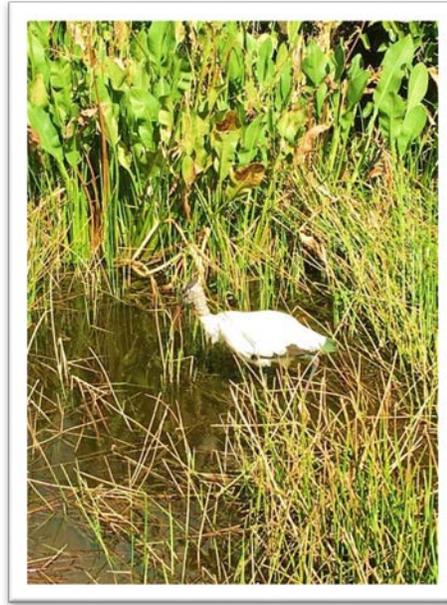


# Sabiduría



*Green Cay Nature Preserve*

Dear Readers,

As a microcosm of our prestigious program, it is our honor as your editors to showcase the academic talents and dedication of our fellow students here at the Honors College. After a rigorous selection and editing process, it is truly a privilege to have such an outlet through which the perseverance of our classmates and friends can be channeled to give back to our academic community and continue the cycle of knowledge. Many authors humbly presented their hard work for criticism and altercations all in the name of education, and we applaud their generosity and humility, but, alas, your humble editor could only select a few authors, the ones we felt best represented our program's goal. With that being said, congratulations to this semester's selected authors: **Zoltán Vincze**, **Christy W. LaFlamme**, **Karl Sully Guerrier**, and **Jash Patel**.

We thank the writers who submitted their work and the peer-reviewers for their tireless work in reviewing the submissions. Our gratitude is also extended to Marcella Montesinos, and Dr. Matthew Klauza, for their dedication and support, and without whom none of this would be possible.

Sincerely,

*Brandon Merino, Editor  
Samantha Mayernik, Editor*

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*In keeping with the mission of Palm Beach State College, the purpose of the Dr. Floyd F. Koch Honors College is to provide a challenging and supportive academic environment in which students are encouraged to think critically, demonstrate leadership, and develop ethical standards. The Honors College pursues an interactive learning experience where students acquire a creative and comprehensive understanding of concepts in an interdisciplinary and global context. Palm Beach State Honors students and faculty share a commitment and civic responsibility that extends beyond the classroom to local, national, and international communities.*

## Ballroom Dancing

*Zoltán Vincze*

### WHAT IS BALLROOM DANCING?

“Entering the room the music reverberates tantalizing the ears; on the dance floor, the couple turns ever so lightly while she arches her back with a smile. He supports her expertly, they spin, twist, turn, two ethereal beings lost in time. The smiles written on their faces betray a total satisfaction of a routine in the sound of music that has elevated itself to reach the soul” (Yiannas). Ballroom dancing is more valuable in today’s world than most of today’s generation sees it. It may share similitude with sports, however one must harmoniously follow the rhythm of the music, and use skills he or she would not even think were required for Ballroom dancing. In fact, this art is even considered a language. Furthermore, Ballroom dancing is not only a form of communication using more parts of the mind than other dances, but also a venue for relaxation. The art form could even put us on a course for world peace. There are multiple styles and dances within the family of Ballroom dancing, each with its unique origins. An increase in popularity has begun with television shows portraying this art’s masculinity and elegance. Many dancers are athletic and Ballroom dancing provides a fantastic, arguably one of the healthiest forms of exercise, and is different than any other style of dance.

If one were to ask the average young American what Ballroom dancing is, the answer received would most likely be similar to: “sweeping ball gowns, men in tails and formal, regal dancing” (PBS.org). There’s nothing wrong with that answer. However, the answer given described a specific style of Ballroom dancing, and not Ballroom dancing as a whole. While commonly referred to as “International Standard” or plainly “Standard,” very few non-dancers know the name, however almost everyone thinks of it when visualizing an image of Ballroom dancing (PBS.org). “With steps that date back hundreds of years to the royal courts of Europe, it is [B]allroom’s oldest style, [it’s] most recognizable and, some would say, [it’s] most elegant” (PBS.org). International Standard includes five dances: Waltz, Tango, Viennese Waltz, Foxtrot and Quickstep. “All five must be danced in the ‘closed position,’ meaning that the man and woman must remain in contact at all times – in

contrast to their American Smooth counterparts, who are allowed to separate and rejoin while performing many of the same steps” (PBS.org). This list of Standard “dances clearly shows the timeless thread joining the past and present, from the classical period of great composers such as Mozart,” Bach, and Strauss “to experts of recent past such as Ginger Rogers and Fred Astaire’s” modern American versions of these dances (Yiannas). International Standard is usually what is portrayed as classic Ballroom dancing, nothing more, and nothing less. Although, it is agreeable to appraise Standard as the most dignified form, there are four other styles equally exceptional. The reasoning behind calling out an American, besides it being relatable to most individuals within the U.S., rather than a European, is because Ballroom dancing is far more popular in Europe than in the United States. Moreover, since it is a large part of European culture, and considering that standard dancing originated there hundreds of years ago, if one were to ask the average European, he or she would most likely provide a more elaborate answer about Ballroom.

### STYLES OF BALLROOM

In Ballroom dancing, there are five main styles of dance under two categories, each with its own type of rhythm, music and ethnical background. The two major categories are International style and American style. International style, like the name suggests, is danced throughout the world, including the United States. However, both styles have many shared dances. International style Ballroom dance contains two subcategories: Latin and Standard. The International Latin dances originated all over the world, but they are influenced mainly by Latin America, from Cuba to Brazil. There are five Latin dances: Cha-Cha, Samba, Rumba, Paso Doble, and Jive. The Cha-Cha is considered the basic of all Latin dances, originating from the Rumba and the American style Salsa or Mambo. The Samba is from Brazil. An extent of today’s music would be considered Samba, for example “Cheap Thrills” by Sia. Rumba, which began in Africa, resembles a slow Cha-Cha. The Paso Doble, sometimes shortened to Paso, is unlike all other forms of Latin dances. The Paso Doble is a Spanish phrase literally meaning “two-step.” Unlike other Latin dances, the Paso is seldom danced socially, and is chiefly performed at shows or competitions. The Jive resembles a sped up American Swing. Its lineage can be traced back to a variation of the Jitterbug also known as the Lindy Hop. The swing dances

started in Harlem, with African American origins. The East Coast Swing, West Coast Swing, Jive, Lindy Hop, Jitterbug, Shag, Slow Drag (the Blues), and Charleston, alongside others, though, not all are considered Ballroom dances, are all under the family of swing dances.

“The United States population resembles a multicultural quilt. Therefore, this multicultural influence is reflected in the” American style “which encompasses” the other three styles of dance; Smooth, Rhythm and the unclassified dances, which resemble the American forms of Ballroom dances (Yiannas). Unlike International style, American style, with its own idiosyncrasies, is really only danced in the United States. American style Smooth strongly resembles International Standard, and even shares many of the same steps and dances, the primary difference being the freedom of the couples to separate from the closed hold position kept throughout the dance in Standard. American Smooth consists of Waltz, Tango, Foxtrot, Viennese Waltz, and sometimes includes Peabody. Though four of the dances are the same, American style Smooth “is more theatrical, similar to the dances performed by Fred Astaire and Ginger Rogers” (PBS.org).

The American Rhythm dances, must not be confused with the “Latin American Dances” which is simply another name for International Latin. Rhythm consists of Cha-Cha, Rumba, East Coast Swing, Bolero, and Mambo; the dances shared between the International and the American styles are once again different than their counterparts. Although the music played for American and International dances is sometimes similar, it often has a different tempo. For example, American East Coast Swing is sometimes danced to rock-n-roll music, and so is International Jive; however the music for Jive is much faster than Swing. “With the exception of swing, which started in America, these sultry dances originated in Africa and Cuba” (PBS.org). The Unclassified dances include: Disco or Hustle, West Coast Swing, Merengue, Night Club Two Step, and even Polka. The Disco was danced in the 1977 movie: Saturday Night Fever. It is still danced today, however it has lost popularity since the 70’s. The majority of today’s Pop music is Hustle, West Coast Swing, or Night Club Two Step. Remarkably, the Boom-Clap type of rhythm, prominent among most fast or upbeat music, almost always has Disco rhythm. Evidently, the majority of the Bee Gees’ music is Hustle, as well as some of today’s music like: “This is What You Came For” by Calvin Harris and Rhianna, or “Can’t Stop the Feeling” by Justin

Timberlake. West Coast Swing and Night Club Two Step rhythm are usually found among pop songs. Even International Latin, American Rhythm and Merengue music can often be found in Today’s Pop Latin music, and among the work of various renowned artists including Enrique Iglesias. However, International Standard and American Smooth rhythm is seemingly difficult to come by in today’s music.

Additionally, another form of dance exists resembling Ballroom dance, yet it is omitted from the previous categories for multiple reasons, including the fact that it is chiefly danced only at competitions or during a showcase. There is no social form of the dance, for good reason. Cabaret, which is sometimes referred to as “Showdance”, is not to be confused with Theatrical style or Theatre Arts, which is similar to Cabaret. Cabaret is a form of dance which incorporates Ballroom technique, Ballroom steps, Ballroom dances-sometimes multiple dances are blended in during one Cabaret performance, Ballroom music, Theatric elements and Ballet. Ballroom steps are danced with Ballroom technique to Ballroom music. Doesn’t that describe just about every Ballroom dance? What’s the difference between Cabaret and all other forms of Ballroom dance? Besides all the shared aspects of Ballroom, Cabaret also has “seemingly impossible lifts, spins and jumps” (PBS.org). The man lifts, twirls, and catches the woman throughout the dance. Depending on the style of the specific couple, there may be more or less lifts and Ballroom dancing. Some couples have a strong focus on the Ballroom aspect of Cabaret, or an even mix of both, while others rely almost strictly on lifts. “More than in any other division, the men in [C]abaret must be strong, and the women must be light, agile and very flexible. Both partners must also have terrific stamina, because cabaret dances run about three-and-a-half minutes - twice as long as a typical routine in the other styles. These dancers also need nerves of steel, because the moves can be quite dangerous” (PBS.org). Now the reasoning for there being no social form of this intense dance is clear.

#### BALLROOM DANCING AS COMMUNICATION

Remarkably, Ballroom dancing is a universal form of communication. In COMM3 communication is defined as a “complex process through which we express, interpret, and coordinate messages with others to create shared meaning, meet social goals, manage personal identity, and carry out relationships.”

(Verderber, Verderber, and Sellnow 4) One can express emotions like joy and love through a Ballroom dance. As the man needs to clearly express his lead, communicating his intentions of movement, the lady must correctly interpret the message sent by the man, which the man relies on as feedback. This process is necessary to coordinate the couples' movement to create a shared meaning. Feedback, in terms of speech communication is defined as "reactions and responses to messages" (Verderber, Verderber, and Sellnow 4). This definition also applies to Ballroom dancing. One may argue that Ballroom dancing is either more solely dependent on the man because he has to lead, or on the woman because she has all the difficult spins, however, each are equally unique and important. The couple could not be a whole without the gentleman or the lady. In conversations, there is always a verbal connection through dialogue, and sometimes, though not essential to the discourse, a physical connection may exist with some meaning as well, i.e. holding hands. Though speech is the indispensable component of a spoken conversation, it is quite the opposite when it comes to Ballroom dancing. Physical connection is essential for Ballroom dancing, and conversely, any spoken or verbal dialogue is unnecessary, and furthermore, distracting. Still, Ballroom dancing is no less than a spoken form of language. The couple communicates in a way resembling a conversation. Like in a conversation, "both parties must do their part to maintain the connection. When one person falls short, the conversation dies, no matter how much the other may try to compensate" (BallroomDancers.com). The only difference between Ballroom dancing and a conversation is that a Ballroom dance is strictly between a man and woman, while a conversation could easily be between either. "In the Ballroom partnership, the man initiates the action, yet the woman as his partner has already sensed and anticipates the movement ever so slightly and thus they move together in harmony" (Yiannas). Ballroom dancing is a form of communication. Similar to the way many countries speak the English Language, the International style dance is also a language spoken throughout the world. International style Ballroom dancing is the same throughout the world. Eddie Rose's Tribute in Choreology Basic affirms, "[d]ancing has been a connecting golden thread between people of all countries" (17). If one skilled in the art form were to travel from the U.S. to a Ballroom dance studio or club in Europe or even Asia, without speaking the language, he or she would be able

to dance with a partner, communicating simply using lead and follow.

Surprisingly, most of us don't realize how important Ballroom dancing is in today's society. Michel Jacques, in *Choreology Basic*, voices, "learning to dance well is similar to speaking a language fluently; the key to communicate in a language fluently will lead the world to peace" (11). This may seem a bold statement, nonetheless, all the more true. What does Ballroom dancing and world peace have in common? Proper communication through motion such as Ballroom dancing leads to harmony and respect towards the man and woman. Therefore, as also a form of universal form of communication, Ballroom dancing, increases harmonious human interaction, which reduces violence and thus improves the human psyche to move towards world peace. The positive emotions generated in well-structured Ballroom dancing help negate malicious feelings such as anger itself. Although some may consider it difficult and maybe even frustrating when learning, Ballroom dancing itself promotes courtesy, and teaches the proper way for a gentleman to ask a lady to dance. It promotes family values, and unlike traditional folk dances, Ballroom is still strictly to be danced between a man and woman. Even in the 2016 edition of the National Dance Council of America Rulebook "A couple is defined as a male and female" (4). Many Ballroom dance couples get married at some point during their careers. As mentioned previously, there is a specific sound of Ballroom music, unique to each dance. Music strictly for Ballroom dancing is also salutary for the brain as well as the body. Many Ballroom dancers continue the art well into their eighties, nineties, and even hundreds! Some continue their professional careers of teaching, coaching and judging. Good health being one of the benefits of Ballroom dancing makes Ballroom really an activity one can partake well into their late years in life. Fantastic, isn't it?

#### THE PURPOSE OF BALLROOM DANCING

The purpose of dancing is to follow well-constructed musical beats, to be in harmony with nature through the music, and one's dance partner. "Some may even make the claim that proper Ballroom dance elevates one's self, the soul's existential experience" to God, Jesus Christ (Yiannas). References to dance, in its appropriate context, are found throughout the Holy Bible. In the "Parable of the Lost Son," after the prodigal son had returned to his Father,

“[n]ow the older son had been out in the field, and on his way back, as he neared the house, he heard the sound of music and dancing” (New American Bible, Luke. 15:25). They were celebrating with music and dancing! According to Socrates in *The Republic* “Musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul” (Plato). Ballroom dancing is presumably an exceedingly refined form of musical training. Following the rhythm of the music is fundamental to each and every dance. According to Howard Gardner in *Frames of Mind: The Theory of Multiple Intelligences*, there are seven intelligences: linguistic, mathematical, and spatial - architects, kinesthetic - athletes and dancers, interpersonal - ministers, counselors, and psychologists, intrapersonal - poets and philosophers, music - composers, performers, and a lot of happy amateurs.” Ballroom dancing requires and incorporates all of these intelligences. Linguistic, since Ballroom dancing has been established as a language. There are applications of Mathematical intelligence? Of course, one must have proper timing while listening to the rhythm and counting beats, be familiar with parallel and diagonal lines and basic geometric shapes. One may argue that this is basic knowledge that everyone should know. If that claim is true, then everyone should dance Ballroom according to their capacity. Moreover, as Ballroom dancing advances in levels, the knowledge of Physics (a mathematics driven subject) such as inertia, momentum and rotational motion increases. Ballroom increases environmental, spatial and architectural cognition. Spatial, as defined by Dictionary.com, is “of or relating to space.” In Ballroom dancing, one must be fully aware of the space around the couple (environment) and the space within the couple’s frame, regardless of the style being danced. In architecture, an architect is a designer, as a Ballroom dancer, one uses these elements to create amalgamations starting from basic steps to more advanced structures and designs the proper choreography in order to fit the music. Interpersonal intelligence is necessary between the man and woman within a partnership or simply before, during and after a dance to communicate throughout this process of Ballroom dancing. Speaking of architecture and interpersonal intelligence, Michel Jacques defines Ballroom dance as “[t]he architecture of all human movements, which is dancing to the equivalent of music; the interpretation of music; It is Communication, Interpersonal” (*Choreology Basic 13*). Intrapersonal intelligence, self-awareness, is also required of one who wishes to

Ballroom dance, as he or she must be fully aware of the position and movement of his or her individual body thought the dance. Interpersonal intelligence is not exclusive to ministers, counselors, and psychologists, and, likewise, intrapersonal intelligence is not limited strictly to poets and philosophers, though, the famed philosopher Socrates stated the importance of proper musical training. Musicality is the basis of Ballroom dancing. Michel Jacques asserts that “choreology is the equivalence of music” (*Choreology Basic 13*). Therefore, musical intelligence is essential to Ballroom dancing. The art of Ballroom dancing clearly requires all seven forms of intelligences as stated by Howard Gardner.

#### OVERALL HEALTH

Alongside communication, harmony, and respect, Ballroom dancing is arguably one of the healthiest forms of exercise and relaxation. Ballroom dancing “has continued to nourish our soul in the direction of happiness, good health, faith, and serenity” (Eddie Rose in *Choreology Basic 17*). Ballroom dancing is relaxing and for some it clears the mind offering an alternative to meditation. When dancing properly, one feels nearly every muscle in his or her body. From one’s toes, to the spine, arms and legs. Moreover, this form of dance not only promotes healthy muscle tone, but also flexibility. Using all these muscles and dancing to the rhythm can be beneficially therapeutic for the mind, body and soul of an individual, which is why dance offered as medicine is becoming prominent. Dancing Ballroom clears the mind to focus on what’s important. The serenity achieved is an effect of dance itself bringing joy to everyone partaking it. Eddie Rose beautifully states “[t]here is always and forever the joy of the music and dance” (Eddie Rose in *Choreology Basic 17*). The joy and happiness gained from Ballroom dancing accompanies good health.

#### CONTEMPORARY EXAMPLES

Ballroom dancing has increased in popularity throughout the years, with shows like *Dancing with the Stars*, and *So You Think You Can Dance*. *Dancing with the Stars*, a reality TV show has re-energized the interest of the public with a focus on Ballroom dancing yet also incorporates other forms of dance such as Contemporary. This series pairs a Professional Ballroom dancer, sometimes a previous contestant from *So You Think You Can Dance*, with a beginner who has never danced Ballroom to compete in the show

for a Mirror Ball trophy. Although there is a prize and the couples make money through the show, the individuals usually realize that Ballroom dancing has positively impacted their lives in more ways than they can imagine.

There are some men who see dancing is girly, feminine or as an act that has a potential which would strip them of their dignity. Ballroom dance would be the most masculine form of dance. The couple harmoniously moves as one, as the gentleman begins the movement and the lady continues it. The Paso Doble, for example, is based on the matador taming a bull. Tango, is considered to be one of the most intense and passionate dances. Nonetheless, Ballroom dancing is the only form of dance equally dependent on both partners, and would be incomplete without the man or the woman. As an exercise, Ballroom dancing provides a strong cardiovascular workout. One may want to take a look at the physique of the male and female professionals on the show "Dancing with the Stars". All of which have abdominal muscles or "abs," may it be a six-pack or eight-pack. Although most do not have muscles the size of intense bodybuilders, individuals with Artem Chigvintsev's physique would be an exception with incredible muscle tone. In reality, most men and women would be pleased having a body like any of the professional Ballroom dancers. True, some of the Professionals do go to the gym, however dancing is no less a full-body workout. The two classified forms of International and American style Ballroom, if danced correctly, as any form of exercise, must be executed correctly to achieve stellar results; they complete each other and nearly guarantee well rounded muscles and physical condition.

Ballroom dancing has been around for a hundreds of years and is increasing in popularity somewhat due to the media. The various forms of Ballroom dancing all showcase different cultures, from Eastern Europe to Latin America. It is a beautiful art in which every one of all ages, male and female can partake, regardless of the verbal language one speaks. The form of communication is extraordinary. Given the opportunity everyone should try it. Ballroom dancing promotes self-respect, respect of others and morals dying in today's world. It offers health benefits like an alternative to yoga meditation, as well as other bonuses, including being able to dance to today's pop music, truly make this style of dance unique.

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Aleksandr Skarlato, Ivan Mulyavka, Karin Rooba, and Loreta Kriksciukaityte, all of who are counted among the top Latin Ballroom dancers and instructors in the world. With high results in Latin Ballroom dance competitions like United States National Professional finalist, and fifteenth place in the Professional (highest) division of Blackpool Dance Festival (World Championships), these instructors are fully capable of training National Champions.

## Interviewing Dance Town

*Zoltán Vincze*

### INTRODUCING THE FOUNDERS OF DANCE TOWN (BACKGROUND)

Manny and Lory Castro are the owners of Dance Town, "one of the [country's] top dance studios located in Miami" (DanceTownDT.com). Dance Town is most famous for its world renowned Ballroom Latin dance program. Before opening Dance Town in 2003, Manny and Lory Castro were Latin Ballroom competitors, and have been happily married for over twenty years "combining their diverse backgrounds, they fused together [J]azz, [B]allet, and [L]atin [B]allroom to create the unique style for which they are now well known" (GenerationIVDance.com). Per an interview with Julio Castro, Manny's brother, owning Dance Town has always been Manny's dream. Manny Castro didn't need to "settle" for this opportunity, because the opportunity was his dream, and now he's living it. Manny Castro also always wanted his children, D'Angelo and Ruby, to dance. Julio and Manny didn't test a scaled-down version of Dance Town, because a dance studio with a full-blown program, like the one Dance Town has, only works to scale. One could supposedly say the Dance Town studio in Miami/Doral, Florida was the test, as the first studio. Once Manny and Lory saw it was thriving, they opened a new Dance Town studio in Boca Raton, FL. Now Dance Town is looking to expand further.

Manny Castro was born in Santiago, Chile, and moved to Miami twenty-seven years ago, where Manny and his wife Lory opened their first dance studio. Manny and Lory created a Latin Ballroom dance program unlike any other. Although, the contemporary and hip-hop classes at Dance Town are also strong, Dance Town is recognized throughout the United States for its exceptional Ballroom Latin dance classes and teachers for that matter. Among them are

### BUSINESS AND MARKETING INFORMATION ABOUT DANCE TOWN

Dance Town offers a variety of programs including Ballet, Stretch, Pointe, Contemporary, Ballroom, Lyrical, Jazz, Hip-Hop, and Rhythmic Gymnastics. Dance Town is open Monday through Saturday with a variety of these dance programs being offered at different times throughout the day. The studio is run like a school, with classes offered back to back from 4:30 P.M. to 8:30 P.M. on weekdays, and classes from 10:00 A.M. to 2:00 P.M. on Saturdays. Alongside group classes, Dance Town also provides the opportunity to private lessons with their first-rate dance instructors, at an affordable cost.

One of Dance Town's many successful business moves is their pricing strategies. Group classes for any style of dance generally cost between \$5 and \$50, depending of the quality of instruction, and sometimes the style of dance. For a Ballroom dance instructor with the experience and credentials of Dance Town's teachers, a one hour group class is expected to easily be \$20 to \$50. However, Dance Town makes it affordable working out to about \$20 a class, reasonably cheap for the quality of the classes. However, private Ballroom dance lessons generally can be very expensive ranging from \$45 to \$500 for forty-five minutes to an hour. With champion Ballroom dancers training the students, Dance Town could easily charge on the more expensive end. Instead of charging hundreds of dollars for private lessons, Dance Town charges the students between \$65 and \$75 dollars per group class. This pricing strategy makes Dance Town's business model inimitable and provides them with a clear, distinguished unfair advantage. This marketing strategy, not only makes Ballroom dance lessons more affordable, it also makes Dance Town more profitable. Unlike, other dance studios and instructors, Dance Town's business model works best with high volume of sales at low prices. Dance Town has over three hundred students, most them being girls under twenty. The majority

of students take multiple group classes daily. And, some students even take private lessons in addition to the group classes. Dance Town's facilities were built for this. The large buildings home to Dance Town in Miami and Boca make it ideal for hosting multiple dance classes at once. With this aspect of the business covered, the more people they can fit in their large dance rooms, the more money Dance Town makes. Their fixed operating costs stay the same whether they have twenty students taking the group class in the room or one-hundred students taking the class. Dance Town still has to have the A/C and light on and pay the teacher, regardless of the amount of people taking the class. The only possible variable expense may be air conditioning for more people. Nonetheless, their volume over cost approach to business makes Manny and Lory's dance studio exclusive.

#### OPPORTUNITY IDENTIFICATION

Another powerful marketing strategy implemented by Dance Town is their market segmentation. Market segmentation consists of deciding the general market or industry, dividing the market into smaller groups based on geographic, demographic, and psychographic characteristics of the customers, and then selecting a segment or segments to target (paraphrased Hisrich, Robert et al 225). Manny, Lory, and Julio are all of Hispanic and Latino background, and as previously stated, Manny and Julio both moved from Chile to Miami. It is safe to say that people with similar geographic, demographic, and psychographic backgrounds also move to South Florida, specifically, the Miami-Dade County area. The choice for Dance Town's first and second location was clearly part of a well-devised marketing plan. According to a study done by the United States Census Bureau, as of July 1st, 2015, nearly 25% of Florida's population is of Hispanic or Latino background. Additionally, a 2010 study in April shows 79.5% of Doral City, Florida and 11.9% of Boca Raton, Florida as Hispanic or Latino. 11.9% may not seem like much, but it is enough to keep Dance Town Boca packed with over one hundred regular students. Due to the large Latino population Doral City, Florida, Dance Town Miami has hundreds of regular students every day. Miami and Doral Florida are clearly one of the most Latin-American influenced places in the United States. Manny and Lory Castro easily identified their target market and their desires, because their family is the intended target market.

#### INTERVIEWING JULIO & THE ENTREPRENEURIAL PROCESS

An interview of Julio Castro was conducted on November 10, 2016 at Dance Town's second location in Boca Raton, Florida. Julio Castro has been the manager of Dance Town for over ten years, and is Manny Castro's brother. Julio Castro was the manager for Dance Town's Miami location for ten years prior to the opening of Dance Town Boca. Julio has been the manager of Dance Town Boca for the past three years, since 2013, when Dance Town Boca was first opened. Unlike Manny, Julio didn't dream of opening a dance studio. He just wanted to bring food to the table for his family, and took the opportunity presented by his brother. This interview was more challenging than a regular interview due to one factor: Julio's native language is Spanish, not English. The Spanish language is the second most popular in the United States, coming second place to English. However, I speak fluent English, and very little, if any, Spanish. Julio, on the other hand, went to school in Chile, not the United States, and was much more accustomed to the Spanish language. The Entrepreneur interview questions and Interview Consent form are both presented in English, so I had to explain the terms of the contract and interview questions in Basic English terms and eventually turned to Google Translate. Julio was better able to understand the Spanish translations of the Entrepreneur Interview questions, and could then answer them in simple English terms. Because I interviewed Julio Castro instead of Manny Castro, I was given the opportunity to see the management and entrepreneurial processes taking place in Dance Town.

Julio Castro is an entrepreneur within an organization (Dance Town) and is the face people see when they enter Dance Town's Boca Raton location. Julio manages customer needs/wants with the Studio and dance teacher's needs. As a manager, Julio faces challenges every day. During the interview, Julio joked, "[it takes a lot of] patience, and deep breathing." His sacrifices include driving from Miami, where he lives, to Dance Town in Boca Raton, Florida Monday through Thursday, and Saturday. Julio reports that managing the family business comes with it daily headaches and sacrifices, resting being one of them.

#### ENTREPRENEURIAL PROCESS

During the interview, Julio explained, "[that] in a business, you always experience risk,

because you have to put money in and don't know what will happen. They had to invest in floors [and] sounds systems [for Dance Town]" before they could take profits out of the company. In regards to critical failures, Julio was very grateful that Dance Town did not experience any critical failures and expressed his gratitude, "thank God [it] was good." As previously stated, not much could have been done to reduce risk, as this business had to be launched at scale, and the purchase cost of capital and labor was unavoidable. An article published on DanceTeacher.com, also known as Dance Teacher magazine, conducted an interview with Lory Castro in 2009. She explains one of her proudest competition moments in her career: "My 8-year-old son D'Angelo is a dancer, so I get to have proud studio moments and proud mom moments. This year, a number I choreographed and that he was in, "Imagine," won the Mini Critic's Choice Award at [the New York City Dance Alliance] Nationals. He wasn't nervous and never freaked out, even when we made a major change to the piece right before they went onstage. He just said, "OK, Mom!" (Feller, Alison).

#### MEASURING SUCCESS

Dance Town is one of the most famous Ballroom Latin dance studios in the United States. The name is known throughout the United States, mostly for Latin Ballroom. Dance Town won the 2016 Studio of the Year award presented by The Dance Awards. The Studio of the Year award is open to the entire world, and considered "the most Prestigious Award in Competitive Dance" (TheDanceAwards.com). Dance Town hosts an annual Ballroom Gala, with Ballroom performances by their exceptional students and teachers. People show up hours before tickets go on sale for these Ballroom performances. Besides Ballroom dance competitions, Dance Town routinely takes their students to various types of dance competitions. "After six years of taking their students to Starpower Nationals, this year they made the trip to New York to compete at NYCDA, where the studio walked away with Mini and Junior Critic Choice Awards" (Feller, Alison). "Their choreography, dancers, and even their own children, D'Angelo and Ruby, have made numerous appearances on shows such as 'America's Got Talent,' 'So You Think You Can Dance,' Paula Abdul's 'Live to Dance,' the Latin Grammys, the Latin Billboard Awards, as well as Europe's original version of 'Dancing With the Stars,' 'Strictly Come Dancing'" (Forance, Jonny). Just this season of "So You Think You Can

Dance: The Next Generation" featured Camilla Schwarz, Jake Monreal, and Ruby Castro all from the famed Dance Town with Ruby and Jake making it to the top ten and Camilla being cut from the show placing eleventh.

#### PERSONAL REFLECTION

It was an intelligent move to open this Latin-focused dance studio in Miami, FL as a testing stage, because Miami and Doral, Florida has a large population of people with Hispanic and Latino backgrounds, the perfect target market. In my opinion, it couldn't hurt and might help their business expand if they offered different styles of Ballroom dance, not only the Latin Ballroom. Although they do have some dancers and teachers who take private lessons in other Ballroom dance styles, the focus is Latin, and they do not offer any type of group Ballroom classes besides Latin. And this is where they could expand. Different styles of Ballroom, like the International Standard may help attract a different target market if they're looking to expand Dance Town outside of South Florida. Investing in the venture does seem feasible, as the business is still in its growth phase. With Manny and Lory's children and students constantly appearing on television shows like So You Think You Can Dance, and America's Got Talent, Dance Town's name is increasingly being heard. I would possibly consider working for this entrepreneur as an International Standard dance instructor. However, I would have to become much more experienced and a highly-ranked in World Ballroom dance competitions to teach in Dance Town, as they literally only hire those counted among the best for Ballroom. Based on what I have learned from Dance Town's business model, I learned the importance of a dance program like the one offered by Dance Town, as well as the significance of market segmentation.

#### CONCLUSION

Manny, Lory, and Julio Castro have been running this business for many years, and are the original founders. They recently expanded Dance Town from Miami, Florida to another studio in Boca Raton, Florida. Their studio offers group and private dance lessons from world class instructors at affordable prices. I intend to go into the Ballroom dance business and found this a fantastic opportunity learn the dance business. I also became more aware of language barriers through the interview process. Interviewing Julio instead of Manny gave me insight to both sides of

Dance Town, the entrepreneurial process and management or entrepreneurial process.

Dance Town's students, including Manny and Lory's children, and are among of the best Ballroom Dancers in the world, due to talent, fantastic teachers, and due to their parents' dance program. Ruby, D'Angelo, Amanda, and many others from the renowned Dance Town have participated and performed multiple times on live television shows like "So You Think You Can Dance" and "America's Got Talent." Dance Town Miami is home to "the Untouchables" as seen on America's Got Talent. The Dance Town team works hard to keep costs low and the quality of dance instruction high.

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## Why our Abuse of Penicillin is Killing Us

*Christy W. LaFlamme*

### ABSTRACT

In 1928, Alexander Fleming discovered one of the first antibiotics that revolutionized the world of medicine and changed the course of World War II (Lax, 2004). This "mold juice," known today as penicillin, is still used along with other antibiotics to treat a variety of diseases and illnesses (Parsons, 2011). However, antibiotic resistant "superbugs," such as methicillin-resistant Staphylococcus aureus (MRSA), have risen from our overuse of antibiotics, causing one of history's greatest discoveries to be a contributing factor to a nationwide epidemic (Blaser, 2014).

Alexander Fleming, Scottish bacteriologist most notable for accidentally discovering penicillin and winning a Nobel Prize Award in Medicine, had humble beginnings growing up on a farm near Ayrshire, Scotland, in the early 1800s (Gottfried, 1997). He was the seventh of eight children born to Hugh Fleming, who nicknamed him "Alec" (Simmons, 2000). His father, a sheep farmer, tended their eight hundred square acre farm where a young Alec honed his natural skills of close observation and careful consideration (Lax, 2004). In the words of Eric Lax (2004), "He had light hair and a flattened nose... his most noticeable features were large, strikingly blue eyes." Alec lived a pleasant life until tragedy struck the household in 1888. When he was only six years old, his father died of a stroke (Gottfried, 1997). One by one, the family moved to London (Lax, 2004). Alexander left Kilmarnock Academy at age fourteen to join his brother Thomas in the south where he could continue his education (Lax, 2004). Persuaded by

Thomas to choose a secure career in business, Alec easily made his way through school and landed a job as a junior clerk for American Line (Lax, 2004). In 1900, Alexander and his beloved brother Robert enlisted in the London Scottish Rifle Volunteers during the Boer War (Gottfried, 1997). After returning home to his dead-end job, Alec became interested in medicine. Thomas encouraged Alexander to use inheritance from their recently diseased uncle to attend medical school (Lax, 2004). After much tedious studying, finishing necessary classes, and taking the medical school entrance exam, Alec entered St. Mary's Medical School with a full scholarship (Lax, 2004). Alexander Fleming had just begun a long journey towards becoming the world renowned doctor who would save millions of lives.

Upon entering medical school, Fleming excelled in all of his coursework and earned numerous awards including the Anatomy Prize in 1902, the Senior Anatomy Prize in 1904, and the gold medal for Top Medical Student in 1908 (Lax, 2004). He earned a conjoint degree, M.B. and M.S. in medicine with honors (Simmons, 2000). In January of 1905, Alexander Fleming passed the examination to become a fellow of the Royal College of Surgeons (Lax, 2004) and became qualified as a surgeon in 1909 (Simmons, 2000). However, he chose to pursue a career in research instead of surgery after coming under the influence of Almroth Wright, professor of pathology and the director of the Inoculation Department at St. Mary's Medical Hospital (Simmons, J). Fleming soon gained the esteem that his work deserved and published impeccable journals on diseases such as syphilis (Simmons, 2000). "I play with microbes," Fleming once said. As Lax (2004) stated, "There are, of course, many rules to this play...but when you have acquired knowledge and experience it is very pleasant to break the rules and to be able to find something nobody had thought of." With an inevitable war approaching, the world would need a brilliant mind like Fleming's in the battle against pathogens and disease on the battlefield. While the entire world was fighting in World War I, Alexander Fleming was fighting very hard in different war, a war against soldiers not visible to the naked eye. This war was against the many types of harmful bacteria and pathogens that

created infections and diseases in the wounds of countless soldiers (Lax, 2004). Fleming worked as an army doctor studying antiseptics and treating the ailments of the Allied powers (Hart, 1992). He also developed new techniques to combat infection, which were absorbed into standard procedures for cleanliness (Simmons, 2000). Upon returning home after World War I, Alexander Fleming made great discoveries in his laboratory. During the 1920s, he discovered lysozyme, a bacteria destroying enzyme found in tears and saliva (Brown, n.d.). Although this ensured that Fleming would be remembered in the history of bacteriology, it paled in comparison to his discovery in the summer of 1928 (Gottfried, 1997).

At the end of July in 1928, Alexander Fleming left for a vacation to The Dhoon with his wife, Sarah, and their four-year-old son, Robert (Lax, 2004). He had been working on research involving staphylococci as a part of a larger work entitled *A System of Bacteriology*, to be published by the Medical Research Council (Lax, 2004). Just by chance, Fleming had failed to store his cultures of staphylococci bacteria in incubators before leaving his laboratory (Horvitz, 2002). One particular Petri dish containing staphylococci bacteria exposed to the air was contaminated with mold when Alexander returned (Parsons, 2011). He noticed that the blue-green mold was actually killing off the bacteria and decided to experiment with the mold further (Simmons, 2000). Fleming discovered that the mold was producing a substance toxic to staphylococci, a "mold juice" (Hart, 1992). As he continued to study the mold, he was able to classify it as a part of the Penicillin genus of molds, which was how he coined the name for his discovery, "Penicillin" (Horvitz, 2002). "It was astonishing that for some considerable distance around the mold growth the staphylococcal colonies were undergoing lysis (the dissolution or destruction of cells)," Fleming wrote. Adam Horvitz contented in his novel, "What had formerly been a well-grown colony was now a faint shadow of its former self." Alexander Fleming had just discovered the first of many antibiotics that would revolutionize medicine and change the course of World War II. Although this new miracle "mold juice" would eventually bring

about rapid change in the lives of many sick people, penicillin would not be commercially used immediately following its discovery in 1928 (Horvitz, 2002). The first step towards making penicillin a widely available medicine was to develop a technique for purifying it (Hart, 1992). Two men would play a crucial role in this research. When Howard Walter Florey, a pathologist, and Ernst Boris Chain, a chemist, came across Fleming's article published about his new potential medicine, they were intrigued (Hart, 1992). These two British medical researchers continued Fleming's work, perfected his antibiotic, conducted clinical trials on humans, and made penicillin into what it is today, a "wonder drug" (Time, 1996). According to the American Chemical Society, "Penicillin production began to increase dramatically by early 1944. Production of the drug in the United States jumped from 21 billion units in 1943, to 1,663 billion units in 1944, to more than 6.8 trillion units in 1945, and manufacturing techniques had changed in scale and sophistication from one-liter flasks with less than 1% yield to 10,000-gallon tanks at 80-90% yield." Without the discovery of penicillin and its widely applicable use in treating the diseases plaguing World War II, millions of people would have died from infection (Lax, 2004). In 1945, Fleming, Florey, and Chain received the Nobel Prize in Medicine for the discovery of penicillin and the development of the antibiotic for practical use (Parsons, 2011). To this day, we continue to use penicillin along with other antibiotics to treat our modern ailments. The world then and now will forever be grateful to a man who forgot to clean his work station before leaving for vacation in the summer of 1928. Alexander Fleming chose not to get rich off a medicine that the world was desperate for but rather aid in its widespread availability, died in 1955 of a heart attack at the age of 73, a hero (Time, 1996). Penicillin is still one of the most widely used drugs today in the treatment of various infections and diseases ("Penicillin: Drug," 2016). It was one of the first of many antibiotics, small molecules usually produced by fungi that kill bacteria without harming the host being treated (Guilfoile & Alcamo, 2007). According to the Encyclopedia Britannica, doctors prescribe different strands and forms of penicillin to cure patients of throat

infections, meningitis, syphilis, gonorrhea, heart valve infections, childbirth fever, chronic bone infections, abscesses, scarlet fever, post-surgery infections, and various other bacterial diseases. Many breakthrough surgeries such as open heart surgery, organ transplant, and in vitro fertilization owe their origins to the practical use of antibiotics (Blaser, 2014). Such cancers as leukemia would not have cures if antibiotics were unable to safeguard patients against the bacterial infections resulting from large doses of chemotherapy (Blaser, 2014). Penicillin and other antibiotics work in three different ways. The first way attacks the mechanisms that bacteria use to build their cell walls; the second inhibits the process of the bacteria's protein synthesis and therefore, all of the important functions of the prokaryotic cell; the third interferes with the bacteria's ability to divide and reproduce (Blaser, 2014). Unfortunately, our overuse of these antibiotics has caused specific types of bacteria to build up resistance and create defense mechanisms against the drugs in our own bodies (Walsh, 2003). Just as we have built up resistance to certain diseases by coming into contact with their vaccine, bacteria have built up resistance to our antibiotics by coming repeatedly into contact with them.

Pharmacologists are constantly trying to create new strands of penicillin with different chemical structures to account for the fact that most bacteria are immune to its original form and continue to become immune to its new forms (Parsons, 2011). This poses a catastrophic problem to the health of our society when these researchers fail. Untreatable "superbugs," such as MRSA appear (Walsh, 2003). MRSA (methicillin-resistant *Staphylococcus aureus*) killed 17,000 people in the United States during 2005 alone (Parsons, 2011). These bacteria are constantly adapting to the effects of our antibiotics and passing along their resistance to new microbes in a process known as selective pressure (Kowalski, 2005). This is only the beginning. As we continue to abuse and overuse antibiotics, the amount of superbugs resistant to our wonder drugs will only continue to increase, and the amount of possible new strands of antibiotics will continue to become more and more difficult to extract

(Blaser, 2014). This is why our abuse of penicillin and other antibiotics is slowly killing us.

The epidemic of antibiotic-resistant bacteria is growing every day. From bacteria resistant to sulfonamides in the 1940s to linezolid-resistant bacteria in 2002, the list has grown from few cases to many since the discovery of penicillin in 1928 (Guilfoile & Alcamo, 2007). As Parsons (2011) expressed, "The principal cause of antibiotic resistance is overuse of antibiotic drugs. Each time bacteria are exposed to antibiotics they gain more immunity to them. The only way to minimize this is to only prescribe the drugs when really necessary." If we continue down the path we are on today, these superbugs will gain the upper hand of killing us before our antibiotics can kill them. In order to slow the process of selective pressure, we must put restrictions on the prescription of antibiotics to regulate the frequency and concentration that patients are being exposed to, especially for the common non-life threatening infections (Guilfoile & Alcamo, 2007). If we aim to improve our medical care, progress towards less invasive surgeries, and encourage the population to prevent the spread of disease, the rate of infections and our need for antibiotics may slowly begin to decline (Guilfoile & Alcamo, 2007). However, there still may be an eminent "post-antibiotic era" upon us. For example, if multi-drug resistant tuberculosis spread from region to region, this would create a larger spectrum of resistance and make some cases almost impossible to treat (Guilfoile & Alcamo, 2007). An outbreak of incurable tuberculosis would have devastating psychological effects on scared, healthy individuals, causing them to spread the overuse of antibiotics even further. This cycle could continue as antibiotic-resistant disease after disease spreads until the entire population is infected with this super bacterium. Nevertheless, as long as our researchers stay ahead of these microbes, we may be able to continue making these superbugs manageable (Kowalski, 2005). Also, with improvements and the invention of new vaccines, we will be able to prevent people from becoming infected with the bacteria and needing antibiotics in the first place. Other alternatives to penicillin are the use of chemicals or peptides in the immune system

(Kowalski, 2005). Current research is showing that intravenous immunoglobulin (IVIG) may be used to treat aggressive staph and strep infections, and animal peptides, such as those of reptiles, may be used to synthesize new medicines (Kowalski, 2005). There are other branches of natural medical research using plants, such as the barberry bush, garlic, and St. John's wort, to fight bacteria using nature's elements (Kowalski, 2005). In a time of this antibiotic-resistant bacteria crisis, we must strive to stay ahead of these superbugs by using antibiotics sparingly, continuing to spread the message of disease prevention, and researching other alternatives to our wonder drugs.

Alexander Fleming once said, "Do not wait for fortune to smile on you; prepare yourself with knowledge" (Horvitz, 2002). As we look toward the future, we must prepare ourselves for this era of super bacterium resistant to our precious antibiotics. The Center for Disease Control stated that at least 2 million people are infected with antibiotic resistant bacteria every year and that at least 23,000 people die as a direct result ("Antibiotic Resistance Threats," 2014). Steps are already being taken, but the action should not stop here. The U.S. Food and Drug administration recently banned the use of fluoroquinolones in poultry, a decision based on health concerns associated with antibiotic usage (Guilfoile & Alcamo, 2007). Our abuse of penicillin will kill us if we do not continue to higher regulations, promote disease prevention and antibiotic education, and research areas of alternative medicine. We have the ability and resources to prevent this superbug epidemic and secure the future for generations to come. Alexander Fleming would not have wanted his discovery to bring the world into an era of healing and then drown it back into an era of sickness.

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## A Closer Look at the Controversy of Hydraulic Fracturing; Advantages and Disadvantages to the Environment

*Karl Sully Guerrier*

For nearly the past 50 years, the practice of hydraulic fracturing or fracking has been the subject of controversy. The first hydraulic fracturing experiment conducted in 1947 was unsuccessful. Since then, however, energy companies have been utilizing fracking on gas and oil wells, located on grounds composed of shale rocks. This production of shale gas was funded by the American government in the 1970s, with experts maintaining that the hydraulic fracturing process will cause little to no harm to the environment. In addition, fracking gives America access to energy in the rich form of oil and natural gas. Conversely, opponents do not agree that hydraulic fracturing is one of the main reasons that America becomes less dependent on foreign and domestic oil. Moreover, the Agency of International Energy predicted that by 2015, the United States would become the leading producer of oil in the world. In fact, studies show that in the next ten years, 90 percent of natural gas wells will undergo the process of fracking (Hyder).

This paper will examine whether or not fracking is conducive or harmful to the environment. The pollution of ground water, chemical impurities, excess water usage, and the prevalence of seismic behaviors are indeed harmful and should not be glossed over or marginalized in an effort to provide an unbiased perspective of the process as a whole. As a courtesy of Gasland The Movie, the process of hydraulic fracturing is clearly explained on their website. Hydraulic fracturing or fracking is the process of drilling and injecting fluid into the ground at a high pressure in order to fracture shale rocks to release the natural gas inside. In

the United States alone, more than 500,000 active natural gas wells are located on fracking sites where shale rocks are most abundant. Shale is imperative in the process of hydraulic fracturing. Approximately 400 tanker trucks carry water and supplies to and from the fracking sites. To complete each fracturing job, it takes about 1-8 million gallons of water. As these tanker trucks arrive to the fracturing site, the water brought in is mixed with sand and chemicals to create fracking fluid. Approximately 40,000 gallons of chemicals are used per fracturing and up to 600 chemicals are used in fracking fluid. Gasland The Movie also shows that a few of those toxic chemicals are lead, uranium, mercury, ethylene, glycol, radium, methanol, hydrochloric acid and formaldehyde. Once the drilled pipeline has reach 10,000 feet into the ground, the chemically altered fracking fluid is then injected into the ground with pressure through the pipeline. When the mixture reaches the end of the well, the nearby shale rock begins to crack because of the high pressure. Natural gas is then released into the well through the cracks created by the high pressure ("Hydraulic"). After the natural gases have been drained from a certain fracturing site, the hole is then sealed and left alone.

The Wall Street Journal wrote in its June 25, 2011 editorial "The Facts about Fracking" that the shale boom is also helping the suffering parts of the country economically. It does that by offering a new incentive for manufacturers to stay in the United States (qtd. in ProCon.org). The Ground Water Protection Council (GWPC), a national association of state groundwater agencies, wrote in its Apr. 2009 publication "Modern Shale Gas Development in the United States: A Primer" that hydraulic fracturing has clearly been a key technology in making shale gas an affordable addition to the Nation's energy supply. GWPC claims that the technology is proven to be a very effective and safe stimulation technique. Thanks to installed cement when the well is drilled, and the great layer of rocks between the fracture zones, the ground water is protected during the shale gas fracturing process. While challenges continue to exist with water management and water availability, solutions which allow shale gas

development to continue, ensures that the water needs of other users can be met, and that surface and ground water quality is protected are emerging (qtd. in ProCon.org).

Hydraulic fracturing produces approximately 300,000 barrels of natural gas a day, but at the price of numerous environmental, safety, and health hazards ("Hydraulic"). In an effort to shed some light on the controversy; however, Energy from Shale, supporter of hydraulic fracturing claims that the use of fracking is an easy solution to the growing need of natural gases.

Fracking is America's innovative response to economic and energy related challenges. Regarding the economy, fracking brings good jobs and prosperity to towns across America. Across all 50 states, the industry supported close to 2.1 million jobs in 2012, and it has been estimated that it could also support 3.9 million by 2025 ("Good"). Jacqueline Adams, editor of the article titled "Fuel Fight: A Look at the Pros and Cons Controversial New Drilling Technique" states that new technologies like fracking are allowing oil and gas companies to access fossil fuel sources that used to be out of reach. According to David Biello, Geothermal Fracking Scientist, the U.S. Geological Survey estimates that at least 500 gigawatts of electricity generating capacity could be harvested thanks to fracking. That is 1.5 times more than the entire U.S. fleet of coal-fired power plants. Such potential is why the Department of Energy invested \$5.4 million to help specialists create the nation's first fracking-enhanced system (Biello). In the article "List of Pros and Cons of Fracking posted on Occupy Therapy, fracking also allows the United States to decrease its dependency on foreign oil. As population continues to increase, with no end to the nation's oil addiction, it pays to uncover more domestic sources for oil. Studies by the Environmental Protection Agency (EPA) and the Ground Water Protection Council (GWPC) suggest that there are no direct links between hydraulic fracturing operations and groundwater contamination. According to Winans Foster, publisher of "the fracking truth", fracking gives the U.S a second chance at economic security

and prosperity. In the years ahead the U.S will export energy without having the need to war to preserve access to affordable sources. To bring some clarity into this debate, Foster further explains that almost everything manufactured these days are products that require oil and natural gas. To be able to use air conditioning, to drive at will, fly around the world, cook a meal, perform an operation, and paint a house requires oil and natural gas. In places where conventional technologies are ineffective, fracking makes it possible to produce oil and natural gas. Access to new wells provides energy for all Americans and encourages economic growth.

It is not always effective to use Conventional drilling even though it uses far less water. Fracking also causes reduction in water supplies, especially in areas where it occurs. Environmentalists are also concerned about the population of people in need of water and air in the surrounding areas where fracking takes place. Water supplies in fracking zones have carry toxic chemicals which are released into the air. The air becomes more toxic because of that. It is impossible to completely dispose waste water from fracking. According to Occupy Therapy, 10 to 40 percent of fracking waste water flows back to the original drilling surface. The more contaminated the ground water supply is, the more consequences. There is are not many solutions for local communities to prepare themselves for specific chemicals, because fracking companies are not required by law to provide a list of which chemicals they will be using for the job. Scientists are overwhelmed because they cannot predict potential downfalls, and emergency personnel are not prepared for accidents that could occur. Residents of areas where fracking takes place are also concerned about the effect that consistent heavy machinery has on their daily lives ("List"). Heavy vehicles make tons of noise in residential areas which then become industrial work zones. Fracking happens all hours of the day and night. Lisa Jackson, EPA Administrator quotes "...not aware of any proven case where the fracking process itself has affected water" (qtd. in "List"). Almost half of the nation is currently experiencing water droughts because the concept of using massive amounts of water to inject into the ground for oil

and gas. Environmental observers see the harm that such techniques cause to the environment. One of the main reasons why there is a conflict between those who do not support fracking and those who do is because of evidences of the cons of fracking prevail over the pros. Fracking enemies claim that continuing to achievement every square inch of the nation, in a desperate search for more natural gas and oil is only delaying the unavoidable. It is unescapable to prioritize renewable energy over discovering new sources of gas and oil.

Though the use of fracking is an easy solution to the growing need of natural gases, Environmentalists worry that the irresponsible sealing after exhausting a fracking site will lead to water contamination. During the process in which natural gas is released into the well through the fissures, methane gas and toxic chemicals leach out from the system and contaminate nearby groundwater. Most likely, nearby cities and towns use that same contaminated well water for drinking. Due to ingested contaminated water next to areas of gas drilling, there have been over 1,000 documented cases of water contamination as well cases of sensory, respiratory, and neurological damage. After the mixture has been injected into the ground, only 30-50% of that fracturing fluid is recovered. Fracking fluid is not biodegradable; therefore, the remaining of the toxic fluid is left in the ground. Because of that, harmful volatile organic compounds are released into the atmosphere, because the waste fluid is left in open-air pits to evaporate. This reaction contaminates the air, forms ground level ozone, and acid rain ("Hydraulic"). "Fracking threatens the air we breathe, the water we drink, the communities we love, and the climate on which we all depend on," states Wenonah Hauter, president of Food and Water Watch and Shane Robinson. "We can't expect future generations to clean up our messes, which is why we need to ban fracking now." Hauter and Robinson strongly believes that instead of fracking to obtain fossil fuels, the U.S. should focus more on developing renewable energy sources such as wind power and solar energy. Hauter and Robinson also suggested that there are much more efficient ways to extract oil to meet the needs of oil

consumers. Looking into more effective ways to collect oil for needs of more energy will ensure a clean future for the coming generations.

Rivers Wright, editor of the article titled "Environmental Cons of Fracking Outweigh Economic Pros," published that two cases of water contamination in Texas and Pennsylvania were reported. The contamination came from the sealing portion of the fracking process. Another of the major disapprovals of fracking is that it leads to earthquakes, which occurs in places that have never before experienced it. The high-intensity pressure cracks cause minor shifting of the tectonic plates, leaving new areas susceptible to environmental changes. Aside from damaging the land, fracking has been linked to harmful air pollutants as well. Fracking causes greenhouse gases to be released into the air, which has played a significant part in the changing climate of the world. The explosion of oil and natural gas supplies in the US will continue to tax transportation organization for rails, pipelines, and truck routes. Foster believes that due to excess supply of oil and natural gas, it could depress prices to the point that drillers and producers will stop drilling and producing. However, that would be impossible because all over the world, oil is in high demand. In some parts of the world, drilling has become so high-volume that there is no place to store the gas and it is being burned, which is a waste and also a source of pollution (Foster).

Fracking is a problem shaking environmentalists to the core and leaving people torn on whether the process is helpful or harmful. Therefore, whether or not fracking is conducive or harmful to the environment will always be up for debate. Hydraulic fracturing has grown over recent years, and given the controversy over this practice, the U.S will never run out of oil and natural gas because the energy revolution is changing the world in so many ways (Foster).

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## Education Reform in the United States

*Jash Patel*

Education in the United States has been in constant decline since the start of 21st century. High School students are treated like robots and made to cram every single thing they learn. There is also no motivation for most of the high school students to attend college due to the rising cost of higher education. Thus, children are being forced to take the easy way out and enter the workforce. Everyone wants to be successful, but it is so hard to succeed with no financial freedom. Currently, the standard of education in the United States is low compared to international standards. However, if the United States adopts an education strategy from its global peers, its school system will be on an upswing. According to Pearson rankings, United States ranks 14th in the world regarding education in a survey conducted in 2014. The UN has developed a universal system to measure the education index in a country. The education index provides an individual a rough idea of a country's school system and the amount of illiteracy in the country. The United States' education index is .890 where 1 is a perfect score. Any value close to 1 suggests that a country is well educated, and amount of illiterate people is significantly less. However, the scale developed by United Nations might have some major flaws in it. For example, English and Mandarin are the most spoken languages in the world. The underdeveloped countries, where most of the people do not speak English are at a disadvantage. People cannot be tested on English speaking skills when they are hardly exposed to learning the language and are at a disadvantage when there is testing on it. Thus, the UN results might have some flaws in them, but they give an insight of where we stand as a nation.

The history of education in the United States began when it was a British colony. Massachusetts has been the pioneer of the education system in the United States. The history can be traced back in the 17th century, where they enacted compulsory education laws

'Old Deluder Act' in 1647. In this act, each township of 50 families was required to hire a teacher to teach their children reading and writing skills. When the population of the town grew to 100 families, the city would establish a grammar school (high school) just to prepare the children for the university. Boston Latin School was one of the first secondary schools in the United States. These schools offered education in the Greek and Latin languages. Due to lack of broad mindedness, the education system in these secondary schools was challenged. Harvard University, which is considered the most prestigious institution of higher learning, was founded in 1636 and later hit the ground running in 1638 (Watts). Education in United States has come a long way since and now education is accessible to every single child in the country. In the south, the public education was more focused on the poor. Before the American Revolution, the southern colonies were not as educated as some of the northern ones. Because public schools were more focused on the poor, the concept of private schools was established by the wealthy people in the south. The only college in the south was College of William and Mary. It started to grant degrees in 1700, and its primary purpose was to train ministers. Later in 1779, Thomas Jefferson added various curricula like languages, law, social science, and physical and natural sciences. George Washington and some of the founding fathers wanted to build a national university, but the Constitution granted the power to established colleges and universities to the states. The prejudice against colored people in the early days of the history of education was high. Thus, colored men were not exposed to education, and they had to serve as slaves (Watts).

This poor and developing education reflected the historical state in the United States, and gives the world a form of measurement to compare the humble beginnings of American education to modern education today. The United States education system has come a long way since the American Revolution. After Russia launched the Sputnik mission, the United States invested heavily in their higher education. Education has been the main topic of conversation since mid-1950. Before Sputnik, a

lot of scientists joined America's war effort and tried to help through scientific research. The science and technology industry grew because of large capital investment. By the end of World War II, the United States was a leader in most scientific fields. When the Russians launched the Sputnik satellite on Oct. 1, 1957, the American public was in a state of panic. People started to wonder if the United States was a superpower when it came to science and technology. A team of scientists had already built an orbital satellite, but President Eisenhower and the government prevented them from launching one. The National Aeronautics and Space Administration was established by the U.S. government in 1958, after the launch of Sputnik and Sputnik II. Under the leadership of a scientist named Wernher von Braun, NASA launched the first U.S. satellite into space, and his contributions led to the moon landing in 1969. The United States' education system has come a long way in the last fifty years, and every year the amount funded towards research keeps increasing (Steeves).

The United States education system has come a long way since 1950's. Before 1950s, the teachers did not have a common curriculum standard set for them. They were free to teach their students whatever topics deemed necessary and useful for day to day life. After Sputnik Revolution, teaching got high competing. Teachers were prepared to match common curriculum standards and also learn "effective practice" standards. A set standardized and organized education system was established after the Sputnik launch which revolutionized the United States school system. Steeves furthermore states "Fear has been the tool of choice in shaping the American curricular landscape in the post-Sputnik era." He thinks that the students are in a state of denial where they are forced to study or else they are given living examples of people living their lives without any pride. Students no more go to schools to get an education but only go to obtain a degree which will make them feel proud about themselves.

In the 21st century, the world is changing more quickly than anyone expected. People are coming up with scientific advancements in every field and every minute. A Higher college

education is getting more competitive. Everyone in the society wants to be more successful, and the problems of high school system in the United States remain a mystery. States govern education, and each state has different curricula and standards of education. The southern states are continuously trying to reduce the gap with their northern counterparts, when it comes to intellectual skills. Children who go to high school in the south are bombarded with so many standardized tests that they have zero motivation to learn new things outside of class. The parents are aware that if their child does not pass the standardized test, they might not be able to graduate from high school. School officials and teachers keep their students under a lot of pressure. They are told to cram what they learn and apply it to testing. This positive trend continues to improve education in the 21st century.

State-level accountability emerged in the 1980s and 1990s. These systems include the state set standardized tests for each grade level. In this system, some of the states reward their teachers and students using additional funding, for performing well in these tests. The only problem these standardized tests face is that they are sometimes not fully aligned to what students learn in class. Efforts to improve these disparities and ultimately improve achievement outcomes have been slow to show results because teachers have to regularly change their teaching methods to adapt to the topics in the standardized tests. Leaders in education will have to find a way to increase productivity and changes within the tests. By strengthening standardized tests, state-level accountability will improve.

According to Tom Vander Ark, some of the in-classroom learning goals should be literacy, mathematical competence, problem-solving, scientific literacy, good citizenship, and technological skills. All of the skills are necessary for a high school student to be successful in college. High school teachers are lenient with their students with what they need to know, but college requires more intensive critical thinking. Dean Willey at Palm Beach State College suggests that the high school education system in Florida

does not prepare their students for a smooth transition to college while some of the private schools do make it easier for students to fit in college life. He further adds that due to the technology advancements and capital incentives, some of the colleges in the state of Florida tend to be stagnant regarding growth. The common challenge that the education system faces is a budget reduction, and he feels Governor Rick Scott has done a fantastic job of keeping the tuition fees from increasing at all state colleges and universities. Asked about his thoughts on high school education, he added:

“Parents and teachers play a vital role in a student's success. Parents today only care about their children passing state standardized tests. Parents need to teach their kids to go out and challenge themselves. Students need to be challenged in critical thinking skills in high school, so they are more prepared for college.”

Rick Scott explains the importance of parents and the role of pushing them to further education. The importance of encouragement in the family unit, increasing the quality of education, and remaining in a reasonable budget, are all important factors in improving education.

Performance-based funding is one of the methods used to distribute funds across various high school districts. Some high school teachers worry more about their student's performance in school and do not challenge their students in the regular curriculum. This is also an important issue to consider. Leaders in education should explore ways to encourage both teachers and students to increase and challenge within education. This can be done through a pre-test before class, and the regular standardized test after. This can measure the student's learning growth. Other solutions can be found, which will be a pressing issue in the years to come. The inflation rates in the education industry are gradually rising. Low-income families and lower-middle-class families are finding it difficult to pay for rising costs of college education. According to College Data Survey, the average cost of public college for an in-state student is \$9,410, \$32,405 at a private university and \$23,893 for out-of-state residents

attending public universities. The average federal financial aid a student receives is \$3,670, and the cost of college does not include indirect costs like miscellaneous fees, meal plans, and housing. The gap between the financial aid available and cost of attending college is expanding, and current politicians are profoundly worried about it. President Obama is trying to pass a budget for 2017 which would significantly increase the amount of Pell grants available to low-income families. The idea of having free community college is great but the incentives for students to do well at a community college and build a strong foundation is discouraged (Field). Rising tuition costs and affordability is a significant issue, and possibly a roadblock, to higher education and the education of the American population. In today's world, a lot of teenagers going to college are influenced by bad peers and drugs which make them stray away from their goals. It is not until in their mid-20's that they realize the importance of obtaining a college education; it is some of the things observed around at community college and learned from real life examples. Parents in today's generation need to be more educated about financial literacy and also make their children more goal-oriented. John Chubb, in his book *Politics, Markets, and America's Schools* argues that “America's children are not learning enough, they are not learning right things, and, most importantly, they are not learning how to learn.” American education should continue to teach and to improve on subjects about values, critical thinking and the importance of each decision made (1).

The federal government plays an important part in the education system. They exercise a leadership role by promoting educational policies and reform efforts around the nation. The Congress enacted Every Student Succeeds Act (ESSA) which replaced the No Child Left Behind (NCLB) Act so that the states have more control over education funding for various school districts. The law gave states more freedom for school district funding but did not take away the annual federal standardized testing requirements. According to a survey, 47% of teachers supported national annual standardized testing while 46% of them opposed

it (Henderson). The national testing does not reflect the overall performance of schools because students have the option to opt out of testing. The testing is also not based on core curriculum. Thus, it does not give an accurate reflection of what the students are capable of doing. The schools in rural parts of the country are at a significant disadvantage because of the technology and resources available to them. If a state has its funding based on performance, then the rural schools would be at a major disadvantage compared to the urban schools. According to his recent email, Barack Obama thinks that the recent Every Student Succeeds Act (ESSA) passed by Congress is preparing all students for success in college and future careers, holding schools accountable for the progress of all learners and empowering parents and educators in the education of their children. ESSA is taking important steps to reduce unnecessary standardized testing and much more of smarter assessments so that educators can spend more time teaching and less time testing. He furthermore thinks that our teachers make some extraordinary sacrifices in their job and the Department of Education is fully willing to help out the teachers for the work they put in. This step Obama has made has increased awareness for issues with higher education and the relativity of each test.

Education reform is a major topic which has always been circulating in the news. Should the government pass school choice laws, it would make the education industry competitive. The level of education would increase significantly because the schools will be competing against each other to maintain an incredible standard of education and various programs they would have to offer. The racial inequality gap is getting less and less every day, but it is still found in elementary school. According to data from the National Assessment of Educational Progress (NAEP), 63% of fourth graders perform at only basic or below basic levels in reading. 69% of kids perform at basic or below basic levels in Mathematics. African-American, Hispanic, and Native American fourth graders perform consistently lower than their white counterparts. In his journal, Kumar states that "education is the engine of economic growth and social

change". It creates motivation for progress and brings revolution in the ideas necessary for the prosperity of the country. It opens up opportunities leading to both individual and group entitlements." While the education system in the United States has been falling, countries like Singapore have been thriving. It is the competitive nature of studies in Singapore, which sets the level of education high. At the age of six, children begin a four-year government-approved standard curriculum which involves learning English, their mother tongue, and mathematics. At the age of ten, the child enrolls in a two-year orientation program, where he or she has to pass Primary School Leaving Examination (PSLE) to get to high school. At the age of twelve, children enter a five-year high school program where they have to pass a Singapore-Cambridge General Certificate of Education (GCE) exam to attend junior college (Abazov). The students in countries like China, India, Japan, and Singapore usually attend private schools because the competitive nature of education makes the school system a bit more challenging. The quality of education in these countries is high, and the price is negligible when compared to United States school system. The motivation for getting good grades on standardized tests comes because one may not be admitted to top colleges or universities if they do badly on the test. In the United States, standardized tests to get into colleges like SAT and ACT are owned by private companies while the federal standardized tests are just there to evaluate performances of various school districts. It is more like a collective analysis of how the school is performing and not from an individual's perspective.

The government of United States is so ignorant about a child's success in the real world it just wants the lower middle class and low-income families to stay in a loophole of the American Dream and just work hard to survive. The upper class gets richer while the middle class gets poorer. But with proper reforms and more involvement of federal government, the education can be made more transparent, so everyone has an equal opportunity to attain success through persistence. United States is already making significant advancements in the

STEM industry, and it could achieve more success if this education loophole is sorted out. With proper reforms, we can develop an education system which will enhance the results in the education field and make United States one of the top ranked education systems in the world where every single child's talents are maximized by the time he or she graduates in high school.

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Brandon Merino will graduate from the Dr. Floyd F. Koch Honors College in the fall of 2018, and plans to attend New York University to study writing and broadcasting. He plans on pursuing a career in the entertainment industry, working behind the scenes of movie and television sets. He is certainly thankful to Professor Matt Klauza for giving him the opportunity to be an editor with *Sabiduria*.

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Samantha Mayernik will graduate from the Dr. Floyd F. Koch Honors College in the spring of 2017, and transfer to the Florida Atlantic University Honors College, where she will pursue a degree in physical therapy and will continue her studies to maintain her many passions,

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