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Meeting the Needs of Male Students in the World Language Classroom through Kinesthetic Learning

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Meeting the Needs of Male Students in the World Language Classroom through Kinesthetic Learning

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Abstract: This article examines the current situation of male students in the world language classroom and discusses the failure of the current system to meet their learning needs and styles. The necessity for attention to the male student is established—male student success is declining across subjects and in school discipline. More specifically, the communication-based world language classroom generates a significant disparity between the success of female students and their male counterparts. The unique needs of the male student in the world language classroom are examined through the lens of biology, neuroscience, and learning styles. Kinesthetic learning strategies and studies are developed to bring a more thorough understanding to movement-based learning. Successes with kinesthetic learning show that the incorporation of kinesthetic practices benefits all students, not only male students or those with a preferred kinesthetic learning style. Lastly, this article provides plausible, realistic, and simple ways to incorporate kinesthetic learning strategies into the world language classroom.

Keywords: high school Spanish, kinesthetic learning practices, male students, pedagogy, student learning, world language classroom

Introduction

In recent years, female students have increasingly found more success than their male counterparts in the American school system. This differential in achievement is clear in discipline, college enrollments, grades, and diagnosed learning disorders (Gurian 2011; Whitmire 2010). However, is it the learners that are the issue in this situation? Do teachers need to make a more concentrated effort to teach to the male brain and learning styles if we hope to see greater success in our male students? How can male students be better reached?

First, it must be considered that the male brain is inherently different from the female brain. Because there are significantly more female teachers, and teachers tend to teach to their own learning style, the needs of the male brain are often overlooked (Aliakbari & Tazik 2011; Gurian & Stevens 2011). Variations in learning styles, biological differences in the brain, and social differences all need to be evaluated to best teach male students and lead them to success in the classroom and beyond (Lerner & Steinberg 2004).

Kinesthetic learning, or learning through movement and physical activities, has long been considered more relevant in the elementary classroom. However, recent research shows that incorporating kinesthetic learning activities in the high school and university classroom can improve student

learning (Gurian & Stevens 2011). Kinesthetic learning has been shown to help students concentrate better, learn more easily, retain knowledge for longer periods of time, understand more thoroughly, and find more enjoyment in the learning process (Breckler & Yu 2011; Chao, Huang, Fang, & Chen 2013; Jensen 2010; Perez 2014; Tight 2010).

While this type of learning has proven especially beneficial among male learners, it is advantageous to a wider circle of students. Even students who would not identify as kinesthetic or tactile learners benefit from the differentiation in instruction. The ability to learn in a variety of perceptual ways produces successful learners who have a greater ability to adapt to different situations (Tight 2010). This article focuses on enabling the male student to learn more effectively, but the strategies discussed are not detrimental to female learners and will not interfere with the learning styles of others. In fact, incorporating kinesthetic learning has been shown as beneficial to learners of all learning styles (Breckler & Yu 2011).

In addition to the benefits of kinesthetic learning listed above, kinesthetic learning practices are motivating to students. Incorporating movement into the classroom often leads to a positive emotional state and helps students connect these positive emotions with their learning (Oberparleiter 2004). When students feel this sense of community and fun in the classroom, they are more likely to achieve academic success (Lengel & Kuczala 2010).

While there are many studies on the male brain and the benefits of kinesthetic learning, there are very few studies published about incorporating kinesthetic practices in the world language classroom. How does this idea manifest when used in the language classroom? Are there similar benefits in learning, understanding, and retention of information? How can teachers incorporate kinesthetic learning in the high school world language classroom?

Literature Review

This research examines several areas that are important to the understanding of strategies to reach male students in the world language classroom. The available literature suggests that kinesthetic learning is beneficial to all students, but is particularly instrumental in male students' learning (Breckler & Yu 2011; Chao, Huang, Fang, & Chen 2013; Jensen, 2010; Perez 2014; Tight 2010). According to the research, this is due to differences in the biological makeup of the male brain and the resulting differences in learning style (Gurian & Stevens 2011). Finally, the literature shows how important it is that schools are intentional about targeting and teaching toward male students, as their achievement is continuing to decline.

Kinesthetic Learning

Successes with Kinesthetic Learning

Kinesthetic learning refers to learning through engagement in tactile activities or physical activities, as opposed to watching a presentation or listening to a lecture. Kinesthetic learning has become an increasingly popular technique because it is producing results at all levels of education. While it was first viewed as more appropriate in the elementary classroom, educators are beginning to see the benefits for older students as well (Jensen 2000; Richards 2012). Ted Richards, a science professor, reported that incorporating kinesthetic learning into his lessons resulted in improved test scores and students that were physically engaged in their own learning process. Richards went on to explain that incorporating the kinesthetic aspect in learning made concepts easier to understand initially and easier to recall later (2012). Another example of successes in kinesthetic learning comes from a study done with medical school students. Michael Prithishkumar found that it was important to teach material in a variety of ways. He proposed that kinesthetic practices were more motivating to the students because they made the lesson more interactive and student-centered (2014). These studies illustrate the benefits of kinesthetic learning in older students.

An additional benefit of incorporating kinesthetic learning is that a multimodal approach to learning increases information retention. When Jennifer Breckler and Justin Yu used kinesthetic learning to teach college students in a physiology class, findings showed not only that the students improved in their understanding on the post-test and that information was largely retained throughout the rest of the course, but that nearly all students, regardless of their declared learning preferences, enjoyed the activity and were engaged throughout the lesson (2011). A similar question was addressed in a study at National Sun Yat-Sen University in Taiwan, where students were learning vocabulary in a foreign language. The researchers assisted one group's learning using an Xbox Kinect, while the control group used a computer and mouse. The students using the Kinect had to physically act things out while they learned the words; the students using the computers had to click on the correct answers. While the students using the Kinect scored slightly better on the immediate free recall test, the difference was not significant. However, the difference between the two groups was highly significant on the cued recall test. Furthermore, students in the kinesthetic group (employing the Kinect) scored much better on the delayed tests, retaining their original scores, while the scores of the mouse-based group decreased significantly. The researchers concluded that "the use of Kinect in enhancing the recall of action phrases demonstrated the power of embodied learning" (Chao, Huang, Fang, & Chen 2013: 155).

Kinesthetic Learners

Though researchers have agreed that incorporating movement into the classroom benefits all students, there are certain students who learn most effectively through moving and doing instead of through listening and reading. Kinesthetic learners preferred to experience things for themselves rather than listening to verbal instruction, even when plenty of visuals were provided. These students were often passive in the more traditional classroom, and they benefitted from the alternate approach to the material (Prithishkumar 2014). Because the world that students are growing up in is increasingly stimulating technologically, this issue is growing in prevalence.

Benefits of Kinesthetic Learning

There is a biological component to the benefits brought to the classroom by incorporating kinesthetic learning techniques. In his article *Run for your Brain's Life*, Hajime Kinoshita explained that when the body is inactive, neural communication declines. He suggested that, for best neural processing, students should not remain sedentary for more than 20 minutes at a time (1997). In *The Kinesthetic Classroom: Teaching and Learning through Movement*, Traci Lengel and Mike Kuczala (2010) explained that "movement in the classroom provides both teacher and student with a stimulating classroom environment. Allowing students to get out of their seats to move while learning provides novelty cognitively, physically, mentally, and socially" (2010: 2). Incorporating activity into the lesson encouraged neural communication, and allowed students the opportunity to refocus and be more attentive to the task at hand (Lengel & Kuczala 2010).

The positive effects of movement for kinesthetic learners were seen not only when the activity was connected to the information, but also when it was unrelated—movement allowed them to both concentrate better and learn more easily (Perez 2014). This is because integrating physical activity connects the two hemispheres of the brain.

Kinesthetic learning helps students to retain knowledge for longer periods of time (Breckler & Yu 2011; Chao, Huang, Fang, & Chen 2013; Jensen 2010; Perez 2014; Tight 2010). Information is best retained when learned in a multisensory manner (Jensen 2010; Perez 2014). Additionally, research shows that "when cognitive information is linked with movement, retaining and recalling the data becomes easier" (Lengel & Kuczala 2010: 10). Educational consultant Lee Oberparleiter explained in his book *Brain-Based Teaching and Learning* that the brain operates best when learning is based in concrete experiences, and the best way to provide those experiences is through using movement to learn or review a concept (2004). Incorporating movement and gestures also provided additional learning channels when processing and retaining information, which helped students to understand concepts more easily (Hostetter & Alibali 2008; Tellier

2008). Hostetter and Alibali further concluded that "since people use gestures to express knowledge, it is argued that knowledge itself must be deeply tied to the body" (495), and they explained that pairing gestures with information gives an additional code for recall (2008). In a study with kindergartners learning English, Tellier found that pairing gestures with vocabulary words significantly improved the students' memorization (2008).

Incorporating kinesthetic learning creates one more pathway in the brain for that information, even for students who would not call themselves kinesthetic or tactile learners (Tight 2010). Students who could learn in different perceptual ways were often the most successful learners, since they learned to adapt to different situations (Tight 2010). Through incorporating various styles of learning into the classroom, students could be taught to develop these diverse areas of learning, benefitting in the long run.

Finally, kinesthetic learning also encourages a healthy and fun atmosphere in the classroom, which in turn creates a safe place to learn. When students felt supported and sensed that they were a part of a team or community, they were more likely to find academic success (Lengel & Kuczala 2010). This is especially important in higher-level thinking, because the parts of the brain that conduct critical thinking and higher-level thinking do not function when the student's emotional state is compromised (Lengel & Kuczala 2010). Oberparleiter explains that learning is easier to initially transfer to memory and to retrieve if it is based in emotion. He found that using movement in the classroom often led to a positive emotional state and helped students connect positive emotions with learning (2004). This, in turn, nurtured students' intrinsic motivation to learn and to invest in the classroom. Maria Montessori explained another aspect of the healthy and motivating atmosphere created in the classroom by incorporating kinesthetic learning; she asserted that students have a more meaningful experience when physical movement and hands-on materials are incorporated into the learning process (2004). Kinesthetic activities in the classroom have often had greater appeal to students, as well. In a survey given by Breckler and Yu after conducting a kinesthetic, hands-on activity in a physiology class, students reported a high level of participation (2011). This student engagement was also observed by those leading the class. Students commented that they felt as though they were fully participating in the lesson, and that it was a more unique approach to learning the material.

The Male Student

The Decline in Male Achievement and its Consequences

Over the past couple of decades there has been a growing trend of female success and a lack of male success in the American school system. A statistical look at the state of male students today is both eye-opening and alarming:

- Boys are 4.5 times more likely than girls to be expelled from preschool.
- They are 4 times more likely to suffer from attention deficit disorders.
- Male students are less likely to enroll in college and more likely to drop out before earning degrees. (Gurian 2011; Whitmire 2010)

Particularly troubling is the last point, which highlights a growing lack of motivation and ambition among male students (Whitmire 2010). Andrew Sum, the director of the Center for Labor Market Studies at Northeastern University, discussed the far-reaching consequences of this growing difference between male and female students and why the public should be concerned about these gender gaps. Sum argued that immediate attention must be given to the gender gap that is growing in both academic achievement and in disciplinary action, and he listed as possible future consequences a decrease in men's earnings and marital possibilities. He also stated that the present-day issues mentioned above could result in more single-parent families and a negative impact on the fiscal health of the nation (Whitmire 2010).

A major issue is that boys do not like school. In a study in Edina, Minnesota, 84% of female students reported liking school, while only 64% of male students said the same. Statistics swung the other way when considering disciplinary issues: nine out of ten suspensions given were handed down to male students. In a study in Wilmetter, Illinois, girls in grades 5-8 had higher scores in every core subject and were 30-35% more likely to earn an A than their male counterparts (Whitmire 2010). In *The Handbook of Adolescent Psychology*, Richard Lerner and Laurence Steinberg stated that issues such as boredom and lack of interest in the classroom lead to poor achievement, lower levels of attention, and a lack of engagement with the material. Eventually, students feel alienated from the school environment (Lerner & Steinberg 2004). It is clear that boys are being overlooked in the classroom, that their disinterest comes with long-lasting effects, and that something needs to be done differently to reach them.

Biological Differences in the Male Brain

One reason that male and female students often differ in their learning styles and in their preferred subjects is biological differences in the brain. Many of these variances are particularly related to language, and are therefore especially important to this study.

The arcuate fasciculus develops earlier in girls (Gurian & Stevens 2011; Schmithorst 2009). This means that girls tend to develop their language and speak in sentences earlier than boys do (Yeatman, Rykhlevskaia, Sherbondy, Deutsch, Wandell, & Ben-Shachar 2011). Also related to language skills is Broca's area, a motor area for speech that processes grammatical structures and word

production, which tends to be more highly active in females (Gurian & Stevens 2011; Musso, Moro, Glauche, Rijntjes, Reichenbach, Büchel, & Weiller 2003). This means that females often have better verbal communication skills. Finally, Wernicke's area, which leads to improved verbal communication skills, is also more highly active in the female brain (Gurian & Stevens 2011).

Also worth noting are neurological differences in the limbic system that affect the way that males and females respond to stimuli (Wang, Korczykowski, Rao, Fan, Pluta, Gur, McEwen, & Detre 2007). Because the limbic system is different in men and women, women respond verbally to stressful or emotional experiences more quickly than their male counterparts (Gurian & Stevens 2011). In the world language classroom, this allows female students to respond more easily in the demanding work of speaking a new language.

Lastly, biological differences influence the way that students are best motivated. Oxytocin, which is often referred to as the "tend and befriend" hormone, is much more functionally present in females. This means that they have a stronger desire to please those around them, including their teachers. Doing well in school is more motivating for female students in this way, because pleasing their teacher is a rewarding experience. Male students, on the other hand, have much higher levels of testosterone. This results in a greater desire to win and a more intense spirit of competitiveness (Gurian & Stevens 2011; Music 2011). This is one reason that including competition in the classroom may help to motivate male students to invest in the learning process.

Though there are varying opinions on the weight that should be given to neurological differences, the outcomes of incorporating kinesthetic learning are important and convincing.

Differences in Learning Styles

The previous section discussed several reasons why female students are often more verbally inclined, which is an important aspect of learning to consider in the world language classroom. It is also beneficial to take into account learning styles that tend to differ between male and female students. A study conducted with Iranian EFL students found that gender does play a significant role in learning styles. Aliakbari and Tazik, who ran this study, concluded that it is important for teachers in world language classrooms to know their students' learning styles, to teach accordingly, and to use this knowledge to confront any problems that students may have in the classroom (2011).

Girls are generally better listeners, and boys tend to get bored more easily when seated in a traditional classroom. Because male students are more spatially-inclined, they benefit from having a lot of space in which to work. This need can be met by giving boys the opportunity to move around. Gurian and Stevens explained that female students do not have the same need to be active while they

learn. In contrast, movement not only helps to stimulate the male brain but also increases the ability of male students to manage and relieve impulse behaviors (Gurian & Stevens 2011).

Herein lies the issue that is behind many diagnoses of attention deficit disorders: the educational system generally does not understand or build curricula designed for the way that most male students learn best (Gurian & Stevens 2011). A classroom that helps boys deal with their natural impulsiveness, their spatial skills, and their competitive tendencies will better serve average male students and help them to use these aspects of their personalities as strengths instead of seeing them as weaknesses. However, today's classroom better targets typical female brain development over male brain development. The educational system currently relies on fewer kinesthetic strategies and is less disciplined than many male students need (Gurian & Stevens 2011). However, the studies mentioned above suggest that kinesthetic learning can be motivating and stimulating for male students in world language instruction.

Kinesthetic Strategies to Benefit the Male Student in the World Language Classroom

Teachers have a duty to make every effort to reach each of their students, despite differences that may make that more difficult. In the *Handbook of Adolescent Psychology*, Jacquelynne S. Eccles explains,

> individuals have changing emotional, cognitive, and social needs and personal goals as they mature… Schools need to change in developmentally appropriate ways if they are to provide the kind of social context that will continue to motivate students' interest and engagement as the student matures. (2004: 125)

Currently, many world language classrooms are failing male students in this arena.

Clearly, there are several obstacles in reaching the male student through traditional curricula. This is especially true in the world language classroom, where female students tend to dominate due to their more developed verbal skills. In incorporating these additional activities, the curriculum will not only more effectively reach boys, but will also become better-rounded and more capable of benefitting every student.

The brain is attracted to novelty, and active lessons easily lend themselves to creativity. This is yet another reason that kinesthetic learning will benefit the classroom and more effectively help the male student to focus. Additionally, the brain pays attention to movement and is built to want to interact with people and things in the surrounding environment (Oberparleiter 2004). By incorporating

movement and student interaction into the classroom, the lesson becomes more stimulating.

Integrating movement into the classroom also engages the whole brain (Lengel & Kuczala 2010). This helps move away from the left-hemisphere based, or language-oriented, lesson and encourages more whole-brain learning. This is especially beneficial to the high school male student, whose verbal processing may not be as developed as that of his female counterpart.

Finally, incorporating more spatial and kinesthetic activities increases the likelihood that the male student will excel and builds a confidence that is vital to his learning. Though there are subjects that generally appeal more to each gender, the design of instruction within subjects is another major indicator of performance and enjoyment (Lerner & Steinberg 2004).

Practical Implications: Examples of Kinesthetic Activities

Kinesthetic learning can be incorporated in a variety of manners, and it is often a strong motivator. Not only do students pay attention well when engaging in the kinesthetic activities themselves, but they are more likely to pay attention during a more sedentary portion of class when they know that that type of activity is coming. However, while students do respond well to kinesthetic activities, it is important to consider how a game or activity can be crafted to fit material—not how material can be crafted to fit a game or activity. This leads to activities that are more specific to and effective in what is being learned.

Below is a sampling of kinesthetic activities used in my classroom, ranging from activities that are largely motion-based to more traditional activities with minor changes that will activate the brain in a new way. While these are just brief examples from recent lessons, they are representative of larger truths about kinesthetic learning and are realistic and plausible ways for a teacher to begin incorporating kinesthetic learning in the world language classroom.

Movement as the Goal

When starting a new chapter, games are an effective way to pull male students into the new material. Games are beneficial for several reasons. First of all, male students tend to be very competitive, due to higher levels of testosterone in their brains. While they are not biologically as likely to have the desire to please their teachers as a female student would be, they are more motivated by the allure of winning (Gurian & Stevens 2011). Secondly, research shows that kinesthetic learning is beneficial for the brain regardless of whether the movement is relevant to what is being studied (Perez 2014). Therefore, simply getting students out of their seats and moving around is going to benefit them.

One example of this type of activity can be seen in a simple vocabulary game called "Tráemelo" [English: bring it to me]. Instead of having students

copy words or fill out a worksheet, the students separate into two teams and each team receives a set of notecards with the vocabulary words from the new chapter. Students can organize the vocabulary words as a team, which is another way to engage the spatial part of the male brain. When students have organized their terms, the teacher calls for a word. Depending on the level of the students, the teacher can use the English equivalent, a definition in Spanish, or a motion. The first team to run the correct word to the front of the room wins the point.

Movement Paired with Words

Another method of incorporating kinesthetic learning activities is to associate a motion with a word or an idea. Breckler and Yu (2011) found that, in this type of instruction, facilitated by a Kinect, students both acquired information more effectively and retained the information better. Incorporating movement with the vocabulary gives yet another memory and method of retrieval in the synapses of the brain.

An example of pairing movement with vocabulary words is the incorporation of "Simon Says" into classroom instruction. When new vocabulary is learned, students repeat the word and a motion to pair with it. Then, as an activity to open class, students participate in a game of "Simon Says." When they hear the vocabulary word or definition in the target language, they must perform the motion associated with it. In this way, students are not only associating vocabulary in the target language with a motion instead of with the students' first language, but they also practice listening skills and enhance blood flow to the brain for the rest of class time (Lengel & Kuczala 2010).

Another example demonstrates how movement can be associated with a grammatical concept. As students learn new vocabulary and grammar in which written accent marks are required, they make a slashing motion with their hand to represent the accent mark. This will especially help kinesthetic learners to better remember when and where accent marks are necessary.

Movement as a Small Change to Activities

Kinesthetic activity can also be incorporated in small ways that do not have to include moving about the classroom. Even when incorporated in a minor fashion, kinesthetic learning activities can help students to understand concepts more easily and to later recall the information more clearly (Richards 2012).

For example, a group of students in my classroom was attempting to understand and give driving directions in the target language. As a part of the unit, they had to participate in a conversation activity in which they used maps to tell other students where to go. The activity came with instructions to have students write a list of the directions that they heard. Instead, students followed along with the directions on their maps with a finger or pencil. In this way, they were

"moving" with the instructions and experiencing the activity more than if they had been simply converting the instructions to written work.

Personal Experience in Kinesthetic Activities

Influence of Incorporating Kinesthetic Learning Activities

Though I had experienced the benefits of kinesthetic learning activities in both the academic and atmospheric realms of the classroom before researching for this article, the information found only further encouraged commitment to incorporating movement and competition into my own classroom. I teach high school (Spanish I and II) and have about twenty students in each class. The research discussed in this article echoes what I have observed in my own classroom: the more that I have incorporated these kinesthetic activities, the more engagement and retention of information I see in students. While I have seen huge improvement in investment from male students, there has been a marked positive influence on female students, as well.

The outcome of incorporating kinesthetic learning that has been most important to me is seeing the students' enjoyment in the study of the subject matter. Since incorporating kinesthetic learning, students are not only more engaged during class time, but are also more likely to pursue the language on their own time. As students experience positive emotions during class activities and correlate positivity and fun to the study of Spanish, more stories pour in about speaking Spanish at home, listening to Spanish music, and turning on Spanish subtitles to broaden vocabulary while watching television, amongst other examples.

A secondary positive impact of incorporating a variety of learning activities is witnessing students improve their own study habits, depending on how they personally learn best. During peer-tutoring sessions, for example, student tutors who have experienced the kinesthetic classroom are more creative and varied in how they inspire those that they are tutoring to learn new material. In this way, kinesthetic learning impacts not only the Spanish classroom, but also creates models for students of how they can best pursue learning independently.

This article's focus on the male student underscores the question of whether there is a positive or negative influence on the female student (or, more broadly, on learners that do not profess kinesthetic learning as their primary learning style). In my own classroom, I have seen the incorporation of kinesthetic learning positively impact both male and female learners. Female students also profess enjoyment in these activities and report that they feel excited for and comfortable in Spanish class. Once again, this results in greater overall success (Lengel & Kuczala 2010). Female students are also more engaged and focused when participating in these more novel activities (Lengel and Kuczala 2010). Finally,

female students have also discussed with me the advantage of learning various ways to study through classroom activities and incorporating these methods into their personal study at home. I have seen no negative impact on female learners in my classroom, but, even more importantly, have seen these practices benefit them as well.

Difficulties of Incorporating Kinesthetic Learning Activities

There can be short-term difficulties in incorporating kinesthetic learning in the classroom. For example, the first time that a new game or activity is incorporated, it takes time and energy to teach students rules and expectations. In the moment, this can feel like a less efficient use of time. Additionally, sometimes students are overly invested in competition and the energy in the classroom can be hard to reign in.

Overall, I have found these temporary frustrations to be minimal in light of long-term goals. While it may take more time or energy on my end to teach and lead a new activity, students are more invested, attentive, and willing to obey even when participating in a lecture or reading that they do not enjoy as much, because they know that there are activities like this to which they can look forward.

The majority of students are excited to participate in kinesthetic learning practices and activities, but there are sporadically students who are wary of these activities. There are several ways that I have dealt with this, depending on the individual. Many students will respond positively when engaged in conversation that explains the benefits of learning through movement. Other students will grudgingly engage in minimal ways, then gradually do more as they experience the activities and see their classmates playing along. The best way that I have been able to gain student participation, though, is by being passionate and excited about activities myself.

Conclusion

This research clearly shows the positive influence of kinesthetic learning practices on the manner in which male students acquire and retain Spanish vocabulary. Methods of instruction in the Spanish classroom should be reconsidered with the needs of male students in mind. Currently, the educational system generally does not understand or build curricula to best target the strengths of male students (Gurian & Stevens 2011). If practices that allow male students to move and participate as they learn are incorporated into the classroom, research suggests that gains should be seen in both academic success and behavior (Eccles 2004; Gurian and Stevens 2011; Oberparleiter 2004). Additionally, the utilization of kinesthetic practices will result in more engagement from male students in their own learning (Oberparleiter 2004; Lengel & Kuczala 2010).

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