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Fashion Patternmaking Book Instructions in Spanish

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FASHION PATTERNMAKING INSTRUCTIONS IN SPANISH

by

YESSICA N. PRIETO

A THESIS

Presented to the Faculty of the University of the Incarnate Word
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

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Yessica N. Prieto

FASHION PATTERNMAKING INSTRUCTIONS IN SPANISH

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University of the Incarnate Word, 2018

This thesis was an exploratory study of the participants perception on the need of a fashion patternmaking book in Spanish to be use by native Spanish speaking students in the United State institutions of higher education. The participants' perceptions of the nee of a patternmaking book in Spanish were researched.

There is no previous research demonstrating the need for a patternmaking book in Spanish for native Spanish speakers. Neither, information on how patternmaking is taught to English or non-English speaking students was located. This study provided an insight into how educators perceive the need of a fashion pattern making book in Spanish to assist non-English speaking students.

A survey was sent via e-mail using Survey Monkey®. Participants were members from the International Textiles and Apparel Industry (ITAA) and faculty that teach fashion design Mexico. The responses of seventeen participants that answered the surveys were collected and analyzed.

The study revealed that when educator had a native Spanish speaking language student that are not English proficient, step by step instructions demonstrations help students to understand the class. Base on the information analyzed a fashion patternmaking book in Spanish for native

Spanish speaking students could be suggested to students as a help guide while they get used to the new language and terminology.

This study gives insight into how educators perceive the need of a fashion pattern making book in Spanish. Further research is needed in the area of a fashion patternmaking book in Spanish.

TABLE OF CONTENTS

LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
FASHION PATTERNMAKING INSTRUCTIONS IN SPANISH.....	1
Statement of the problem.....	2
Purpose.....	2
Research Questions.....	3
Definitions.....	3
Limitations of the Study.....	4
Summary.....	4
LITERATURE REVIEW.....	5
English as a Second Language Students.....	5
History of Fashion Patternmaking.....	14
Teaching Fashion Patternmaking.....	19
Conclusions.....	20
RESEARCH METHODOLOGY.....	21
Development of Survey.....	21
Data Collection Sample.....	22
Data Collection Process.....	23
Survey Question Explanation.....	23
Data Analysis.....	25

Table of Contents-Continued

Summary.....	26
DATA ANALYSIS.....	27
Data Analysis of Survey for Fashion in the United States.....	27
Research Question One.....	27
Research Question Two.....	30
Research Question Three.....	31
Research Question Four.....	31
Research Question Five.....	32
English Survey Results.....	34
Data Analysis of the Survey Sent to Faculty in Mexico.....	34
Summary.....	34
DISCUSSION, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS.....	36
Discussion/Conclusion.....	36
Implications.....	38
Recommendations for Further Research.....	38
REFERENCES.....	40
APPENDICES.....	42
Appendix A.....	43
Appendix B.....	45
Appendix C.....	46

LIST OF TABLES

1. Research Questions Answered by Survey to Faculty in the United States.....	24
2. Research Questions Answered by the Survey to Faculty in Mexico.....	25
3. Do the Current Books Contain Adequate Material to Help you Teach to non-English Speakers?.....	28
4. Has a non-English Speaker's Language Been a Defining Fact in how Well a Student Learns in a patternmaking class?.....	28
5. Would a Patternmaking Book in Spanish Facilitate the Learning Process?.....	29
6. As a Professor, Have you Considered Social-cultural Backgrounds and the Limitations of Students who Speak English as Second Language Face as They Translate Sociocultural Perspectives Into Practice?.....	32
7. Is the Participation in Class of Spanish Speaking Students the Same as Native English- speaking Students?.....	32
8. Do you Have Students of Different English Speaking Abilities in Your Class?.....	33
9. Would a Patternmaking Book in Spanish as a Teacher's Tool Increase Students' Learning?...33	

LIST OF FIGURES

1. Spanish morning gown of cloth from Juana de Alcega.....15

Fashion Patternmaking Instructions in Spanish

Some students demonstrate different rates, styles, and forms of learning a new language (Robinson, Keogh, & Kasuma-Powell, 2000). According to Leahy (1980), students that speak Spanish have more difficulty learning English than other languages. This is due to the greater number of cognates between English and Spanish (Leahy, 1980). The orthographic pronunciation between Spanish and English are equal, producing an approximation in the words (Leahy, 1980). The aim of this study was to determine the need of an apparel patternmaking book in Spanish. The book is intended to optimize ESL students' learning experiences while in an apparel patternmaking course.

In order to adjust to the lessons and new vocabulary, the English as a Second Language (ESL) students have to improve their English knowledge (Robinson et al., 2000). Research shows that students would not be left behind and their attitudes would be more positive influence on learning outcomes and school success (Robinson et al., 2000).

According to the census on July 1, 2015, the population of Hispanics in the United States is 56.6 million individuals (17.6 % of the nation's total population) making Hispanics the largest ethnic population (U.S. Census, n.d.). The Hispanic population grows every year. According to projections by the U.S. census, in 2060 the Hispanic population will be 119 million, which will be 28.6 % of the nation's population (U.S. Census, n.d.).

Fashion patternmaking started as an exclusive product utilized by tailors (Emery, 2014). As patterns became more popular, they became available in magazines for the middle class (Emery, 2014). The patterns were sold with illustrated envelopes, detailed instructions for construction, and directions to cut fabric (Emery, 2014).

The researcher has personal experience with discussion of students from Mexico who have come to the United States to acquire the necessary professional patternmaking skills necessary for the industry. In the garment industry, products are only as good as the patterns from which they are made. It is up to the patternmaker to take the designs or a prototype garment and develop it into a workable pattern for mass production. With much of the profitability and success of the business riding on the original pattern, apparel manufacturers naturally want to hire only the most highly trained patternmakers (Burman, 1999).

Statement of the Problem

There is little previous research demonstrating the need for a patternmaking textbook in Spanish for native Spanish speakers. Books that are used in the United States are not translated into Spanish and there are not patternmaking textbooks accessible in bookstores or libraries for native Spanish speakers.

Students from Mexico come to the United States to acquire the necessary patternmaking skills through hands-on training by qualified professors. Since Spanish speakers immigrate to the United States with minimal or no knowledge in the new language, language could be a factor that can influence the students' ability to acquire and retain the new knowledge.

Purpose

The purpose of this research was to determine the need for a Spanish patternmaking book for use by native Spanish-speaking college students. The study was developed through the review of ESL oriented articles, the history of patternmaking, and how patternmaking is taught. Based on how English as a second language (ESL) students acquire new language, how patternmaking developed and the importance of correct patterns for manufacturing, the researcher determined that a patternmaking book in Spanish would assist non-English speaking students.

Factors that affect second language acquisition were identified and used to develop the survey.

Research Questions

The following questions were developed to direct the research on the need of a patternmaking in Spanish for native Spanish speakers:

2. Is there a need for a patternmaking book in Spanish for native Spanish speaking students?
3. How is patternmaking taught to non-English speaking college students?
4. Do schools' libraries have patternmaking books in Spanish accessible for native Spanish speakers?
5. How do the faculty currently respond to ESL students in patternmaking classes?
6. From a faculty perspective, what do ESL students do when they do not understand the lesson?

Definitions

- ESL (English as a second language) - the use of English by speakers with different native languages. Instruction for English-language learners may be known as English as a second language (ESL), English as a foreign language (EFL), English as an additional language (EAL), or English for speakers of other languages (ESOL)" (Robinson et al., 2000, chap. 6, p. 1).
- Patterns - are essentially a 2D template that represents the shape that will be cut out in fabric" ("How Patterns Work," 2013, p. 7).
- Professional Patternmaker - apparel patternmakers draft patterns based on a designer's sketch of a style. The designer gives the sketch to the patternmaker, who can ask

questions to determine details the designer is looking for. Patterns may be drafted on paper or in a computer program designed for patternmaking” (“How Patterns Work,” 2013, p. 8).

Limitations of the Study

One of the biggest limitations of this research was the lack of information available on how patternmaking is taught to English or non-English speaking students. There was little literature located on how professors who teach patternmaking adapt the material, if at all for native Spanish speakers in their classroom. Another limitation was that the survey did not include students, the participants were only International Textile and Apparel Association (ITAA) members and professors from Mexican universities. Surveys were sent via email using Survey Monkey® which also increased the limitation of the study due to firewalls setup by universities and junk mail options.

Summary

This study was conducted to determine the need for a patternmaking book in Spanish for use in college classes by native Spanish speaking students. There is no previous research demonstrating the need for a patternmaking book in Spanish for native Spanish speakers. To support the need for a patternmaking book in Spanish, research was done into ESL students’ acquisition of new language, the history of patternmaking, and how patternmaking is taught in the United States.

Literature Review

The literature used to develop this research discussed and examined the difficulties that English as a second language (ESL) students' face into a new environment and language. The literature described different ongoing research projects implemented in communities to engage non-English speaking students in to everyday life. Literature on how patternmaking is taught at institutions of higher education was also reviewed.

English as a Second Language Students

English as a Second Language (ESL) students are people who come to live in an English-speaking country, but do not speak English very well or at all (Robinson et al., 2000, chap. 6, p. 1). ESL is taught from pre-kindergarten to through colleges, as well as at private institutions. An ESL program is coursework planned to improve students' level of English speaking, writing, reading, and listening skills (Robinson et al., 2000, chap. 6, p. 1).

English as a Second Language students face many challenges from learning a new language to a new culture. One of the challenges is feeling overwhelmed living in a country that does not speak his or her native language. It can be frustrating because students cannot understand or participate in a class taught entirely in English or participate in the world outside the classroom (Robinson et al., 2000). The result of facing and overcoming such challenges increases their self-confidence (Robinson et al., 2000).

According to Robinson et al. (2000), not all ESL students acquire a second language in the same way. Some students are faster learners and more conversant of the language, while other ESL students have trouble. If the student has previous exposure to the language, the learning process can take weeks, months or years. When students learn English, it can have a positive influence on learning outcomes and school success (Robinson et al., 2000).

Through critical analysis of articles based on ESL students, factors that affect second language acquisition were identified. According to themes found within the literature, they are divided into categories; prior language development and competence, learner characteristics, and teachers' teaching methods and approaches.

Prior language development and competence. The student's native language development and competence can be an important factor in defining how well a student learns English as a new language. Chaitanya and Ramana (2013) demonstrated that ESL students have little or no participation in the classroom. According to school educators' observations, second language students are mostly exposed to English only during school hours unless English is spoken in the community environment where the student lives (Chaitanya & Ramana, 2013). White (1971), articulates that students do not extend their use of English to real situations. When students step outside of school, many feel they do not need to continue to practice English because the professor is not there to give them a grade. They think what they learn in ESL class will be enough for them to learn English well (White, 1971). It is difficult to break away from their native language.

Most of the time, ESL students do not get enough exposure of English at home or outside of the classroom. Many of the students' parents and family do not speak English, which does not allow students to be exposed to the new language (Robinson et al., 2000). ESL students at home speak their native language because they do not want to feel like outsiders and be excluded from their own home environment (Robinson et al., 2000). In some cases when the students start speaking English at home, their parents think that their son or daughter feels superior to them and want to forget their roots (Robinson et al., 2000). ESL students outside of the classroom tend to look for people that speak the same language because they feel more comfortable and secure.

Speaking the same language will allow them to express themselves without worrying that they will make a grammatical mistake or that other people will not understand them (Robinson et al., 2000). In and out of the classroom, students look for their own kind.

Learner characteristics. Ajayi (2008), points out that for ESL educators to be efficient in their work, it is very important to consider ESL students' background experiences and connect what the students learn in school to their out-of-school identity formation activities. Educators have to place him-or herself in the student's shoes to recognize the student's knowledge, skills, cultural heritage, and preconceptions students could bring to class (Ajayi, 2008).

In the article *Cruzando el Puente: Building Bridge to Funds of Knowledge* by Gonzalez and Moll (2002), described different factors that can interfere on the learning process. The word Puente can connote a bridge in many forms. These can be bridges between parents and educators, in understanding learning communities, and between practical, out-of-school, or experimental knowledge and academic (Gonzalez & Moll, 2002). The main focus of the research is that the teacher and students' Puente can enrich their practice and mutual learning through the students' home, lives, and local histories (Gonzalez & Moll, 2002).

ESL myths. One of the myths is that ESL students should stop speaking their native language and concentrate on speaking English to understand and become fluent in English. By stopping speaking their native language would socially and linguistically isolate themselves from their parents and community where English is not the dominant language. Research shows that expertise in the native language makes acquisition of a second language easier (Robinson et al., 2000). Academic success is improved when ESL students use their native language to learn in school (Robinson et al., 2000). Second language students who were enrolled in bilingual

programs achieved the greatest academic success. To deny an individual their native language is the same as pretending that the person does not exist (Robinson et al., 2000).

Educators at different academic levels, found it hard to teach because the curriculum and textbooks did not reflect linguistic and cultural diversity since all the materials were written in American English, the dominant culture. The teaching materials at the American K-12 level are approved by the local school district and academic principal. Chaitanya and Ramana's (2013) objective was "to encourage students' participation and to reduce their inhibitions, to integrate listening, speaking, reading and writing skills, to improve negotiating skills and to give form to their thoughts, and to enhance students' ability to communicate in real time/authentic situations" (p. 3). Chaitanya and Ramana (2013) implemented the use of role play to encourage students' participation. This experimental study found that role plays reduced various inhibitions and increased students' participation in the classroom.

ESL students and difficulties in oral communication. ESL students who enter the classrooms are easier to recognize among the population of students. ESL students are the new students to the class, community, and school. They may remain silent in class as they adjust to a new culture, environment, and school, unless there is a native language friend(s) to interact. The silent period can take a few days, several months or even a year. It is a discomfoting time for the ESL students and educators (Robinson et al., 2000).

Pathan (2013) examines major linguistic barriers of oral communication in English faced by ESL students. Oral communication helps students to improve academic performance, increase job opportunities, enhance professional competence, and improve personal effectiveness.

Communicating orally is a two-way process that consists of a speaker and a receiver. Difficulties

in-oral communication need to be understood due to the influences on the learners' listening and speaking skills.

Some of the most common weaknesses that students present is their ability to listen for meaning; inability to understand pronunciation, words or phrases; problems to understand fast speech, and the inability to maintain attention because of long text (Pathan, 2013). Listening does not lead naturally into acquiring fluency unless special attention is followed by practice at the grammatical and lexical level. Problems that were noticed in students' speaking include failure to discriminate between long and short vowels or diphthongs, failure to aspirate initial /p/, /t/, /k/ of stressed syllables, troubles pronouncing sounds not in their native language, not stressing on appropriate syllables, inadequate range of vocabulary leading to not conveying messages clearly, grammatical construction such as WH-questions, passive sentences, etc., and failure to use different word classes such as prepositions (Pathan, 2013).

Leahy's (1980) study is based on the Blache (1978) Jakobsonian three-point system for features of place, manner, and voicing to explore teaching pronunciation and to compare voicing problems for ESL students. The Jakobsonian system is associated with the "Fundamentals of Language (Jakobson, Fant and Halle, 1956) and the subsequent translation of Child Language, Aphasia, and Phonological Universals (Jakobson, 1968)" (Leahy, 1980, p. 209).

Depending on the student's native language, the results can be different. Japanese, Arabic and Farsi groups had problems with voiced consonant stops and continuants while Farsi and Japanese students also had trouble with voiced and voiceless sounds such as the semi-vowel (Leahy, 1980). Due to the difference in dialect variants, Farsi had a problem with the initial /W/ in the semivowel and the Japanese group with the /l/ and /r/ (Leahy, 1980). However, Spanish students presented more problems overall than the other students. The difference in the number

of problems between native Spanish speakers and the other groups is the result of the greater number of cognates between English and Spanish (Leahy, 1980). The problem can be due to the fact that Spanish and English's orthographic pronunciation are equivalent, therefore, producing a passable approximation in the words (Leahy, 1980).

The results of Leahy's (1980) study show that the position and sound are the main problem in this group. It is in the production of the voice stops in the word's final position.

Lau (2012) emphasizes that to overcome the ESL oral challenges, more emphasis should be given to writing and reading to improve oral skills. Lack of practice in writing and reading can be reflected in the students' substandard vocabulary development, poor writing, and minimal participation in class. Reading and writing are two complementary processes that develop creating ideas, organizing ideas in a logical process, drafting them in order of time to obtain cohesion, and revising appropriate ideas (Lau, 2012). Words are an important tool because vocabulary development is an important and ongoing part of a student's learning process (Lau, 2012).

New vocabulary must be associated with students' previous knowledge and experience. The goal is to make students learn new words and concepts by incorporating them to the concepts they already understand (Lau, 2012). This could be achieved via writing practice and repetition. By doing these, students become familiar with new words and understand how to use them correctly.

ESL students were complaining about being bullied by another student because of their lack of English skills (Lau, 2012). Lau (2012) used the students' bullying experiences to explore the problem in depth by inspiring the students to write about how they felt, talk about bullying experiences, and how to overcome the situation. Students were captivated by the activity because

as they engaged in it, they opened up and started sharing and discussing their stories with interest (Lau, 2012). By rewriting their bullying experience, they started to analyze possibilities of change and how they could have asserted themselves and used appropriate language. As the students were writing, Lau teaches the students structure to improve vocabulary and language skills to complete the assignment.

Chaitanaya and Ramana (2013) used the same approach as Lau (2012), but they went a step further in their research. Chaitanaya and Ramana (2013) inspired ESL students to write dialogues for plays. Students were required to act what they wrote and do a little “role play,” to provide the students a chance to interact with their educators and peers which contributed to their listening and speaking skills (Chaitanaya & Ramana, 2013). The writing of dialogue started with student discussions to develop the first draft. With the teacher’s guidance, students revised the dialogue to produce the final draft. During the writing process, students developed language learning by listening to ideas from teachers and peers, practicing speaking skills by expressing ideas, and honing reading skills while researching information for the role play (Chaitanaya & Ramana, 2013). Students were improving their English skills without being aware. Once the dialogue was completed the students had to perform their roles several times. Students gained the confidence to perform in front of each other. This practice increased the transformative impact on the student and teacher. The student gained linguistic skills, sense of their own voice, confidence, learning and strategies, attitude, motivation and personality. One factor that could accelerate the ESL student learning process could be his/her own personality and confidence to interact with other English speakers (Chaitanaya & Ramana, 2013). These personal characteristics could be obstacles for the quiet students and make the learning process slower.

Strategies to teach ESL students. Over the years, bilingual education has grown to garner more attention in the United States. The National Clearinghouse for English Language Acquisition and Language Instructional Educational Programs (2007) reported that the percentage of second language students in the United States had increased by 57.17% since 1995-1996. According to research, ESL students are more likely to drop out of school because second language students fail to learn to read and write proficient English (Gunderson, 2008). Many blame the victims for their failures rather than the school system that fail to find adequate methods in teaching English (Gunderson, 2008). The difficult part is to understand and examine explicit strategies that will be required for the instructor to teach ESL students to acquire the second language successfully.

Azevedo and Goncalves (2012) state that students should be taught in a way that they do not get bored. These students are now living in a new country without the ability to read, write, or speak the predominant language. Beside all this, students have to cope with additional challenges of incorporating into the new society (Azevedo & Goncalves, 2012). It is even harder to learn when the teacher starts to overwhelm the student with a lot of information at once.

Huang and Newbern (2012) mentioned that since 1970, there has been an interest in investigating second language learning strategies such as; actions, behaviors, steps, or techniques used by students. Huang and Newbern (2012) describe the outcomes of using a metacognitive strategy in reading. Learning to read is a hard subject for students with limited English skills. When ESL students learn how to read English, educators must consider how to use and incorporate the students' skills and knowledge from their native language to develop their English vocabulary skills and improve reading comprehension. When ESL learners read, they have to translate word by word to understand the text completely (Huang & Newbern, 2012).

Students may spend hours trying to translate sentence-by-sentence. When they translate to their native language, the idea may be lost in translation (Huang & Newbern).

Huang and Newbern (2012) suggested key reading strategies for ESL students to overcome lost in translation. These included global reading, problem solving, and support strategies. Global reading strategies include a purpose for reading, previewing the text pictures, graphics, organization, and tables (Huang & Newbern, 2012). Problem-solving strategies include; focus on using techniques to guess unfamiliar words and rereading the text to understand (Huang & Newbern, 2012). Support strategies, imply the use of elements to support and to enhance comprehension, for instance the use of a dictionary or highlighting important information (Huang & Newbern, 2012).

Summary

It is not always the case that international students come to a new country already confidently knowing the language and ready to overcome a new environment's challenges (Robinson et al., 2000). Many students do not arrive with the skills or characteristics to allow an easy bridge into second language acquisition. English is difficult to acquire if it is not practiced outside of the classroom. Students cannot be told to stop speaking their native language in order to acquire a new one (Robinson et al., 2000). Instead, a variety of approaches should be analyzed and implemented to increase students' success. Students can get a basic understanding of the language by using basic-level concepts, images, language proficiency, and background knowledge but many need much more than basic knowledge of English (Azevedo & Concalves, 2012).

History of Fashion Patternmaking

Pattern has a complex story of evolution, adaptation, and significance in the commercial pattern industry. Patternmaking has changed over time to create the tailored and styled designs of western clothing (Emery, 2014). Patterns started as an exclusive product to tailors. Eventually commercial patterns became very important not only for tailors, but for the general public (Emery, 2014). Many different pattern companies realized that people were willing to spend money on patterns and began to produce and market patterns in illustrated envelopes with detailed instructions of how to cut and sew fabric to fit varieties of body shapes (Emery, 2014).

Patterns for professionals. Tailors in the 14th century, published books that consisted of methods for cutting and constructing clothes (Seligman, 1996). Pattern drafting work developed at the beginning of the 19th century. Each new pattern publication became better than past ones. Simultaneously, magazines and periodicals related to fashion, dressmaking, and tailoring began to emerge. As patterns became important, they started to appear in fashion magazines and periodicals, as either scale or full-size (Seligman, 1996).

Scaled pattern pieces were used to promote the latest styles. In the 1840s, Germany and France experimented with scaled patterns (Spanabel, 1999). Ultimately the scaled patterns were developed to full-size patterns (Spanabel, 1999). These patterns were included in periodicals as a free supplement. Eventually full-size patterns were offered for sale to tailors and dressmakers, then to home sewers.

Juan de Alcegas's Libro de Geometria practica y trac a para (1580), was one of the surviving books on tailors' patterns published in Spain in 1580 (Seligman, 1996). The book shows how to lay out patterns on fabric and the amount of fabric that is needed per garment.

Juan de Alcega, Tailor's Pattern book, included 163 patterns for women and men with instructions for scaling and enlargement for practical use (Figure 1).

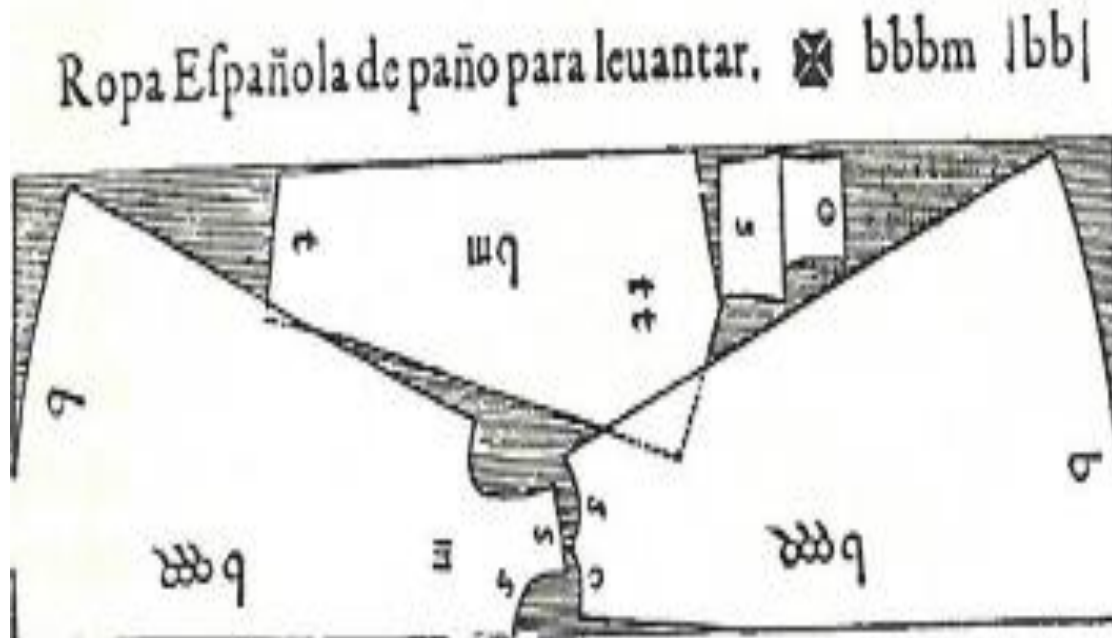


Figure 1. Spanish Morning Gown of Cloth from Juan de Alcega, *Cutting for all!: The Sartorial Arts, Related Crafts, and the Commercial Paper Pattern: A Bibliographic Reference Guide for Designers, Technicians, and Historians* (p. 3), by Seligman, 1996, *Carbondale, [Ill.]*: Southern Illinois University Press. Reprinted with permission.

Beginning of commercial patterns. In 1808, Eduard Minister a dressmaker, introduced a new method for drafting patterns. The method is based on the implementation of drafting methods using on proportionate scale and tables related to direct measure (Seligman, 1996). Publication of Hearn's *Rudiments of Cutting* in 1818, was based on Edward Minister's work. The first "real" system of cutting which was referred to as: "a direct measure system to ascertain dimensions of parts of the body directly utilizing the inch tape measure, invented along with the square in 1799 by Mr. George Atkinson" (Seligman, 1996, p. 7). This method was used by tailors to get appropriate client measurements.

The commercial pattern industry began after 1850, the pattern designer was recognized under the name of Madame Demorest, a dressmaker in Philadelphia (Spanabel, 1999). Through *Frank Leslie's Gazette of Fashion*, Demorest introduced the first commercial patterns used in the United States. Her publication consisted of a system of dress-cutting which was easy to understand. The system explained how to cut patterns which were exhibited as paper dresses, fully trimmed and available to dressmakers and private families all over the country (Spanabel, 1999). The Demorest method offered patterns plain or trimmed, bodices, sleeves, children's clothing, ladies' wrappers, undergarments, cloaks, and mantillas to name a few. Patterns were offered at select shops, dressmaker's establishments or by mail. However, the patterns were available in only one size. To get accurate individual dimensions, the consumer was able to send their measurements to Madame Demorest (Spanabel, 1999).

The United States pattern industry was established in 1860 (Burman, 1999). There was much development in the pattern industry; patterns were sold at retail stores, available through mail, and consumers were able to select items from fashion periodicals. However, patterns were available in only one size. This deficiency was resolved by Ebenezer Butterick.

As a tailor in Sterling, Massachusetts, Ebenezer Butterick's, innovative idea was to cut patterns in different sizes according to age, such as three to five years. The idea of grading sizes came from his wife, Ellen (Burman, 1999). The story is that Butterick designed a pattern for his wife after watching how she was struggling cutting fabric for the child's dress (Burman,). Butterick started his business in late 1864 by selling sized men's and boys' patterns. That same year, he published his first advertising at a *Currier Print of Juvenile Fashions*. Women's garments were added in 1866 (Seligman, 1996). Women's patterns were available in sizes using a proportional system based on the bust measurements (Burman, 1999). The first patterns were

cut in stiff paper. By 1868, the patterns were cut of tissue paper complemented by printed instructions. To promote and sell his patterns he published his first magazine, *Metropolitan*.

S. O. Beeton, an Englishman, was credited as the individual to first offer patterns through mail. Even though this process was already implemented, he was the first to see the link between technology and the elaboration of fashion (Seligman, 1996).

Patternmaking companies' expansion. Patternmaking company's Madame Demorest and Butterick competition increased in 1870 when James McCall founded McCall's Pattern Company. James McCall, a tailor from Scotland, started offering patterns and began the publication of his magazine *McCall Magazine*. In 1871, McCall began advertising "Bazaar Cut Paper Patterns" in *Harper's Bazaar*. Ladies' patterns were available in sizes ranging from 30" to 46" bust, for misses, sizes 10 to 16 years old, children of both sexes (Burman, 1999). In 1919, McCall offered printed patterns and 1923 offered full-color illustrations envelopes. McCall was the first company to publish pattern designs of French couturiers in 1925 (Seligman, 1996).

McCall renamed his patterns Bazaar Glove-Fitting Patterns to take advantage of name recognition associated with two well know fashion periodicals: *Der Bazar of Berlin* and *Harper's Bazaar of New York*. The New York periodical was introduced by the Harper brothers in November 1867. The periodical consisted of 16 pages and was published weekly. In 1901, it changed to monthly (Burman, 1999).

1916-1926 Innovations. The early patterns had information about how to cut garments, but no information on how to make the garments. The introduction of patterns envelopes by Madame Demorest in 1872 allowed more space to put more information than the small sheet pasted on the folded pattern. Construction directions became standard in the 1890s. In 1916,

Butterick experimented with a sheet called “Deltor.” The Deltor was a separate sheet with detailed sewing instruction, but it was not until 1919 that Deltor was patented.

Printed patterns. In 1921, printed patterns were introduced to the marketplace. Information such as construction, marks, pattern pieces identification and seam allowance were printed on each piece. There was no need for cut-and-punched markings (Seligman, 1996). Pattern pieces were printed in large tissue paper with darts, notches for matching pieces, and the name of each piece. In 1926, the information was printed in English, French, and Spanish for the overseas market (Emery, 2014).

In 1923, McCall’s added to the package a detailed instruction sheet called “Printo Gravure.” In the beginning, the sheet included illustrations of how to cut the printed pattern pieces, which included an additional margin beyond the cutting line (Emery, 2014). In 1942, the Printo Gravure was introduced as a larger sheet with more information (Emery, 2014). The sheet was patented to make it exclusive to McCall’s company and prevent other pattern companies from producing until the patent expired for McCall. Other pattern companies, utilized the new approach by adding some printing in the regular cut and punched tissue patterns.

Postscript: 1950s to the present. In 1961, Butterick acquired Vogue and continues to produce patterns under both names. Simplicity and McCall’s are still active companies. The mid-1950s brought diversity to the pattern companies. Companies began to develop global markets by producing patterns in diverse languages such as Spanish and Japanese. As well patterns were developed to be used with synthetic and knits materials (Emery, 2014).

In 1980s, the pattern company experienced many changes. The patternmaking companies were no longer family-owned and companies became subsidiaries of large conglomerates (Emery, 2014). Simplicity changed owners four times, McCall’s twice, and Butterick/Vogue

became a division of American Can Company (Emery, 2014). In the early 1990s, the three patterns companies grew to become equal in the market (Emery, 2014).

Summary

The first half of the twentieth century brought innovations to the patternmaking companies such as printed patterns and new marketing strategies. Mme Demorest established the foundation and Butterick introduced the use of patterns in different sizes (Emery, 2014). The introduction of James McCall pattern's company formed the three-way competition that defined a marketing formula which continues throughout the industry.

Patterns pieces started from the exclusive use of tailors and the aristocracy to being accessible for any social class. The process of adjusting the patterns to different body types was a difficult task. Today, patterns are mass produced on thin tissue paper in envelopes and are available according to a variety of sizes. The garment illustration is printed on the envelope along with a list of closure and yardage needed. For easy understanding, instructions are included and pattern pieces contain specific information pertaining to seam allowance and alignment with the fabric according to the grain.

Teaching Fashion Patternmaking

There is very little information available on teaching methods for patternmaking. Literature that was found deal with teaching patternmaking using technology, Gursoy and Celokoz (2017). Nothing was found when searching academic databases on the traditional methods of teaching patternmaking. No literature was found on teaching patternmaking to ESL students.

Conclusion

According to the literature, there is a need to understand how to help second language students to adjust to a new language. Questions that been addressed in the literature are: What tools do educators need to help students to acquire a new language? How long does it take a student take to learn the new language? Another issue for educators is identifying major linguistic barriers.

Education can be improved when educators learn about their students' everyday lives. There are deficiencies between parents and educators in understanding learning communities, and between practical, out-of-school, or experimental knowledge and academics. Educators and students can enrich practice and mutual learning through students' home, lives, and local histories. Students' knowledge can be used to validate identities as individuals and can be used as a guide for future learning. Educators' autonomy and professional preparation should involve research to understand their students' lived experiences.

Patternmaking has had evolved over the years. Early on, patterns were available in magazines only. As time passed, patterns became distributed through mail and corner stores. Now they are available online, in fabric stores and people attend classes to learn how to make patterns. Patternmaking requires practice and special training to develop skills and techniques within the apparel production piece of garment manufacturing. To learn this technique students, attend school to acquire adequate training.

Research Methodology

This chapter focused on the methods utilized for this study. The development of the survey, data collection, and data analysis will be explained in this chapter. This study focused on professors who teach fashion design at universities in the United States and Mexico. Of particular interest were faculty who teach patternmaking courses and may have or had Spanish-speaking students in their classes and how the language barrier influenced learning. For professors that teach patternmaking in Mexico, the interest was how they teach patternmaking with books written in English.

Development of the Survey

The information was gathered through a survey developed using current literature in ESL students learning a new language. The instrument consisted of 10 questions. Eight questions were close-ended questions but provided an option for participants to write in a response if needed (Appendix A). The two remaining questions were open-ended. The survey in Spanish consisted of six questions (Appendix A). Four of the original survey questions were translated to Spanish and two new questions were added. The new questions were related to the process of how the professors prepared for class when the books are in English. Five questions were close ended questions that provided an option for participants to write in a response if needed and one was an open-ended question. The four questions that were removed from the Spanish translation deal with professors in United States teaching Native Spanish speaking students.

No current literature on the need for a book in Spanish or how patternmaking is taught to non-English speakers could be located. Questions for the survey were based upon the perceived need of a patternmaking book in Spanish and the researcher's experience in the fashion industry. Other questions were developed based on English as a Second Language literature (Appendix

A). The questions were then placed in Survey Monkey® which was used to distribute and collect the data.

Survey Monkey® was used to distribute the survey. This program was used because it provided the simplest and most affordable way to distribute the survey and gather data. It allowed the researcher to send the survey to many potential respondents. Survey Monkey® is an easy-to-use platform that allows surveys to be developed according to a target audience.

An email with the link to the survey was sent to potential participants via Survey Monkey®. The email cover page explained the reasons for the research study, participation in the research was voluntary, and that all the responses remained anonymous. The investigator name, email, and phone number were available to participants in case of questions. For questions about potential participants' rights or to discuss problems, complaints or concerns about the research study, or to obtain information or offer input, the University of the Incarnate Word Institutional Review Board contact information was also available.

Data Collection Sample

This study focused on professional participants selected from the International Textiles and Apparel Association (ITAA) membership and faculty that teach fashion design in the United States and Mexico. ITAA was selected because it is a professional, educational association composed by members that have knowledge in the fashion industry. The members from ITAA are scholars and educators. One of the requirements to be selected was that the member must live in the United States and have experience in teaching fashion design. Participants' emails were obtained from an ITAA directory. A link to the survey was sent to 489 members via email from Survey Monkey®.

The participants from Mexico were located via an internet search. A link to the survey was sent to three faculty members from Mexico via email form Survey Monkey®. The e-mail was sent to a designer from Mexico that teaches fashion design faculty that teach design at Universidad de Monterrey (UDEM) and the Instituto Di Moda Burgo in Mexico were contacted to find out about the fashion patternmaking book(s) available and the teaching process.

Data Collection Process

The first round of data collection for the English survey began on October 24, 2017. Potential participants were emailed a link via Survey Monkey® with an invitation to participate. On November 27, 2017, a reminder was sent to participants that did not answer the first round. The final reminder was sent on December 18, 2017.

The Spanish survey was emailed to participants through a link via Survey Monkey® on October 24, 2017, as well. A reminder was send to participants on December 26, 2017.

Survey Question Explanation

Table 1 illustrated research question answered by survey to faculty in the United States. Response to survey questions one, six, eight, and 10 pertain to the research first question of a need for a patternmaking book in Spanish (Table 1). Research question two was answered by survey question three (Table 1). Research question three results were answered by survey question five (Table 1). Research question four was answered by survey question four and seven (Table 1). The final research question was answered by survey question two and nine (Table 1).

Table 1

Research Questions Answered by Survey to Faculty in the United States

Research Questions	Survey Questions
Is there a need for a patternmaking book in Spanish for native Spanish speaking students?	1, 6, 8, & 10
How is patternmaking taught to non-English speaking college students?	3
Do school's libraries have patternmaking books in Spanish accessible for native Spanish speakers?	5
How do the faculty currently respond to ESL students in patternmaking classes?	4 & 7
From a faculty perspective, what do ESL students do when they do not understand the lesson?	2 & 9

For the survey sent to faculty who teach fashion design in Mexico, questions one, three, and four answered research questions one (Table 2). Research questions two was answered by survey question five and six (Table 2). Research three was answered by survey question two (Table 2). Research question four and five are not addressed in the survey sent to faculty in Mexico (Table 2).

Table 2

Research Questions Answered by the Survey to Faculty in Mexico

Research Questions	Survey Questions
¿Hay alguna necesidad de tener libros de patrones en Español para estudiantes de habla Hispana?	1, 3, 4
¿Cómo es una clase de patrones enseñada a estudiantes en colegio que no hablan Español?	5 & 6
¿La librería de la escuela ofrece acceso a libros de patrones en español para estudiantes de habla Hispana?	2

Once data was collected it was downloaded from Survey Monkey® and saved as an Excel® file. Survey Monkey® data analysis tools were also used. Two types of data were collected, qualitative data through open-ended questions and quantitative data through closed-ended questions.

Data Analysis

Survey Monkey® data analysis tool was used for the basic descriptive analysis, specifically to find averages and frequencies. Frequency distribution was used to analyze the close-ended questions. The answers were grouped according to how many respondents answered the question the same way. Frequencies provided the best statistical analysis to answer research questions needing quantitative data.

To analyze the open-ended responses, theme analysis was used. The responses were read to determine patterns and/or common themes emerged. These words and/or phrases are coded into categories so each topic can be separated from other topics.

Summary

Potential participants from the United States and Mexico were selected according to their experience teaching patternmaking or experience working in the fashion industry. Two surveys were developed based upon a review of the literature in how ESL students learn and the perceived need of a patternmaking book in Spanish. The English and Spanish surveys constituted open and closed-ended questions. The surveys were sent by email via Survey Monkey®. Once the data were collected it was save and analyzed using theme analysis for open-ended questions and averages and frequencies for close-ended question.

Data Analysis

This section focuses on analysis of the data collected. The responses from the survey sent to faculty in the United States and Mexico were analyzed. Responses of the close and open-ended questions were evaluated to determine if faculty felt that there was a need for a patternmaking book in Spanish for native Spanish speaking students who come to study patternmaking in the United States.

Data Analysis of Survey for Faculty in the United States

The survey for faculty that teach patternmaking in the United States was sent to 489 potential participants, who were professional members of ITAA. Seventeen participants answered the survey and 11 opened the survey, but did not respond. In the following section, the research questions were answered based on the analysis of data from the survey questions. The responses from participants were downloaded and analyzed using Survey Monkey®.

Research Question 1

Is there a need for a Patternmaking book in Spanish for native Spanish speaking students?

When asked if the books used to teach patternmaking have the adequate material to teach native Spanish speakers, some of the comments included no previous experience teaching Spanish speakers and when Spanish speakers are present, students are expected to follow the step by step class explanation and manipulations. Another responded that the students must write their own patternmaking handout in Spanish.

Table 3

Do the Current Books Contain Adequate Material to Help you Teach to non-English Speakers?

Answer Choices	Responses	Total
Yes	17.65%	3
NO	64.71 %	11
Other	17.65%	3

The researcher asked if a non-English speaker's language has been a defining fact in how well a student learns in a patternmaking class (Appendix A). The majority of the participants, said they answered no because they do not have experience in teaching patternmaking to Spanish speakers (Table 4). The respondents that answered yes (Table 4), commented that higher education institutions required English as the primary language of instruction.

Table 4

Has a non-English Speaker's Language Been a Defining Factor in how Well a Student Learns in a Patternmaking Class?

Answer Choices	Responses	Total
Yes	17.65%	3
NO	52.94 %	9
Other	29.41%	5

Survey question eight (Appendix A) asked if a patternmaking book in Spanish would facilitate the learning process. Some of the comments by participants included the book should

be suggested if students want to use it, but not obligatory because it could create challenges in the class outcomes if two different textbooks were used.

Table 5

Would a Patternmaking Book in Spanish Facilitate the Learning Process?

Answer Choices	Responses	Total
Yes	47.06%	8
NO	17.65 %	3
Other	35.29%	6

Survey question 10 asked if when teaching non-English speakers, is it more difficult due to the curriculum and textbooks being written in American English and lack cultural diversity (Appendix A). The responses were to an open-ended question. To analyze the responses theme analysis was used. Many of the respondents stated that it is more difficult to teach non-English speaking students because the books are written in American English. For some of the professors English is their first and only language, so it becomes difficult for the faculty to understand non-English speaking students. To cope with the problem faculty use images to demonstrate to the class, simplified terms for clarification.

A common theme found in responses was that the dominant use of English and lack of cultural diversity was not an issue. Faculty felt students encountered knew enough English to understand explanations of techniques. As students started to go to classes, they need to learn and adapt quickly.

Others commented that to have the curriculum and textbook written in Spanish would be difficult because it depends on the dialect of Spanish used, as sometimes the translation is

deficient, leaving the students further confused. It is important to remember that Spanish changes from country to country, and that a word or a group of words in one country mean something else in another.

Another common theme in the responses was that the use of Spanish in a patternmaking book is a careful process, because it can be misleading and confusing. Yet, there are many Spanish speaking sewers, sample makers, cutters, etc., in the apparel industry that are not fluent in English. This is when knowing Spanish becomes a great communication tool. In addition, the academic programs have their curriculums written in English. A patternmaking book in Spanish can be a useful tool to help Spanish speaking students better understand techniques and processes. However, it can also limit their academic progress to Spanish, leaving them with communication gaps that can also limit their opportunities to secure gainful employment.

Several respondents stated that they were not sure because most of the professors teach hands-on course that they felt do not require English proficiency. Some of the schools where faculty work is not in the situation where they must have the curriculum and the book in Spanish because there is not a large number of native Spanish speaking students currently enrolled.

Research Question 2

How is patternmaking taught to non-English speaking college students?

One of the respondents stated that they let the Spanish speaking students translate the material themselves. A few of the participants felt students who do not to speak English were not an issue. Previous students had a proficient mastery of English that allowed students to understand the course material with little problem. A small group of respondents stated that this question did not apply to them because they do not have native Spanish speakers in their classes. A more common response was that the faculty felt the best way to help their students was to

work on an individual basis, depending on the extent of each student's need. This could mean more hands-on demonstrations to help non-English Speakers to understand the lessons. The instructions (handouts) are keep simple, yet detailed enough for non-native English speakers to understand and follow on their own. The instructions are clearly stated, with full sentences written in international English. The respondents stated that students have never had problems following the step-by-step instructions.

Research Question 3

Do school libraries have patternmaking books in Spanish accessible for native Spanish speakers?

The third research question focused on the availability of patternmaking books for non-English speakers. Survey question five answered this question (Appendix A). 100% of the participants answered no. School's libraries do not have patternmaking books accessible to non-English speakers

Research Question 4

How do the faculty currently respond to ESL students in patternmaking classes?

Table 6 shows that faculty felt that students who do not speak English are capable of understanding the lessons as presented. The majority of respondents answered yes because the faculty made every effort to ensure that students are provide with a transcript to make translation to Spanish easier. While three more respondents (17.65%) stated they had not had this thought cross their mind since teaching in the United States.

Table 6

As a Professor, Have you Considered Social-cultural Backgrounds and the Limitations of Students who Speak English as Second Language Face as They Translate Sociocultural Perspectives Into Practice?

Answer Choices	Responses	Total
Yes	64.71%	11
NO	17.65 %	3
Other	17.65%	3

The results from Table 7 were analyzed and it showed that 41.18% of faculty found that Spanish speaker participation in class was equal to the English-speaking students. If the students are fluent in English the language makes less of a difference in participation. 17.65% of the participants responded that it depends on how comfortable they are with English (Table 7). If they are still struggling with English, no, their participation in class is not the same.

Table 7

Is the Participation in Class of Spanish Speaking Students the Same as Native English-speaking Students?

Answer Choices	Responses	Total
Yes	41.18%	7
NO	17.65 %	3
Other	41.18%	7

Research Question 5

From a Faculty Perspective, What do ESL Students do When They do not Understand the Lesson?

When asked if the responders have students of different English speaking abilities in their class, most of the comments included that they occasionally have students with different English speaking abilities, but not very often.

Table 8

Do you Have Students of Different English-speaking Abilities in Your Class?

Answer Choices	Responses	Total
Yes	17.47%	13
NO	11.76 %	2
Other	11.76	2

The researcher asked if a patternmaking book in Spanish as a teacher's tool would increase students' learning? The comments provided by the participants included that a book in Spanish would be useful for schools that have significant number of Spanish speaking students. A patternmaking book in Spanish can increase students learning, but the book should be tested before a book in Spanish has complete adoption.

Table 9

Would a Patternmaking Book in Spanish as a Teacher's Tool Increase Students' Learning?

Answer Choices	Responses	Total
Yes	41.18%	7
NO	23.53 %	4
Other	35.29%	6

English Survey Result Summary

The survey for faculty who teach patternmaking in the United States was answered by 17 participants. The research questions were answered based on the analysis of data from the survey questions. The results of the closed and open-ended questions were analyzed. According to the participants' responses, a fashion patternmaking book in Spanish would be useful for institutions that have native Spanish speaking students. Before the book is adopted, it should be compared to current textbooks used in the United States to ensure information is not misleading and confusing. It should increase student's learning and understanding of techniques and new terminology. It should supplement what is being done in the classroom.

Data analysis of the Survey sent to Faculty in Mexico

The survey for faculty in Mexico was sent to professors that teach fashion patternmaking and two fashion design schools. Unfortunately, none of the potential participants responded to the survey after the initial attempt and reminders. Possible reasons for the lack of responses from faculty in Mexico is that the email with the survey was sent to a spam or junk folder, lack of interest in participating in surveys, and fear of opening emails from unknown senders due to the increase in computer viruses and malware.

Summary

It is expected that native Spanish speaking students have at least a basic knowledge of the English language before they come to study in to the United States. When professors have students that are not proficient in the language, step by step demonstration help students to understands the patternmaking class. Based on the results from respondents, a fashion patternmaking book in Spanish for native Spanish speaking students would be an excellent supplemental book, which could be suggested to students as a help guide while they get used to

the new language and terminology. Unfortunately, no data was collected from participants in Mexico. Limiting the results to the perspective and point of view from faculty in the United States. With this limitation, faculty in the United States felt that a patternmaking book in Spanish would be a good supplement or reference tool in their patternmaking classes.

Discussion, Conclusions, Implications, Recommendations

The results from the data provided in Chapter 4 will be further discussed. Research questions and comments provided by respondents will be discussed and conclusions drawn. Implications of the research to educators of patternmaking in institutions of higher education and recommendations for further research were also included in this chapter.

Discussion and Conclusions

The respondents were professional members of ITAA who had experience teaching patternmaking courses and may have had Spanish-speaking students in their classes. An attempt to survey two different pools of participants as part of the research. The first group of participants were faculty who teach at institutions of higher education within the United States. The participants in the second pool were faculty from institutions of higher education in Mexico. Of particular interest was how they impart the knowledge of patternmaking to a class with books written in English.

All the statistical results were reported because previous research on this topic was not located. The results are important to help understand what influenced this sample and how research could be expanded upon in the future. As this was an initial study, all the information collected was necessary to understand if there is a need of a fashion patternmaking book in Spanish for native Spanish speakers.

The need for a pattern making book in Spanish was addressed by research question one. According to data collected from the survey some of the professors have no previous experience teaching patternmaking to students that come from Mexico and do not know English well. Those participants stated that the higher education institution required students to know English well enough to take classes. 47.06% of the participants responded that when they have students whose

second language is English, they used images to teach the class, simplified terms for clarification. This helped students to keep up with the lessons and their peers. Another method used is to work with students on an individual basis, depending on the amount of work assistance needed.

Eight out of 17 participants mention that it is difficult to teach non-English speaking students because the books are written in English. They suggested that a patternmaking book in Spanish could be misleading, confusing, and it can limit their academic progress to English. They say that to incorporate a patternmaking book in Spanish to the curriculum is possible. However, it would be a hard to teach a class using both an English and Spanish book. Rather, the faculty suggested that a Spanish book can be recommend to students as a useful tool for Spanish speaking students to better understand techniques and processes.

Research question number two addressed how patternmaking is taught to non-English speakers. Two participants stated that Spanish speakers can translate the material by themselves. Respondents also stated they help students to understand the material on an individual basis if they have to, but in class the focus is in the emphasis on demonstrations. The instructions are simple and detailed enough to be understood by non-native English speakers.

On research question number three, the answer was unanimous. All the participants answered no to having patternmaking books in Spanish available in school libraries. There is not a supplement tool available, if wanted for use by students and/or the professor.

The fourth research question is, How do the faculty currently respond to ESL students in patternmaking classes?

Research question five, From a faculty perspective, what do ESL students do when they do not understand the lesson? Faculty stated that non-English speakers are capable of

understanding the lessons even if they do not master the language. The instructors ensure that students are provided with the adequate material to make the translation to Spanish easier.

Implications

As stated previously, this was the first study of its kind to look at the participants' perception of the need for a fashion patternmaking book in Spanish for native Spanish speaking students. There has been a large amount research of how native Spanish speaking students perform in the classroom while learning a new language and how the new language is acquired (Robinson et al., 2000).

This research provides patternmaking professors, institutions of higher education, and publishers an opportunity to determine how to go about creating and testing the development of a patternmaking book in Spanish. The information provides a basis for determining where a patternmaking book written in Spanish would best be used and understood as a supplemental tool. A Spanish patternmaking book may not be needed for all native Spanish-speaking students. Nor will a Spanish patternmaking textbook be essential for every professor to require in class. Rather it may be selected as a supplement for students to aid learning.

Recommendations for Further Research

Further research is needed in the area of a fashion patternmaking book in Spanish. The lack of literature on the need of patternmaking book in Spanish indicates that there is possibility for more research on the subject. Additional research would include perception of professors from design schools in Mexico for comparison and additional research from faculty in the United States. Another research study within the United States that included faculty that beyond the ITAA directory would add to the current research and provide a better understanding of the need

for a patternmaking-book in Spanish. Further studies should also include native speaking Spanish students to obtain their insight into the need of a patternmaking book in Spanish.

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Appendices

Appendix A

Survey sent to Faculty in The United States

Do the current books contain adequate material to help you teach to non-English speakers?

Yes No Other

Do you have students of different English speaking abilities in your class?

Yes No Other

How do you handle teaching students that do not speak English or speak English as their second language?

As a professor, have you considered social-cultural backgrounds and the limitations of students who speak English as second language face as they translate sociocultural perspectives into practice?

Yes No Other

Does your school library have easy access to pattern making book(s) in Spanish?

Yes No

Has a non-English speaker's language been a defining fact in how well a student learns in a pattern making class?

Yes No Other

Is the participation in class of Spanish speaking students the same as native English speaking students?

Yes No Other

Would a patternmaking book in Spanish facilitate the learning process?

Yes No Other

Would a patternmaking book in Spanish as a teacher's tool increase students' learning?

Yes No Other

When teaching non-English speakers, is it more difficult due to the curriculum and textbooks being written in American English and lack cultural diversity?

Were you aware that non-English speakers remain silent in class while they adjust to a new culture, environment, and new school?

Yes No Other

Appendix B

Survey sent to Faculty in Mexico

¿Los libros utilizados para enseñar a los estudiantes de habla Hispana, contienen la información adecuada para ayudar para impartir la clase?

Si No Otro

¿La librería de la escuela ofrece acceso a libros de patrones en español?

Si No Otro

¿Un libro de patrones en español facilitara el proceso de aprendizaje?

Si No Otro

¿Un libro de patrones en español como una herramienta para maestros, aumentaría el aprendizaje de los estudiantes?

Si No Otro

¿Proporciona folletos a los estudiantes que han sido traducidos al español?

Si No Otro

¿Basados en libros de patrones en Ingles, ¿Cómo se prepararía para dar una clase de patrones en español?

Appendix C

IRB approval letter from University of the Incarnate Word

IRB Approval Letter

September 1 2017

PI: Ms Yessica Prieto

Protocol title: Pattern Making instructions in Spanish

Yessica:

Your request to conduct the study titled "Pattern Making instructions in Spanish" was approved by Exempt review on 09/01/2017. Your IRB approval number is 17-09-001. Any written communication with potential subjects or subjects must be approved and include the IRB approval number.

Please keep in mind these additional IRB requirements:

- This approval will expire **one year** from 09/01/2017.
- Request for continuing review must be completed for projects extending past one year. Use the **IRB Continuing Review Request form**.
- Changes in protocol procedures must be approved by the IRB prior to implementation except when necessary to eliminate apparent immediate hazards to the subjects. Use the **IRB Amendment Request form**.
- Any unanticipated problems involving risks to subjects or others must be reported immediately.

Approved protocols are filed by their number. Please refer to this number when communicating about this protocol.

Approval may be suspended or terminated if there is evidence of a) noncompliance with federal regulations or university policy or b) any aberration from the current, approved protocol.

Congratulations and best wishes for successful completion of your research. If you need any assistance, please contact the UIW IRB representative for your college/school or the Office of Research Development.

Sincerely,

Ana Wandless-Hagendorf, PhD, CPRA

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