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Contents

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A Reflective Critical Thinking Workshop for Graduate Students in

Pharmacy and Health Sciences: A Pilot Study

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Abstract: The purpose of this study was to see if a reflective critical thinking workshop for graduate students would help improve the critical thinking ability of research participants. Twenty-six occupational therapy, physical therapy, and pharmacy students in their first and second year of graduate education in pharmacy, occupational therapy, and physical therapy programs participated in this study. Students were separated into two groups, student-teachers and student-learners, using controlled random assignment. The student-teachers created reflective critical thinking activities for the student-learners based upon each level of Bloom's Taxonomy. It was hypothesized that students who helped teach would be working on a higher level of Bloom's taxonomy than students who did not, and would perform better on the Health Science Reasoning Test (HSRT). The analysis of data did not show a statistically significant difference in HSRT scores between the two groups. However, there was a marked difference when comparing pre-post score differences between the second-year students and the first-year students (mean difference of 4 points, p = .015). This study supports the incorporation of an interactive, interdisciplinary workshop for reflective critical thinking strategies during the 2nd year of graduate school. Further research with a larger group of students and with more disciplines is recommended.

Key words: reflective critical thinking, graduate students, health sciences, pharmacy

1. Background

Reflective critical thinking is a process of learning through experiences while becoming self-aware. It includes the ability to critically evaluate one's own responses to various situations that present challenges (Finlay, 2008). Graduate students in pharmacy and the health sciences must utilize high-level critical thinking strategies in order to pass their board examination after graduation. These strategies become even more valuable when the graduates begin practicing in the clinical setting (Kowalczyk & Leggett, 2005; Martin, 2002; Pitney, 2002; Velde, Wittman & Vos, 2006). These reflective critical thinking strategies are not limited to health care. They are needed for many, if not all disciplines (Hatcher, 2015; Moon, 2004).

Critical Thinking is sometimes defined as an integration of the elements depicted in Bloom's Taxonomy (Aviles, 2000; Huitt, 1998). Definitions of critical thinking include the ability to use reflection or *metacognition* — thinking about one's own thought processes (Dean & Kuhn, 2003), *collaboration* (Vygotsky, 1978), and

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hands-on skills or *learning by doing* (Dewey, 1916). *Reflection* requires one to look back and reconsider choices or actions. This study on the development of critical thinking, used an interdisciplinary approach, inviting 1st and 2nd year graduate students from the physical therapy, occupational therapy, and pharmacy graduate programs to participate.

2. The Need for Reflective Critical Thinking Instruction in the Health Professions

Dr. David Leitch, a U.S. Navy Medical Trainer, was once quoted as saying that health care professionals need to be able to look for answers, rather than simply reciting what they learned in the classroom (Shelby, 2007). Critical thinking is the process in which health care practitioners engage to find answers to problems when treating clients. The tools of reflective critical thinking are essential in order for the health professional to examine the medical record, the patient's current status, evidence in the literature, and personal and client values, and then make a sound decision that is in the best interest of the patient (Plack & Greenburg, 2005).

Although health care professionals typically do reflect on their actions, it's the conscious acknowledgement of these reflections that are often paramount for the development of clinical reasoning (Gustafson & Fagerberg, 2004). Research has shown this is true for practitioners from a number of professions, including occupational therapy, physical therapy, and pharmacy. In an effort to help guide patients toward the most appropriate therapeutic intervention techniques and/or referral, research has shown that practicing occupational therapists utilize reflective critical thinking strategies to make these clinical decisions (Lederer, 2007; Velde, Wittman & Vos, 2006). The skills required for high level critical thinking have been found to be important for occupational therapy practitioners in regard to both clinical decision-making and professionalism (Lederer, 2007).

Likewise, the use of high-level reflective critical thinking strategies is viewed as extremely important for physical therapists when making effective clinical decisions (Bartlette & Cox, 2002; Jensen, Gwyer, Shepard & Hack, 2000; Jette & Portney, 2003). Jensen et al. (2000) identified a dynamic, patient-centered knowledge base evolving through reflection, and clinical reasoning skills in collaboration with the patient as two of the four dimensions in their theoretical model of physical therapist expertise. The development of reflective critical thinking is therefore an important goal in the curriculum (Vendrely, 2005).

Pharmacists must also make complex decisions every day, often based on incomplete information (Austin, Gregory & Chiu, 2008). Critical thinking is therefore seen as an essential educational outcome for students in a graduate pharmacy school (Cisneros, 2009). There is a concern, however, regarding whether or not these essential critical thinking skills can be developed while a student is in the college setting (Miller, 2003). Research by Miller (2003) found that although there is an increase in the overall generic critical thinking ability of college students in a pharmacy program, there is not an increase in student motivation to think critically.

3. The Need for Reflective Critical Thinking Instruction in Other Disciplines

Although this research focused on college graduate students in the health professions, there is a definitive need for reflective critical thinking for students in other disciplines as well (Hatcher, 2015; Moon, 2004). Barak et al. (2007) demonstrated that teaching critical thinking skills to high school science students enhanced their scores related to open-mindedness, self-confidence, and maturity. These traits are needed for many professions. It is believed by some that learning to use critical reflection in a social context, could have the potential to transform organizations by potentiating a more democratic process (Welsh & Dehler, 2016). This could be valuable in any

office setting and in many professions where collaboration is paramount. The literature is inundated with testimonials and articles that stress the importance of teaching critical thinking skills to students while still in college. A small list of college subjects in which students could benefit from the instruction of skills related to critical thinking includes economics (Heijltjes et al., 2014), physics (Holmes et al., 2015), education (Fakunle et al., 2016), and language awareness (Hélot, 2018). Without this instruction in college, many professionals might not acquire these skills until they are out in the field a few years and more experienced. At that point, some mistakes may have been made that could potentially have been avoided.

4. Strategies to Teach Reflective Critical Thinking

There is little how-to information in the literature regarding the development of critical thinking strategies for college students (Tiruneh et al., 2014). A study by Mann, Gordon, and MacLeod (2007) found that the educational elements most likely to encourage the development of critical reflection (and ultimately reflective practice) include: a safe, supportive environment, and group discussion, mentorship allowing students to freely express ideas and to provide peer-support, with time set aside to reflect. Time to share these reflections for a more conscious experience was also advocated by Gustafson and Fagerberg (2004). Michaels (2017) found that a reflective critical thinking workshop for a racially diverse group of graduate physical therapist students, could be beneficial if the information presented is something new that the students had not experienced prior. Suggestions for improvement in the classroom curriculum included the implementation of more opportunities for problem-based learning (Foord-May, 2006), use of interactive web-based sites (Gottsfeld, 2000), use of case-method formats (Wade, 1999), increased use of classroom technology (Halpern, 1999), and utilization of patient-simulation mannequins (Seybert et al., 2005). Because of limited empirical evidence related to the effectiveness of these strategies, choosing appropriate strategies for teaching critical thinking poses a quandary (Bartlette & Cox, 2002; Sharp, Reynolds & Brooks, 2013).

The goal of this study was to see if a reflective critical thinking workshop for graduate students in occupational therapy, physical therapy, and pharmacy would help increase the reflective critical thinking ability of the research participants. It placed the burden of pinpointing teaching strategies for the development of reflective critical thinking on the students themselves, with half of the students teaching the other half, gradually increasing the difficulty based on the stages of Bloom's Taxonomy. There are six levels in Bloom's Taxonomy that classify educational learning objectives from simple to complex: *Knowledge* (defining, repeating, recalling), *Understanding* (explaining, discussing, describing), *Applying* (using, practicing, illustrating), *Analyzing* (calculating comparing, contrasting), *Synthesizing* (planning, formulating, constructing), and *Evaluating* (judging, appraising, assessing) (Bloom, 1984). Student-teachers were assigned to a level of Bloom's Taxonomy, then asked to create a learning activity for their fellow students based on current course content and that specific level of the taxonomy. The students then provided this instruction to their fellow students. Because some of the students acted as instructors, requiring a higher order of thinking, it was believed that the student-teachers would out-perform the student-learners in the pre/post testing.

5. Method

Approval was granted by the Institutional Review Board (IRB) at Belmont University for the procedure used in this study.

5.1 Participants

Email-invitations to participate in the study were sent to full time, first-year and second-year graduate students in the physical therapy, occupational therapy, and pharmacy programs at Belmont University. There were 32 volunteers who took the initial Health Science Reasoning Test (HSRT), consisting of 19 first-year students and 13 second-year students. Twenty-six completed the study (Table 1).

Table 1   Demographics of Participants Completing the Study

Sex	Male	5
	Female	21
Race	African American	1
	Caucasian	20
	Asian/Pacific Islander	2
	Hispanic	2
	Other	1
Discipline	Physical Therapy	8
	Occupational Therapy	15
	Pharmacy	3
Year	First-Year	15
	Second-Year	11
TOTAL		26

Volunteers were separated into two groups: Teaching-Students and Learning-Students. This was done using controlled random assignment (choosing an inverted card, where 1 = teacher, and 2 = learner), with a set number of cards for each discipline, and for each year in the program. This was done to ensure that an equal number of volunteers from each discipline and cohort would serve as Teaching-Students and as Learning-Students, and an equal number of first and second-year students serving in these capacities. Consent forms and demographic forms were competed on the first night of the study, followed by administration of the HSRT.

5.2 Instrumentation

The Health Science Reasoning Test (HSRT) was administered during the first and fourth nights of the study. The HSRT is a version of the California Critical Thinking Skills test that focuses on eight criteria of critical thinking (problem solving, deductive reasoning, inductive reasoning, analysis, inference, explanation, evaluation, and numeracy). It was developed by Facione and Facione (2006) and consists of 32 multiple choice questions that target critical thinking skills of professionals in the health sciences. According to Insight Assessment (2018), the HSRT has been specifically calibrated for students in professional health science programs, and had been found to predict clinical performance ratings, and success when taking professional board examinations.

5.3 The Workshop

The study was conducted over four sessions. During the first session, after administration of the HSRT to all participants, the Learning-Students were allowed to leave and the Teaching-Students remained. Teaching-Students were asked to create a portion of the workshop to instruct their fellow students in critical thinking skills that would aid them during their first and second years of graduate school. These students randomly selected cards for each of the six specific levels of Blooms taxonomy (Bloom, 1984), and were instructed to design lessons aimed at that specific level of learning. The strategy for the workshop was patterned after previous work by the principle investigator (Michaels, 2017). Students were presented with basic instruction regarding their assigned level of Bloom's Taxonomy to help them create various break-out sections of the workshop. They were provided with one week in order to allow them to work together to create challenging and informative break-out activities for their

peers.

During the second session (one week later), there were opening remarks from each of the researchers, followed by commentary about Blooms first level of the taxonomy (*Knowledge*). After this, there was a breakout session by discipline and year (first-year PTs in one area, second-year PTs in another, first-year OTs in the next room, and so on) where the Learner-Students were taught content with an activity prepared by the Teaching-Students. This was repeated for the second level, *Understanding*. For the third level, *Application*, there were again opening remarks from one of the researchers, followed by a breakout session with the students, this time separated only by discipline (1st and 2nd year students together). Table 2 depicts some of the activities created and used by the teaching students on the second evening.

Table 2   Sample of Some of the Teaching-Student-Led Activities on the Second Evening

Bloom's Level	Teaching Students	Learning Students	Example of the Activities
Knowledge	First-Year OT Students	First-Year OT Students	Mnemonic Strategy to memorize cranial nerves
Understanding	Second-Year PT Students	Second-Year PT Students	Story board for understanding of circulation
Application	First-Year Pharmacy	Second-Year Pharmacy Students	Case-Based application examples

At the third session (the following day), there were again opening remarks from the researchers about the fourth level of Bloom's taxonomy, *Analysis*, followed by breakout sessions. This time, however, each discipline met with all other disciplines from their same year, to make a more interdisciplinary, higher-level activity. The fourth breakout began with an overview of *Synthesis*, followed by a group activity of all disciplines and all years combined together. The final level of Blooms taxonomy, *Evaluation,* was covered with a presentation about the revised version of Bloom's Taxonomy (Anderson, 2013), and a faculty-led case-based activity that required the entire class to work together. The session ended with closing remarks, conclusion, and discussion, and a mock graduation ceremony. Table 3 depicts some of the activities created and used by the teaching students on the third evening.

Table 3   Sample of Some of the Teaching-Student-Led Activities on the Third Evening

Bloom's Level	Teaching Students	Learning Students	Example of the Activities
Analysis	Second-Year OT Students	All Second-Year Students	Strategies to use when choosing various patient assessment tools.
Synthesis	First-Year PT Students	All Students	Lecture and group activity to create a treatment plan.
Evaluation	Faculty-Led	All Pharmacy Students	Case-Based application examples of actual litigation cases regarding what could have been done better, utilizing reflection.

During fourth session (the following day), the HSRT was re-taken. Students also answered basic follow-up questions, and completed a workshop evaluation.

5.4 Data Analysis

Student names were omitted from the documents and only numbers were used. Because the HSRT examination scores are given in percentages, parametric statistical analysis was utilized. Group data were analyzed for within-group effects (paired t-testing of Pre-HSRT versus Post-HSRT), and between-group effects (Independent t-testing). Cohen's *d* was calculated for effect size.

6. Results

6.1 Quantitative

Parametric measures were utilized in the form of test score percentages. The overall HSRT percentage scores for all students when taken as a group increased from a mean of 84.27 to 84.96, but this was not statistically significant on paired t-testing ($p = .418$). The overall HSRT scores for Student-Teachers increased from a mean of 84.50 to 85.07, but this was again not statistically significant ($p = .668$). The overall HSRT scores for the Student-Learners increased from a mean of 84.00 to 84.83, but this was also not statistically significant ($p = .450$). Contrary to the stated hypothesis, the students-learners actually showed a greater increase in the mean overall HSRT score (0.83) when compared to the student-teachers (0.57), however, neither of these differences were statistically significant on independent t-testing ($p = .878$) (see Figure 1). There were also no statistically significant correlations when pairing the level of the Bloom's taxonomy taught by the student-teachers to the change in HSRT in scores. As can be illustrated in Figure 1, all students made improvements in every area except for the Student Teachers, who actually showed a decline in 4 out of the 9 scores presented.
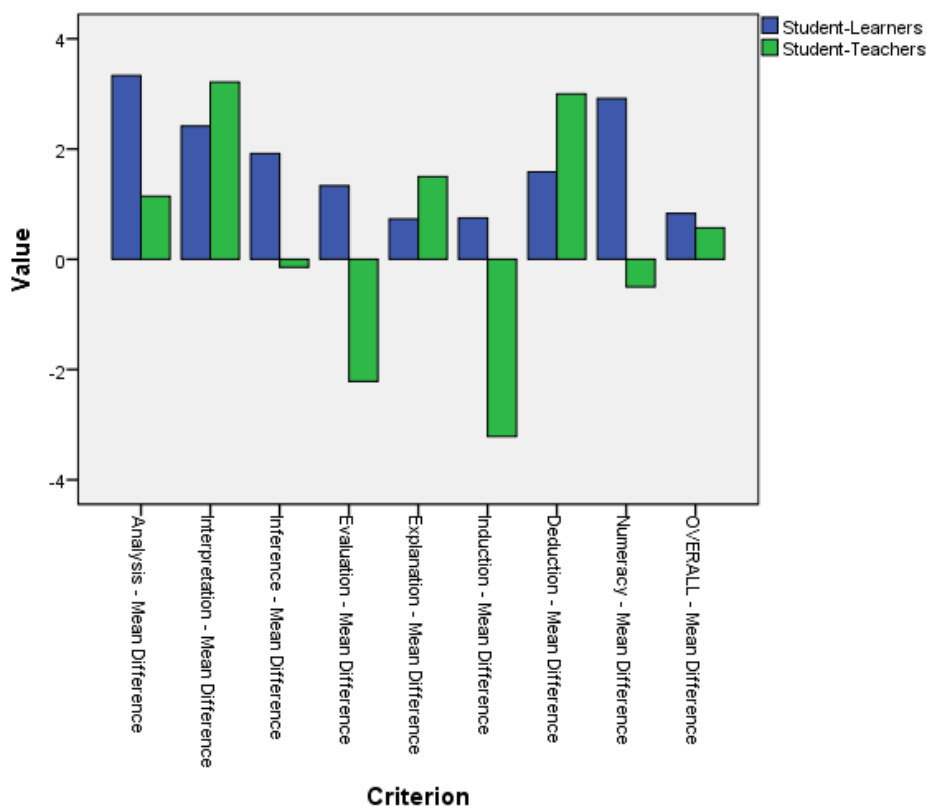
Figure 1   Graph Comparing the Mean Difference Between the Pre-HSRT and Post-HSRT Scores of Student-Teachers Compared To Student-Learners (Created Using SPSS)

Although the null could not be rejected for the above findings, there were significant differences between the scores of students from different class cohorts. When comparing the scores of the students by class year, there was a statistically significant increase in the post-test overall HSRT mean scores for the second-year students when compared to their own pre-test scores, with an increase of 3 points, from 84.73 to 87.73 ($p = .048$). The first-year students, showed a decrease of 1 point from 83.93 to 82.93, although this was not statistically significant (p

= .274). When comparing the change in overall HSRT scores of the first-year graduate students to the second-year graduate students using independent t-testing, the difference between groups was found to be statistically significant (p = .015). The Cohen's d effect size of this calculated to 1.013. According to Portney and Watkins (2015), this would be a high effect size with a power between .93 and .99.

HSRT criteria scores were also analyzed individually using independent t-testing (see Figure 2). The most significant difference between groups was found for Inference, with a difference of 6.63 points between groups. This difference was found to be statistically significant on independent t-testing (p = .015). The Cohen's d effect size of this calculated to 1.033. As can be seen from Figure 2, the second-year graduate students showed an increase between pre-test and post-test scores for all 8 criteria of the HSRT, as well as the overall score.
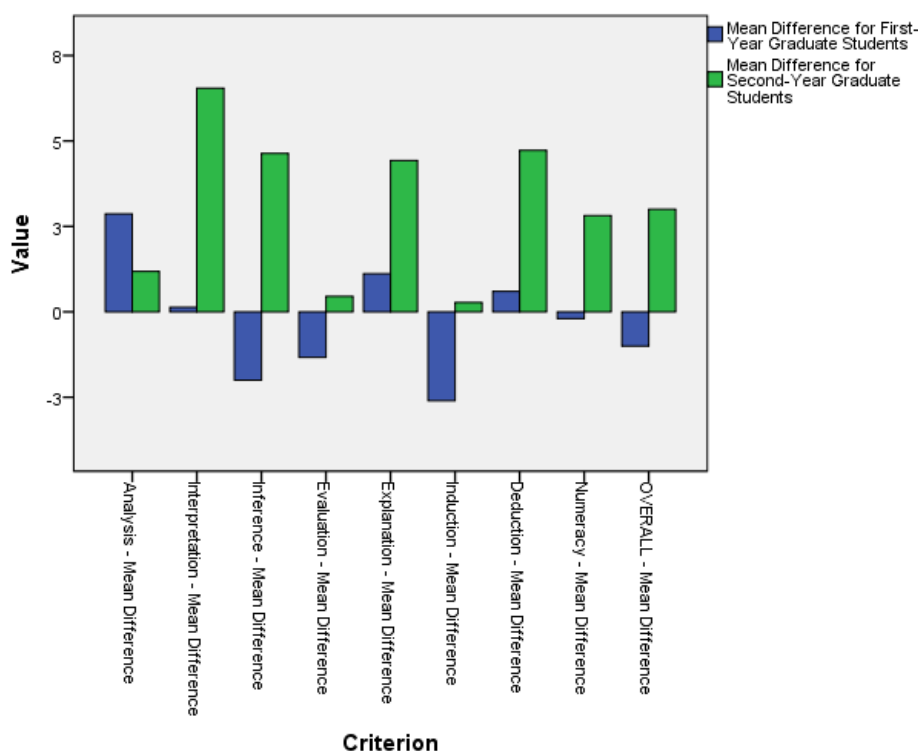
Figure 2   Graph Comparing the Mean Difference Between the pre-HSRT and post-HSRT scores of First-Year Graduate Students Compared to Second-Year Graduate Students (created using SPSS)

6.2 Qualitative

The second-year graduate students in this study demonstrated much more of an improvement in HSRT scores when comparing the pre to post-test results than the first-year students. Because of this finding, qualitative comments collected after the workshop were analyzed for recurrent themes. The first-year students focused more the utilization of these new strategies while studying and learning in the classroom, and when taking examinations. Answers to the question, *what skills did you use to have a successful session?* Included "Memory" and "Remembering and Analysis", and "Understanding and Application." To answer the question, "*How inclined are you to use (these strategies)?*" Comments included, "I will use them during class and while studying." and "Now, when I study, I will watch videos and practice drawing/demonstrating skills." The answers from the first-year students incorporated more words that linked to the lower levels of Bloom's taxonomy (*Skills* was the most used word, and this falls under Knowledge, and *Use* was second, which falls under Understanding and Application.

Other widely used words included *Study, Listened,* and *Draw*). A word cloud with the words most commonly used by the first-year students can be found in Figure 3.
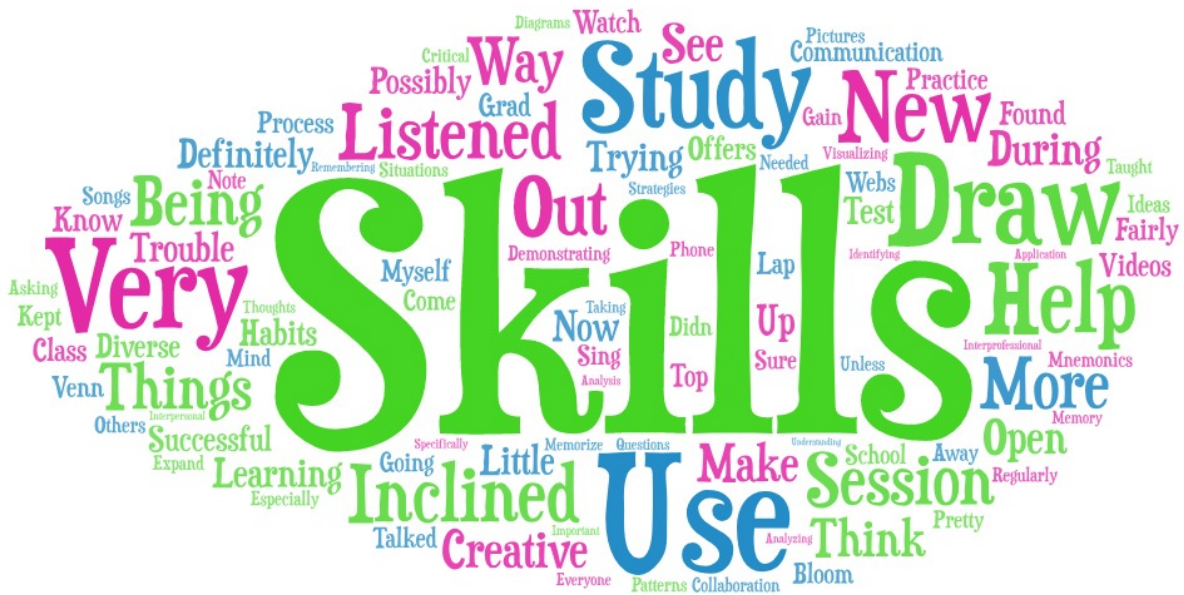
Figure 3   Word Cloud from the Qualitative Responses of the First-Year Students, Demonstrating Words That Link More Closely to the Lower Levels of Bloom's Taxonomy

The second-year students, in contrast, were focused more on skill-building, listening, trying new things, and communicating. Their comments seemed more focused on the use of these strategies to perform better in the clinical setting. Answers to the question, *what skills did you use to have a successful session?* included, "Interpersonal communication to make sure I gain the most out of a session", "Understanding and Application, Interprofessional skills were very important", and "Paying attention, respecting my peers, writing material down, discussing material with the group." To answer the question, *How inclined are you to use (these strategies)?* Comments included, "More likely than I was before." and "More so now that I've had training with the application of skills in a controlled low-stakes environment and not in the context of material to be learned for a test." Although similar to the words used by the first-year students, the answers from the second-year students used words that linked to the middle levels of Bloom's taxonomy more than the first-year students. (*Use* was the most utilized word, which falls under Understanding and Application, but it was often used in the context of discussing with a group, which falls more under Analysis. *Skills* was the second most utilized word, but it was typically used in the context of "skill-building," which falls under Synthesis. Other widely used words included *More, Material, Bloom*, *Listened*, and *Learned*). A word cloud with the words most commonly used by the second-year students can be found in Figure 4.

Figure 4   Word Cloud from the Qualitative Responses of the Second-Year Students, Demonstrating Words That Link More Closely To The Middle Levels of Bloom's Taxonomy

7. Discussion

The goal of this study was to see if a reflective critical thinking workshop for occupational therapy, physical therapy, and pharmacy students would help increase the reflective critical thinking ability of those present. Because some students acted as instructors requiring a higher order of thinking, it was believed that the student-teachers would out-perform the student-learners in the pre/post testing. The null hypothesis must be accepted as no statistically significant differences were found between these two groups.

When looking at the HSRT differences based on class cohort, it seems that this workshop was highly effective for the second-year graduate students, with an increase between pre-test and post-test scores for all 8 criteria of the HSRT, and a large effect size. The explanation for the improvement of the second-year students' scores and the lack of improvement in the first-year students' scores is unclear. The researchers in this study used a safe, supportive environment, and group discussion, mentorship allowing students to freely express ideas and to provide peer-support, with time set aside to reflect as advocated by Mann, Gordon, & MacLeod (2007), and time to share these reflections as advocated by Gustafson & Fagerberg (2004). One thought was the difference between the cohort scores was possibly due to the different characteristics observed by Benner (1984), and later depicted by Dracup and Bryan-Brown (2004), who theorized that individuals on a more advanced level tend to exhibit more confidence and tend to perceive situations more as whole entities rather than in pieces than those who at a more novice level. The greater maturity of the second-year students, and/or better understanding of the rationale for reflective critical thinking strategies, might have allowed for increased motivation to outperform their first HSRT score. Second-year students had prior opportunity for problem-based learning as recommended by Foord-May (2006), and use of case-method formats, as recommended by Wade (1999).

Qualitative analysis of answers to open-ended questions revealed that the second-year students utilized more terminology indicative of Application, Analysis, and Synthesis, as defined by Bloom, while the first-year students

stress more words related to Knowledge and Understanding. This finding concurs with that of Miller (2003), who found an increase in the overall generic critical thinking ability of college students in a pharmacy program over the course of the program. Whatever the reason, the students in their second-year achieved more benefit from the workshop than the first-year students as a group, regardless of discipline, or teaching/learning role. This finding lends credence to the idea that the presentation of a reflective critical thinking workshop for students in a graduate pharmacy and health sciences program would be better if administered during their second academic year.

These findings can be applied to other disciplines as well. A reflective critical thinking workshop of this type, taught by both the teachers and the students would produce the best results if the students are "ready". All the participants in this study were eager and motivated, but the second-year students showed the most improvement. It's possible that because the second-year students were already using more application in their coursework, it was easier for them to make the connection between this workshop and their future work in the field. Because of these findings, these researchers suggest that instructors choose their more advanced students when running a workshop of this type. This does not mean that students earlier in a program will not benefit from learning the skills related to critical thinking. It may mean, however, that students could be more likely to rely on lower levels of Bloom's Taxonomy until they have an increased awareness of how the material learned in the classroom will eventually apply to the roles required for their chosen fields.

Regardless of class cohort, all the participating students wrote very positive comments about the workshop, asking to do this again next year. When questioned, many first and second-year students admitted to having seen the taxonomy levels discussed in prior coursework. However, most admitted that they previously had minimal exposure to apply this information. They also expressed appreciation for the chance to work in an inter-professional educational (IPE) setting. One student wrote, "Loved the chance for IPE. I liked that different teachers presented different sections and they incorporated healthcare cases." Another student wrote, "So, so great! Worth the time!"

This study did have its limitations, such as the small sample size, and the inability to include nursing students due to scheduling difficulties. Although this workshop was patterned after previous work done by Michaels (2017) with a sample of diverse students with regard to race, the group in this study consisted primarily of Caucasian females. This is also a limitation, but the profession of Occupational Therapy is primarily female, and many of the volunteers were from OT. Regardless of these limitations, the information gained will help these researchers when developing a plan for future workshops to help build reflective critical thinking strategies in the graduate pharmacy and health science programs at Belmont University. Repeating this study with a larger sample-size, and using only graduate students in their second-year of their program, could help determine whether or not these results are reliable. The goal is to learn the most effective strategies to teach reflective critical thinking, and hopefully graduate well-prepared health care professionals.

Acknowledgements

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Learning Based on Competences and Communication, Tools for the

Cognitive Development of University Students

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Abstract: Competency-based learning (ABC) in conjunction with communication, form a technique that helps the cognitive development of university students so that they are able to face the different present and future scenarios. The ABC entails putting into practice the competencies of the students through a problem, from which they must provide a solution using their knowledge, skills and abilities acquired during their school career, since when they graduate from the university they will have to put into practice everything they have learned, enter the world of work that demands people with initiative and skills to face the challenges that are found in the different spheres where professionals interact. The research is based on quantitative data applied to 93 students who study the Bachelor of Administration and Public Accountant. The text aims to demonstrate that ABC and communication directly impact the cognitive development of learners.

Key words: learning, competencies, communication, university education

1. Introduction

Talking about higher level education, but mainly about competency-based learning (CBL), communication and cognitive development, involves putting into play three fundamental factors that must be exploited within universities so that students have complete knowledge and integral that allows them to develop in the workplace.

Sometimes the formation strongly opts for the intellectual, full of important subjects and knowledge, and sometimes distant from the everyday reality of the world of work. Other times the training is limited to a transmission of specific knowledge, what we call tricks of the trade, valid for a small environment in space and short in time. That is why the approach of the EHEA (European Higher Education Area) insists that it is not about learning the little tricks of the profession, but about knowing, feeling and being a good professional (Martínez et al., 2012).

The word educate encompasses multiple meanings because it depends a lot on the person and vision that you have with respect to this item. For Mexico should be the main platform to teach and train professionals with the necessary knowledge and bases that allow interaction in various areas, and at the same time, have the necessary tools to solve the problems that present adequately, effectively and efficiently.

However, discourse the educational theme is to enter different perspectives and approaches, each president has proposed and enacted educational reforms with the aim of improving the situation of society, and currently the

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focus of current education are competencies and inclusion where teachers and students generate learning to learn, through collaborative work.

But education does not really meet its objective, the Center for Educational Studies (2013) says that education, far from promoting social mobility that guarantees the individual a result according to their abilities and efforts, is discriminating against the poor and favoring the rich. At the macro level, the education system is operating as a mechanism that helps maintain, reproduce over time and reinforce the enormous social inequalities, the stratification system and the class structure.

It is important that the functionality of the teaching-learning process is not compromised in educational institutions, regardless of whether it belongs to the public or private sector, the reality is that each student needs tools that help solve the concerns that afflict society. If the educational reform raises an education where priority is given to the development of skills, universities should be concerned with forming a comprehensive teaching staff, that is, teachers give classes according to their professional training, to update and seek that students develop their own cognitive process through CBL, communication, practical cases and other didactic questions, all according to reality so that once they graduate they can face the different scenarios that are outside the university.

2. University Education

It is said that education is the main ingredient for social cohesion and the consolidation of the values of society, making it the most powerful means to achieve individual and collective well-being. Despite this, the problems that have arisen as a result of assigning such an important role to education are as complex and diverse as the context of each country or region (Miklos, 2009).

Currently, many universities in all continents reestablish regulatory procedures in the academic debate, in order to increase efficiency and competence, appealing to the generation of an evaluative culture (Miranda, 2007). The university is the last step that the student must overcome, then it will face adverse issues, that is, enter the workplace where the problems are no longer practical cases, trials or projects, here you must put into practice what you learned to be able to solve issues that demand an immediate response, and making mistakes is allowed, but with consequences that can affect their performance at work.

Today, it is advocated by an education based on competences, that is, an education that transfers not only knowledge but also entrepreneurial skills and attitudes that allow newly graduates to successfully develop their professional careers. This professional efficiency is translated in terms of adequate work planning, capacity for innovation and adaptation to new tasks, reflective and critical thinking of situations, ease of relating, etc. (Sánchez, et al., 2011).

Faced with this situation, Muñoz et al. (2011) comment that the paradigm of the transmission of knowledge supposes that one learns in a linear way, and by means of repetition, which has no sustenance. It is known that learning is chaotic, complex, linked to emotions and consciousness. To solve problems, it is not enough to memorize information. The general idea that people learn in a linear way, and through repetition, has no support. These investigations support the need to organize different scenarios, novel experiences, so that students can apply what they learn — not in the form of definitions or paradigms — to use, in new scenarios, what they have learned.

Taking into account the previous premises, Gutiérrez (2014) affirms that currently inclusion is a term that is becoming important in the world, because thanks to the competency approach (educational reform proposed and promulgated by President Enrique Peña Nieto), educational institutions Higher education must seek the full

development of the students, that is, generate skills, skills and aptitudes according to the conflicts that are presented, and even more, that are as real as possible to what happens in the workplace.

2.1 What Problems does the Higher Education Environment Have?

It is well known that the educational institution has been one of the main pillars of classical modernity, because of its role in training the individual for economic production and also for the reproduction of the values and knowledge of society (Cubides & Valderrama, 1996).

Education is the guiding axis of the life of every professional, however, this factor has been modified at various times due to the different educational reforms proposed and promulgated by our presidents. Currently we are governed under the competency-based approach, where students are expected to develop the necessary skills, aptitudes and skills that allow them to resolve conflicts in various spheres where they interact.

Educational systems are affected by changes in the society in which they are immersed, and reciprocally. In recent decades, it is important to highlight how the convergence of variables of different nature — historical, philosophical, political and social — has brought new challenges for school systems, affecting their organization and functioning, especially in the mandatory stages (Dueñas, 2010).

It is important that the education system does not leave out inclusion, that is, the contribution of various teaching tools and scenarios that show a different perspective to what is lived within the university, as Bravo (2009) mentions that more and more are the voices that insist that the skills and abilities that society demands as most necessary are not adequately trained in the classrooms.

Taking into account the previous statement, we should ask ourselves if the education system is fulfilling the objective of developing competences in university students, because at the time they graduate, the scenarios and problems they experience are totally different from those shown in the classroom. We assume that the educational deficiencies of the students are simply questions where the intellect is put into practice, but the reality is different, where is the teaching to treat the client? How should the problems be solved?, In what way? Can you communicate opinions, questions or comments?

University education should emphasize the development of skills so that the student is able to resolve any conflict, but also needs to create a holistic communication where students and teachers express comments, information and others so that together they encourage the development of meaningful learning.

Therefore, the problem of research arises, what kind of skills should be taught in the university? How does communication influence the cognitive development of students?

It is important that higher education prepare professionals capable of facing multiple situations, but also can discern the collisions that arise in the workplace.

2.2 The Educational Reform in Mexico

In Mexico, according to the Ministry of Public Education (MPE), there are nearly 3,800 universities and thousands of different professional careers that can be studied. However, only 33 percent of young people of college age do so, and when they leave, only 50 percent think that going through college has improved their chances of employment. The failure does not end there; more than 40 percent of employers in Mexico believe that they do not find the talent needed in the graduates. As McKinsey would say: students blame businesses, companies, universities and universities for the previous two (Alvarado, 2017).

If we take into account that higher education is the last level that the student has to graduate to face the world of work, an analysis must be made in universities to know if they are effectively addressing issues according to

what companies need, and more still, if the graduate has the necessary tools to deal with the different scenarios that are present.

Not bad that education reform is changed with the arrival of new presidents of Mexico, but should pay more attention to the needs demanded by both society and the workplace, and beyond that, structures educative programs that confabulate in the formation of knowledge, skills and abilities that the student needs to face the different scenarios that are outside the school.

However, Roldán (2018) says that, four years after entering into force, the Education reform has not complimented with the promised precepts. The quality of education has not improved, as the evaluations show to the students; neither there is even a diagnosis of the infrastructure of the schools that serves to correct the needs and teachers have not been professionalized with new standards.

The issue of education will always be controversial because each person has a different position and ideology regarding this item, you really need to think about what the country's needs are, which is intended to be fostered in schools, that is, what knowledge, skills and abilities Demand the labor world. We must avoid forming obedient people and better focus on people who think, analyze and resolve conflicts that arise in their immediate context.

3. Competency Based Learning (CBL)

Alberici and Serreri (2005) say that the debate on the concept of competence, in the field of education and training (or rather from the pedagogical point of view), is to learn to think, to learn not only a specific job but to work, to learn to live, to be, in the sense of confluence between knowledge, behaviors, skills, between knowing and doing, which is carried out in the lives of individuals, in the sense of knowing how to act in the different contexts of Reflective and meaningful way.

Competencies should be considered as part of the cognitive-behavioral adaptive capacity that is inherent to human beings, which are deployed to respond to the specific needs that people face in concrete sociohistorical and cultural contexts (Frade, 2009).

The adoption of the model by competences in higher education means, for the teacher, to move the focus from teaching to learning. Learning understood as a process that allows capturing, codifying, relating and storing new information with that already integrated into long-term memory (Martínez et al., 2012).

Education needs to elucidate all the demands that are manifested in the university, theory is not the same as practice, and within the professional field there are several issues that, sometimes, are not reviewed during the school trajectory of university students, that's why, it is important to generate a learning based on the competences of the learners, through various problems, case studies, projects and other teaching tools so that they think, analyze and understand what they are witnessing, so that they can provide an effective solution to the dilemma shown

One strategy to generate CBL is the implementation of Project Based Learning (PBL), Maldonado (2008) explains that PBL involves forming teams made up of people with different profiles, disciplinary areas, professions, languages and cultures that work together to make projects with the purpose of solving real problems.

4. Communication as a Tool in the University

When talking about communication, we think about the interaction that is generated with two or more people, but using this term in the educational field is very similar, the only difference is that it is used to exchange

information or clarify doubts in order to generate knowledge.

The District Network of Internal Communication (2007) says that communication is a necessary tool to enable the development of democracy and citizenship, but beyond that, it also serves for the creation and development of cognition in university students. It's them, who, at the time of graduation, must resolve the conflicts that arise in their work environment.

Following this guiding axis, Corrales et al. (2017) manifest a communicative variant, that is, they consider that assertive communication has to do with the ability to express oneself verbally and preverbally in an appropriate way to culture and situations.

Thus, educational processes will have to be understood as the spaces in which, both students and teachers, but mainly those, participate in a process of construction of meanings, which is achieved in a more optimal way when there is a possibility that the student can interact and participate actively in that process (Banderas, 2014).

The new challenges of education place greater emphasis on communication; only in this way can we clarify all those uncertainties that could arise in any scenario where human beings interact, because through comments and interaction, information and knowledge can be generated.

4.1 Communication Skills that Promote Effective Education

Tejera et al. (2012) say that the concrete historical condition in which the contemporary world lives marked by complex processes of changes, transformations or social readjustments, especially in the economic and political, demand reforms in educational policies and readjustments of important social values in the that these policies are sustained.

Education must be the fundamental pillar in every educational institution, but, above all, it must offer a teaching that is consistent with the needs of society and the world of work. Given this, Batista and Romero (2007) say that communication processes in the university area contribute in a complementary and dynamic way to structure the organization and respond to stimuli that arise from inside or outside, depending on compliance with their social mission

Communication skills can be defined around the influence exerted on the receiver and consequently the change that occurs in their environment. These skills are represented by the capabilities to perform certain tasks consistent communication to influence people so, because communication is a circle where the subject influences other individuals and others in it. Therefore, it is necessary to master them to face the various changes that occur in the environment of the human being and even more so for the leaders, who confront and influence in multiple ways the personnel, clients, suppliers of the organization among others (Batista & Romero, 2007).

Bearing in mind that the communicative process is fundamental for the development of the human being, it is necessary that at all times an effective communication be encouraged, that is, opinions, knowledge, skills and other actions are exchanged that confabulate in the formation of learning, skills and skills that help to face the different present and future scenarios.

4.2 Cognitive Development, Ability for University Students

Cognitive development is understood as the set of transformations that take place in the characteristics and capacities of thought in the course of life, especially during the period of development, and by which the knowledge and skills to perceive, think, understand and manage increase in reality (Linares, 2009).

In this sense, Zapata (2009) says that cognitive fluency increases complexity because it increases the information we can process, it allows us to make more relationships between the stimuli and events that we

perceive and live, and it facilitates the imagination, the free association of the remembered elements, free expression, the inflow of relationships, and the perception of different options.

Knowledge, therefore, is similar to a puzzle but without limits, and with its pieces with versatile borders. Without limits in the sense that it is like an arrow always in tension, which does not reach the goal, but constantly the objective, when it is close, it moves away and the arrow must still follow in progress (Sanmartín, 2013).

Discussing the cognitive development leads to analyze different perspectives, each teacher has different teaching methods and techniques, but the objective is to get the learners to transform their knowledge, that is, learn to learn, stimulate creativity and foster skills, aptitudes, attitudes and skills that help to solve present and future conflicts.

5. Method

This research used a quantitative approach using the survey technique and aimed to measure the impact generated by competency-based learning (CBL) and communication in higher education in the municipality of Amealco to ensure that the students have a favorable cognitive development. The data was applied and collected in April 2017. The population to which the research instrument was applied was in a Higher Education Institution, located in the municipality of Amealco de Bonfil in the state of Querétaro with an enrollment of 93 university students studying the careers of Public Accountant and Bachelor of Administration. In this regard, 31% of the students are men and 69% are women, both of different ages because all the semesters of the educational institution were selected. In the following table the situation of the students of Higher Level is detailed.

Table 1   Student Population of Higher Education

Semester	Bachelor of Administration	Certified Public Accountant
Second	11	9
Quarter	13	14
Sixth	12	17
Eighth	9	8
TOTAL	45	48

Source: Self made.

6. Results

The results obtained from the non-participant observation, the survey and the content analysis that the research instrument showed to know the impact of Competency Based Learning (CBL) and communication in higher level education for the cognitive development of the students.

In relation to Figure 1, the selected sample expresses that the Competency Based Learning (CBL) within the educational field is good, according to 40%, 36% say it is regular and 24% mention that it is bad to promote the CBL inside the classroom. It is essential that the CBL is gradually increasing within the universities, because through it, students can learn from what they know how to do, and thus get more confidence to deal with present and future problems.
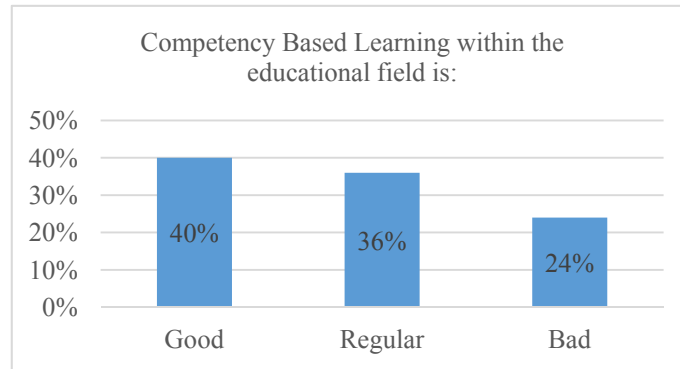
Figure 1   Competency-based Learning within Education
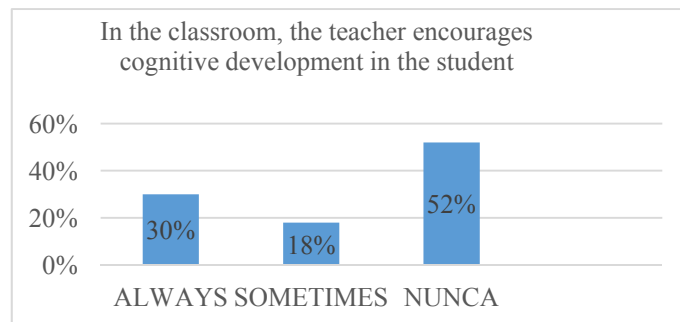
Figure 2   Cognitive Development of Students

Based on Figure 2, 52% of the surveyed population suggests that the teacher does not help to promote cognitive development in higher education, 18% say that only sometimes, and 30% of respondents think that it is always seeks cognitive development in university apprentices. These percentages mark a red focus because it is perceived that more than 50% of students argue that teachers have not made any effort to promote cognitive development in each student.
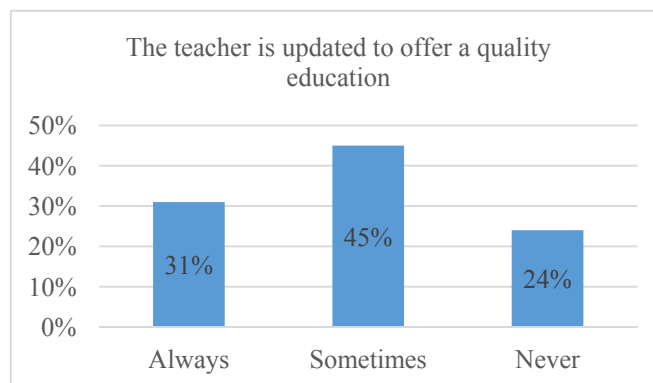
Figure 3   Teacher Update

Figure 3 discusses whether teachers are updated to offer a quality education that enhances cognitive development in college students, with 31% saying that teachers always worry about updating to offer a broad educational background, 45% say that only sometimes are they updated and only 24% said that the professors have never worried about updating themselves to provide a better education, they arrive at the classroom and

transmit only information. It is necessary to motivate and invite the professors to be updated according to their profession and can improve their teaching-learning techniques.
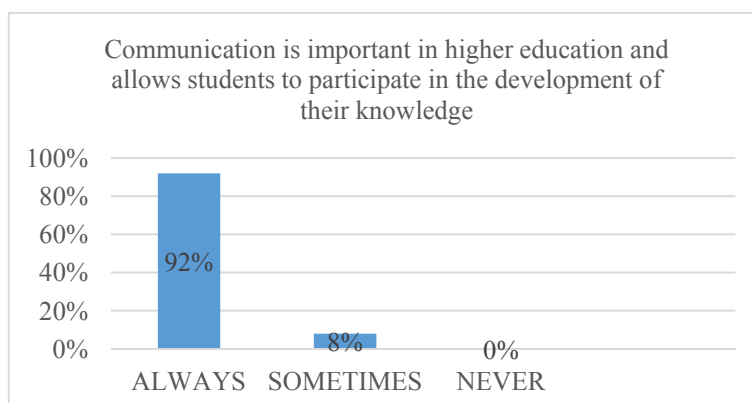
Figure 4   Communication in Higher Education

Figure 4 shows that respondents identify communication as a relevant factor, and a result of 92% was obtained, recording that communication is always important as a means to innovate in higher education and get students to participate in the development of your knowledge. While 8% of the participants decided that only sometimes communication is substantial to innovate and achieve the participation of the student.

7. Discussion

Encouraging the CBL and communication in the university is to offer educational alternatives, today, it is necessary that students have a broad background, that they have different tools that allow interaction in different scenarios, and that, in addition, they provide effective solutions for each situation. We know that education is and always will be the fundamental basis of the human being, however, it is necessary for universities to have professionals who are updated, trained and willing to teach others.

During the investigation, it was determined that communication, one of the competences that should be developed at all educational levels is important for students, since 92% of the sample selected said that this tool manages to develop students' knowledge because it allows to clarify doubts and exchange information, then turn it into learning.

However, 52% of college respondents said Ron that teachers discourages cognitiv development or situation that detracts the student learning, as the quickening skills, Manriquez (2012) ensures that the student happens to have a active participation in the construction of their own learning, with which the teacher becomes the great facilitator who puts resources in the hands of students: information, methods, tools, creates environments and accompanies them, providing assistance throughout the process, thus increasing their motivation, commitment and pleasure to learn and understand the usefulness of learning.

Can be considered as a factor in school recoil little updating teacher because the teacher always does the same and is not concerned about meeting the needs demanded by the labor market. Sometimes, teachers only focus on imparting information, but they do not make sure that their pupils are decoding the data they receive, or they do not give current examples and referring to their context. It is necessary that the professors update and know the necessities which develop outside the classroom, motivate students to continue learning and become

active agents, so they generate their own learning, and especially see that the CBL's is used in different scenarios helping them to effectively address any situation.

Considering the stated arguments, it is inferred that the CBL, communication and cognitive development are an essential tool for university students, and for that reason, it is important that educators use diverse teaching tools, scenarios, problems and all issues that propitiate in the student the need to think, analyze and visualize the problems clearly so that they can provide efficient and effective solutions. Courses, workshops, dynamics and other activities aimed at teachers must be fostered and encouraged so that they can improve their teaching-learning strategies and achieve that their students acquire the necessary knowledge to face present and future problems.

8. Conclusions

Education will suffer changes constantly because each president proposes an Educational Reform that he considers necessary and timely for the situation that the country shows, however, one should think about what Mexico needs and not try to impose educational models from other places, as what works there, may not be effective here. It is enough to want to solve the educational decline that is had with copies of educations of world powers, it is necessary to carry out a study that shows the needs, weaknesses and deficiencies, so that later, options are proposed that really help the country.

Today, the current education in which we live requires each of us skills, skills, knowledge and certain types of attitudes and skills that allow us to compete in the best of cases. The competency approach establishes that students build their knowledge and, even more importantly, the purpose is for each individual to be able to count on their own elements, to learn on their own and to solve problems that arise throughout their life.

The emergence of education by competencies is a model that is formalized and gradually begins to appear in most educational institutions, giving favorable results in each of their students because it allows them to be responsible for their learning, becoming a practice generalized that becomes more important in each educational level.

The CBL and communication are visualized as basic tools that allow the student to achieve school success, since they are an integral activity to guide and support learners during their training process, attending them from the self-knowledge of their problems and the attention of needs not only academic, but social, emotional and economic because they all directly or indirectly influence the construction of learning. In addition, advising is a permanent task intrinsically linked to the reason to be of the teacher, which empowers him to provide a full education to students.

Cognitive development, competency-based (CBL) learning and communication are factors that directly or indirectly affect the human being, and speaking of higher education, these elements interrelate to generate ideas, concepts, skills and abilities, allowing a dive in different scenarios, both present and future. The university investigates the initiative of taking advice as a source of help where the learner can express their concerns and the teacher supports them so that together they manage learning according to the union demand. Do not forget that the fundamental objective of higher education is to prepare professionals with a cultural and intellectual background that helps interact, address and respond to the concerns that emanate from the world of work.

Based on the graphs and their interpretation, it is concluded that education must be attended to constantly, not only every six years when a new president comes in and proposes reforms that appear to be the solution to the

backward movement that exists. It is essential to take into account the inquery. These are the ways in which the country manifests itself in order to propose actions that are really beneficial for the higher educational level, since this is the last step that the student has before leaving to work. You need to have the necessary tools to be competent and competitive with other graduates who aspire to a position in an organization; the disturbing or to some extent necessary, is to train thinking professionals, with initiative and able to act in difficult situations to solve them, and not to seek that the university students are obedient and without aspirations.

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Is Progress to Sustainability Committed Engineers Stalking?

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Abstract: Engineering Schools were among the first to address the challenge of Sustainable Development, and integrate Sustainable Development into their curricula. This paper identifies a tendency that this progress is stalking. Main factors are an increased tendency to train more narrowly specialized engineers, while specialized SD programs sometimes became an alibi to remove SD course from the major programs. Broader engineering programs are required for mainstreaming SD in engineering education.

Key words: engineering education, interdisciplinarity, specialization

1. Introduction

Since the publication of the Our Common Future, 31 years ago, sustainability problems have not vanished, on the contrary. The "ozone hole" has more or less been healed, but regarding climate change, resource depletion, and declining bio productivity and biodiversity no signs of a transition to a new equilibrium can be observed. Despite an unavoidable exception, there is increasing political support for taking action.

In the past three decades, it has been repeatedly claimed that engineering plays a key role in solving these global problems: a strategy solely based on austerity cannot solve these problems, given the fact that the major part of human population still lives in poverty. Engineering Education in Sustainable Development, a conference series that started in Delft, 2002, has been based on this conviction, and emphasized the importance of teaching strategic competencies in order to gear innovation to sustainable development. However, in the midst of a growing societal recognition of these problems, progress of EESD in engineering seems to be stalking. Frontrunners have sometimes cut their efforts, and SD courses often still play a marginal role in the curriculum.

This paper analyses this process and claims that it results from historic trends leading to more specialization and less emphasis on societal context in the engineering curriculum: the T-shaped engineer tends to become an I shaped engineer.

The paper will illustrate this by analyzing trends in recent engineering education. The paper is intended as a start for a discussion how we could boost progress in EESD.

2. Engineering Education until the 1980s

Traditionally the key to becoming a respected engineer was to gain experience. Until the 19th century, engineers learned the craft by apprenticeships. Although a university mathematics course could be helpful, the craft of engineering was learned in practice (Lintsen H., 1985). The foundation of engineering schools in the 19th

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century implied a revolution for engineering. Engineering education became based on rationality and science, instead of being based on tradition and experience. Many of the new 19th century engineering societies demanded that their members should be trained "scientifically", to underline the break with the past (Mulder K. F., 1997).

However, there were many problems that could not be calculated: engineering designs were in practice often not based on exact calculations, but calculations with additional safety factors that emerged from practice. In this way fatigue and wear factors had to be dealt with, etc. But quantification became an important feature of the engineering paradigm. Especially designers that were dealing with features that were hardly quantifiable (beauty, user friendly, etc.) often met disdain from their colleagues. For example "Psychology" was considered unscientific, and should be kept out of engineering education (De Jong F., 1992). However, the soft features made their way into engineering, mainly as this was a key factor in turning engineering design into reality. It is fascinating to see how many bright engineering ideas failed in the Soviet Union, due to the inability to adapt engineering designs to "soft" demands (Graham L., 2013).

Ever since its inception as an institutionalized profession, engineering branched out in an ever increasing number of specializations: Mechanical-, Geological-, Agricultural-, Industrial-, Chemical-, Electrical-, Physical-, Architectural-, Maritime- and Aerospace- and Design-engineering followed. Moreover, by the general scientification of education, the educational programs of engineering became narrower, more theory-, and less practice oriented.

3. Engineering by the end of the 20th Century

Massive and cheap computing removed several of the barriers for improved engineering design: design features could be computed, and maintenance and user experiences could be registered in data bases and evaluated. "Modelling" replaced the craft of experimenting and full "mock-ups" were hardly needed for design evaluation. Tradition and experiences of the past were hardly needed anymore for good engineering design, and so "apprentice" elements in the engineering curriculum were diminished or completely disappeared.

However, the controversy regarding nuclear power, that emerged in most industrialized countries, showed that engineering design based on this "scientific rationality" was not unproblematic; in fact scientific rationality' often coincided with predominant values in society (Nowotny H., 1979).

However, new values could come into play in engineering designs and old ones could be contested. Engineering became far more part of societal force fields, and various controversies emerged on engineering designs (airports, motorways, acceptability of food additives, agricultural chemicals, fluoridation of drinking water, etc.) (Nelkin D., 1974; Nelkin D.,1979; Mazur A.,1981; Mulder K. & M. Knot, 2001; Hicks J., 2011). However, these controversies were often just neglected by the engineering community, as engineers often perceived them as being based on ignorance.

The increased flexibility that computers and science created for engineering design, as it was no longer bound to forces of tradition implied that engineering designs became the centerpiece of societal controversy. Instead of being perceived as the great force of progress, engineers were often portrayed as irresponsible nerds.

4. Our Common Future and its reactions

After the Brundtland committee presented "Our Common Future", the engineering community reactions were not very positive: "another report bashing technical-industrial progress…". However, also soon other

reactions showed up. Contrary to the wave op environmentalism of the 1970s, the analysis underlying "Brundtland" was not one of "environmental protection" but one of being able to provide for mankind in the long term future[1]. Such a long term planning perspective fitted to the mathematical model based planning perspective of engineering.

Backcasting was embraced as a strategic decision making method to take the (future) limits of planet earth as a starting point for planning (Robinson J. B., 1988; Robinson J. B., 1982). The method created an interesting controversy between what could be determined as

- a planning approach, taking Sustainability principles as leading principles in order to derive a sequence of planning actions (Holmberg J. & Robèrt K. H., 2000).
- and a decision-making approach aiming at bridging the divides between engineers and societal stakeholders, aiming at sketching long term options in order to trigger productive interaction (Weaver P. et al., 2000; Quist J. N., 2007).

The first approach to backcasting could be determined as "engineering planning with Sustainable Development as a core value set" while the second approach could be determined as "Strategic and interactive decision making on technology for SD"

The first approach is therefore a traditional expert based approach that is in line with the role that engineers have long played in society. It takes SD a given external goal. In the second approach, engineers take a new role, aimed at informing stakeholders on technological options and, creating interaction in order to reach consensus regarding socio technical development pathways. This involves a new role for engineers; a role that does not only involve expertise but also democratic leadership.

In other words, the difference is between "Engineering the future from Sustainable Development values" versus "Jointly engineering the future, based on Sustainable Development and other values". It is a difference between focusing on outcome and focusing on process; a difference between a traditional expert promoting inescapable solutions and the new expert, providing expertise as input for dialogue….

In highly educated societies, dialogue and interaction are important values. However, a scientific discipline has its own social mechanisms that keep the discipline together, the paradigm (Kuhn T. S., 1962). This also applies to engineering. Upon entering engineering schools, engineering students are increasingly inclined to give up their societal orientation, and define themselves, and their engineering designs, as neutral tools. Engineering education is in fact not just learning theories, facts, and design but also the initiation in a disciplinary paradigm (Cech E. A., 2014; Mulder K. F., 2017).

5. Changes in Engineering Education

The Bologna process created a strong divide between Bachelor and Master Programs. This created options for another wave of new specializations, this time at the Master level. Only few MSc programs were created that broadened the scope of engineering by adding new perspectives to engineering (e.g., Industrial Ecology (Korevaar G., et al., 2004), Sustainable Energy, or Innovation Studies (Salcedo Rahola T. B. & Mulder K., 2011). This new engineering programs, bridging various fields, were embraced by SD seeking students and managers, that aimed at combining model based analysis with practice oriented action.

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[1] Of course one might argue that ultimately, providing for mankind is only possible if the environment is well protected, and the environment can only be well protected, if the number of people is limited and people are provided for.

The general branching out of engineering into more specialized engineering degrees was accompanied by the large scale introduction of "minor programs" and "exchange semesters" in BSc as well as the MSc programs. Deeper specialization created options for being admitted to MSc programs, and an exchange as an MSc student often implied participating in specialized research.

This development of at one hand increasing specialization and at the other hand new programs that aim at bridging various fields of engineering might be worrying for traditional engineering:

-A narrow specialization can only be legitimized by emphasizing the unique knowledge value of the program, i.e. negating the value of general knowledge

-The existence of MSc programs that bridge knowledge fields, can act as an "alibi": students that seek general knowledge might opt for that program, so the subjects do not need to be included in specialized MSc programs.

The existence of new MSc programs that bridge knowledge fields might draw SD minded staff attention to that program, instead of drawing attention to implement general change in specialized engineering programs.

My own university, Delft University of Technology is a perfect example. In 2000 DUT offered 12 MSc programs to its students, some of which contained several "tracks". Nowadays, this university offers 83 MSc and "tracks", all advertised in an equal manner, to express that these are equal specialization options (Delft UT, n.d.).

Academic education has experienced various debates in recent decades. At the one hand, access to higher education has been curbed by deteriorating support schemes. At the other hand academic education has been promoted as a key factor in international competition. As a result, academic educating became more geared to demands of the labor market.

The diminishing freedom for students was compensated by the introduction of "minor" programs. The intention was that students could develop an additional qualification. In practice however, such minor options were often used for being admitted to specializations that were in high demand, i.e. as increased specialization options.

The result of these developments was that engineering students were, during their studies, increasingly focusing on their professional qualification. Education became less a matter of personal development and far more an issue of obtaining a ticket for a career as an (engineering) specialist.

6. Stalking Progress to EESD?

In many engineering schools modernizing engineering education seems to be stalking. For Sustainable Development no hard numbers are available. However, the landscape does not appear to be very flourishing. Educational reform initiatives do not grow and every now and then there is a setback. Moreover, related initiatives to strengthen linkages between engineering and societal developments are not thriving: For example, despite many efforts, the number of female engineering students hardly increases in the last decade (Microsoft Corporation, n.d.; Jansen M., 2015; Yoder B. L., 2016). New interdisciplinary MSc programs like Sustainable Development, Industrial Ecology, Sustainable Energy Technology, Sustainable Engineering, Environmental Engineering, etc., have established themselves in the academic landscape. Initiatives with high PR value are cherished at engineering schools as long as they bring good publicity, but the socio-technical challenges that it takes to actually implement novel sustainable systems are generally neglected.

In principle, competition for students might lead to increasing the SD content of established engineering

programs as freshman and sophomores are attracted by SD. However, SD is sometimes banned from programs, as SD minded students might be referred to electives from other programs, instead of implementing SD in the own program. Given the strong tendency to focus programs on technological specialty (Cech, 2014), such a reaction might even be far more obvious.

An expansion of the efforts thus far is required if we want to go beyond the single green add on course. Curricula should be rebuilt give the overriding priority of reducing greenhouse gas emissions, developing a circular economy, and providing for all on this planet.

Academic engineering has taken the lead in education for SD, although progress is stalking. Vocational education is lagging behind and should now rapidly sustainabilize. For example, installers play a crucial role in the energy transition (Brezet J. C. & Silvester S., 1984). Installers of heating and cooling equipment often hardly know of fossil free heating and cooling alternatives.

7. The Future of Engineering

Nowadays designing engineers should design "value sensitive", i.e. designers should perceive their designs not as neutral solutions for a given problem, but as an intervention in society, that can be assessed according to various different value systems (Friedman B., P. Kahn & Borning A., 2002; Van den Hoven J. ,2007). The impacts of engineering might affect human values. But what are these values, and who weighs them? The engineer him/herself? Of course it would be an advantage if engineers would be able to make such value analyses to evaluate their designs. But would it make much difference?

The key is not to involve all relevant values in the engineering design process and present that to stakeholders, the key is trust: to show transparently how different values affect the outcome of the design process, i.e. the key is interaction with stakeholders. Engineers should have the ability to work with stakeholders, who put forward their own values.

The designing engineer is a gatekeeper that has to take the responsibility that the design "works". In that respect, the engineer bears a specific responsibility, a responsibility that should be based on design expertise, and not on "alternative facts".

Expert communities have been "deconstructed" as being not just sharing expertise, but also sharing specific values and as being susceptible for specific interests. This has sometimes contributed to a conviction that expert reasoning is only equally valid as all other types of reasoning as it is just "a representation of interests". If such distrusts to experts would be widespread among the citizens, it could lead to terrible accidents.

In debates on Science & Society, scientists have been assigned the role of being honest brokers. In parallel, engineers should be able to play a similar role in regard to the public: being able to show the alternatives that are available and their impacts (Pielke Jr R. A., 2007), thereby facilitating an open and democratic discussion on our common future.

8. Conclusion

Engineering for Sustainable Development does not just require an engineer to have knowledge of sustainability issues, it does not just require new values, it requires foremost a new identity as an engineer: an identity as an expert, who is an honest broker in technological design, and serves the pathway that our communities decide to take towards Sustainable Development.

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Challenges of Education for the 21st Century

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Abstract: In public schools, all around the world, we are exposed to the emergence of projects that aim to promote students' success, valuing their interests, motivations and potentialities, regardless of their physical, intellectual, cultural or other condition. This study analyzed the project "Edulabs", implemented in Portugal in 2014, by the Ministry of Education. "Edulabs", as defined by the Ministry of Education, are classrooms with integrated technological systems of hardware, software and educational platforms, intended to be the core of the schooling ecosystem, focusing on mainly on teaching and learning. Using it is easy, attractive and mobilizing. The objectives of this project are to improve the pedagogical work and the use of technology, which in turn will have an impact on the quality of teaching and learning. We analyzed a group of the fifth-year students, as subjects of this project, to understand how they use technology and the teaching and learning methodologies available to them, and what results come from such use.

Key words: competences for the 21st century, school for all, pedagogical innovation, "Edulabs" project

1. Introduction

The Edulabs Project derives from the E-Escolinha program that made the Magalhães computer available, in 2008, for the students between first and fourth grade; creating conditions for the development of innovative work dynamics.

This project was implemented in Portugal in 2014, and presents itself as an innovative and attractive educational tool for classroom use. The ambition to develop a work of continuous improvement of classroom dynamics and to improve the quality of teaching and learning, through the creation of a school ecosystem focused on the teaching and learning component, requires reflection and monitoring, giving an essential importance to direct observation in context.

Thus, in order to better understand the Edulabs Project, we observed a group of the 5th year of schooling in a public school, in the context of the classroom and studied how learning is processed using technological systems, in this case — by using a tablet device.

The aim is to understand how classrooms are organized, what the role of the student and the teacher is in the learning process, and how to personalize the teaching-learning process, in a perspective of inclusion. It is also intended to understand how the use of the tablet promotes the development of key skills of the profile of the XXI century student.

During the year 2017, the Ministry of Education in Portugal prepared a document "Profile of the student of

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the XXI century", where it sought to establish the areas of development and acquisition of the key competences that should be reached at the end of the 12 years of compulsory schooling.

According to these competences, the aim is to promote the student empowered using dynamic educational experiences in order to promote sociability, resilience, communication, autonomy, problem solving and all the skills that allow the construction of an individual more capable of overcoming the challenges that will arise throughout their life. The purpose will be to prepare them for life in society, with all the successes and failures they must face.

Innovation has emerged as a frequent term in our discourse, but with a multidimensional sense. According to the OECD/CERI report, educational innovation is "a dynamic change aimed at adding value to an educational process, which leads to measurable results, both in terms of sponsor satisfaction and in terms of educational outcomes" (Kampylis, Bocconi & Punie, 2012, p. 7).

Jonassen (2007) points out that ICTs should be understood as cognitive tools since students learn with technologies and not through technologies. However, in order to promote active learning for students it is necessary to create the right conditions by using different tools and integrating these new experiences of learning in their lives. Thus, ICT must be integrated, when the authenticity of learning is intentional, as a tool to solve real problems.

Studies conducted by the OECD and UNESCO show that the use of technologies can also ease knowledge acquisition, allowing students to have greater access to information. They also consider that computers were particularly effective when used to extend study time and practice, and their use allows students to take control over the learning situation such as, when used to support collaborative learning. However, the study also notes that its exclusive use can affect students' reading ability, cautioning that by itself its use does not guarantee success in all areas.

As the power and functionality of mobile technologies continue to grow, their usefulness as an educational tool is likely to broaden and along with it, its central role in both formal and informal education (UNESCO, 2013, p. 42).

The Edulabs Project brings an innovative digital tool to the classroom, the tablet and all the applications that are part of it make up a resource that breaks the learning dynamics presented by traditional teaching, since it favors changes in the level of classroom organization, nature of tasks, resource management, and classroom dynamics.

This project was presented by the DGE in 2014 to about 20 schools nationwide and has been continuously adjusted to fit the reality is lived in the School today, adapting to the profile of the student that we have in our schools. In this school, the group that is implementing the Edulabs project is organized in small working groups. In this way, direct interaction between group members is shared, sharing opinions and promoting collaborative work.

2. Methodological Framework

The current research is part of a methodological approach derived from both a qualitative and a quantitative nature. In this study, the method of naturalistic observation was used along with the method of the semi structured interview and the field notes resulting from informal conversations within the school context.

Three teachers from the 5th grade class were interviewed: the class leader, the ICT coordinator and the

Portuguese teacher, and the group's sub-director and the Co-Lab coordinator at the school. Observations of classes and projects developed by the study group were also conducted: three observations of classes in History, Mathematics, and English, and in addition, a field observation in the Natural Sciences course. It should be noted that there is a direct relationship with the educational context since it allows greater access to information, as well as an ease in identifying the objectives of the study, according to the target context's characterization.

In addition, a collection of data from various documents was made, allowing the interchange of information, leading to conclusions. Based on this research, a more detailed characterization of the target context's constitution, and the mission and objectives that it defined, was carried out.

According to the Educational Project (PE) of the school, we could verify that the Study Group was created in July 2009, on the south bank of Lisbon, to respond to the growing need of increasing the access to pre-school and basic education in this community. The community consists of 4 schools and has approximately 1300 students.

The school's population consists mostly of students with Portuguese nationality (94.6%). The remaining students come from various different backgrounds, of which we place emphasis on Brazil (1.7%) and the Eastern countries (1.8%). Together these represent more than 60 students in the grouping and are an important reference for the heterogeneity of the school population, which implies the allocation of resources, namely social support (31.4% of students have support from School Social Action).

3. Results Presentation

Through this research, we have tried to understand how this project improves the pedagogical work and the use of technologies, and how it affects the quality of learning. Thus, it was our priority during this research to identify the strategies implemented by teachers in the classroom setting, namely–to what extent the difference is welcomed as a value added, according to the perspective of inclusion. In addition, the impact of these strategies on the success rate of these students was also analyzed. It is intended to suggest indicators of success that favor the validation of these strategies and associated technological resources.

The Edulabs Project, as we could verify in the interviews carried out, appeared in the grouping at the request of a first-grade teacher three years ago and was applied in a heterogeneous 2nd grade class. Over the past three years, the project has undergone some adjustments, notably in classroom planning, seeking to improve collaborative work among students.

Thus, the data points to an existing willingness on the part of the management body, to welcome projects that are considered to promote success, valuing teachers´ suggestions of who are predisposed to change.

4. The 5th Grade Class

The class director was composed of 16 boys, 6 girls, and 3 students with special educational needs (SEN), however they are students with a very high level of energy, and according to the teacher, this means that "the students cannot remain stationary, although they are helpful, they need to be busy, and the lectures do not work in this educational context. On the other hand, individual tasks such as work sheets are also challenging for these students. They are students who need a context and a meaning for their learning, questioning a lot what they have to do, and the use of what they are going to do".

5. The Opinion of the Teachers about the Development of the Project

According to the Portuguese teacher, the devices that students prefer to use are digital. Students receive one tablet given by the school at no cost and in turn these devices must be returned at the end of the year.

As for the dynamics in the classroom, it was also mentioned by the Portuguese teachers that there is collaborative work and there is a sense rooted in the students regarding helping each other: "some end up faster than others, and they love the process of choosing those who help and those who need help as some give explanations to others".

As the lesson progresses: "they work together, talk and discuss. We can see sharing of knowledge and points of view". This data points to a natural predisposition for collaborative work, since they naturally identify the right moment and the tasks that best suit the beginning of partnerships and collaboration. On the other hand, it is understood that the teacher gives autonomy to the students for a shared management of the classroom, being able to show confidence in the work developed by the students and in their capacities for collaborative work. Regarding the resources used, he said: "We frequently use the mail app, the platform OFFICE 365, and the 'sapo campus' which is the equivalent of Facebook for the school in order to share documents and communicate".

In another interview with the Mathematics teacher, they stated that "a teacher who promotes collaborative learning cannot remain behind a desk, they must observe and be involved, they must perceive how the students think, if they can follow what has been disclosed". In this sense, students learn in the most effective way with sharing and debating information with each other: "they can share their opinions, presenting to each other's their arguments. It's very interesting". This type of learning embraces all students; it also naturally implements collaborative procedures that respect the learning patterns of each student and allows for inclusion in the true sense of the word. In addition, one can perceive that the teacher's motivation and interest, when implementing such strategies, has an impact on the classroom environment.

On the other hand, with the data collected from field work, it was possible to verify that in several moments, the projects developed sometimes noisily, but productive. In a classroom environment and by giving students autonomy for the development of tasks, we noticed that the noise can be favorable for skill-development. However, according to the ICT coordinator at the school: "it is from work group voices that opinions are born, and projects are carried out". Thus, the data points to the identification of some elements that may characterize a collaborative working context, with noise being considered as one of these elements.

6. What the Quantitative Data Tell Us

We used the quantitative analysis method to understand if this project enhances school success. The E-Class Project comes under the "Tutoring Program" measure of the group's Strategic Action Plan (PAE), and consists of the group's overall responsibility for the school's results, activities developed by the class as part of the school's annual activity plan, responsible use of resources made available by the school and behavior through a quarterly ranking system that awards the best classes. This project contributes to the following objectives:
  • to prevent situations of indiscipline, lack of punctuality, attendance abandonment and early departure;
  • promote autonomy and organization in students;
  • improve success;
  • promote cooperative work and in turn improving behavior.

7. The Data Collection for the E-class Project

From the results obtained with the E-class Project, it was possible to conclude that the two classes where the "Edulabs Project" was implemented had the best results. Through the quantitative analysis method and the examination of the grades obtained by the students at the end of the 1st period, one can realize that the use of technologies has a significant improvement of the students' school results, both at the level of internal evaluations and at the level of their predisposition for challenges involving student collaboration and competitiveness.

Facing the implementation of innovative methodologies are the students who acquire competences that make them more willing to participate, and to be critical and cooperative in the management of their own learning.

By implementing the innovative methodologies implemented by the Edulabs project, this study aims to promote the success of all students at various levels, by:

- promoting a greater motivation for the use of technologies (Tablet);
- Promoting rapid access to information;
- Contributing to collaborative work among students;
- Allowing for an easy, attractive and mobilizing application;
- Providing the intrinsic knowledge of each student, bringing the experience of each individual student to the classroom;
- Promoting help between students/support students give their colleagues;
- Respecting each student's working pace making the inclusion of every student possible;
- Promoting pedagogical differentiation so that all students can learn at their own pace;
- Streamlining different tools and thus forcing the student to make decisions;
- Developing a personal point of view;
- Make the student constructor of your learning;

Taking into account the data presented on the potential and the implications of ICT in the teaching/learning process, this study shows that there is a need for proper integration and use in an educational context (formal and/or non-formal spaces), of educational tools and resources capable of providing new and different approaches, that result in more motivating, engaging, and potentially meaningful learning. The use of technology in this study breaks away methods, beliefs and attitudes of traditional schooling system, and challenges school with pedagogical innovation in order to change and transform the school.

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A Better Tool for Language Acquisition: Intrinsic or Extrinsic Motivation?

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Abstract: The purpose of the present research is to determine the most efficient type of motivation, either intrinsic or extrinsic need that drives students to learn a language. In this study, anonymous questionnaires using the *Escala de Motivación de Logro (EAML),* or *Achievement Motivation Scale as well as the Escala de Motivación Académica (EMA)* or *Academic Motivational Scale* from María Antononia Manassero Más and Ángel Vázquez Alonso, were given to students completing a Master's Degree in Spanish, in a Study Abroad Program in Madrid, Spain. The study also addressed the role of teachers in the classroom in order to motivate students learn a foreign or second language. The results of the questionnaire show, without question, the positive impact that educated professors in this field can have on students acquiring another language.

Key words: second/foreign language education, language acquisition methodology, bilingual-bicultural education, motivation.

1. Introduction

Motivation is a term that dates back to ancient times. Etymologically, the term has its roots in the Latin word *movere*, which means to move. The meaning of motivation goes beyond simple movement and a stimulation of interest. According to Burden and Williams, motivation also involves a sustaining of interest and the investment of time and energy needed that is necessary to achieve certain goals, which is key to learn a second language. The purpose of the present research is to determine the most efficient type of motivation, either intrinsic or extrinsic need that drives students to learn a language.

2. Language Learning and Behavioral and Cognitive Theories

Behavioral theories, which include types of associative learning, have been extensively used to study motivation in the field of animal research. At first, under behaviorism, it was believed that biological necessity explained the dynamic of motivation, which consists of necessity, incentive, activity as well as reduction of incentive and reduction of necessity. Later, it was concluded that a motive or objective should be sought, so that the process of achieving this goal would take place. The first and most influential behaviorist of the twentieth century that concluded this is Clark Leonard Hull. Hull debated with Edward Tolman on the principles of behaviorism. "Tolman believed that learning could occur in the absence of a goal (identifying this as "latent learning"), whereas Hull stressed that the goal should be thought of as a "reward" or "reinforcement" and was necessary for learning to occur. Hull explained learning and motivation by scientific laws of behavior" (New

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World Encyclopedia).

The social constructivism of motivation is a category that is classified under the branch of cognitive theory. According to Burden and Williams, motivation varies in every person and each individual assigns a different significance to her or his own objectives. Therefore, each individual gives importance to what surrounds him or her. It is this motivation that impels the individual to perform an action in a particular way. As Burden and Williams state: "Motivation of an individual is also influenced by social and contextual factors, which include culture, context, social situations as well as other relevant people and personal interactions with these individuals" (Burden & Williams, 1999, p. 128).

In contrast to the behaviorist notion of *extrinsic* motivation, cognitivism focuses on the workings of the human mind and *intrinsic* motivation. Tolman states that the critical determinants of learning are not associations nor reinforcements, but rather the cognitive organization of structures. Choice is an important aspect of success, which Burden and Williams also consider it as significant. Individuals make choices that are related to the way they behave and, therefore, control their own actions, which in contrast to behaviorist theory, states that actions depend on external forces such as rewards (1999, p. 127).

In order to conduct a more thorough analysis of motivation, it is important to examine the subject of intrinsic and extrinsic motivation in more depth due to its effect on people. According to Bruner, intrinsic motivation can be divided into three classifications, depending on each situation: *curiosity* (interest in the novel aspect of a situation), *competence (*that which motivates the subject to control the environment and to develop personal skills and reciprocity), and *necessity* (the adoption of *standards of behavior*). In contrast, extrinsic motivation, according to Skinner, refers to constant effort. Therefore, the intrinsic concept is a preference for interest or curiosity versus the extrinsic where there is a preference for easy work to satisfy the instructor; the intrinsic concept of independent mastery versus the extrinsic of dependence on a teacher to solve problems; internal criteria to achieve success versus the need for external criteria to be successful.

3. Methods

This study was based on a twenty-question survey given to 30 students completing their Master's Degree in Spanish in a Study Abroad Program in Madrid, Spain. In this study, anonymous questionnaires implementing the *Escala de Motivación de Logro (EAML),* or *Achievement Motivation Scale* as well as the *Escala de Motivación Académica (EMA)* or *Academic Motivation Scale* from María Antononia Manassero Más and Ángel Vázquez Alonso were used.

Más y Alonso (1997, 1998) designed the Achievement Motivation Scale (EAML) for educational settings, based on the Weiner's motivational theory, grounded in the causal attributions (attribution - emotion- action). The EAML is divided into five categories: *motivación de interés* or interest motivation, *motivación de tarea/capacidad* or ability motivation, *motivación de esfuerzo* or effort motivation, *motivación de exámenes*, motivation related to exams and *motivación de competencia de profesor* or motivation related to the professor (Morales-Bueno & Gómez- Nocetti, 2009, p. 4).

With the exception of one, the thirty participants were graduate students. In this particular study, the students of Spanish as a Second Language were mostly Americans, except for one student who was Rumanian. The participants' ages ranged from twenty-two to thirty, being the majority women. All the students were exceptional since the program they were completing is one of the best programs in the United States. It has competed with

Harvard University. These students had the experience of having had an instructor who had influenced their learning process by motivating them, which is an important aspect when acquiring a second language.

4. Instruments

In this research, the Achievement Motivation Scale (EAML) and the Academic Attributional Academic Motivation Scale (EMA) from María Antononia Manassero Más and Ángel Vázquez Alonso were used and have been modified and adapted to the needs of the study.

The EAML questionnaire contains ten questions. The questions range from 1 to 7; one, representing the least applicable to the student, to number seven, demonstrating what is closest to the student's personal experience. As researchers Más and Alonso affirm, the questions are designed in such a way that each one is related to one of the following types of motivation, indicating only the first part of the questionnaire (1998, 6): Motivation of Interest (questions 3, 4, 7 and 10); Motivation of Ability (questions 2 and 8); Motivation of Effort (1 and 6) and Motivation of the Professor (questions 5 and 9). The *Achievement Motivation Scale (EAML)* includes eight questions which focus on intrinsic motivation to "know and experience stimulation" (1998, p. 7) and two which relate to extrinsic motivation, which is referred to as "external regulation." The second part of the questionnaire consists of "the different reasons to participate in the classroom" (Más & Masero, 1998, p. 6) and the motivation that prompts them to learn a second language.

5. Data Collection and Procedures

Both questionnaires based on Más and Angel's *Achievement Motivation Scale* as well as the *Academic Motivation Scale* were collected and analyzed once they were completed in a period of one week, to assess the results.

6. Results and Discussion

The results indicate that the level of student motivation to learn Spanish as a second language is high (6 and 7). Number 7 represents the students' eagerness which obtained 12 points at number 6 and 10 and number 7, showing that students possessed a great desire to learn the subject.

The high scores regarding self-confidence (6) and behavior when solving complex problems (6 and 7) also reflect the positive attitude of the students. Both aspects belong to the category of ability motivation while the degree of subjectivity (6) and the desire to learn the language (7) belong to the category of effort motivation. These results also show the influence and importance that the professor has on the students even if the students already possess implicit motivation. Thus, it can be observed that all the categories of motivation reflect a high score in the Achievement Motivation Scale (EAML).

According to researchers Más and Alonso, the terms intrinsic and extrinsic motivation, and demotivation (lack of motivation) are useful in comprehending the results. They are defined in the following way: Intrinsic motivation refers to stimulating sensations, such as sensory pleasure, aesthetic and exciting experiences. With extrinsic motivation, the action is usually performed whether the result is rewarding or not. Finally, demotivation is defined as the absence of any type of motivation. Demotivation is a vision of incompetence and low expectations for success.

Table 1   Results of Part A: Achievement Motivation Scale Questionnaire (EAML)

Variables of motivation and questions related to categories of motivation	Points				Results: Prevailing No.
Motivation of Interest					
Importance	1.= 0points	2. = 1 point	3.=1 point	4. = 1 point	6 y 7 = great importance
	5. = 3	6. = 10	7. = 14		
Level of Satisfaction	1. = 0	2. = 0	3. = 0	4.= 3	# 7= great satisfaction
	5. = 4	6. = 2	7. = 21		
Self-imposed demands	1. = 0	2. = 0	3. = 0	4.= 0	#7= great number of demands
	5. = 7	6. = 9	7. = 14		
Own boredom	1. = 0	2. = 2	3. = 1	4.= 4	#6= great boredom
	5. = 5	6. = 17	7. = 2		
Ability Motivation					
Self-confidence	1. = 0	2. = 0	3. = 2	4. = 1	#6= quite confident
	5. = 9	6. = 13	7. = 5		
Behavior when solving a complex task	1. = 0	2. = 0	3. = 1	4. = 2	#s 6 y 7 = effective behavior
	5. = 4	6. = 12	7. = 11		
Effort Motivation					
Degree of Subjectivity	1. = 1	2. = 4	3. = 2	4. = 6	#6 = degree of subjectivity
	5. = 5	6. = 8	7. = 2	No answer.= 2	
Eagerness to learn	1. = 0	2. = 0	3. = 0	4.= 3	# 7= great eagerness to learn
	5. = 3	6. =12	7. = 12		
Motivation of the Professor					
Exams	1. = 0	2. = 0	3. = 0	4. = 7	#6 = importance of exams
	5. = 7	6. = 8	7. = 3	No answer. = 5	
Eagerness to learn	1. = 0	2. = 0	3. = 0	4. = 1	# 7= great eagerness to learn
	5. = 1	6. = 3	7. = 25		

Table 2   Results of the Second Part: Academic Motivation Scale Questionnaire (EMA)

(Some of the terminology or format is based on the empirical analysis from the two scales motivational scales of María Antonia Manassero Más y Ángel Vázquez Alonso). They have been modified and adapted in accordance with the needs of the study (Más y Alonso, 9).

Reasons for learning the foreign language studied	Type of Motivation	Prolific #
1. Earn a degree that leads to a higher-paying job	Extrinsic	2 y 4 with **8** points each
2. Communicate ideas to others	Intrinsic	6 with **15** points
3. Improve as a person	Intrinsic	6 with **18** points
4. Have a more prestigious job	Extrinsic	5 with **7** points
5. Satisfaction of discovering new things	Intrinsic	6 y 7 with **9** points
6. Satisfaction from enjoying readings	Intrinsic	6 with **11** points
7. Felt motivated in the past, but hesitant to continue	Amotivation	1 with **12** points
8. My studies allow me to continue learning many things that interest me	Intrinsic	6 with **14** points
9. I feel excited reading material with interesting themes and topics	Intrinsic	6 with **13** points
10. I am motivated when I get good grades	Extrinsic	6 with **10** points

In general, the results of the EMA show a high score in terms of motivation whether it was intrinsic or extrinsic. Specifically, the results demonstrate that intrinsic motivation is higher in number, 89 points, while extrinsic motivation had 33 points and amotivation had 12 points. What the results present is that while the thirty students are part of a very competitive program nationwide and therefore are excellent students, they possess a high intrinsic motivation and though they also find test grades and the professor's motivation rewarding, extrinsic motivation is secondary.

7. Conclusion

The present study was an attempt to determine the most efficient type of motivation, either intrinsic or extrinsic need that drives students to learn a language. The results provided strong support that the reasons of why the students were able complete their Master's degree in Spanish at such a prestigious Study Abroad program in Madrid, was mainly due to intrinsic motivation, but yet it also evident that the remarkable quality and preparation of the professors of the program help maintain, nourish the students' interest and love for the subject and even take it to the next level.

The questionnaires completed by students pursuing their Master's Degree in Spanish, clearly show an existing motivational relationship between learners and teachers as well as the intrinsic motivation that learners have that spurs them to keep learning the language and, ultimately, achieve their objectives. In this study, it can be observed that a good teacher has a strong effect in motivating a student, since the stimulus of most of the students interviewed, study for the desire to learn. It is here that the attitude of the teacher towards the student comes in. A teacher's positive attitude results in increased and sustained interest in assignments on the part of the learner. On the other hand, a student will either not feel interested in the class or, in the worst case, may develop a fear of participating in the classroom. The author and professor, Kim Griffin, states that fear of participation in second language classes can be debilitating for the learner:

> A bad experience with learning (many times in the classroom) causes the learner to reject the material. In contrast, if the learning experience has been pleasant, the student will have a positive attitude toward the material. A positive or negative attitude is also formed by the pedagogical method used, by the personality of the teacher and by how the teacher communicates with the students, the type of educational materials, whether they are textbooks, videos, CDs, films or any other (Griffin, 2005, p. 10).

Students respond to different types of motivation. Those students, who are oriented to the domain, try to master an activity, whereas those who feel anxious and helpless have learned to regard their failures as some sort of personal deficiency and abandon the activity (Burden & Williams, 1999, p. 145). It is here, that the role of extrinsic motivation plays an important role when the professor can impact the students, by motivating them to persevere and continue learning the language. It is the teacher who can influence the students positively, so that learning can continue to take place if intrinsic motivation is not present. Likewise, the teacher must find a balance and must not exceed the motivational rewards to the students. This action could have a negative impact on the students. In psychological terms, this is defined as the over justification effect. Kendra Cherry states that "offering excessive external rewards for an already internally rewarding behavior can lead to a reduction in intrinsic motivation" (2018, p. 3). Therefore, it is essential that instructors have the necessary education and preparation due to the enormous impact they can have on the students as extrinsic motivation to take the students even further when intrinsic motivation already exists, or even when the intrinsic motivation is non- existent.

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Appendix

Questionnaire
Motivation in the Classroom

Please select the answer that most matches what you think, drawing on the most recent experiences that you have had in the classroom. The answers in this questionnaire will be anonymous.

The questions were retrieved from the empirical analysis from María Antonia Manassero Más and Ángel Vázquez Alonso and have been modified and adapted in accordance with the needs of the study.

Parte A

ACHIEVEMENT MOTIVATION SCALE (EAML)

Rate the degree of subjectivity of the grades given by professor:

TOTALLY SUBJECTIVE   1 2 3 4 5 6 7   NOT SUBJECTIVE AT ALL

Rate the confidence you have in getting a good grade in the language class:

HIGH CONFIDENCE   7 6 5 4 3 2 1   NO CONFIDENCE

Rate the importance of good grades for you in the language class:

HIGH IMPORTANCE   7 6 5 4 3 2 1   NOT IMPORTANT FOR ME

Rate the level of satisfaction the studying this language gives you:

GREAT SATISFACTION   7 6 5 4 3 2 1   NO SATISFACTION

Rate the degree to which the exams might raise or lower the grade that you would deserve in the language class:

LOWER MY GRADE   1 2 3 4 5 6 7   RAISE MY GRADE

Rate the desire that you have to get good grades:

GREAT ENTHUSIASM   7 6 5 4 3 2 1   NO ENTHUSIASM

Rate the demands that you place on yourself to study the language:

VERY LOW DEMANDS   1 2 3 4 5 6 7   VERY HIGH DEMANDS

Rate your behavior when you solve a difficult problem in the foreign language class:

I KEEP WORKING UNTIL THE END 7 6 5 4 3 2 1   I QUIT SOON

Rate your desire to learn the foreign language:

NO DESIRE   1 2 3 4 5 6 7 GREAT DESIRE

Rate your level of boredom in the language class:

I'M ALWAYS BORED 1 2 3 4 5 6 7 I'M NEVER BORED

Parte B

ACHIEVEMENT MOTIVATION SCALE (EMA)

Select the answer that best matches your personal experience with the acquisition of the language you are/were studying.

I am/was interested in learning a foreign language because:

1. Without a degree in my studies, I cannot find a job that pays well

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

2. I will be able to communicate my ideas to others, and this pleases me

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

3. I am pleased to see that that I can improve in my studies

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

4. I want to find a more prestigious job after I graduate

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

5. I feel happy when I discover new and unknown things

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

6. I feel happy when I read

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

7. I was motivated in the past, but I am doubtful now and hesitate whether I should continue

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

8. My studies allow me to continue learning many things that interest me

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

9. I feel excited reading material with interesting themes and topics

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

10. I am motivated when I get good grades

Not At All	Very Little	A Little	Average	More Than Average	A Lot	Totally
1	2	3	4	5	6	7

The Great Adventure for Gender (Equality/Inequality) the Images of the Feminine and the Masculine Transmitted by the Portuguese Manual of the 4th Year of the 1st Cycle of Basic Education (2014-2015)

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Abstract: School textbooks are privileged vehicles to (re)transmit information for children's learning in the classroom. In this space values and knowledge are conveyed and inform the culture and the daily life of children, being the Portuguese language manual of the 4th year of the 1st Cycle of Basic Education that assumes a structuring functions in the process of learning and socialization. The classroom constitutes a central space in the life of the child and in it the re-contextualization of the official pedagogical discourse, formalized by a curriculum regulated in the ambit of which the respective manuals appear. Formal education takes place in a "social world" where there is a reproduction of values, social order and gender inequality. Gender equality is one of the main concerns of modern and democratic societies, and the School, as a historical institution of socialization, assumes an important function of social regulation. Thus, the School is responsible for teaching in accordance with its own values and norms and resulting from a process of enhancing democracy and the consolidation of Human and Social Rights. The confrontation between the analysis of the texts of the Portuguese Language Textbook of the 4th year of schooling and the normative guidelines of the regulators of the social question of Gender Equality opens the way to another look at the social function that the Portuguese Language Textbook (PLT) can play in this question.

Key words: gender inequality, Portuguese language textbook, school

"There is, therefore, at every moment of time, a regulating type of education from which we can not detach ourselves without hitting the lively resistances that restrain the whims of the dissidents.

However, the customs and ideas that determine it, were not us individually that made them, they are the product of life in common and express their needs."

(E. Durkheim, Educação e Sociedade, 2007, p. 48, Edições 70, Lisboa)

1. Introduction

The present text proposes a sociological view on the Portuguese Language text book for the 4th year of schooling, having as its social problematic the analysis of the social question of gender inequality.

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School textbooks play a primary role in the formal education of children, assuming themselves as formalized and legitimate documents of an official pedagogical discourse, and their social importance is extended to the family integrating the daily life of children and those around them. It allows the creation and knowledge of a certain vision of the world and the (re)construction of cultural values and norms that shape the process of socialization.

Democratic societies, as is the case of Portuguese society, have as essential condition for their development, the deepening of Fundamental Rights and Duties, namely the Right to Equality. Considering the breadth and complexity of the issue, we focus on the issue of the right to equality that may be evident in the Portuguese Language Textbook. The social question of gender (un)equality, as well as the existence of stereotypes based on the construction of the gender image, has now been explicitly and sometimes more discreetly imposed in the national political and social landscape. There are several legal and normative documents that constitute guidelines of social action in general and in this specific case of the educational act and guide the preparation of school textbooks, knowing that they constitute the privileged vehicles of official knowledge and values, reasons why these should be presented in the school environment as impartial manuals and promoters of social equality.

Our work in this framework matrix proposes a crossing of the Portuguese language manual of the 4th year of schooling (2014–2015) guided by the main objective of signaling and recording, in quantity, the "images" of the feminine and the masculine transmitted suggesting ideas of confirmation of traits of gender inequality and of stereotypy.

This text begins with a brief set of reflections about the social placement of school textbooks in the school and social life of children and families. Equating the fundamental role of the Portuguese language textbook as a fundamental book for the compilation and presentation of selected texts and transmitters of knowledge and values within the framework of a formalized and official pedagogical discourse. It seeks to demonstrate what and how a school textbook can reproduce the social order and a certain ideology and contribute to inform the children's perceptions.

In a third part, a cross-over of the Portuguese language textbook of the 4th year is proposed, in search of the (gender) inequality that pervades school-age children. This trip tries to account for the number of occurrences of images of the masculine and feminine transmitted by said manual and the suggestions of valuation ideas created from them. It begins with the preliminary observation of the external elements that surround the manual that go from the cover of the same to the record of occurrences of the existent graphic images. The analysis of the texts, on the other hand, is part of their typology and equates the number of female and male authors through some indicators such as: central figures patent in the texts, historical figures, professions transmitted in the masculine and feminine, gender equality and certain formative attitudes based on gender inequality.

It is sought to correspond to certain fundamental objectives, being them the elaboration of a fundamentally descriptive text that enables the signaling of situations of gender inequality present in the texts under analysis; to revise a content analysis methodology by Eugénio Brandão (1979) and to verify the existence of certain similarities with respect to some presented results and confirm the occurrence of gender inequality as well as the existence of stereotypes. Conclusions, in this line of thought, are presented in relation to what has been stated in the fundamental normative documents.

2. About the Social Importance of the Textbook

Textbooks assume fundamental and structuring dimensions in the daily life of the today's Portuguese society. The act of acquiring them is almost a ritual of family consumption. In addition to mobilizing families and children, it is a symbolic landmark that determines the transition from summer to autumn, the transition from the end of the school holidays to the beginning and the return of school work, and mark a new school year, another step in the child's trajectory.

These books clearly mobilize various actors, social and educational, specifically the Ministry of Education and the official proposal of the textbooks for the school year in question, publishers, authors, book dealers, schools, beyond children and families.

In a more subtle way, textbooks, as final products, result from a work process that, in turn, move other actors such as work groups that define the contents and the way they should be transmitted, authors, graphic and digital designers, among others. Aspects such as graphic quality, relevance of contents, quality of texts and proposed exercises, pedagogical and educational concerns, as well as those of a legislative and sociological nature, will certainly be included in the guidelines for preparing the textbooks, in this specific case the Portuguese Language Textbook. Will there be normative concerns regarding the issue of gender inequality? This is the starting point for the content analysis of the Portuguese Language Textbook of the 4th year, which will be presented later.

In addition to the impact of textbook sales that certainly contribute to the national economy, school textbooks are then present in classrooms for one school year and enter the home, integrating the domestic space. It is common for parents and siblings to flip through the books in question and comment about the texts that remain for several years and on the new texts that are currently part of the official program. The Portuguese language textbook populates the family scenario (des) favoring moments of socialization in the child life through the transfer of knowledge as well as of the values and formative attitudes of life, thus excluding the merely school context.

In another perspective and according to socialization theories (Durkheim, Dubar, Berger and Luckmann, Mead), the child reconstructs the "world of others" and performs an interpretive reproduction of reality (Percheron 1993; Corsaro, Sarmento & Pinto, 1997). From the age of 6 years, the child begins compulsory schooling and starts to perform the office of student (Sarmento, 2000). His school path is based on the provision of tests for school success (Rayou 2005; Mollo-Bouvier, 1998), and where reading practice becomes regular. It is therefore important to know the textbooks that children read systematically during a school year, in this case the PLT of the 4th year of schooling, and from which they also internalize the reality of the world around them, of which they are an integral part.

3. The School and the Official Pedagogical Discourse

School is consensually accepted as one of the main agents of individual socialization and one of the society fundamental social institutions and of its own evolution. The act of educating constitutes a social action with determined objectives and with great scope in the people's formation. As Durkheim points out, "In each of us... there are two beings who, though can only be separated by abstraction, are not different. One is made up of all mental states that only connect with ourselves and the events of our personal life: it is what we can call the individual being. The other is a system of ideas, feelings, and habits that express in us, not our personality, but the

different group or groups of which we are a part: religious beliefs, beliefs and moral practices, national or professional traditions, collective opinions of all kinds. The whole forms the social. To constitute this being in each one of us, such is the purpose of education" (Durkheim, 2007, p. 53).

Communication in the classroom constitutes a formalized point of view about social reality and through the act of teaching and learning, it is transmitted, internalized and ready to be (re)constructed and (re)produced (Berger & Lukcmann, 1997). The school transmits knowledge and values, norms and customs destined to the average student, with the purpose of forming according to the requirements of a certain historical time and conveying a dominant ideology (Bourdieu & Passeron, 1970; Bourdieu, 2010). The transfer of knowledge is important in the production and reproduction of the mental structures of society, which are also social conventions, built in a certain historical time. The "order of things" (Foucault, 2002) constitutes the integrated social whole that the school helps, in a pedagogical and specialized way, to transmit to the new generations, thus assuming social order regulation function. Education, and particularly the school, in the figure of the teacher, prepares individuals for the performance of previously defined social roles. The message conveyed by the teacher reveals knowledge and programmatic content proper to an official pedagogical discourse, and conveys dominant ideas and ideologies (Bourdieu & Passeron, 1970). In turn, for Bernstein (1996) the official pedagogical discourse is understood as the result of a set of relationships established among the various fields involved in its generation, recontextualization and reproduction. Bernstein (1990) constructed a model, based on the analysis of communication mechanisms, that seeks to show the multiple and complex relations that intervene in the production and reproduction of that discourse. Thus we have: the dominant principles which are transmitted by general regulatory discourse which reflect positions of conflict and unstable relations; there are always potential sources of conflict, resistance and inertia among the political and administrative agents of the field of official recontextualization among the various agents in the field of pedagogical recontextualization between the primary context of the student/receiver and/or recipient of the information/message and the principles and practices. Teachers and, in this case, school textbooks authors, may or may not reproduce the educational transmission code underlying the official pedagogical discourse. It is this dynamism, among the forces present, which, for Bernstein, will make the change.

The most important dimensions to consider in this analysis are related to the pedagogical discourse recontextualization context. Thus, school textbooks, specifically the PLT, are considered as a recontextualized pedagogical text. Thus, school textbooks convey a specific pedagogical discourse recontextualized (Botelho, Borges & Morais, 2002).

On the other hand, knowing, and according to Giddens, social institutions are the result of social practices rooted in space and time (Giddens, 1986), social norms, values influence communication, namely educational communication, the education makes possible the progressive internalization of men of women social roles, reproduces a dominant ideology, favors the maintenance of the social order and constitutes an important factor of social regulation through the production and transmission of official pedagogical discourse.

In the context of the creation and recontextualization of official pedagogical discourse, legislative and normative concerns are in principle underpinned.

The social question of gender inequality has been implemented, albeit discretely in the national scenario, through public opinion and the media. However, given the legislation and normative recommendations issued, we can say that this is a subject strongly supported by guidelines of this nature. Thus, there are several documents that call for gender equality in school, in Portugal. In addition to international recommendations from bodies and institutions such as the United Nations, the European Union and the Council of Europe, there are explicit

guidelines in Portuguese law and related documents that support the attention paid to this matter. In the analysis presented, attention was focused on the Constitution of the Portuguese Republic (2005), the Basic Law of the Educational System (1986) and the guidelines in the Guide to the Commission on Gender Citizenship and Equality (2009).

In Article 13 of the Constitution of the Portuguese Republic (CRP) can be read the Equality Principle, which states:

> Article 13
>
> (Principle of equality)
>
> 1. All citizens have the same social dignity and are equal before the law.
>
> 2. No one may be privileged, benefited, prejudiced, deprived of any right or exempt from any duty on the grounds of descent, sex, race, language, territory of origin, religion, political or ideological beliefs, education, economic situation, social condition or sexual orientation.

Having as analysis object the PLT, it should also be noted that the Basic Law of the Educational System (1986) states in paragraph 2 of its article 1 that the educational system must promote "a formative action in order to the global development of personality, social progress and the democratization of society 'and article 3' to ensure equal opportunities for both sexes".

These fundamental rights constitute basic marks for the foundation of Portuguese democracy, seeking to guarantee the universality and equality of the existence social conditions and have become a banner for deepening democracy and the development of citizenship. In this line of concern, the Commission for Gender Equality, currently known as the Commission for Citizenship and Gender Equality, emerges around the 70's in Portugal. Thus, in 2009, this Commission launches a practical guide with guidelines to be considered in the production of textbooks (2009). The purpose of this guide is to "support publishers and their collaborators in the design and production of unequivocal multimedia textbooks and educational products that promote gender equality" (Pais in Nunes, 2009). This guide systematizes a set of principles and practices to be taken into account in the preparation of school textbooks, emphasizing that: "Promoting equality between women and men: requires a balance in their visibility and presupposes that references to women and men are equally significant, contextualized, explicit and valued" (Nunes, 2009, p. 16).

It is based on the mentioned factors and starting from the Portuguese language textbook for the 4th year of schooling, as a product and result of a pedagogical discourse recontextualized and official, and the normative and legislative orientations referenced in the Constitution of the Portuguese Republic, in the Law of the Bases of the Education System and in the guidelines of the Commission for Citizenship and Gender Equality that we set out to cross the Portuguese language textbook with an informed look on the issue of the social differentiation between man and woman conveyed by the book in question.

4. A Gender Inequality: Inform the Perspective

The notion of gender is related to the social differentiation between man and woman, surpassing the physical, biological and cultural differences. Men and women are different. The question that arises is when the differences result from an inequality and or hierarchization of the roles and social status associated with men and women. The feminine and the masculine constitute worlds of meaning too vast for a merely sociological analysis. It is

undoubtedly a multidimensional concept. "Born in the intense debate that feminism of the second wave generated, the concept of gender spread rapidly in the social sciences, considering the chronology of some reference texts, such as that of Ann Oakley (1972) for sociology, Rhoda Unger (1979) for social psychology and Joan Scott (1988) for history" (Amâncio, 2003, p. 687). Differences are, from the point of view of analysis, seen in various ways within the social sciences. However, all of them are based on one condition: the rescue of the concept from biology and medicine. The notion of social differentiation goes beyond the physical and concept biological conditions and enters the universe of power relations and the field of the symbolic, through behaviors and the social construction of preconceived ideas and stereotypes about men and women, resulting in a form of social inequality, to which the questions of work and of the feminine condition are added.

The concept of gender is intimately linked to the differences between men and women in a perspective of social inequality that starts from inferior and higher social places occupied respectively by women and men and favors the social construction of beliefs, knowledge and values about the sexes, reproducing and legitimizing inequality itself. It refers to a question of the relation between social forces, signaled by asymmetry at the meanings level and defines a context of domination (Amâncio, 2003). On the other hand, even analyzing a shared plan of life, male and female, therefore, a couple, Jessie Bernard (1982) notes that marriage is lived differently, between man and woman, men generally think they have more power than they have and women, in turn, think they have less power than they actually have.

From the sociological point of view, the question of the gender perspective is fundamentally based on three fronts of analysis: the positions hierarchization occupied in society by men and women, different positions, and, above all, unequal positions; the social inequality between men and women that results from the organization of society according to social roles in the feminine and social roles in the masculine. It is based on the principle, because history corroborates it, that women usually have less material resources than men, a lower social status and occupy positions with less power than men. In this perspective, gender is considered an element that conditions the social position of individuals, similar to what happens with social class type factors, economic income, profession and schooling level. Finally, a third front of analysis is aimed at the socialization of individuals based on the social expectations created by gender, facilitating the reproduction of a mechanism of a differentiating and discriminatory nature in the relationship between men and women. These three fronts of analysis are interrelated and closely linked, integrating one's own ways of being and being in the feminine and the masculine.

It should also be noted that the concept of gender arises within a social and political context of enlargement and deepening of rights in contemporary societies, to which international and official documents such as the Charter of the United Nations (1945), the Universal Declaration of Human Rights (1948), and subsequently the Convention on the Elimination of All Forms of Discrimination Against Women (1979). In fact, the twentieth century has, among others, two important protagonists: women and love. The former went beyond the limitations imposed and showed, from various social contexts, what they knew, what they did and what they were willing to give, far beyond the maternal function to which they were limited. From an idea of nature-woman, circumscribed in being and action to biological conditioning, we came to an idea of individual-woman, owner of her destiny, responsible for herself and her actions. Process of transformation still in progress, with shortcuts and sinuous curves (Torres, 2002, p. 573).

The symbolic struggles of power, which occur in a context of social inequalities, are the least visible from the social point of view and the most time-consuming, making them the proper mechanisms for the becoming of

societies.

5. Methodology of Analysis: Eugénio Brandão Proposal

The sociological analysis of textbooks is an area of great academic interest. The main dimensions have been focused on the study of gender and cultural stereotypes (Fontaine, 1977; Brandão, 1979, Abraham, 1989) and on the importance and role of socioeconomic relations that influence the publication and textbook selection (Apple & Christian-Smith, 1991). However, although there is academic and scientific production of reference, the sociological analysis, in this context, presents data and explanations still insufficient in the face of the complexity of the theme.

The big question is: is the MLP of the 4th grade discriminatory? This analysis seeks to signal and record, in quantity, the feminine and masculine "|images" conveyed by the texts, suggesting ideas of confirmation of gender inequality traits and stereotypy, the number of female and male authors crossing some indications such as: central figures in the texts, historical figures, professions transmitted in the masculine and feminine, values images of gender characteristics and certain formative attitudes based on the gender inequality.

It is assumed that if there is a regular exposure to discriminatory images, children will tend to acquire certain preconceived ideas, constructing themselves "symbolic fields" on the social placement of the sexes, which will condition the respective possibilities of formation and professional and personal fulfillment. In this sense, it is intended to alert to the existence of ideas about the sexes that pass from generation to generation in the school context and are rooted in society.

It is proposed, in this text, a visual content analysis to the images patented in the Portuguese Language Textbook of the 4th year of schooling, based on the figures and gender images conveyed. The methodology is inspired by the proposal of Eugénio Brandão and is part of a wider work of content analysis using an analytical and categorization grid based on the following elements: identification and brief contextualization of the text, type of text, categories of images transmitted about the feminine and the masculine, with some associated significations, considering the number of occurrences. The categories of analysis considered appear in the line of research developed by Eugénio Brandão (1979) and are related to the following elements: authors of the texts — male/female; the figures presented in the texts — family figures, historical figures, professional figures and central figures and or reference, activities associated with gender; gender-related occupational activities, and formative attitudes associated with gender. We reiterate that the present text, in support of the communication presented at the III Luso-Brazilian Symposium, refers only to the figures/illustrations and graphic images shown in the respective manual.

It is first necessary to carry out a framework analysis of the manual itself, taking into account the external aspects of the manual, namely the cover and the presence of male and female authors. The analysis now presented is based solely on the observation of the illustrations that populate this manual. It is understood that these can convey symbolic images associated with the issue of gender inequality, considering aspects such as the following: the number of occurrences of female, male illustrations the way they present themselves. How is the female figure presented and how is the male figure presented? As the figures appear in the perspective of the drawing, sometimes giving a larger dimension or suggesting a smaller dimension. In addition to these external aspects, it is necessary to consider the suggestion of conveyed ideas.

The overrepresentation of the number of male illustrations may lead to or facilitate a process of socialization occurring mostly in the masculine either from a graphic point of view or from the point of view of the ideas that the figures carry.

The analysis therefore reports to the illustrations that accompany the school book texts as well as the manual itself as a book.

The presentation of data seeks to demonstrate the (dis)equilibrium between the illustrations of the masculine and the illustrations of the feminine diffused by the manual, seeking to find similarities with the work of Eugénio Brandão in relation to some presented results, and to verify the occurrence of gender inequality and the existence of stereotypes based on gender inequality.

In the results presentation, there was a concern to keep the author(s) of the manual as well as the authors, in general, of the analyzed texts anonymous.

The results presented should be subject to the criteria of representativeness and generalization, since they refer only to a Portuguese Language Textbook (for now) and it is a limited study.

6. For a Gender Inequality: The Crossing of the Portuguese Language Textbook of the 4th Year (2014-2015)

6.1 Crossing the Manual: The Cover

It should be reiterated that the textbook plays a key role in the everyday life of the school-age child and is easily identifiable by the various members of the family.

The beginning of the school year is marked by a daily and familiar bustle in the acquisition of school material and textbooks. The Portuguese language textbook is usually very appealing, either by the texts it includes or by the figures/illustrations presented. Dimensions such as graphics and aesthetics should also be part of the assessment of this manual. Its external form, the figures and colors, the cover, the title, the author and the publisher are identifying elements of the manual and well known by the whole family.

The interest in consultation and leafing is manifested by children and adults in domestic spaces. Since the Portuguese language textbook is of daily use, all the exterior elements of the Portuguese language textbook will begin to be visualized and will integrate daily and family life. It is easily identified and becomes an object of the family context.

The cover of the Portuguese language textbook of the 4th year of schooling, in analysis, is predominantly red, with a blue list at the top and presents a stage where two children, a boy and a girl, with a tree behind, with a strong brown trunk and green foliage, where you see a small yellow bird perched on a ranch. Next door is a white house. Children's figures dress in casual and half-season clothing. In the audience, we see, on their backs, children's heads and a giraffe's neck. The show will begin, or rather continue once, and given the designation of the Portuguese language manuals of previous years, the great adventure will have begun in the 1st year of the 1st Cycle of Basic Education. Now, in this school year, it will continue to present more extensive and complex texts and fewer figures. The title of the manual is a neutral title and suggests major challenges. The authors are female, and in the line of continuity of previous school years. With regard to these external elements, we can say that the manual is aimed at both sexes and the title suggests the same. Boys and girls, men and women can live great adventures in life. It is interesting to go beyond the cover and observe how this adventure is transmitted.

On the left-hand side of the handbook (for observers), under the heading "4th year" is the information that the handbook is in accordance with the Curriculum Goals of the New Program and is certified by the ESES[1].

The leafing through of books is a habit that has been acquired since childhood. Regardless of the familiar or not populated places of books, the Portuguese textbook is, for many children, the first book of systematic visualization. The figures and illustrations accompanying the manual are extremely important and suggest "other" ways of reading. They are especially important when they are viewed regularly and can lead to memorization and consequent internalization, within the scope of the socialization process.

6.2 The Authors of the Texts: Feminine Presences /Masculine Presences

Table 1   Text Authors

Authors	Totals
Men	34
Female	18 (2 are joint authors)
Mixed	1
No author	6
Sites	2

Considering the authors of the texts of the Portuguese language textbook in the feminine gender and the masculine gender implies a visualization of masculine or feminine names, which in case of overrepresentation of the proper names of the masculine gender can send the message that the universe of writing is predominantly male, an idea that, in turn, may condition the construction of future expectations based on gender.

6.3 The Historical Figure

The historical figure is of crucial importance in the child's understanding of his country and his culture. In this manual of Portuguese language, the historical figure evidenced is that of D. Afonso Henrique, the Conqueror.

It is a masculine figure and favors the association of ideas of courage, bravery and valor, values, also, associated with the masculine world.

6.4 Images/Figures and Illustrations Present in the Portuguese Language Textbook of the 4th Year of Schooling

Table 2   Illustrations/Pictures and Figures

Illustrations	Total occurrences
Men's	24
Women's	12
Neutral Male animals Female animals Animals together Objects Plants Scenario	7 4 1 5 5

The figures that accompany the texts of the manual are predominantly masculine. They are images of men and or boys and or suggest the male sex. For example, considering a scenario presented in the book, it is generally

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[1] It is a High School of Education, which, for reasons of preservation of anonymity, we do not identify.

composed of male "elements", or male-suggesting elements, such as horses and airplanes or male animals.

The world of illustrations in the manual is thus essentially male. The ratio of images is 24 male images to 12 female images.

In a finer analysis we can find, through the images themselves, some representations and some symbolisms that, to a certain extent, reinforce both male overrepresentation and the association of positive ideas with the male sex.

Thus, according to Table 3 we can verify that the male figure appears in the following ways.

Table 3   Forms of Representing the Male Figure in the Portuguese Language Textbook of the 4th Year of Schooling

Manipulating a puppet of letters
Hunting vampires, suggesting courage and bravery
Traveling, suggesting adventure
Wise man in figure of grandfather as storyteller to grandchildren and as writer
Man, distributor of gifts: the figure of Santa Claus
Man, as historical figure representing D. Afonso Henriques the conqueror
Man, as navigator discovering the world
Young men exercising the right to vote supervised by a male figure
Boys playing football
Boy observing nature
Man, as emperor, suggesting power and wealth
In the BD version, the male figures are placed in the center, gaining a prominent shape in the center of the gaze's perspective
The man as father who makes magic and enriches the childhood of the children
Man, as a symbol of wisdom, power and protection, associated with the historical figure of the pharaoh and symbolic of the Egyptian sphinx

It is predominantly an illustrative representation of the male figure associated with ideas of action, courage, bravery and knowledge.

The female figure, on the other hand, is associated with the following descriptions as can be seen from the analysis of Table 4.

Table 4   Ways of Representing the Female Figure in the Portuguese Language Textbook of the 4th Year of Schooling

A woman at the window
Scared girls
As the emperor's maid
As a mother with a baby on her lap
On her mother's lap
As a princess
Linked to affections
Looking at a wilted flower on the floor
Smelling a flower
Young girl at the castle gate in the rain
As a tour guide

About the female figure we can affirm that it assumes an illustrative representation associated with ideas of contemplation, greater passivity and affections.

In view of the above, the illustrations of the Portuguese language manual of the 4th year of schooling discriminate women. Of course, in quantity. For each female illustration there are 2 men. In terms of qualitative analysis, the illustrations tend to represent and convey the idea of man as an active, courageous, brave and wise being, and the idea of the woman as being less active and more contemplative (at the window, looking at the flowers ...), associating with it the fear, the affections and the act of caring.

The dissemination of illustrations and their systematic visualization by children of school age, usually 9 and

10 years old, may lead to the creation of stereotyped ideas based on gender. Thus, through the process of socialization and/or interpretive reproduction (Corsaro, 1997), the children, when they are recognized as socially competent beings (Sarmento, 2000), can understand that women and men will be socially types of behavior, which may affect the personal and social development process itself.

6.5 The Human Figures Present in the Manual and Their Suggestions of Social Representations in Terms of Socialization

The association between the figures in the handbook, through the illustrations, and what they may represent is an essential analysis dimension in a social context strongly marked by demands spread by the mass media on the basis of gender. From the celebrities clothes to their manifestations of expression at the level of social networks, we see an infinite universe of possibilities of life that surely exert their influence in the juvenile behaviors. The school manual, because of its social legitimacy and insofar as children are exposed to possible suggestions for the association of ideas and the construction of social representations, should constitute a document of objective and nurturing teaching and learning regarding the issue of gender inequality.

The family is par excellence the main agent of socialization and brings with it significant socializing figures. Thus, school textbooks usually refer to family figures (Brandão, 1979). The Portuguese language textbook presents as explicit family figures the grandfather storyteller and the figure of the father, who plays with his children doing magic. It is not verified the occurrence of images/illustrations making the apology of the family bonds as well as the family frame conveyed does not correspond to the formalized configuration of family (mother, father and son).

Peer groups are an important agent of socialization. In the manual in question, there are 2 figures of paired groups: boys playing with a girl in the distance (and smaller in terms of image perspective) to see them, and a group of children and young men with an adult female figure in their midst, suggesting the figure of the teacher, some of whom have a red carnation in their hand.

The central figures patent in the manual are overwhelmingly male. The world emerges in the eyes of the clearly masculine child not only by the placement of the images but also by the social roles and social values associated with them.

The vital role of the texts of the Portuguese language textbook of the 4th year of schooling is assumed by the male central figure, which can lead to a gender discrimination through the counted presences as well as the consequences in the socialization process itself, restricting to the male figure, and to their associated values, the diversity of the cultural world of socialization.

In this sense, we can point out the crucial role of school textbooks in providing a wide range of professions for both sexes. Given the data presented, we conclude that there are significantly more possibilities for men than for women, leaving the world of work in the feminine very circumscribed and reduced to two professions. In addition, from this conclusion, we may also point out that in this manual, the socially more important and better paid professions are reserved for man.

7. Final Notes

This proposal of analysis of Portuguese-language textbooks of the 4th year of primary school enrollment is part of a broader work that we have been developing which involves the analysis of the contents of the texts included in the textbook in the scope of the social dimension of gender inequality. In addition, it is an analysis that

extends to the 4 years of the 1st Cycle. In this symposium, we have tried to present only the illustrations that are part of the manual of the 4th year of schooling.

School textbooks are crucial tools in educating children. In addition to supporting the act of instructing/ teaching and learning in them, there is an educational function, more explicitly or less implicitly, within the socialization process for the fundamental values of society (Brandão, 1979).

In a diachronic perspective, studies of sexual stereotypes show that the traits of instrumentality, independence and domination are associated with masculinity, and that traits of expressiveness, dependence, and submission are associated with the feminine (Fontaine, 1977; Amancio, 1992; Botelho, Borges & Morais, 2002). The Portuguese language textbook of the 4th year of schooling under analysis follows the same orientation. In a first analysis, we can see that there are more published values that are linked to the masculine world and that the less cited and or less occurring values are related to the feminine world. There is a disproportion in the number of occurrences. On the other hand, and still in this first analysis, and considering the illustrations in the context of the subjects approached, for example, by the texts, we can point out that the values that connect to the success and to the social projection are in their overwhelming majority favorable to the man.

The observation of the conceptions about the feminine and the masculine, and about women and men can take place on several levels: physical representation of female figures and male figures; psychological characterization of female and male figures; and the association of the masculine and the feminine with the different knowledge and the different forms of acquisition of this knowledge (Nunes, 2009). In this line of thought we can see from the table in the table that the female figure and the male figures are attributed distinct traits, various spheres of the symbolic universe that involves the creation of stereotypy in the Portuguese language manual. As far as the physical representation of the figures is concerned, we find that the physical reference to the woman relates to someone "tall, lean and elegant". In relation to the masculine figure we did not verify any direct occurrence against a physical description. On the other hand, and considering the symbolic representations of the size of the figures, conveyed by the texts, while it is verified that the woman appears as "small" the man appears like "great".

The psychological characterization of male and female figures involves a set of beliefs that, by association, crystallize in the individual and collective perceptions proper to everyday life. The male figure is conveyed mostly by associating the man with a brave, brave and courageous being. Usually it occupies a position of power and/or domination in society and / or community and presents cultural traits of persistence and curiosity. The male figure is associated with the knowledge of the world, the journey; adventure and imagination. The acquisition of their knowledge is articulated with school and travel. The analysis of the texts shows that his wisdom also comes from the experience of life because man is presented as a dynamic being, and in movement. The symbology of the sphinx, presented in a comic book, confirms the characterization of man as a person possessing knowledge and wisdom. Other characterization features will be highlighting the ability to face adversities.

The male figure arises associated with the labor value either by the profession/function it performs, has already played and/or seeks to perform. On the other hand, the male figure appears as a figure related to affections and associated with protection. In relation to other studies (Brandão, 1979; Botelho, Borges & Morais, 2002), the affection area has traditionally been reserved for the female figure.

Through the analysis of the Portuguese language textbook of the 4th year we can still find what we can call "formative attitudes". In this sense, we find in the male figure the act of electing. Elections and the act of voting are transmitted literally in the masculine. At the same time, man appears as a "balanced" and "complete" figure

because it combines his function of power and domination with the world of affections, as we have already mentioned. It should also be mentioned that the intergenerational act of playing is presented by the male figure, both in the social role of father and in the social role of grandfather.

On the other hand, as far as the value images conveyed by the manual are concerned with the female figure, we have the woman/young girl/little girl represented as a fragile and vulnerable being, sometimes needing protection and care, dimensions to which we can add dependency.

There are few moments where the female figure plays a leading role and when it happens the same is represented in an unfavorable way. Vulnerability is the most frequent dimension. Thus, the female figure is associated with disease and ignorance and poverty. Usually someone who needs support and lacks attention.

The female figure is sometimes associated with tears and the image of sadness, suggesting a certain contemplative posture towards nature and the world in general, confirming previous conclusions (Brandão, 1979).

In fact, with regard to the female figure, we recognize that there is no empirical matter of significant analysis, however, it should be noted that the formative attitudes conveyed by the woman/girl figure are fundamentally related to the act of caring. Take care of nature, concretely.

The female figure is presented as sensitive and fragile.

In conclusion, we can say that the Portuguese language textbooks seem to result from a process of social construction of a pedagogical and social discourse that legitimizes the dominant values, among them those related to gender stereotypes leading to reinforcement of gender inequality, reproducing it using illustrations and/or texts of a set of ways of being and thinking that shape, through socialization, the daily life of children.

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Cultural Keepers: The Sansei from Colonia Urquiza and

Reinventing the Identity

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Abstracts: This report is a preliminary research that focuses on the *sansei*[1], the grandchildren of the first Japanese immigrants who settled in Colonia Justo José de Urquiza in the 1960s. Together with their parents, but mainly with their grandparents, they take a close look at into the Japanese cultural roots. And It is through interviews that we get immersed in the field of interest of both children and youngsters who grow up within a Western background away from the city but interested in the language, the music, the traditional dances, the food and customs of their ancestors with the intention of seizing an Eastern identity and reinvent it.

Key words: sansei, cultural identity, transmission

1. Introduction

The Twentieth Century has been a period of important migration flow. For different reasons, on the one hand connected with the wars, on the other, with sudden changes both political as well as economic, or just due to the search for better living conditions, the movement of people from different points of our planet has become a characteristic of our country both in the past, as well as in the present.

We cannot imagine the history of our country without the migration processes. The case we have been doing research on in the last 15 years is that of the Japanese immigrants who settled in a rural area in the suburbs of the city of La Plata during the sixties. Despite the fact that number of immigrants is not very big, they established a colony called Justo José de Urquiza where they developed their horticultural and floricultural activity. These activities have made them well known, especially since the eighties, to the present days, as a result of their insertion in the local, national and international markets, but also due to their hard work and big effort to keep their heritage through cultural manifestations such as *Bon Odori*[2] among others.

Preservation and tradition were two words that led the way in the process of building this colony. Firstly, the school[3] (Cafiero Irene Isabel and Cerono Estela, 2013) which was the milestone for spreading the language, and

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[1] Word that means third generation, i.e., those who were born outside Japan, but with at least one ancestor nisei.

[2] *Bon* is the day of the dead ancestors and *Odori* means dance, therefore *Bon Odori* is the dance that accompanies and brings comfort to the dead people's souls.

[3] It was created in May, 1969, in the plot of land belonging to the Japanese Club of the Colony. Later on, in the year 1981, several colonies surrounding it bought a piece of land where on February 29th, 1992 the Japanese School La Plata was born. They were not only interested in learning the language but in the integral development of the child.

later on the Asociación Japonesa La Plata (the Japanese Association) which promotes sports, typical dances, cooking traditions and other events addressed to other Japanese communities in the province and to the rest of the society.

The present research work, which is based on interviews to the young sansei people, is trying to show what the role of this community is. Having a different point of view from that of their parents, they young ones are the ones in charge of keeping the cultural heritage and reinventing it under a Western sky. They were born and grew up under the East/West dyad. They do not feel themselves identified — as their parents do — with rural activities, but anyway, and in spite of living in the city, they do go back to the colony every Saturday in order to continue the study of the Japanese language at school, or to play sports such as baseball or table tennis in the case of boys, and dances or *taiko* (a kind of drum which is played at celebrations) in the case of girls. They are Argentinian and Japanese not only because of their names and because of their parents, but also because of their physical appearance. They build up their identity while overcoming obstacles. They honor their ancestors every day when they keep and protect every little piece of tradition.

2. The Far Becomes Near

Although at the beginning the research was directed to the analysis of mechanisms of reproduction of the culture among the young people of the rural area, later on it reached those people who, in spite of living in the city, usually go to the colony in order to visit their family, attend language classes and conversation classes in Japanese, which is in the process of getting lost by many families. Those who were born in the rural area have to face the disadvantage of the distance and the geographical space in their high school or university education. Despite this drawback, 90% of the people who were interviewed are at the moment studying at university or have already graduated. This means that there is also a break as regards the rest of the family, since in all the cases their grandparents were farmers while their parents managed to fulfill tertiary or even university studies, which means an important growth in the schooling project from one generation to the other. This means that the immigrant's children and grandchildren can escape from the social destiny, shared by those who are born in the rural area, but who find the will and the stimuli for overcoming this drawback. They face and overcome the "impossible", such as determinism, and the original cultural situation finds hope. There are probably several causes, among them the decisions taken by the immigrants who, since their arrival tried to foster the building of a school in the colony and later on encouraged their children to carry on upper studies, so that they would not have to make the same sacrifice they had to while working in the countryside. In addition to this, and with the intention of keeping their culture, teenagers experience the possibility of travelling to Japan as a way of knowing the country their grandparents came from about 50 years ago, but specially in order to promote the knowledge of the Oriental culture. This means a third generation who escapes from the cultural heritage of the first immigrants, as regards the social category of migrants and their possible destiny.

Being less worried than their parents in issues such as adaptation to society, because they were born and live in this country, these young people's search and interest in questions of tradition, deal with other areas, not only with the language. Many of them have already been to Japan thanks to the scholarship programme for the prefectures or encouraged by associations such as JICA[4] and that life experience made them come closer to a way

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[4] JICA means Japan International Cooperation Agency. JICA is a part of the Official Assistance for the Development (AOD) and a bridge that brings together Japan with the developing countries. It shares knowledge and experiences in order to make the receptive

of thinking which is quite different from the Western one. In other cases, teenagers and youngsters are encouraged by their families to travel and experience the visit to their grandparents' homeland. It is understood from the interviews that they are deeply interested in learning all aspects of the history of Japan, their cooking traditions, art in general, but mainly sculpture, fashion, philosophy. They pay special attention to the values and to the founding principles of Eastern culture that they want to preserve: respect for the elderly who are a symbol of wisdom and experience, the coexistence between the modern and the traditional, order and hygiene, cooperativism *"there are certain habits that are worth learning from the Japanese, some of them that are rooted in myself"*— this was said by someone who was interviewed.

3. The Eyes Speak

Photo 1   The Youngest *Sansei* in the Exhibition

Both the physical appearance as well as the cultural characteristics of these young people are quite different from those of the Argentinian young people whose parents were born in Argentina. Even though they were born here, most of them are the children of a family of Japanese origin, and even though they speak Spanish, they are brought up in such a family context in which parents and grandparents speak the Japanese language, although it is in a process of decay. Being considered culturally positive, the point of view of the others is not only like that. Although the Japanese from the colony are seen as hard-working, honest, tidy, enterprising people, the view of the society is always mixing up facts and myths, and even at some extent, a certain amount of exoticism as regards the community. The age group that was analyzed in our research included those young people between 14 and 25 years of age, most of them are students at secondary school, tertiary institutes and even at university. Firstly, it is understood that they have fulfilled their primary and secondary school studies, and since they have decided to

countries strengthen their capacity to solve their problems, building in this way a more peaceful and better world for everyone.

In October 2008 JICA managed to strengthen their ways for International Cooperation, by integrating the operations of financial support of the Bank of Japan for International Cooperation (JBIC), non-refundable financial cooperation granted by the Ministry of Foreign Affairs of Japan (MOFA) and the technical cooperation offered by JICA.

JICA does not only try to grant goods and equipment, but is also trying to develop people's capacity to solve the particular development challenges they face, becoming key actors who generate positive changes in society.

attend classes at university, they moved to the city to be nearer the educational centers. It is understood from their speech that they are not as interested in their grandparents' activities, as their parents used to be. The fact that they go back to the colony every weekend in order to visit relatives and friends and share some time with them does not necessarily mean that they would like to devote their lives to the farming activity. Only one of the girls that was interviewed showed herself interested in continuing with the floricultural activity. Those who live with their parents and grandparents are absolutely convinced that they will not work in the floricultural activity, since they know the effort it means. Despite being aware that to a great extent their possessions are the result of the sacrifice made by those thin people, with tired faces, who devoted lots of years under difficult weather conditions such as extreme cold or high temperatures to cultivate the flowers in the greenhouse in order to be sold at the market later on. Anyway, they have not learned the technique, nor do they intend to study any courses related to their grandparents' activity. The youngest among them are interested in university courses such as Medicine, Odontology, Economy, and Engineering. And even some of them are thinking of moving to their ancestors' land after graduating.

The *sansei* who had the opportunity of visiting Japan, either thanks to a scholarship granted by the prefectures or through a family reunion, speak about an enriching experience which they would like to repeat. The youngest ones (11 and 12 years old) cannot really appreciate the meaning of this initiatory journey associated with their traditions and will, and would like to return in order to recover those moments or even maybe some places that they were not able to visit or that they would like to enjoy again. However, not everything related to their ancestors' culture is significant for them. There are certain myths about that, for example the fact that they watch or have been watching cartoons on TV since they were little kids, or that they are fans of anime cartoons, or the idea that they only eat sushi[5]. As one of the youngsters said: *Despite the fact that we keep special love for those tastes and meals that we enjoyed during our childhood, it does not mean that we cannot try other dishes or that we only cook the Eastern food.* On the contrary, there truly is a special interest for going deep into the study of the language, probably in order not to get it lost for the future generations. For example, they hardly ever watch the Japanese TV channel NHK. One of the *sansei* said that in NHK they are all the time speaking about politics which he cannot almost understand, and which is not attractive at all. But they do learn to sing and dance. One of the girls expressed her experience: "Since I learned to sing, I can take part in the festivals, such as *Utamatsuri*[6], which is organized in the colony. They really like the *ikebana*[7], the youngest like the *animé*[8] exhibition and also the

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[5] Eating habits and traditions are among the strongest cultural elements.

[6] Derives from the words in *zetsu no uta* which means a speaking song and it is the most meaningful musical genre in the Japanese culture.

[7] It is the Japanese art of making floral arrangements, which was born as a traditional offering and became a form of art. The word *Ikebana* literally means "living flowers". Together with the introduction of Buddhism in Japan through Korea and China in the VI century, the custom of kuge or flower offerings in the altar started. A Buddhist priest called Ono-No-Imoko, who was not pleased with the untidy way the priest used to make their religious offers in Buddha's altar tried to use floral arrangements meaning the whole universe. In his designs the flowers and the branches headed up (never down) and set themselves in groups of three in order to represent the harmonic relationship between heaven, the man and the land. The priests kept on making these flower arrangements for hundreds of years, but there is no evidence of any special shape, way or design until the end of the XV century. At this time and together with the Italian Renaissance, Japan experienced an explosion of artistic development and the traditional Japanese architecture was created the way we know it today: the *haiku* poetry, the *noh* theatre, gardening and also the training in several Schools of *Ikebana* which evolved and set their arrangements from a more traditional and innovative point of view varying from more formal to more informal styles. The spiritual aspect of *Ikebana* is considered very important for those who practice it. Silence is a must while making one *Ikebana*. It is a time to appreciate those things in nature that people usually overlook due to their busy lifestyles. You manage to become more patient and tolerant to the differences, not only in nature, but in general. *Ikebana* might inspire you to identify in beauty all forms of art. It is at this time that you feel yourself close to nature, offering the relaxation of mind, body and soul.

shamisen[9].

Another aspect of the Eastern culture the young people are interested in is their cooking knowledge. The youngest one said: "I like Japanese food much more than local food". Maybe due to the fact that their grandparents kept this meaningful heritage on their way of immigration and there is a tendency for it to disappear, so it becomes necessary to dive into the cooking habits and traditions so that the lunches and dinners in the community, both in the countryside as well as in the city would keep the smell and the taste from Japan[10]. Japanese art is another topic of interest that appeared in the interviews.

Some of the *sansei* girls spoke about their interest in learning more about *Shodo* and *Sumi-e*. The former being Japanese calligraphy which is one of the most popular fine arts in Japan, it is compared to painting for its importance. This art of writing calligraphic symbols on a white background that represents a void space, while the signs in black represent the female and the male aspects, carry with it a philosophical sense[11]. The latter, the *Sumi-e* is a creative discipline characterized by ink monochromatism[12].

Some social difficulties as regards integration and relationships during schooling times are often pointed out in the interviews. Physical appearance gave rise to bullying and mocking, especially during primary education.

You used to hear in the classrooms "You are Chinese!" "You, the Chinese, shut up!"[13] Speaking in a pejorative way and referring to the shape of the eyes. One of the girls pointed out that they used to laugh at her for the way she used to speak Spanish. It is true from a point of view of people who do not know and in the way of a curse, that almost always they are associated with the Chinese community, even though they may come from other South East Asian countries. Although they may be seen as Argentinian everywhere, on certain occasions they are

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[8] Although it is a word of French origin, it was adopted by the Japanese in order to refer to cartoon on TV. *Animé* is a cultural phenomenon, which is also entertaining, and which is internationally popular. It is a kind of art connected to **manga** (Japanese cartoons), **cosplay** (the use of costumes) and other disciplines and tendencies. Animé works used to be drawn by hand, although in recent years digital creations have become popular. Despite the existence of multiple works of animé with different characteristics, there is a typical style of Japanese animation that started in the 1960's. All the characters have got very big eyes, thin lips, strange hairstyles, being these some of the most outstanding features of animé. The expression in their faces, on the other hand, makes these cartoons different from the typical occidental animation characters.

[9] One of the most classical musical instruments in Japanese art. It is a lute with three strings that is usually used in the plays of *kabuki* theatre, *Nogachu* theatre and also in the puppet shows *Bunraku,* and even in the dances performed by geishas. This is a musical instrument that derives from the Chinese *sānxián* (three strings) which appeared in China during the Yuan dynasty in the XIII century. The Chinese *sānxián* was introduced into the Ryukyu (Okinawa islands southeast of Japan, from where it reached Sakai (Prefecture Osaka) around the year 1562, and from there it spread along the country

[10] To learn more about gastronomy in the colony, read *¿el renacer o la cristalización de la tradición? Preguntas a la identidad desde la comida y el vestido en la comunidad japonesa de Colonia Urquiza* en Cafiero Irene Isabel y Cerono Estela (2013): *Algunas voces, mucha tradición*, Ediciones Al Margen, La Plata, capítulo VII, pág. 149-166. (*Rebirth or crystallization of the tradition? Questions to the identity from the food and the dressing up in the Japanese Community in Colonia Urquiza.* Cafiero Irene Isabel y Cerono Estela (2013) *Some voices, a lot of tradition.*

[11] It means Sho calligraphy, Do the way. It is one of the Dzen practices. It is a delicate kind of writing art, in which a teacher with a bamboo brush and Chinese ink, on a rice type of paper a true work of art, characterized by its harmony and beauty and show the basic principles of Japanese aesthetics. Such as *wabi-sabi*, i.e., the proportion of the simple and the delicate. The balance between the starting and the finishing points is determined by the equilibrium between the lines, the dots, the direction and even the empty spaces. It comes from Chinese calligraphy and it is practiced the same way it used to be done thousands of years ago. Nowadays there are calligraphy teachers in this art who are specially hired in order to write important documents. Not only great skill is needed, precision and grace by the calligrapher, for example, each kanji character must be written according to a specific order in the design, which makes this discipline more demanding for those who practice this type of art.

[12] This discipline was born in China during the Tang dynasty (618–907) and becomes an established style during the Song dynasty (960–1279). It is introduced in Japan in the middle of the XIV century by the Buddhist monks zen, achieving great popularity until it reaches its peak during the Muromachi period (1338–1573).

[13] One of the girls said that after their partners' insistence on comparing her to the Chinese, she replied: ***"I am Japanese!!!!"***, and immediately after that she heard people saying: ***"It's OK, Chinese!!!!"*** in quite a pejorative way, in order to hurt her. It is very often considered that due to the shape of their eyes, they can only be of Chinese origin.

the only Eastern people. It is important to remember that at school the recent migrations into the country were not considered in the classroom, or they were only considered in certain cultural manifestations such as the food, the clothing, or even the language to a certain extent but only by chance, considering its folk tradition, making it exotic, in the case of difficulties in integration. It is set aside other aspects in the cultural manifestation such as the setting of the community, the demographic aspect, legal o economical questions that mean something in the migration processes and which are full of a sensitive connotation.

Their grandparents live in the countryside, but most of them live in the city. The demography has changed as well as the spaces, the world, and they have grown up in a multicultural world and society. They have not shared their time or their space, they have never heard of a farewell or loneliness, they have never heard of ports, nor of boarding and disembarkments, they know another nature, they do not know of the land, nor do they cultivate it, and although they live a different story they do create bonds with the culture of their ancestors. First of all, and no matter where they live, they attend classes in order to learn a language, the language being a synonym of the colony, a fundamental element in the reinvention of their identity.

4. The Bodies Speak- The Sounds Take Us Far Away

Photo 2   *Nisei* and *Sansei* at the Japanese School, Sharing the Playing of the *Taiko*

Photo 3   *Sansei* Waiting Next to the *Taiko* in Order to Play While Dancing at the *Bon Odori*

The traditional dances speak about the Eastern culture, saying something that cannot be expressed with words. The delicate and subtle body expresses through the dance that which is impossible to be said with words. It is worth noticing during celebrations that have become popular such as *Bon Odori*[14] how the visitors get together around the central tower *yagura*[15] where the *taiko*[16] play the rhythm. Inside the circle simulating the dance floor, the line of Japanese women starts dancing wearing their *yukatas*[17], their sandals, their flowery hairstyles, and the audience joins them, following them, copying them. Nobody gives instructions nor speaks; they are just bodies that let themselves be looked at and copied. There is quite a clear difference between the movements of the *issei* y *nisei* that belong to the community, who open their arms towards the sky while touching the air with the palm of their hands, and the audience who are attending the event. The latter perform exaggerated movements, accelerated and even rough movements at times. We might wonder why there is such a big difference between ones and the others. This can be explained because the dance comes from inside[18], the dance does concentrate on the rhythm with a few movements that are frequently repeated, and it seems that after repeating them insistently they manage to change your mood. Those who play the *taiko* do that with their whole body, a kind of ritual in which the arms are spread up and sideway, to both sides, and the strength is addressed to the drum without losing harmony. The circle implies a meeting place, it means contact, opening, gazing. The *nisei* are the organizers of the event, while the *sansei* are the dancers who set the pace with the *taiko*. The event causes delight, it subdues, transports and brings together men and women who attend the festival. It shows the *sansei* keepers closer and closer to the Eastern culture.

5. Everything Changes

We set off this way with the aim of analyzing the conditions and the different forms adopted by those *sansei* that are born in our country as regards their Japanese identity. They are teenagers and youngsters who are supposed to put together different identities: being Argentinian, third generation, *nisei*'s children, *issei*'s grandchildren. Pluricultural people who are building their individual identity in the hybrid of several identities, especially in the Japanese identity which they discover at birth and which becomes the invisible base on which they are supported. In that sense and seen from outside, the community seems to be a stable entity and differentiated, as a result of the work performed by each one of its members and as the basis of their collective identity. We believe that it was like that in the first years when the contact with the outside world might have been seen as an outrage against the group's integrity. As years went by, the children left home towards the city and the

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[14] It is a traditional Japanese festival where the myth and the rite are closely connected with the cult to the ancestors. It is part of the celebration of *Obon*, in which it is celebrated the temporary return of the ancestors to the world of the living. *Odori* refers to the different artistic manifestations of the dance in Japan. It is divided into two main forms: *odori*, which has its origin in the Edo period; and *mai*, which developed in the western part of Japan. The odori developed outside the kabuki stage and it is mainly connected to the male feelings; while *mai* is developed in the rooms, instead of the stage, and was influenced by the *noh* theatre.

[15] Originally the term was used to address a tower inside a fortress that was used as a warehouse to keep arrows. Also as a tower or wooden gun turret opposite a sumo stadium where a *yobidashi* plays the *taiko* every day before and after the competition.

[16] It literally means a big drum, and in the history of Japan, it turned from a musical instrument in the battlefield into a way of calling hunters or even to announce a storm ahead. It is thought that the sound of the *taiko* is so strong because it is inhabited by gods. It is played with drumsticks called *bachi* in Japanese, and it is written "wa-daiko". *Taiko* also refers to the relatively new art of musical ensemble of *taiko* percussion (in Japanese known as "kumi-daiko").

[17] Summer clothing, a more casual and light version of the traditional kimono. Its origin dates back to the Heian period (794–1185) when the nobles at that time used to wear a type of clothing known as *yukatabira* in the steam bathings.

[18] Being a Buddhist tradition, it dates back to 600 years ago, and since it worships the memory of the ancestors, it bears a deep religious meaning; therefore, dancing together and holding hands in some cases it is a way, it is thought, of being able to visualize the figure of the ancestors.

floricultural properties that were characteristic of the colony were disassembled, therefore this cultural stage started to change and the gate of the Little Japan opened to the curiosity of the *gaijin*[19]. The events contributed to the knowledge of the environment, feeding the interest for the oriental "exotism" and for others it meant the sincere search for a product of cultural consumption.

We have chosen this cutout, being convinced after previous research done that we were in front of really true cultural keepers. This generation, the same as their parents' and grandparents' are people of few words. It was hard work to manage to convince them to speak about their interests. They spoke monosyllabic words accompanied by a smile. However, we succeeded in understanding that not all of them live their identity or their collective belonging in the same way. The cultures change, they have different stages, and each one is replaced by another. The *sansei* from the sample have been looking at their grandparents' practices which were also done by their parents for years, which has determined their behaviour as well as the picture the rest of the society has of the community[20].

Probably many questions have been set aside in the present research work. The scope of consideration reached only the questions that had been set beforehand. In our case, they are subjective dimensions or personal identities who subsume to the macrostructural processes of immigration. Todorov (2016) remarks that the collective identities in Western countries are suspicious of conspiracy and attack against individual freedom. In this first report we could observe that far from being an obstacle and an element of enclosure, the community in the rural area meant a platform for taking off, both for children and grandchildren. The *issei* from this rural community did not abandon their Eastern identity, in favor of taking distance from their past, building from that point and claiming the essential aspects of their legacy. Their children and grandchildren grew up in a hybrid and cultural mixture. The *sansei* from the sample could find their own cultural truth. They are born with such an identity that is imposed from childhood. They carry genetically distinctive features. Their teachers were their grandparents, but they do not show absolute obedience, on the contrary, they flow in the permanent process of building. They grow up in the bilingualism which does not only refer to two languages, but to instruments of connection with the actions and ideas of the past of their parents and their community, the view of the world. They inherit the way they move in space and time and relate to the others.

From the taste for certain meals to landscapes, games, songs that constitute their cultural universe since the early childhood, they carry with them a definite identity attitude that is made clear every opportunity they have in order to honor the life of their grandparents, and their struggle to find the way for a better world. Their grandparents brought with them the nostalgic feeling for their lost home that is shown in the *furusato*[21], in their relationship with the family and the community, in the strong bonds with the rural world and with a lifestyle which puts ahead the Japanese values of harmony, good health and who tried to transmit to their children and grandchildren. Even though the word contains a high emotional connotation and you think back of the rural roots, this does not mean that the *sansei* does live it as a burden, as a necessary condition for the continuity of their identity. On the contrary, in Japan, during the eighties, the consolidation of the *furusuto* as a social, political and cultural phenomenon was closely connected to the notion of the Japanese identity[22] and as a reaction to the

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[19] Japanese word that means *gai* (outside) and *jin* (person) it is usually used to refer to a foreigner.

[20] One of the girls said that the only thing she did not like was that due to the fact of being of Japanese origin, she is considered at school and in other environments to have extraordinary conditions *"I don't like to be considered on top just for being Japanese"*.

[21] Literally, the place/land of origin, but it may be found translated as home or old village.

[22] It is called *nihonjinron* in Japanese and it is the period Meiji, a distinctive way and original one that characterizes the Japanese as opposed to the western people. Since the second half of the XX century and coinciding with the technological development and the

modernization process in the Colonia Urquiza, the eldest want the young ones to live their Eastern identity without being bound to the soil. As opposed to the *issei*, who were not able to choose what they wanted to do when they arrived at this land but devoted themselves to the only possible activity in that context, they can decide with complete freedom what to study, where, what they would like to study more deeply as regards the Japanese culture. Some aspects give rise to curiosity and surprise when they study them deeply.

Their grandparents have always looked for the beauty in the scars life has imposed on them, without any grief or darkness; they have always thought of giving a second chance to their farewell story, the same as the ancient technique of *kintsukuroi*[23].

Ever since they arrived in the country in search of somewhere to build their future, they knew they could heal their wounds in heart and soul that meant having left Japan. They made a big effort in order to build what is known today as Colonia Urquiza. Here, in the Japanese community near the city of La Plata, the legend of the little fish *Koi*[24] that looked for the Big Waterfall becomes a celebration every 5th of May, showing that the three generations do still believe that with a remarkable effort and dedication, you can reach the green mountains where the waters are pure and clear.

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urbanization process that it accompanied, there was a reconstruction of the national being in Japan, that joined the growing demand of *matsuri* and other ways of cultural expression that were used as instruments of articulation of the nation.

[23] Craft technique that consists of repairing broken objects and it dates back to XIV century. It consists of applying and filling with lacquer dusted or mixed with powdered gold, silver, or platinum in order to give a precious value to the imperfections both of the objects as well as of life. The interest for this technique that has become a philosophy of life was reborn after the latest earthquakes in Japan.

[24] The legend of the fish says that those fish that managed to swim river up, backcurrent, reach the waterfall and climb it upwards would become dragons as a prize to their strength, perseverance and persistence. The ascent of the *koi* up the great waterfall is considered to mean success in life. It is the myth of metamorphosis and transmutation.

Science-fiction Plots as an Allegory of Totalitarian Society and State in Cinematography of the Late Communist Poland

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Abstract: The 1970's and 1980's are known in the Polish cinematography not only as the period of famous productions of the "cinema of moral concern" and brilliant comedies written and directed by Stanisław Bareja. During that period many films of specific Polish science-fiction style, whose action took place in a near future, were created. They formed an opportunity to create allegories of the totalitarian state, which served as a method of hidden criticism of the communist society ruled in the authoritarian way. Not all of them had equally strong political meaning, but they were always used by their directors as an opportunity to show the forbidden aspect of reality.

Key words: science-fiction, Polish Cinematography, Communist Poland

1. Introduction

For centuries societies used allegory to express their fears, needs, and dreams. This feature was quickly adapted by political opposition, to make people rebel against the dominant power. Also artists used this method, trying to get a listen and discharge social tension. Twentieth-century totalitarian regimes through their censorship and repression apparatuses forced opposition and free-artists to use that method, in a purpose of critic of the system. In post 145 Poland artists, writers and film-makers quickly used this method to speak the truth. As film directors couldn't show reality, they took two forms to search for it: description of the past and description of the future. In the first method they could present recent problems in a hidden way. In the second, they chose science-fiction movies. In the 1970s and 1980s in Poland and all over the world we can observe development of this kind of art, which was very useful and comfortable for interpretation. The society of communist Poland possessed features of totalitarian, authoritarian and liberal societies. This mixture of values was particularly visible in the last two decades of the communist rules, that is why this period will be the field of my analysis.

2. Polish Science-fiction Cinematography

In the years 1970-1990 in Poland there were made over a dozen science-fiction films. In most of them we can find the motives of the totalitarian state and society. I would like to concentrate on couple of them.

In Hydrozagadka (Hydro-puzzle) (Andrzej Kondratiuk, 1970) (by Andrzej Kondratiuk) we can see a world from comic book. There is a superhero and his nemesis, we have the plot of saving the city and, of course, scenes

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of fights. But this movie is made in the convention of a comedy. And most of all, the society and state are quite typical, we cannot see totalitarian elements.

Situation is totally changing in Golem (Piotr Szulkin, 1979), the first film of famous tetralogy by Piotr Szulkin. The reality of the film is strictly totalitarian. The citizens live in a permanent fear. The totalitarian reality is showed in a metaphor of clones: the creatures without characters and personality, totally dependent on the state. The main hero, Pernat, turns out to be a clone of a death man. For the whole time he is looking for himself, having problems with his own identity. At the end, he himself is a matrix for the next Golem, mythical creature formed by mud. Watching this interesting movie, we can have the impression that reality is one big metaphor for an authoritarian state. The state creates this cruel project, without troubling itself by its inhuman consequences. The program works by catching degenerated men and experimenting on them to improve their personality. The hero is being invigilated all the time. The world around him is riled by "doctors" and their spies.

Hanna Książek-Kunicka thinks that the world showed in this motion picture has two separated platforms: demoralized rests of social life and totalitarian power. For instance, the hospital, where the experiments take place, serves also as the prison. Above all, the tool of violence is a knowledge itself. The quasi-totalitarian reality is being seen also in the example of characters. They lost their subjectivity, like mythical golems. As far as Jan Słodowski is concerned: "Incerdiblesigestive vision of the inhuman world, where existence was deprived from values and reduced to automatic gestures of satisfying basic needs" (H. Książek-Kunicka, 1980, p. 13).

Anti-thesis of the totalitarian state is the surface of the earth. Characters know about its existence, moreover they try to get over on it. But on the surface everything is directed to.

Another interesting motive is in the scene, where we can see a concert in an amphitheatre. The main character goes on the surface, where he can see an artist, which sings for the empty stadium. Television is creating an effect of a full stadium. It is an interesting allegory of communist propaganda in the media. In the final scene there is a third Oregon, which can be seen in the uniform of a dictator. He denies that there have ever been any experiments creating the golems. This is another example of lie, this time from the top of authorities. It is the power that decides what is fiction, and what is true. In this context authority legitimizes itself.

Another movie from Szulkin's tetralogy is Wojna światów — następne stulecie (War of the worlds — the next century) (Piotr Szulkin, 1981). It is another motion picture, in which director in a sophisticated way presents Polish reality. The action takes place in 2000, when Poland is invaded by Martians. TV Reporter, Iron Idem takes a desperate try to rescue his wife, kidnapped by the authoritarian state. He loses in all fields and is executed, but in a fictional, television way. The basic motive of the film is a critic of totalitarian state. It was made in the period of the "Solidarity Carnival". The fictional Polish state, which in many instances is similar to the communist Poland, has rules of illusory legitimization of the power. The foundation of those rules is the brutal police and the TV propaganda, which makes fool of people. The citizens are indoctrinated to share they blood, seemingly voluntary. Everybody lives in fear and lie.

The Martians are a symbol of an outer enemy, conditio sine qua non of existence all kinds of totalitarianism. However, taking into account that in the movie there are many plots of friendship with "guest" from the red planet, they could also be a metaphor of Soviet Army in Poland, so-called "The Alien Friends". The Martians are walking on the streets, they are brutal, but the government does not want to be responsible for their actions. Finely they leave our planet[1].

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[1] The Martians are small creatures, with silver skin and high IQ.

Nonetheless an important motive is the world of the hypocritical television, which is represented the main character (in this role Roman Wilhelmi). At the beginning he is a loyal maker of orders from the top. But once the rebellion begins, he doesn't want to read fabricated communications. When he loses his wife, he breaks down. He even tries to speak to the nation live from the screen, but without consequence. He symbolizes a heroic, but doomed to failure, rebel. In that context he is similar to the heroes of the First Solidarity.

One of the most known and one of the best Polish science-fiction movies is Seksmisja (Sex-mission) (Juliusz Machulski, 1983) directed by Juliusz Machulski. The most important plot shows a totalitarian society and its mechanisms. The propaganda says to citizens that on the surface of the earth, existence is impossible, which is a lie. The borders with other countries are strictly guarded. Men are a symbol of an enemy, they do not exist in society, but each time they can come back. The headmaster of the underground state is a woman, which in reality is a shy man — full of complexes and probably an impotent. Rules are dictatorship with externals of democracy. In conclusion everything we can see on a screen is an allegory of totalitarian state and society, precisely the communist Poland. We have to remember that the film was made in a period of the martial law in Poland (premiere was, however, later, in 1984). Moreover, men who wake up in this world are an allegory of anti-communist opposition, the fighters for freedom and traditional values.

Let's try to imagine the characteristics of the society in that motion picture. It is pacified and subservient to the authorities. It is divided into two groups, technocrats and historians[2], competing with each other and strengthening the power of a leader in the name of the rule *Divide et Impera*.

Analyzing the scenes we have to take a look at the trial. Men are prosecuted by the Council, which doesn't know what to do. They defend themselves; say that the history of mankind is a history of men. One of the men denies it saying that "Copernicus was a woman". It is hidden analogy to communist society and the Polish politics of memory. In that discourse the history of capitalism was a history of exploitation, religion was superstition, and the officers in the Katyń Forest were murdered by the Germans — that version of history had been taught to the Polish society. Conclusion: each undemocratic power has to falsificate the history.

To the vision of the totalitarian state fit also the Guardians. In some scenes we can observe their behavior, which is aggressive. They use nightsticks, characteristic for the Polish armed police — ZOMO.

The picture also criticizes the luxury of Power. In one of the last scenes the men characters realizes that the dictator is a male. He lives in an unknown house and keeps precious goods. His lifestyle is similar to that of communist authorities, who often against the ideology, had private houses and luxury goods, unthinkable to other citizens.

In quite the same moment of history was made the film Synteza (Synthesis) (Maciej Wojtyszko, 1983). It is the second half of XXI century. From hibernation is waking-up the little boy, which had been frozen above hundred years ago. He has understandable problems in adapting to the new situation. Couple days later is waking-up former dictator Muanta, which try to take power on the world, using "the Atrophy virus", after which everybody are totally dominated and manipulated. The main motive is the society of tomorrow. At the beginning we can see liberal democracy as a government of a future. But everything is changing after coup d'etat of Muanta. He is trying to compare his new rules to the XX-century dictatorships. He makes believe to people that they have to be happy and obedient. The propaganda slogan is: "Muanta knows what he is doing". In the movie the dictator

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[2] The division on technocrats and historans is wise in cinematography of science-fiction film makers, not only in Poland. For example Demolition Man (Marco Brambilla, 1993).

is stylized on Latin-American but of course he fits also into the shoes of General Wojciech Jaruzelski.

Another interesting issue comprises "ideal people". Thanks to the manipulation in genetics it is possible to create perfect human beings who are socially maladjusted. An example of this is a character (in that role Krystyna Janda), who shows an actress of the future, which hates critics and is hardly self-righteous. Like the local poet says, even perfect world has its disadvantages.

The other motives are robots. They are everywhere, helping people, but sometimes they limit freedom of the human beings. It seems that the director warns in this way about giving the main power into hands of a machines (like in western Si-Fi, for example Terminator).

One of the most important scenes and dialogues is judgment to the Muanta. The dictator defends himself saying that order is the most important as the only way to prevent chaos. One of the Judges (played by Bogusław Linda) says, that human is most important value, non the authoritarian law, which passing by after liquidation of the dictator.

Obi-oba: koniec cywilizacji (Piotr Szulkin, 1984). Another film directed by P. Szulkin. In my opinion better than the previous one. After the atomic war 1000 of people are covering underground, in the dome. They create here new society with all its divisions and with dictatorship. Everybody lives in a dream of coming the mythical ark, the symbol of salvation. Dome is a metaphor of dictatorship and is very similar to polish one. We have here regulation of food, propaganda, anti-government opposition, black trade markets, prostitution, etc. Everybody knows that dome is bursting at the seams and it can't hold them. Like in 80's in Poland, society knew that system is collapsing and was afraid of it. The ark is a metaphor of hope, but could be also metaphor of religion, truth, everything which is lack in totalitarian state. It could symbolize outer free world.

In attention disserves also the character of the Fridgeman. It is another person, which all days waiting for a coming of a mythical ark. He has his own idea how to survive, so he is constructing a giant fridge, which has to be a shelter to survivors. He is collecting food and drink, praying to the ark.

Another symbolic character is library man. In his library are only books about "Burs", mythical enemies of mankind. The rest of the books were being transfer and is added to the free food given by authorities to the people. Even Bible has lost. Only its caver have being save, because, according to library man words, it can be put on the shelf no one will see what's inside. The most important thing is guises, form, not the contents.

The character of dictator is sitting all days in his bunker – bureau laying his little soldiers. He plots intrigues and managing everyone's from the top. He is lonely and unhappy; he is suffering on persecution mania and the God complex. In real is an old, scared man, drinking alcohol watching in mirror.

Another interesting character in this movie is the tramp. This person resigns from his dignity, only to get some extra food. For meat he is even ready to bark like a dog. He symbolizes a social group, which in each political system sacrifices everything for material goods.

Specific Polish science fiction movie of the late 1980's is Pan Kleks w Kosmosie (Mr. Kleks in Space) (Krzysztof Gradowski, 1988). It is the last part of the adventures of the eccentric Ambroży. This time he travels with a young boy, his father and "Melo Śmiacz" to the Mango planet to rescue a princess. As for many others before, also for this intrigue is responsible The Great Electronic.

What is specific in narration is loneliness of heroes. We can't see any marriages. Men and women are living separately. Even Commander Benson with his son live in a house without any woman. The only marriage-motive is an arranged relationship between Carmello and little Agnes. Maybe the producers want us to focus on the progressive crisis of the family?

Like in the previous parts, we can see here a society ruled in a authoritarian way. An example could be a school class of the future. Its organization is highly restricted. Computers are interfering even in the outer school life of our heroes. Also in the song accompanying the school scenes we can hear that discipline is the foundation of education. In a little way it is a reflection of the school in the late communist Poland where children could neither count on high freedom or liberality.

Just like in most undemocratic regimes, Benson is first promoted only to be demoted later. From the narration we know that the Commander is a victim of interpersonal intrigues within the apparatus of power. It could be a metaphor for games inside the party in communist Poland and politics in military, where single human being wasn't important for the High Commands.

The third film of Szulkin – Ga Ga: Chwała bohaterom (Szulkin – Ga Ga: Glory to the Heroes) (Piotr Szulkin, 1985) is also full of allegories, metaphors and symbols. In its vision of the world there is common wellness and nobody wants to conquer a space. That is why the program of prisoners exists — astronauts sent on other planets against their will. One of them, named Scope, is sent to the mysterious planet of Australia 458. On its surface he is welcomed as a hero but… he has to commit a crime and has to be executed for it, to the joy of the crowds. Cosmic Australia is a little bit like a totalitarian state, a little bit like the capitalistic West. Like the first one because state intervenes in everything; the second one, cause cruelty is a consumer goods to sell. In bars we can eat a hotdog with human finger inside, and people all the time are exiting of cruelty and violence. Everywhere we can see English words, and it could suggest that maybe is an image of America in the future. On the other hand we can observe a massive event in the typical communist style. Concluding, the world of this fictional planet is an extreme allegory of communist dictatorships, an extreme vision of "dictatorship of money", which turns people into beasts.

I would like to concentrate on a very specific but important motive: the idea (the concept) of a Hero. The Hero is from one hand a typical socialist worker from the propaganda posters, an important element of communist propaganda, but on the other hand he is a combination of Clyde Barrow and Charles Manson. His like one icon connecting the elements of communist values and capitalist values. Both types are important to each power. Firstly, state prompting them to acts and then punish and liquidate to show the machine of justice and social order. This procedure guarantees obedience of a society.

Kingsajz (Juliusz Machulski, 1983) was the film as popular in Poland as Seksmisja. It is made more in the convention of fantasy or fairy tale then the typical Si-Fi. This untypical movie presents two realities: casual (king size) and the dwarfs, which is an allegory of totalitarian state and society. Dwarfs lives in Dwarfsland, they are existing in society, which is organized from the top, where there are no women and families. The producers smartly cheated censorship of communist Poland showing the regime in fantasy allegory. Dwarfsland is ruled one dwarf with externals of democracy. Everybody lives in identical flats (drawers), which symbolized communist flats. Each day is a hard work and gaining luxury goods founded in Kingsajz. Of course they symbolize Western consumer goods, which were very difficult to buy in communist states. Dwarfs eat in canteens, which are similar to popular communist milk-bars. The social order is guarantee by brutal police, which is like the communist militia, aggressive and impolite. In prisons are oppositionists, enemies of the state and… provocateurs (spies of a secret police). In Dwarfsland there exists dead penalty which can be observed by any citizen. An opposite world of this land is Kingsajz, the world of big human beings, with luxury goods, beautiful women and pleasure. As I have already mentioned it, it symbolizes capitalist countries of the West during the Cold War in comparison to communist ones.

In the introduction to the film Superwizja (Supervision) (Robert Gliński, 1990) we can find out that after the success of cable and satellite television, came the time of the Supervision. The phenomenon of it is connected with waves from the screen which stimulate human brain, addicting of it. The society itself can be divided into the minus ones — resistant to that addiction and positive ones – the opposite. The plot of the film takes place in the near future. For sure the main motive is the anticipation of the threat of too big development of technique. The supervision is an allegory of "dream land", an escape from "grey" reality. But what is this world of close future? Is cruel, uniformed, where society is manipulated by media-bosses, taking efforts from addiction of citizens. Concluding, this vision of producers for sure we can treat as an allegory of totalitarian society and state. Also as a dangerous prophecy.

The main topic of the film is also a threat as a result of the rising technique. The film makers predicted one generation earlier an addiction to the Internet. Supervision is the world where dreams come true, it is a human escape from reality. And people have the reason of escape, because the world is grey and cruel. Even food is uniformed. People are manipulated by a small gang of headmasters who profit from people's addiction to drugs who take an effort from addiction of drugs. So, it is not only an allegory of a totalitarian state, but also a danger prophecy.

This film ends a Polish group of science-fiction films made in the People's Polish Republic. Later, the iron curtain fell down and this topic wouldn't be so tempting to the producers.

3. Conclusion

Analyzing movies from the last two decades of a quasi-totalitarian state that was communist Poland, we can group our conclusion in the following points:

Firstly, the majority of polish science-fiction films were deeply connected to current politics and was a specific mirror for the problems of the Polish society. They showed in a vision of tomorrow current issues, criticizing them.

Secondly, they show not only an allegoric vision of their times but also a threat of totalitarian process in general. I do believe that those images and motives were also clear for other non-democratic societies, not only from the Soviet Bloc, but also in other regions, like Latin American or South-East Asian regimes.

Thirdly, they are also concentrated on a critics of the Western societies and its values, especially the "dictatorship of money" and consuming way of life, without deeper sense of existence.

The 1970's and 1980's are known in Polish cinematography not only as the period of famous productions of the Cinema of Moral Concern and brilliant comedies written and directed by Stanisław Bareja. During these times many pictures of specific Polish science-fiction style, whose action took place in a near future, were created. They formed an opportunity to create allegories of the totalitarian state, which served as a method of hidden criticism of the communist society ruled in authoritarian way. Not all of them had equally strong political meaning, but they were always used by their directors as an opportunity to show a forbidden aspect of reality. The films I focused on were: Hydrozagadka, Golem, Akademia Pana Kleksa, Podróże Pana Kleksa, Pan Kleks w kosmosie, Przyjaciel wesołego diabła, Seksmisja, Kingsajz, Obi oba: koniec cywilizacji and Na srebrzystym globie. I Hope that in my paper I proved that these movies move far beyond being simply si-fi movies and that their metaphoric meaning is not less important than their artistic level.

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The Teaching of Languages in the Early and Primary

Education Program of Uruguay

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Abstract: In the Eastern Republic of Uruguay there was not a national program for the teaching of second and foreign languages in primary school before 2008. Currently, the teaching of second and foreign languages is neither compulsory, nor offered at all public schools for a number of reasons. The purpose of this article is to compare theoretical basis, objectives and contents for teaching Portuguese as a second language and English as a foreign language in the Early and Primary Education Program of Uruguay, where most children speak Standard Spanish from the River Plate variety. The analysis of this Program shows significant progress as far as language policies are concerned.

Key words: second (Portuguese) and foreign (English) language teaching, language policies, early and primary education program of Uruguay

1. Basis for the teaching of Portuguese

Apart from some isolated instances (ANEP, 2008, p. 55), Portuguese has not been traditionally part of the educational system in our country. With regards to the novelty of introducing the teaching of Portuguese in the official public school Program, it could be noted that nowhere in such program does it explain whether the teaching of Portuguese is compulsory for all schools, or mention the number of instructional hours. It does, however, state the reasons for its teaching.

2. Political, Economic, Social and Cultural Integration of Uruguay into the Southern Common Market ("MERCOSUR" by Its Spanish Initials)

Linguistic integration through the teaching of Portuguese (the official language of one of the States Parties of *MERCOSUR*) is necessary in the context of political, economic, social and cultural integration of Uruguay into the *MERCOSUR*. There appears a need for linguistic integration, and the incorporation of Portuguese into public education turns into a major goal (ANEP, 2008, p. 55). The objective is that, through the teaching of Portuguese, primary students can participate from regional integration at a political, economic, and therefore cultural level. As Barrios states, the objective would be for students to "command a language which allows them to participate from regional cultural development at a technological, scientific, economic, and diplomatic level" (1996, pp. 96-97).

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The linguistic objective is therefore a key to the attainment of political and economic goals, since *MERCOSUR* was created for these purposes.

3. Acknowledging and Respecting Linguistic Diversity and Identity in the Border Area through the Teaching of Standard Portuguese

Bilingualism and diglossia in the border area have been deeply studied by local researchers in the fifties (Rona, 1965; Elizaincín & Barrios, 1987). Behares describes the current situation explaining that "Portuñol" (Spanish with Portuguese) is only used at a private, non-standard, colloquial, and socially inferior level (2007, p. 123).

The acknowledgement of the fact that another language apart from Spanish is spoken in Uruguay is a novelty in educational publications, which have historically denied this reality. A governmental intention to respect and protect linguistic diversity can be noted in the Program in question, mainly through the acknowledgement of the existence of Portuguese varieties in Uruguay. Thus, the linguistic policy of our country has undergone considerable change compared with the nationalist tradition which conceived a national state as a state with a single language. The acknowledgement mentioned above implies the intention to teach the standard corresponding variety (Standard Portuguese) and not the vernacular one (Portuñol or Uruguayan Portuguese).

Since only standardized languages can be taught in formal education, the languages present in the Primary Program are Standard Portuguese and Standard Spanish, and not Uruguayan Portuguese dialects. It could be concluded that the objective is for children who speak Uruguayan Portuguese dialects as their mother tongue to incorporate the Standard variety of these dialects: Standard Portuguese (ANEP, 2008, p. 55).

As Barrios (1996) suggests, this implies that "the teaching of Portuguese cannot be conceived with the purpose of substituting neither Spanish nor Uruguayan Portuguese dialects" in border areas (Barrios, 1996, p. 102). The Government can regulate public language use, such as the language used in formal education. It cannot, however, regulate private colloquial language use. It can only provide the teaching of the Standard variety corresponding to the spoken language through formal education. The acknowledgement of a border-area linguistic identity blends with the search for regional identity, which is, from a linguistic point of view, represented by Standard Portuguese.

4. Basis for the Teaching of English

With regards to the teaching of English, neither the scope of such teaching, neither the degree of obligatoriness, nor the number of instructional hours are stated. It is, however, explained that it should be taught as a foreign language, and the following reasons are put forward in support for its teaching:

5. Knowledge Production and Access

It is emphasized that worldwide, English is the language in which the majority of knowledge is produced (ANEP, 2008, p. 56). However, no sources where the truthfulness of this statement is supported have been cited.

On the other hand, the fact that English is "a language for international communication" (ANEP, 2008, pp. 55-56) derives from the political, economic, cultural, and military power that some English-speaking countries have acquired. A power that has enabled them to maintain and expand their language beyond their territorial

frontiers (Crystal, 2003).

6. Communication in the Context of Globalization

"Functional characteristics" of the Englsih language (Phillipson, 1992; Barrios, 2007, p. 37) are invoked. English is seen as a language of international use which provides access to culture, communication, and work. It is here necessary to highlight that although speaking an international language can be positive from many points of view, progress and prosperity cannot be guaranteed (Phillipson, 1992; La Paz, 2012, p. 171). However, it could be deduced that the intention behind this Program is to offer greater possibilities of access to communication and culture, which is at the same time intertwined with providing equal opportunities of access to knowledge.

7. Empowerment of Individuals

Thus, the Program states that the objective of teaching English at schools is to offer "equal opportunities" (ANEP, 2008, p. 56) for people to access work, communication, and knowledge. It would seem that through the teaching of English, learners are protected from what Phillipson sees as the threats to a person who rejects learning the English language, namely fewer possibilities to work, and to access communication and knowledge (1992; La Paz, 2012).

8. Relationship between the Theory, the Objectives, and the Contents of the English and Portuguese Programs

Language	Basis (theory)	Objectives	Contents (Sample for First Grade, Primary School)
Portuguese	Political, economic, social and cultural integration of Uruguay into the Southern Common Market ("*MERCOSUR*" by its Spanish initials) Acknowledging and respecting linguistic diversity and identity in the border area through the teaching of Standard Portuguese	To foster command of the second/foreign language in oral and written skills, from a communicative approach. To teach different cultural aspects of the second/foreign language, through a critical thinking process in comparison to the students' own culture.	• Descrever e representar ações. • Expressar características. • Identificar intenções em textos simples trabalhados em sala de aula. • Localizar informação com ajuda de desenhos.
English	Knowledge production and access Communication in the context of globalization Empowerment of individuals	To foster command of the second/foreign language in oral and written skills, from a communicative approach. To teach different cultural aspects of the second/foreign language, through a critical thinking process in comparison to the students' own culture.	• Capitalizing nouns. • Qualifying things. • Asking about meaning, requesting and demanding information when needed. • Performing and describing actions. • Expressing ability. • Locating information by using illustrations and captions.

As observed above, the basis for the teaching of each of these languages are very different. It is therefore surprising that so similar and general objectives are established from such diverse arguments (basis). It seems inconsistent, for instance, that children from the border area who live in a lusophone cultural and linguistic environment are taught aspects of the Portuguese culture, when this is actually part of their culture already.

However, for the teaching of English the general objectives could be deemed reasonable for all primary students.

Another striking aspect is the contents. When looked at in detail, the contents to be taught in both languages seem very similar (although not identical) in the area of "Communication".

Portuguese (Sample for First Grade, Primary School)	English (Sample for First Grade, Primary School)
• Descrever e representar ações. • Localizar informação com ajuda de desenhos. • Expressar características. • Identificar intenções em textos simples trabalhados em sala de aula.	• Performing and describing actions. • Locating information by using illustrations and captions. • Qualifying things. • Asking about meaning, requesting and demanding information when needed.

Moreover, the same contents are outlined in the areas of "Speaking", "Reading", and "Writing" for both languages.

	First grade
Speaking	Communication about classroom topics. * Dialogues in stories. Role play. *Daily and school routines. * Descriptions of animals, people and objects. Memorizing poems, rhymes, songs and riddles. * Stories with visual aids. - Comics.
Reading	Stories with visual aid. Following instructions to accomplish tasks. Inferring from: - poems and rhymes, - comics, - pictures, - lists.
Writing	Writing sentences based on actions.

Then, how is it possible that so similar contents are chosen for such diverse theories and linguistic realities? Would it not be more reasonable that at least a special program for the teaching of Portuguese in the schools of the border area were created?

In conclusion, the same objectives, teaching approaches, and contents are proposed for different theories and realities. There is a manifest contradiction in this, from an educational point of view. It can be noted that hard work needs to be done with regards to this educational aspect. However, the fact that some aspects of the Program need improvement cannot remove the credit it deserves for:

• acknowledging the existence of *Portuñol* speakers in Uruguay and giving them the possibility to learn the Standard variety of their mother tongue;

• and proposing a program for the teaching of other languages apart from Spanish (Portuguese and English).

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