logic because it does not limit itself to a genre, form of expression, or milieu. As John Dewey said, "Thinking is not like a sausage machine which reduces all materials indifferently to one marketable commodity, but is a power of following up and linking together the specific suggestions that specific things arouse."[3] Such observations indicate that anarchism and pragmatism are not as philosophically dissimilar as commonly assumed insofar as both intervene critically in an ideologically naturalized order of things to perform a situationally contingent, autonomous action that upholds and confirms what James Scott calls the "great promise of democracy."[4] The difference between them rests in Dewey's restless urge to renovate institutions according to his pragmatic initiatives and ideas, whereas anarchism remains incurably wary of the compromises to human freedom that accompany institutionalization.

As for those CT 101 quizzes: they conform to the standardized format of multiple choice and true-or-false questions used by critical thinking instructors at the University of Guam, and test the students' retention of textbook information, but not, except in a few essay-type questions I slipped in, their capacity to think critically, to solve problems and critique situations in a rational manner that avoids the blind-spots and normative but unexamined presuppositions of conventional thinking. Critical thinking is by nature disobedient and uneasy; it resists reified and compulsive forms of argument and reasoning which are formulaic and unaware of their biases and presuppositions. How can polite students think disobediently on a quiz? But the quiz format is hardly the source of the problem, based as it is on the textbook. It occurred to me that my students could master the textbook material without learning how to think critically.

The textbook I have been using, titled *Think*, a standardized "selection" used by all instructors teaching sections of CT 101, is designed to simulate an internet platform, that is, an interactive dashboard, with pervasively pictorial and photographic representations of the basics concepts and structures of critical thinking.[5] The print version is soft, has glossy pages and feels like a magazine. A typical page of this textbook is formatted to visualize information in a way that provides students a friendly, expeditious reading experience similar to browsing a web site. Such a design, which replicates the comfort zone of digital natives, follows the general trend in education today of putting students at ease before challenging them. Phrased differently, the textbook appears like and functions as an appealing, color-coded menu in which critical thinking is compartmentalized as so many task sets and clusters of information. The textbook itself is integrated with online software called *McGraw Hill Connect* that serves two primary functions, one for teachers, the other for students. As a teaching tool, *McGraw Hill Connect* is a "one-of-a-kind visual analytics dashboard…that provides at-a-glance information regarding student performance, which is immediately actionable" (2). As for students, *McGraw Hill Connect* includes an "adaptive reading experience" called *SmartBook*, an algorithmic software "to help students improve grades and study more efficiently":

> **SmartBook**: Proven to help students improve grades and study more efficiently. SmartBook contains the same content within the print book, but actively tailors that content to the need of the individual. SmartBook's adaptive technology provides precise, personalized instruction on what the student should do next, guiding the student to master and remember key concepts, targeting gaps in knowledge and offering customized feedback, and driving the student toward comprehension and retention of the subject matter. Available on smartphones and tablets, SmartBook puts learning at the student's fingertips—anywhere, anytime. (3)

We are suddenly steeped in the milieu of an educational technology that compromises the sovereignty of the individual learning experience by micromanaging its progress and outcomes. To some extent learning becomes automated, not autonomous. The maturation of the developing mind is delayed insofar as its dependence on software signifies a regression to a more immature cognitive style. Education is, on the contrary, supposed to encourage our intellectual maturation through enlightenment.[6] It is unclear how critical thinking, which by definition has freed itself from external tutelage, and which is synonymous with independent intellectual initiative, can thrive in such an infantilizing milieu. To be sure, the digital natives who read this textbook are adepts at information literacy and can access anything they need to know or read on a smartphone. They can distinguish between inductive and deductive thinking and identify different types of fallacies. They can list Bloom's cognitive hierarchy, define what Aristotle meant by "disjunctive" reasoning, and explain John Stuart Mill's theory of Utilitarianism. But information literacy is not critical thinking. Some of these same students, without insincerity or sarcasm, quietly believe in conspiracy theories that sound too absurd to repeat here, including an imminent zombie apocalypse to be initiated by the American government to reduce the population before global warming wreaks havoc with food crops and water supplies. There are students who believe the 1969 NASA moon landing was staged in a film studio on earth. There are others who believe the destruction of the World Trade Towers was a ploy of the American government to provide a justification for invading Iraq. You've heard these untruths before. My casual inquiries have revealed that the credibility of conspiracy theories among students can be traced not to empirical evidence, but to the consensus reached by the online discourse communities to which the students belong (Facebook, Reddit, etc.). If the chat group says it is so, it is so. Hence the passage into untruth is for the sake of *group belonging*; factuality is subordinate to friendship. Here peer pressure distorts truth as in political domination, the kind we see in blindly loyal supporters of Trump who go along with his falsehoods, rendering facts subordinate to politics.[7]

Such groupthink of course contradicts the spirit of critical thinking, whose methodological first principle is the stand-alone or autonomous exercise of judgment that independently asks: Is this for real, or is it bullshit? What are the criteria by which I can distinguish these truth claims objectively? But online conspiracy theories are trite compared to the gullibility with which students adopt the newest digital app. Many felt a betrayal of "public trust" when the news first broke about personal data harvesting on Facebook. It is unclear why so many young adults have a fundamental, all but unshakable trust in technology and technology companies, but they do. And what is

public trust but uncritical gullibility? To call it consumer confidence is not saying enough. One has to explicate, in a rigorous and thoughtful manner for which I do not have the time here, the genesis and cognitive and/or affective structure of a disturbing generational gullibility that has forsaken the hermeneutics of suspicion promulgated by Marx, Nietzsche, and Freud. Hence the given is taken as it is, on trust, without suspicion of a ruse, prank, or scam. A scam artist can ascend to the highest levels of power buffeted by such pervasive public trust.

While reading *Two Cheers for Anarchism*, one encounters all sorts of real-world issues that are considered in unconventional but critically informed ways that demonstrate critical thinking. Only, James Scott calls this anarchistic thinking. Where these terms differ is that textbook-based critical thinking is studied to optimize your performance in the officially sanctioned order of things, your workplace and school, whereas anarchistic thinking seeks to unsettle or reinvent, from the grassroots level on up, the same order as *another order* relatively free of socioeconomic inequality and state regulation. For example, one key criteria of anarchism is institutional openness. "The test of openness," Scott writes, "is the degree to which the activity or institution--its form, its purposes, its rules—can be modified by the mutual desires of the people pursuing and inhabiting it" (61). He gives the example of Maya Lin's famous design for the Vietnam Memorial in Washington, DC, which challenges the spectator to interact with it. As is commonly known, the Vietnam Memorial presents a radically unconventional perspective compared to, say, the Iwo Jima statue that memorializes the American victory on Mount Suribachi. The Vietnam Memorial is more like a horizon of meaning than a fixed entity, whereas the Iwo Jima statue solidly embodies heroic action. Scott says that the former works by ambiguity and interaction, the latter by patriotic symbolism and awe. He argues that the Iwo Jima statue directly informs the spectator of its meaning, whereas the Vietnam Memorial, which memorializes a war whose outcome remain indefinite, honors the soldiers who died "with an openness that allows all visitors to impress on it their own unique meanings, their own histories, their own memories. The monument, one could say, requires participation to complete its meaning" (62).

Confronted with a gullible readership, one is forced to reconsider textbook selection that is adequate to the challenge of questioning and not merely perpetuating the status quo of formal thinking and argument. If we ignore this problem and teach *Think* from one year to the next, the norms of logical thought, that is, the traditional structures of inductive and deductive argument and reasoning, will be diligently absorbed and practiced in conformity to those norms and laws of thought, and not in a manner that questions their pertinence on a case by case basis while imagining alternatives to traditional modes of logic and perspective. That is why Scott's book about anarchism struck me as particularly relevant for teaching critical thinking: its analyses go against the grain and encourage a sort of disobedience toward normative forms of learning and thinking. Nothing short of this approach will awaken the critical powers latent in my students. To quote Kafka, the book we select for our critical thinking students "must be the axe for the frozen sea within us."

NOTES

[1] James C. Scott, *Two Cheers for Anarchism* (Princeton: Princeton UP, 2012), xx.

[2] See Erich Horl and James Burton, eds. *General Ecology: The New Ecological Paradigm* (London: Bloomsbury, 2017).

[3] John Dewey, *How We Think* (New York: Dover Books, 1997), 39.

[4] James C. Scott, *Two Cheers for Anarchism*, 16.

[5] See Judith A. Boss, *Think: Critical Thinking and Logic Skills for Everyday Life*, 4th ed. (Dubuque, IA: McGraw-Hill, 2017).

[6] Bernard Stiegler, *States of Shock: Stupidity and Knowledge in the 21st Century* (Cambridge: Polity Press, 2015), 29.

[7] Lee Mcintyre, *Post-Truth*. (Cambridge: MIT Press, 2018), 11.

Heiwa: Heiwa is the pushing of the canoe on the unfolded mat to demonstrate how a canoe will actually sail in the ocean from the departure island to the destination island. The navigator uses one or more stars or constellations and uses the faunan etak (primary reference island) and possibly a fauan yatil (secondary reference island) in tracking the course. Heiwa is also used to explain the feeling of the canoe's movement caused by the waves and swells hitting the canoe.

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