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AN ANALYSIS OF CURRICULAR CHANGE IN PHYSICAL EDUCATION

A Manuscript Style Thesis Submitted in Partial Fulfillment of the Requirements for the
Degree of Physical Education Teaching

Rafael Ramirez

College of Science and Health
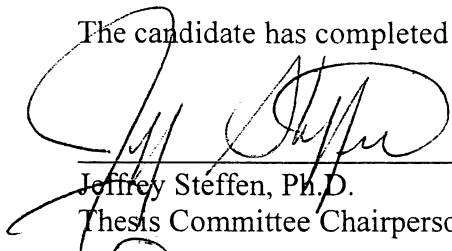Physical Education Teaching/Adventure Education Concentration

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# AN ANALYSIS OF CURRICULAR CHANGE IN PHYSICAL EDUCATION
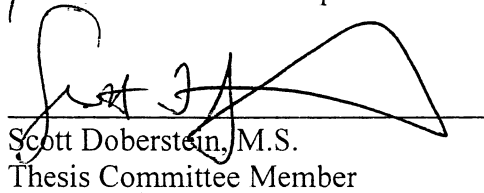
By Rafael Ramirez

We recommend acceptance of this thesis in partial fulfillment of the candidate's requirements for the degree of Physical Education Pedagogy

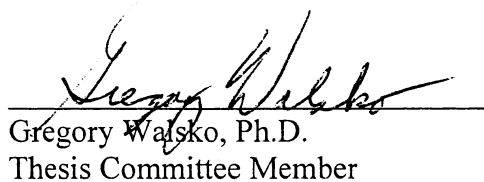The candidate has completed the oral defense of the thesis.

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Jeffrey Steffen, Ph.D.                 Date
Thesis Committee Chairperson

_____     12/17/12
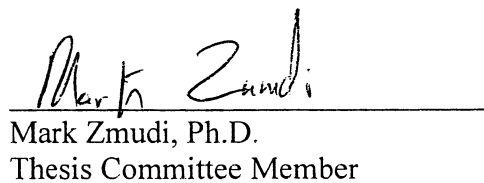Scott Doberstein, M.S.                 Date
Thesis Committee Member

_____     12-17-12
Gregory Walsko, Ph.D.                 Date
Thesis Committee Member
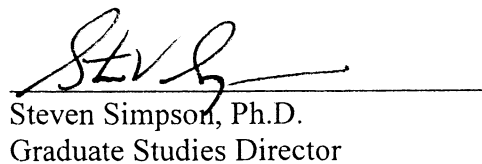
_____     12-17-12
Mark Zmudi, Ph.D.                     Date
Thesis Committee Member

Thesis accepted

_____     5/16/13
Steven Simpson, Ph.D.                 Date
Graduate Studies Director

# ABSTRACT

Ramirez R. <u>An analysis of curricular change in physical education.</u> MS in Physical Education Pedagogy, May 2013, 60pp. (J. Steffen)

Evidence suggests that physical education is not achieving its goal of promoting physical activity in schools. Part of the problem is, in part, due to the lack of curricula that engages high school students in meaningful experiences. Some districts still use the multi-activity model as the only or the predominant model for teaching physical education. The purpose of this study was to examine why selected experienced high school physical education teachers adopted adventure education as a curriculum model or as a methodology. Secondly, we looked at the process through which these physical educators went through when they adopted the adventure education curriculum. In other words, we explored what factors did influence their decision to adopt adventure education. The teacher change model proposed by Ni (2009) was used as a framework to conduct a qualitative interview to explore this curricular change. Four experienced physical education teachers from a large metropolitan area of United States were selected to participate in this project. The following themes emerged: a curriculum that is incomplete; curricular focus on the socio-emotional; the student as a motivational factor; developing life skills; administrative support; relationship to a university program; adventure education as an ongoing process; and being self-confident.

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**INTRODUCTION**

Physical Education (PE) core purpose is to provide movement experiences though which young people develop into healthy and active adults. According to Rink and Hall (2008), it is crucial that elementary schools adopt effective physical education programs that use effective teaching to prepare children to be healthy and active adults (Reference it in List). Over the years different models of teaching PE have been used. Today we have several models such as sport education, tactical games, movement education, health-related physical education, personal-social responsibility and adventure education (Kulinna, 2008; Lund & Tannehill, 2010).

There are problems with many physical education programs. Some problems are related to accountability, effectiveness and meaning (Cothran, 2001). Stroot (1994) suggests that PE may not survive. Locke (1992) suggests that it would be better to change physical education than to repair it. The multi-activity model has been the most common approach to teaching PE. Its purpose was to get students to try different sports and activities while keeping them interested (Siedentop, Mand, & Taggart, 1986). However, this model lacks equity (Ennis 1999; Evans, 1993) and relevance (Cothran & Ennis, 1998; Ennis 1999). An example of a model used to improve physical education in elementary schools and get students more active outside of school is SPARK (Project Sport, Play, and Active Recreation for Kids) ( Cothran, 2001). Adventure education is also another model used to enrich PE (Paniccuci, 2003).

Adventure education (AE) is a process in which educators place or engage students

in adventurous activities. In other words, educators create scenarios of uncertainty, excitement and risk in order to challenge the learner in these educational experiences (Miles & Priest, 1990). According to Miles and Priest (1990), "the aim of this process is to learn from risk-taking, not to be damaged or destroyed by it" (p.1). Wurdinger and Steffen (2003) further explain AE:

> From a pedagogical perspective, adventure serves as a unique mechanism to facilitate student development. Adventure education is the tool used to immerse students of all learning styles into an experiential activity, which includes elements of risk and challenge. Risk and challenge represent key ingredients to facilitate change. Change is the catalyst for student development. (p.10)

Priest (1990) explains AE's rationale, "The premise of adventure education is that change may take place in groups and individuals from direct and purposeful exposure to: Challenge, New Adventures and New Growth Experiences" (Miles & Priest, 1990, p.114).  Priest (1990) continues by addressing the product of adventure education:

> The product of adventure education is personal growth and development. By responding to seemingly insurmountable tasks, groups and individual learn to overcome almost any self-imposed perception of their limitations into abilities; and, as a result, they learn a great deal about themselves and how they relate to others. (p.114)

It was in 1971 that Project Adventure Inc. (PA Inc.) introduced the Adventure Education approach to teaching physical education in the United States. Jerry Piech, a school principal at Hamilton-Wenham High School in Massachusset, was a key player on pioneering AE (Prouty, 1999). Using the lessons learned in Outward Bound, some former instructors decided to bring adventure education to the schools. The idea was to make adventure accessible to all students and to train teachers to use adventure as a safe and relevant educational tool. Since the introduction of AE, the number of schools adopting the AE model has increased substantially. P.A. Inc. acknowledged that since the beginning, AE has actually been part of physical education. P.A. Inc. further explained

that AE is just one more curricular model to enrich a PE program (Paniccuci, 2003).

Cothran's (2001) research on curricular change in physical education suggests that changes are initiated because of dissatisfaction and continue into an implementation depending on financial resources and information. In some cases the changing agent is the teacher. This type of internally initiated change has more potential for success because the teacher is ultimately implementing the change (Driel, Beijaard, & Verloop, 2001; Fullan, 1991). Cothran (2001) proposes an exploration of the teacher-initiated change by exploring: (1) what stimulates a teacher to engage voluntarily in a curricular change; and (2) what steps and support did these teachers use to bring about change in the program? Reeves (2009) explored educational change and how this change process can be difficult and even an overwhelming endeavor. There are challenges and obstacles to overcome. The literature of educational change is numerous (Richardson & Placier, 2001). They have explored two fields of study in the area of teacher change. The first field of study is at the individual or small group level and it is cognitive, affective and behavioral. The second is in a larger scale and it is more organizational. Cuban (1993) notes the fact that this literature focuses on teacher resistance to change instead of what causes the change.

There are studies about teacher initiated change. Additionally, several authors have explored the factors that affect teacher change and the adoption of new curricula (Fullan 1991; Fullan, 1993; Ni, 2009; Reeves 2009). Changes in curricula usually happen in a top-down fashion. They are initiated at the administration level or they are driven by government mandates (Ni, 2009; Richardson & Placier, 2001). When changes happen in a bottom-up fashion, they are more desirable by teachers specifically considering that the teacher is a key-implementing agent (Richardson & Placier, 2001). Richardson and

Placier (2001) refer to it as normative-re-educative change. In this case teachers get involved as changing agents with a sense of ownership and the results are more fruitful (Driel et al., 2001). Even though there is plenty of research in the area of teacher change, not much has been done in the field of PE regarding teacher changes specifically related to AE. This study investigated why selected high school PE teachers adopted the AE model as part of their curriculum.

**METHODS**

**Participants**

Participants in this project were four experienced public high school PE
instructors in a large urban area in the Midwest region of the United States. These
teachers had been teaching for at least 15 years and were currently teaching AE. The
schools where the four participants work have more than 2000 students each. Isabel and
Horace work in schools that can be considered working class while James and Mark work
in middle to high-middle class schools. Horace, James and Mark teach a combination of
sport activities and AE classes. James also teaches outdoor pursuits. Isabel is the only one
who doesn't teaches AE classes even though she uses AE in her classes. After an initial
approach to find out their willingness to participate in this study, four candidates were
selected**.** Previous to the interview, the researcher piloted the interview questions and
sought feedback regarding their clarity. Two PE teachers in a high school near the
university where the research took place were selected to pilot the questions. In
accordance with the policies of the University of Wisconsin – La Crosse Institutional
Review Board, each participant signed an informed consent form prior to participation in
the study.

**Data Collection & Analysis**

In this project the researcher examined why selected high school PE teachers
adopted AE as a curriculum model. Secondly, the researcher looked at the process

physical educators went through when they adopted the AE curriculum. Finally, the researcher explored what factors influenced their decision to adopt the new curriculum.

Using a modified Ni (2009) model of teacher change, the researcher examined why these PE teachers decided to change in adopting AE. Ni (2009) proposed a theoretical framework with 3 personal adoption categories: 1) Teachers' knowledge, attitudes and beliefs about curriculum; 2) Teachers' knowledge, attitudes and beliefs about students; and 3) Teachers' knowledge, attitudes and beliefs about self (the teacher). It is important to notice that the researcher added a fourth category named social factors to explore the professional relationships and interactions that affect the participants' change.

To understand the process through which these physical educators went through when they adopted the AE curriculum or methodology, an extended open-ended qualitative interview was conducted. This standardized open-ended semi-structured interview was designed according to interview protocols suggested by Patton (2002). Furthermore, a naturalistic inquiry approach as suggested by Lincoln and Guba (1985) was used for this qualitative study.

The interview questions in four categories (curriculum issues, student issues, social issues and the teacher him/herself issues) were carefully designed in order to obtain a rich description of these teachers' experience adopting the AE model. Consideration of the factors that promote PE teacher change and factors that inhibit change (Bechtel, 2001; Metzler, 2008) were considered when the researcher designed this qualitative study. This interview framework served to explore why these veteran teachers adopted the AE model. Finally, a panel of experienced physical educators reviewed the

questions for clarity and accuracy.

The interviews were conducted with two voice recording devices. The researcher wrote notes and scripted the interviews. The interviews were transcribed verbatim for detailed content analysis. The researcher took the proper precautions to ensure the confidentiality of all the participating teachers. Participants were presented with the set of open-ended questions. The times for the phone interviews were arranged ahead of time at the convenience of the participants and at times that would ensure no extra telephone costs. The researcher made arrangements for a time period of approximately 60 minutes for each interview. The interview questions were open in order to let the participants steer the direction of the discussion. The questions were clarified when necessary in order to gain depth in the topic. Furthermore, the researcher informed participants that their participation was voluntary and they could quit the interview at any time if they wished, or they could refuse to answer any question. A second researcher was consulted to clarify some of the recorded statements. After the interviews were transcribed, the transcripts were sent back to the participants. Three participants made modifications for the purpose of clarification and accuracy.

**Interview Questions (4 categories)**

Category A: about the curriculum

1. When did you adopt the adventure education model?
2. What prompted the change to the adventure education model?
3. What is the content of physical education?
4. What is the content of adventure education?
5. What is the purpose of adventure education?

6. What curricular issues motivate you?

    Category B: about the students

1. What is the background of your students?

2. Describe the needs of your students?

3. Describe the motivational level of your students.

4. What is the developmental readiness level of your students for AE?

5. What is the skill set of your students? (such as fitness skills, life skills, academic skills)

6. What previous knowledge do your students have of AE?

7. What do you want your students to achieve through AE?

    Category C: about social factors

1. What is the AE knowledge of your colleagues?

2. What was the relationship of AE to previous curriculum?

3. What is the school vision and mission? Do they match with AE?

4. What were the resources available for the adoption of AE?

5. Describe your social relationship with your department, the school and the community.

    Category D: about themselves as teachers

1. What was your level of confidence on making the change to AE?

2. How much time did it take to learn AE curriculum materials?

3. What was your level of knowledge and training when you started the change?

4. How much planning time did you invest in this process?

5. Do you consider yourself an educational leader? Explain it.

6.  What was your level of satisfaction such as enjoyment, agony, success, failure, accomplishment before, during and after the change?

7.  In relation to standards, compare the adherence of the AE model to the sport based approach?

Upon doing the content analysis of the four extended interview using analytic induction methods (Goetz & LeCompte, 1984) themes started to emerge from the responses. The researcher gave special attention to the themes that emerged out of three of the four participants included in this study. The researcher also included the themes that appeared several times which seemed very important to the participants. These themes appeared in different responses of the 4 categories. In some cases a theme appeared for two of the participants and an opposite theme appeared for the other two. In these situations the researcher took a closer look at the possible reasons for it by further analyzing these similarities and contrasts.

## RESULTS

Constructs from the Ni (2009) teacher change model framework guided the data analysis process. Based on these constructs, analytic induction was used to code and categorize so as to inform the reasons of teachers' change to a new curriculum model. The data was coded using analytic induction and constant comparison (Goetz & Lecompte, 1984). A matrix was used for each category of questions.

All of these teachers adopted the AE curriculum because of a combination of factors related to curricular, student, social, and personal issues. A key finding in this study is the interrelation of factors. Each educator in this study approaches PE holistically (fitness, skills, the intrapersonal, and the interpersonal). These educators have a good idea of the purpose of PE and how AE can play an enriching role. These teachers don't downplay movement skills, sports, or fitness. They value them. In fact, two of them were very successful coaches. They found in AE a model where they could better engage students in the intrapersonal and interpersonal. The participants also see how AE is a curricular approach to work on character development and community building, specifically in the current focus on standardized tests and when little time is dedicated in classes to work on the affective domain. They ultimately see AE as a methodology to enrich PE.

The participants also mentioned that they had students that are not typically inclined to team sports or common forms of fitness. In addition, a natural connection

between AE and outdoor pursuits is readily apparent to them. All of them mentioned a connection to the faculty of a university program, which offers AE courses with plenty of support and knowledge base. In the three schools in which AE courses were offered as part of the PE curriculum, administrative support was instrumental for the adoption and development of the AE programs. All the themes that emerged during this study are explored in detail in the following sections.

<p align="center">**Emerged Themes in Category A - Curricular Issues**</p>

**Theme 1: a Curriculum that Is Incomplete**

Mark's words illustrate a curriculum that seems incomplete. A curriculum that doesn't engage all students in relevant experiences:

> I had been in the district for 16 years. We just realized that there was something majorly wrong with our P.E. program. It was disjoined. We had older staff and an unarticulated elective program. We needed something that would reach the kids and create the culture that we wanted. And the adventure program delivered all that stuff.

James pointed out to the fact of getting up to date with new models. James states:

> About 8 years ago we noticed that there was a growing trend throughout the state and other schools of including the AE model and putting that into the new curriculum was something we felt that, a progressive school as school A is, was something we wanted to look at and adopt.

James added:

> So we were very traditional PE program and going back 8 years we were trying to make a change… We are trying to introduce the kids to things that take them out of their comfort zone, things that maybe they have not experienced.

Isabel commented on the enriching aspect of the AE curriculum, "The AE really serves the emotional and social aspects of PE well. It complements the physical development of a student." Mark also commented on the idea of having a holistic curriculum that addresses the four global standards for PE in the state. Mark states:

> In our curriculum we have 4 global learning standards we want to attack. Develop the interpersonal, develop the intrapersonal, develop wellness, and develop the skill level. We try, regardless of whether it is adventure track or fitness track or traditional track; we are going to hit on those 4 global learning standards.

James noted how AE and outdoor pursuits support the national PE goal of promoting lifelong physical activity. James states:

> So when I get those kids to do other things beyond the traditional PE and these are things they can do well beyond their high school years. They can always go to Devil's Lake for rock climbing; Lake Michigan to go kayaking or to get involved with the city area orienteering clubs. These are lifelong activities that we are trying to teach these kids.

**Theme 2: Curricular Focus on Socio-emotional Aspects**

When the researcher asked questions about the content and purpose of PE and AE, the participants responded on how AE focuses on the socio-emotional aspect of PE and its benefits on the individual as well as the students as a community who learn and grow together. Horace, the only teacher in our study working in the inner city, defined it as:

> It is a ripple effect I call it. It can change the way kids think and they act. You know, I teach in the inner city so it is a little rougher. The power of one and how you can change. I expect them to hold to different standard than I usually I hold them to. Being honest and calling the mistakes they make themselves and others and not worrying about failure.

He further added, "For me I think it is taking kids out their comfort zone and having them put their … I mean to build trust so they work together to be teammates."

When Isabel responded to the question, "what is the content of PE and AE?" she answered, "the three components: the physical, the emotional and the social development of a child." Regarding the content of AE, she explains:

> It develops a coping mechanism, which leads into developing a good judgment, problem-solving capabilities, and surviving skills, as well as having a healthy

self-esteem.  This has not been really addressed in the traditional PE.  Having good coping abilities is very important in today's global society.

Mark expressed, "Our goal is to develop social emotional support groups within our classes." He further explains that "the purpose of AE regardless of which track you follow is to develop respect, trust collaboration and communication. We try to find ways to help students move out of their comfort zone so they can grow as an individual". Mark reflected on the effect of the AE curriculum on the students. Mark states:

> The carrot (the initial draw for kids to take the class) is the climbing (technical) part. When you say adventure that is what they think. I think that all are very surprised when we get into the social- emotional aspects of AE and they experience how powerful that portion of the class is. I think by the end of the year course they realize that the climbing is just the icing. The meat of the courses is their own journey inward and their personal development.

**Theme 3: Motivated by the Student**

It is interesting to note that when our participants were asked what curricular issues motivated them, it seemed they were motivated by the idea of looking at the student holistically.

Horace reflected on this theme relation to the challenging situation he experienced in the inner city the following way:

> I guess what motivates me is to change the way these inner city kids think and to set higher standards for themselves… To get them to the point where [it] translates into their regular education and work ethics and honesty and so forth. I think these kids that are in physical education and some like to go in this class and some get put in here and then a lot of those inner city kids either don't want to participate when they are in their junior year or senior year, or they don't have to take the class so a lot of them are rebellious. Some kids just want to play basketball. Those are the challenging kids that don't want to be in class but they get put there anyway. So I try to have them to be self-accountable. It is very challenging for me to get to the point where they can work together and doing not what they want to do but what the group wants to do.

Mark reflected on his motivation and also expressed the idea of the student as a

body and a soul. Mark states:

> AE is pretty awesome academic tool. The one curricular issue that we address
> solely in PE-AE is CHARACTER DEVELOPMENT. There is not time for
> character development in the core curriculum courses. So many of the academic
> areas are test-driven and cannot deviate from their academic base. We are
> fortunate that our state goals specifically address the need for social development
> to be covered in PE. Our flexibility within our curriculum allows us (PE) to
> emphasize character issues in class. I think that motivates us to know that we are
> more than bouncing balls; that we are working at the soul of the kid, dealing with
> the heart of the kid.

### Emerged Theme in Category B - Students' Issues

**Theme 1: Life Skills**

Regarding students' needs, James made the following comment:

> Our kids need to develop more social skills. I see a lot of situations where they
> tend to expect their own cultural race. I would like to see more of those students
> to develop an interaction outside their own race, outside their own comfort zones.
> And as far as AE falls, I think AE kind of leads to that as we are doing the
> teambuilding things that we do at the beginning of the quarter to get to know each
> other. I make sure that they are mixed in their groups, that they are learning each
> other names. You know socializing is very important. We go for several weeks in
> sports and the kids don't know each other names. You know, who is in their
> teams? They know by face but they don't know by name, where in AE within the
> 2 first weeks of the course these kids know each other. So you know who your
> team is, you know their names, a little about their background. So when you see
> them in the hallway it is not, "hey you". It is calling their proper names. I think
> that social aspect of AE is very important.

These educators want their students to gain a life skill set that allows them to be

successful and healthy individuals. Mark expressed this sentiment as follows:

> [I would like] that they leave having a better understanding of themselves. And
> that they leave having more willingness to trust people and the system. And they
> leave knowing that they have positive personal qualities.

Isabel also expressed the same desire. Isabel states:

> I would like them to be aware of what is going on around them. I would like
> them to acquire problem-solving skills and be open-minded. I would like them to
> tolerate each other. I want them to see things from many different angles, and to
> be able to overcome obstacles on their paths.

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These teachers understand the value of interpersonal relationships as a life skill. Horace wanted his students to develop this skill as illustrated in the following words:

> Well, a set of self-worth and how to work in a group and how to listen or how to share. People talk a lot and don't listen so people listen a lot and don't talk. We have to switch those roles a little bit where people speak up and some don't and, you know, listening obviously and then to carry the message of how they act through their lives and throughout their communities so it affects people everywhere.

These educators seem concerned about their students developing a skill set that will help them to be better individuals.

## Emerged Themes in Category C - Social Issues

**Theme 1: Administrative Support**

Administrative support and resources available are very important specifically in the implementation stage. This support can be moral, academic or financial. Mark explained this administrative support as follows:

> The resources when we first started were scarce because the principal at that time wasn't really hot on the idea. When we got a new principal who liked what we were doing- suddenly a ton of money was available and we upgraded our facility. Having good leadership at the principal and district level is crucial.

James had very strong support and many resources from the very beginning. James states:

> When we first proposed our department head about starting an AE program like I said, she was very supportive and we were able to visit several prestigious schools. The AE programs in those high schools were well established. I had an opportunity to visit all these different high schools. I got involved with the experiential organization at University A which had many many resources. Also, I attended other clinics outside school setting with other teachers who were AE teachers themselves. So there were a lot of resources available. Marie was our department head at that time and she was very supportive with what we were doing in our program.

Horace, who works in the inner city, also ended up getting administrative support even though he began by using equipment he acquired himself. Horace states:

Oh my gosh! Whatever I bought put it in my bag of tricks and started with. I tried running for a grant to get a climbing wall. I did not get it. But then I did a little research, talked to the principal and he funded it and we got a climbing wall. So we have a climbing wall now. I buy stuff every year and I supply my stuff sometimes.

**Theme 2: Relationship to a University Program**

Having a university PE program and its faculty as a resource was highly valued by the teachers in this study. This university offers courses, workshops and even hosts a conference in the area of AE. The faculty at this university seems to be a consistent source of support and resources for these teachers. Mark pointed out "our greatest resource has always been University Central. Between Tom and Brandon they have been our resource". James also stated, "I got involved with the experiential program at University A which had many many [emphatic] resources". Isabel stated the same idea, "A big resource was the class taught by Tom."

When Horace approached his principal to get economic support his strategy was to use this relationship with the above-mentioned university:

> I just said, a professor at University Central and there is 20 year research that says that climbing walls are safe for regular PE. I mentioned it to him [principal] and he didn't really believe me and I said if I can prove to you would you take a deeper look and he said yes. I said, give me 10 minutes, went upstairs, got the article, and showed to him. And then he said ok, let's try to do it and we did it.

## Emerged Themes in Category D: Teacher Him/herself Issues

**Theme 1: AE as an Ongoing Process (Subtheme: High Satisfaction)**

Our participants shared that the preparation and planning in AE is constant. It never stops. They have been teaching AE for years but the nature of AE still engages them in further learning. A subtheme of AE as an ongoing process is the high level of satisfaction that all of them have experienced as result of teaching AE. In their comments

we seem to discern that even though AE demands a good deal of preparation, they do it

willingly because they see students benefiting from it. Seeing students benefiting from

the AE model causes a high level of satisfaction. When Mark refers to the time dedicated

to learning and planning he commented:

> It is a constant ongoing process. We have been teaching it for 18 years, you know, and we are still learning. The learning curve is pretty, is pretty quick. The dynamic is always changing. So, as far as the time it took to understand the different principles. The principles are pretty simple. Respect self and others, be involved, give energy, don't take energy and create something of value that they can take away from the activities we are doing---and it works. It works.

Mark referring to the time invested in reflecting and planning for further activities

commented:

> After you got done with an activity you debrief with the kids, well you know, you're debriefing within yourself as well. It also was a constant evaluation, right? Or were the kids engaged? What was the message they got out of it? What was that they were going to take away with them? So the debriefing with your students, the debriefing with yourself and your colleagues was really the key to planning your next activity.

Later in the interview Mark shared about his level of satisfaction. Mark states:

> Well, if we didn't bring adventure or if I wouldn't have been introduced to AE I would have gotten out of PE 18 years ago. I went from wanting to get out of PE and go back to the classroom, to becoming department chair and wanting to establish these programs throughout the whole district. So satisfaction and enjoyment afterward was a big difference. Before the change I did not enjoy teaching PE. It was one-dimensional.

Mark explained the one dimensional idea of the old curriculum program. Mark states:

> The traditional track, the teaching of skills and all that kind of stuff it lost its luster. There was nothing else for the kids. Because we have such high involved rate with athletics. We have almost 70% of our kids involved in athletics. You know you get that aspect of fitness of PE after school and kids were losing interest over what was happening during the day. Not all but the majority of them. They didn't want to be there. Having the variety and having the dynamic nature of the adventure program really gave life to more or less to the teacher. The other teachers who teach this feel the same way.

James expressed that even though he was familiar with outdoor pursuits, he had to learn new knowledge and skills, "there were things that I wasn't fully exposed to. Experiences like when it came to rock climbing and I have never been in a high ropes course before." James also shared on the theme of AE as an ongoing process that requires continuous learning and preparation. James states:

> Many hours, that's for sure. Developing the curriculum, doing the research, learning the skills, talking to other people and organizations. It was many hours, many weeks. It was an ongoing process. You were always learning, so… We have been doing this for eight years so hopefully over that time and even into the future I am still learning things.
> James also experienced a high level of satisfaction from teaching PE and AE

specifically. James states:

> I have been teaching PE for … This is my 31st year and even to this day I can pretty much say I have enjoyed very much what I am doing as far as PE and more so with AE. So it has been a very positive process. I have not really experience a lot of agony as far as PE goes. Success, you know, my success has been that we were able to develop the AE program and sustained it. It is very successful. Failures, you know, very few failures. I think maybe a few failures might be that sometimes I am not able to reach out every single kid in class.

Isabel referred to the ongoing nature of AE and the time dedicated to learning, "Years. I am still learning. I took two or three AE classes. But I have been attending many seminars, lectures and other classes." Her response to how much time she dedicated to planning was:

> A lot. You think about it as you start the unit. You think about it all day long. You replay in your head what went well, what went wrong, how can you improve it, how have the kids reacted. You think about the successes. If the kids have not performed well, you think about how to improve. It is a constant quest for an improvement on the teacher's part as well.

In the theme of satisfaction with AE Isabel experienced satisfaction and dissatisfaction. She explained her dissatisfaction as a matter of large class size.

Isabel states:

> It was both positive and negative.  After all, I expected a progression through trial and error.  It was a constant adjustment.  It was a lot of fun as well.  The feedback is immediate and that is what I love about AE.  An English teacher does not have as fast feedback as I have.  You can study child's psychology on this.  I love that stuff. So yes, a lot of satisfaction.  Small groups would be easier to teach.  With large classes, everything takes twice as long.   That is discouraging for everybody.

Horace went from taking a graduate course in AE to change its curriculum. He had to dedicate a lot of time to preparation for several years. Horace states:

> A semester of graduate school and then I just kept reading upon it [AE] and tried new things and learned new ideas and put my own load of tricks and stuff sometimes. After that semester, I changed my whole curriculum. Every year I start with AE. Every year the first few weeks of school is fitness testing and every year after that for four weeks I do teambuilding. When I did the change I was learning at night from graduate school and bringing it back in the morning to the class. Now very little [preparation]. The first five, six years quite a bit. I like researching. I tried … I thought of … I read a lot.

When referring to level of satisfaction Horace conveyed:

> It changed who I was. I enjoy teaching so much more. Kids like class more, participate more, are happier. I make my standards higher. The kids push themselves harder. I love it. And then it is when you say there is like an 'aha' moment. I got about 3 or 4 years ago … We were doing an activity called the turnstile, a jump rope activity, and it was a coed class, sophomores and we were on day 2 or day 3. And finally one of the gang members said, 'hey guys we have to work together, he is serious and we are not going to do anything if we don't get this done.' And then it kind of clicked: the kid who was one of the trouble makers realized: hey, we need to get this done as a group. It was a nice moment in my life. That was the first time I saw a whole class change. I saw the moment of change. It is very interesting.

The four participants in the study shared the theme of AE as an ongoing process that requires preparation, planning, modifications and continuous reflection. The satisfaction seem to be the result of seeing their students coming out of their comfort zones, trying new things, getting along or even collaborating amongst themselves. There is not a complaint or any negativity when they talk about all the work they invested in the

AE process while there is positivity when they talked about student outcomes.

**Theme 2: High Confidence (Subtheme: Educational Leader)**

Three of the participants expressed having a high level of confidence when they

started to implement AE, while Isabel expressed little confidence in the beginning.

However, when listening to her words it seems that later on she had developed a good

deal of self-confidence:

> I had little confidence at the beginning. I expected a progression through success
> and failure. As one teacher had said, 'failing forward.' I was prepared for the
> fact that it was not going to be easy. But that was what kept me going, because I
> wanted to get better. And getting better, that is what I love about it. We can see
> the results. Students' feedback is immediate. It took a lot of energy, especially
> dealing with so many students.

Mark explained his level of confidence, "It was overnight and one hundred per cent. It

was one night not knowing anything about it and the next day wanting to jump into it

right away." When asked whether he sees himself as an educational leader he responded:

> Yes. I think an educational leader is someone who is transitional. Someone, who
> is going to bring something new to the table, who is going to improve something,
> who is going to allow other people to find out about themselves and be better
> teachers and I think we have done that in the adventure program.

Horace responded to the same question on his level of confidence upon adopting AE.

Horace states:

> I am confident at what I do. If something works, it works and if it doesn't work it
> doesn't work. At times things have work perfectly and at times things haven't
> work perfectly. So, you know, I wasn't worrying about failing. I just … started
> taking the class, I heard some ideas and I did it. Some things my friends do very
> well that I don't want to try. Some things I do well that my friends don't do well,
> so. It is all about your own comfort zone, what you want to teach and what kind
> of students you have too.

When commenting on whether he is an educational leader Horace stated:

> I am the one who brought the AE to the school. I am the one who takes the kids to
> overnight camping. And I got permission and I fundraised and I put a talking

circles area in the back and peace pole in the process and the labyrinth in the back. I started a new program and it has never been done before in the United States. A program where we took my teambuilding and the AE philosophy and we took a bunch of seniors and the psychology class and then what we did is they would mentor incoming freshmen, special Ed students and did teambuilding for 5 weeks. After the 5 weeks were done, we met with them once a week for fun with teambuilding and then processing and the other days of the week we would take the same kids, not the freshmen kids, if they were in trouble with the school and instead of suspending them the first and second period we did teambuilding in the first period and the second period we did facilitating. Instead of being suspended they would be a… we call it suspension reduction. They do two days with us and they go into the classroom. And we were the first people. We kind of invented it, me and my friend.

James also expressed his confidence, "My level of confidence was pretty high. I knew there was something I wanted to do. It was a very easy transition to go from traditional PE program to AE." When the researcher further asked James whether he is an educational leader he explained:

> There are some activities and some things that I feel very comfortable with, that I would not hesitate in leading. There are other things that I still need to learn, that I need to develop my skills. I feel that, I am comfortable as far as an educational leader in AE. In my school people come out to me for help, for knowledge of a particular activity. Yes, I feel pretty comfortable doing that. Also, in coaching track, cross country and PE in general.

Figures 1, 2, 3, and 4 illustrate the themes that emerged in the 4 categories of teacher change in this study.
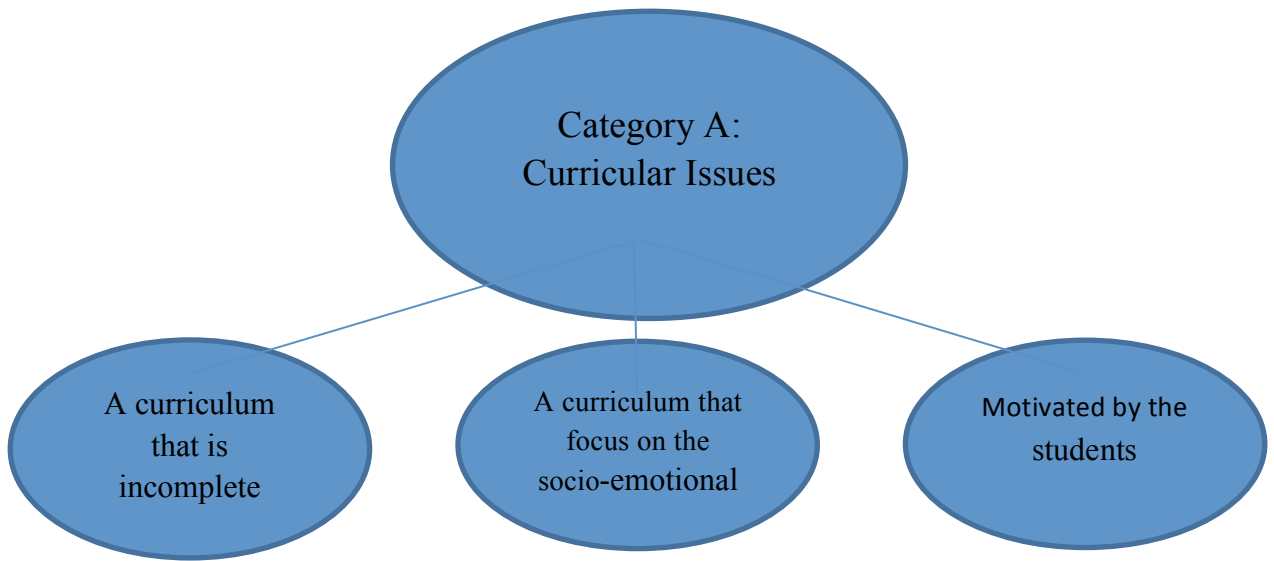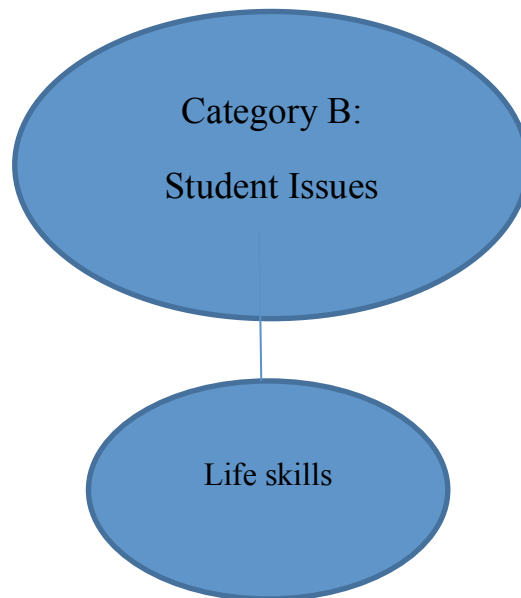
Figure 1. Curricular Issues
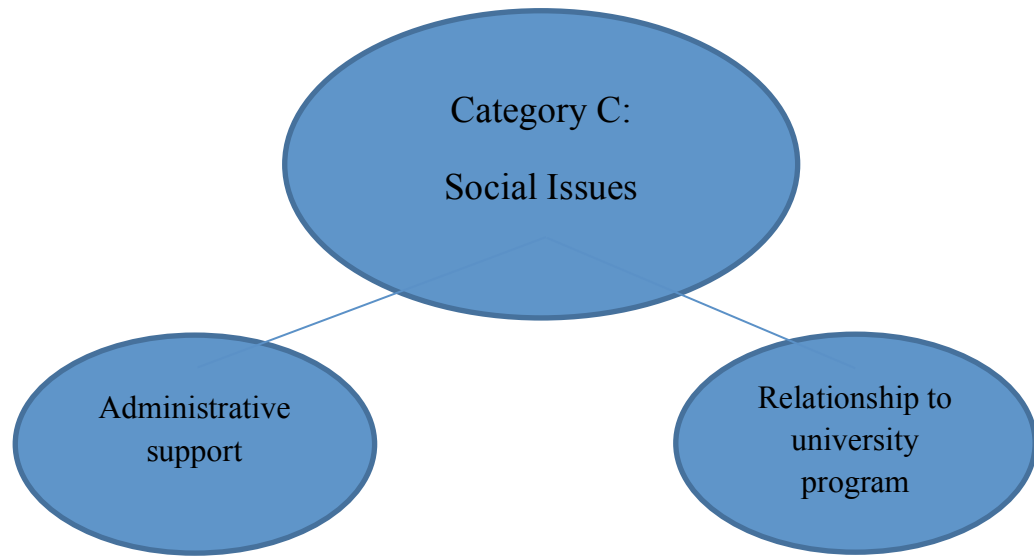


Figure 2. Student Issues
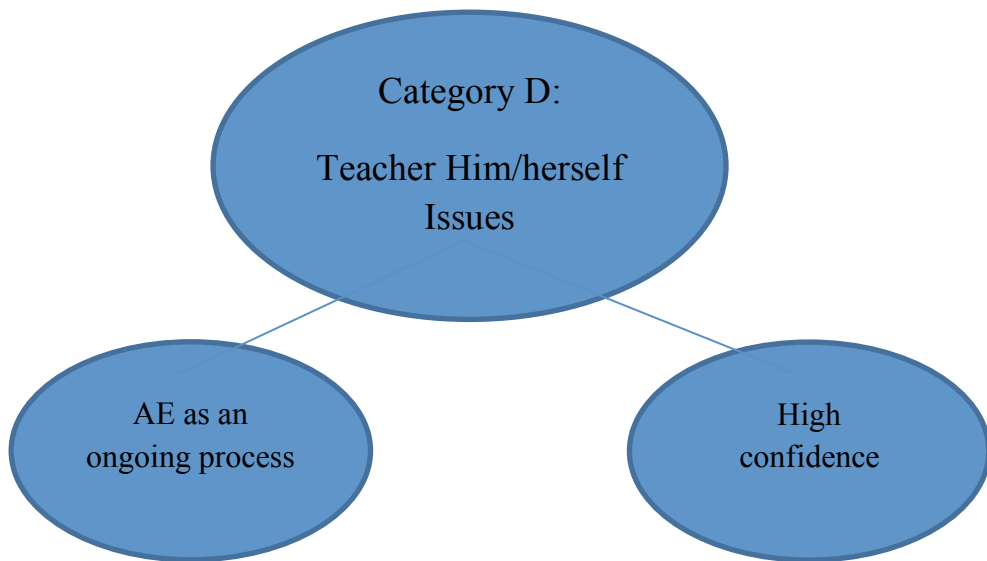
Figure 3. Social Issues



Figure 4. Teacher Him/Herself Issues

**DISCUSSION**

**Curricular Issues**

In the category of curricular issues the first theme to arise is that *the curriculum is incomplete*. The participants of the present study feel that the PE curriculum is not addressing all the students' needs. The curriculum does not engage all the students equally and maybe is outdated. These educators believe the curriculum should address not only the psychomotor aspects but also the socio-emotional aspects of PE. Physical education cannot survive in the schools unless it is part of larger curricula to develop all the aspects of the high school student. The subjects wanted a curriculum that is engaging, contemporary and meaningful for all students. They see in AE a curricular model that complements the overall PE curriculum by addressing the socio-emotional in addition to the psychomotor needs of the students. These teachers see AE as a way of enriching their existing PE programs. They want to address the four aspects of PE: skills, fitness, interpersonal and intrapersonal.

The second theme to arise in the category of curricular issues is a focus on *socio-emotional aspects*. The socio-emotional aspect of the individual are not isolated from the physical. The National Association for Sport and Physical Education (NASPE) standard number 5 addresses this aspect. A physically educated person exhibits responsible personal and social behavior that respects self and others in physical activity settings. The teachers in this study have two types of students who are driven by team and individual

sports but they also have students who don't have an affinity for sports and competition. The first type of students is intrinsically motivated by sports and athletics but the second type needs to find a path to physical activity. According to the teachers in this study, AE does just that. AE engages students in adventurous activities while exploring personal and social responsibility. The use of AE curriculum also builds a strong community and support group for the students. The teachers in this study believe AE challenges their students to think outside of their comfort zone and to work for the good of the group. When exposed to AE curriculum students have the opportunity to develop life skills to deal with real life challenges. The teachers in this study find that PE is the only subject that has specific standards that deal with socio-emotional needs of students and they use AE as a tool to address these needs. AE for this study's participants is made of movement, games, challenges and reflection in order to discover and explore issues of personal responsibility, community, communication and trustworthiness.

In brief, *what motivates the teachers in this study regarding curricular issues is the student as a whole* (the third theme). The teachers in this study look at education and PE holistically.  The teachers in this study see the curriculum as a way to help the students develop skills for life. The teachers in this study don't focus on the psychomotor only. The teachers in this study notice that the physical, mental, emotional, and social aspects of the individual cannot be separated. Mark, one of the participants, refers to it as character development and he notices that it is only addressed in the PE standards. Mark is student-centered in his approach to curriculum as illustrated by his words, "I think what motivates us [is] to know that we are more than bouncing balls that we are working at the soul of the kid, dealing with the heart of the kid".

## Students' Issues

The theme that emerged in the category of students' issues was *life skills*. The participants in this study are genuinely concerned that their students develop a skill set that is going to help them to be successful and to better cope with challenges. They observe many students who are not very prepared to cope with life and they use AE to address this need in the context of their school and PE program. They decided to use AE because in their experiences, this curriculum directly addresses issues of life skills such as communication, respect for different people, being able to work with others to solve problems and building an environment of trustworthiness. The interpersonal aspect is very important to them. These educators see many students are not engaging each other in constructive ways. By using the AE methodology, they observe students develop a higher level of maturity in their relationships. Simply, they want their students to be good, healthy and competent individuals in whatever they do. Some terms these educators use to describe this skill set are: open minded, self-aware, self-worthy, sharing with their communities, being a good listener, etc.

## Social Issues

In the category of social issues, the first theme is *administrative support*. In the case of the three teachers who developed an AE program, there is a principal or chairperson who is highly supportive of their idea. These administrators, two of them principals, played a key role in supporting the adoption of the new curricular model. Based on the testimonials shared by our participants, these administrators see the teachers in this study as educators who are improvement driven and passionate about what they do. The literature of change addresses the importance of the principal as an educational

leader and facilitator of change (Fullan, 1992; Richardson & Placier, 2001). These administrators play a brief but very crucial role in the adoption of AE. The only teacher in the study who could not implement AE as a program mentioned the lack of administrative support. These administrators' support of the three participants in the study seems to be driven by their perception and belief that AE is going to improve their PE program.

The second theme in the category of social issues is *the relationship that all these educators have with a university program*. All the teachers in this study mentioned a strong relationship to two university faculty. According to our participants, these two university instructors are a source of knowledge and support. The teachers in this study developed their expertise in AE (pedagogical content knowledge) while taking graduate courses with these instructors. Beyond that, these college professors were a source of AE knowledge and moral support. The university where these college instructors work has a PE department which offers several courses in the area of AE. The participants in the study also addressed that this university offers other resources such as a conference in AE and regular workshops.

### Teacher Himself/helfself Issues

In the category of the teacher himself/herself, the first theme to emerge is *AE as an ongoing process*. The participants shared their passion about the engaging nature of AE. They shared how AE is an ongoing process that creates continuous opportunities for teaching and learning. They see the students benefiting by this process and that keeps them going. This ongoing process keeps them motivated to plan for the AE classes and also motivates them to keep updating their knowledge and skills. They see their students

learning and growing as individuals or as a group and that motivated them to keep

working at developing further activities and experiences conducive to discovery and

personal development. This process is demanding on them but the level of personal

satisfaction for these educators justifies the work. They shared their satisfaction about

seeing students experiencing, reflecting and learning. They all also share the idea of this

ongoing process transforming the teacher as well as the students. Mark shared that it

transformed him to the point of not leaving the PE field. Horace also mentioned that this

process transformed who he was as a teacher to the point of enjoying teaching more.

Horace transformed his curriculum after a semester in an AE class. He expressed how he

loves the process of challenging students and students solving the situation by

collaborating as a team. Isabel at times was frustrated by the large classes but she loved

the continuous and immediate feedback from the AE process. The participants in this

study all experienced a high level of satisfaction by seeing their students grow during this

ongoing process.

The second theme that emerged in the category of the teacher him/herself

category is *self-confidence* is another theme to emerge in this final category. These

educators are confident on their beliefs, knowledge, skills. They believed that AE is a

curriculum that will enhance and enrich their existing PE programs; they were confident

that the new curriculum was going to help the program, the students and themselves.

Isabel expressed doubts at the beginning but she kept going. She never developed an AE

program in her school but she kept using the AE methodology in her classes. Mark and

Horace saw themselves as educational leaders who initiated change to make things better.

They moved forward decisively from the very beginning and they became change agents

in their buildings. They saw themselves as confident educational leaders who initiated

and engaged change from the first moment and years after implementation they are still

dedicated to it. One of the participants, Mark, went on to become the chairperson of the

department. Horace pioneered a support program for special education students for which

he received an award. James was also pretty confident and never doubted that AE was

something he wanted to adopt to make the PE program better. He also saw himself as an

educational leader. People in his building come to him for support in track and field,

cross country, AE, and PE in general.

## Implications

One implication of the results of this study for high school PE teachers

specifically in an urban area is that curricula should be renewed and refreshed to address

students' needs. Students' needs within a school building can be quite different in an

urban school. Effective teachers should respond to their students' needs while addressing

educational standards and behavioral objectives. They should do it in a way that engages

all the students to be active and motivated to find their path to physical activity.  Simply

keeping students busy and covering the curriculum is not enough. Teachers need to make

the curriculum relevant while addressing the PE standards at the same time. Teachers

who simply say, "We address the standards" without creating opportunities for students

to grow are doing an inadequate job. The teachers in our study addressed this issue by

using the AE model to enhance their program and meaningfully engage more students.

One conclusion drawn from the Saber-Tooth Project (Ward, Doutis, & Evans, 1999) was

that a way of improving PE is by moving away from the multi-activity approach to a

more focused curriculum. The teachers in this project did exactly that and it made a

difference based on their perceived results. Therefore, any well planned move to use different curriculum approaches should be encouraged in order to improve PE in a school.

Another implication of this study is that PE teachers should not neglect the socio-emotional aspect of physical education. The psychomotor domain of PE does not happen in isolation from the affective domain.  If we want students to develop habits of physical activity, PE teachers should help students find activities that are relevant and fun to them. In some cases, students need a support group that challenges them to try new things. The high school teachers in our study use AE to develop the socio-emotional aspect of the students in the context of PE and education in general. In this study, these teachers found a good pedagogical tool to address the three domains: psychomotor, affective, and cognitive. Others have also discussed the non-physical benefits of PE (Dyson, 1995; Stiehl & Parker, 2007). Gerhis (2012) suggest that physical activity may be improved by enhancing students' motivation and enjoyment. The participants in our study use AE in part to address a new curiosity about physical activity by getting students to go beyond their comfort zone while having fun with their classmates.

Another implication is the importance of keeping students' needs in perspective when teaching PE in high school. High school PE teachers need to specifically consider high school may be the last time students receive PE in a formal setting. The teachers in our study are student-centered. They know the goals, objectives, and standards for PE and they address them in the context of their students' needs. Teacher change in physical education is more likely to happen if teachers are student-centered and have a flexible view of PE. When the participants in our study talked about developing life skills using

AE, they took the vantage point of PE in order to positively affect the overall education students receive in high school. In their case, AE is the approach they adopt to make a contribution to the school's role of developing life skills.

Still another implication of this study is the important role that principals and administrators play when they support teachers who lead meaningful curricular change. This study showed some administrators acting as true educational leaders by empowering some innovative teachers who lead curricular change in order to enrich their PE program. These administrators saw value on having a comprehensive PE program with a variety of curricular models. Principals' support during the AE adoption process of the participants reinforces findings by Fullan (1992) and Richardson and Placier (2001). Fullan (1992) found that when principals act as educational leaders they facilitate change, while they impede change when they don't intervene. Another group of educators who seem very important to the participants were the two university instructors who introduced them to AE. It seems PE teachers who implement change would be more successful if they have the support of university instructors who provide knowledge, experience, and moral support through the change process. In a study of PE teachers going through curricular change, Cothran (2001) found that a university or its faculty could be an important resource during curricular change. One of the teachers in our study had the professors' support but not the administrative support. She was the only participant who was not able to develop an AE program even though she used AE strategies in her regular PE classes.

These teachers enjoyed the ongoing nature of the AE curriculum. This dynamic process kept them motivated to be better student-centered teachers. It can be implied that change in PE should be aimed to improve the program but in a way that keeps the teacher

engaged and motivated. The participants in this study seem to be motivated by the right mix of reasons and that keep them going.  It can also be implied that you need to be confident in leading change and innovation in order to be successful. The teachers in this study were educational leaders in the field of PE. They were aware of the curriculum, their students, their urban setting, their social context and themselves. The concept of teachers as a changing agents reinforces Fullan and Hargreaves (1996) finding that teachers are "key players in the change process". These teachers valued reflection and practice self-reflection during the AE process. Cothran (2001) notes this quality as essential in the improvement and change of the physical education field.

The urban ecology of the educators in this study cannot be ignored. They deal with socially and economically diverse populations. The participants in this research are well aware of their students and their circumstances in the context of this large urban area. They respond to students' needs in this context. Based on the data analysis, it seems that AE serves them well to engage students from very different ethnic and socio-economic backgrounds and also diverse interest. The educators in this study utilized AE as tool to teach life and social skills. According to our participants, their students need more than the classroom academics. They suggested that AE in the context of PE can help students to be better individuals.

In conclusion, the results of this study imply that successful curricular change in the field of PE is influenced by teachers' beliefs and attitudes about curriculum, students, social aspects of teaching, and teachers themselves. The emerged themes seem to reinforce what previously has been found in the teacher change research specifically in regard to dissatisfaction, the role of administrators, support from a university program,

enriching PE by using different curricular models, the important role of teachers as agent of change, and AE's focus on psychomotor but also in the socio-emotional development of the student. One distinctive theme of this study was that these teachers were concerned not only with skills and fitness but also with providing students a skill set that would help them in life. Another distinctive theme was that these educators really like AE's dynamics which engages students and themselves. Somehow these teachers grew with this process. We cannot imply that all teachers who decide to use the AE curricular model will be equally drawn to it and grow and be transformed by it. However we can conclude that if physical educators passionately engage curricular change without losing sight of students' needs and educational objectives, they are more likely to enhance their programs and engage more students in relevant physical education experiences. In brief, a PE curriculum that has goals, standards and does not lose sight of students' needs and circumstances. Physical educators who approach teaching this way can not only help more students but also have a positive impact in the promotion of PE in their schools, communities and the world. These teaches were student-centered and they developed a holistic and flexible view of PE.

Finally, it should be notice that it is important for administrators to support a wide variety of curricular models. It is important to be aware of teachers who want to grow, who are creative and ultimately want to enrich their PE programs.

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APPENDIX

REVIEW OF RELATED LITERATURE

## INTRODUCTION

## Physical Education and the Curriculum

Physical Education core purpose is to provide movement experiences though which young people develop into healthy and active adults. NASPE (2004) standards define what a physically educated individual as one who:

> (a) demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities, (b) demonstrates understanding of movement concepts, principles, strategies and tactics as the apply to the learning and performance of physical activities, (c) participates regularly in physical activities, (d) achieves and maintains a health-enhancing level of physical fitness, (e) exhibits responsible personal and social behavior that respect self and others in physical activity settings, and (f) values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction. (p.2)

In order to achieve the goal of educating our youth physically different model of teaching have been used over the years. Today we have several models such as sport education, tactical games, movement education, health-related physical education, personal-social responsibility, and adventure education (Kulinna, 2008; Lund & Tannehill, 2010).

There are problems with many physical education programs. Some problems are related to accountability, effectiveness, and meaning (Cothran, 2001). Stroot (1994) suggests that physical education may not survive. Locke (1992) suggests that it would be better to change physical education than to repair it. The multi-activity model has been the most common model to teach in schools. Its purpose is to get students to try different sports and activities while keeping them interested (Siedentop, Mand, & Taggart, 1986).

However, this model lacks equity and relevance (Cothran & Ennis, 1999; Ennis 1999).

New models have been developed to improve PE. An example of a model used to improve physical education in elementary schools and get students more active outside the school is SPARK (Project Sport, Play, and Active Recreation for Kids) (Cothran, 2001). Adventure education is another model used to enrich PE (Paniccuci, 2003).

Adopting new curricular models is a possible way to improve the PE program in a school. If the model is well implemented, it will enrich the program that already exist or transform it. PE teachers are responsible for adopting and implementing the new curriculum in order to make it successful (Locke, 1992; Bechtel, 2001; Cothran, 2001). For this change to happen we must understand the PE teacher. Education literature examines the teacher and the teacher change from several perspectives.

**Adventure Education**

Adventure education (AE) is a process in which educators place or engage students in adventurous activities. In other words, educators create scenarios of uncertainty, excitement and risk in order to challenge the learner in educational experiences (Miles & Priest, 1990). According to Miles and Priest (1990), "the aim of this process is to learn from risk-taking, not to be damaged or destroyed by it" (p.1). Steffen and Wurdinger (2003) further explain AE as:

> From a pedagogical perspective, adventure serves as a unique mechanism to facilitate student development. Adventure education is the tool used to immerse students of all learning styles into an experiential activity, which includes elements of risk and challenge. Risk and challenge represent key ingredients to facilitate change. Change is the catalyst for student development. (p.10)

Priest explains AE's rationale, "The premise of adventure education is that change may take place in groups and individuals from direct and purposeful exposure to: Challenge,

New Adventures and New Growth Experiences," (Miles & Priest, 1990, p.114). Priest

(1990) continues by addressing the product of adventure education:

> The product of adventure education is personal growth and development. By
> responding to seemingly insurmountable tasks, groups and individual learn to
> overcome almost any self-imposed perception of their limitations into abilities;
> and, as a result, they learn a great deal about themselves and how they relate to
> others. (p.114)

The physical, psychological and social benefits of adventure activities have been

addressed by several authors (Ewert & Garvey, 2007; Stiehl & Parker, 2007).

It was in 1971 that Project Adventure Inc. (PA Inc.) introduced the Adventure

Education approach to teaching physical education in the U. S. Using the lessons learned

in Outward Bound, some former instructors decided to bring adventure education to

schools. The idea was to make adventure accessible to all students and to train teacher to

use adventure as a safe and relevant educational tool (Paniccuci, 2003). Since the

introduction of AE, the number of schools which adopted the AE model has increased

substantially. Project Adventure acknowledges that since the beginning AE has been part

of physical education. PA Inc. further explains that AE is just one more model within

physical education; it tries to enhance what is already there. Somehow, AE enriches a

physical education program (Paniccuci, 2003).

### Educational Reform and Teacher Change

In 1983 was the release of the report <u>A Nation at Risk</u> the National Commission

on Excellence in Education (NCEE, 1983) which initiated the first large scale educational

reform in United States. This report asked teachers to use new methods and new

approaches to improve learning in schools (Fullan, 1992; Rosenholtz, 1991).

Administrators were asked to provide support for teachers' needs by providing relevant

professional development (NCEE, 1983). In 1996 the National Commission on Teaching in America's Future (NCTAF) released the report What Matters Most: Teaching for America's Future (1996). One of the main focuses was the teachers as key elements in the improvement of the American education system.

Both of these reform movements prompted abundant research on the area of teacher change. Since then, the teacher change process has been studied from different perspectives using different frameworks in order to understand it and promote it. That way it can have a positive impact on the teaching-learning process.

## Teacher Change and Physical Education

Cothran's (2001) research on curricular change in physical suggests that changes are initiated because of dissatisfaction and continue into an implementation depending on financial resources and information. In some cases the changing agent is the teacher. This type of internally initiated change has more potential for success because the teacher is ultimately implementing the change (Driel, Beijaark, & Veloop, 2001; Fullan, 1991). Cothran (2001) proposes an exploration of the teacher-initiated change by exploring "(1) what stimulates a teacher to engage voluntarily in a curricular change; and (2) what steps and support did these teachers use to bring about change in the program" (p.68). Reeves (2009) has explored educational change and how this change process can be difficult and even overwhelming endeavor. There are challenges and obstacles to overcome. The literature of educational change is numerous (Richardson & Placier, 2001). They have explored the two fields of studies in the area of teacher change: the first at individual or small group level and it is cognitive, affective and behavioral. The second happen at a larger scale and it is more organizational. Cuban (1993) notes the fact that this literature

focuses on teacher resistance to change instead of what causes the change.

There are studies about teacher initiated change. Additionally, several authors have explored the factors that affect teacher change and the adoption of new curricula (Fullan 1991; Fullan, 1993; Ni, 2009; Reeves 2009). Changes in curricula usually happen in a top-bottom fashion. They are initiated at the administration level or they are driven by government mandates (Ni, 2009, Richardson & Placier, 2001). When changes happen in a bottom-up faction they are more desirable by teachers specifically considering that the teacher is a key implementing agent (Richardson & Placier, 2001). Richardson and Placier (2001) refer to it as normative-re-educative change. In this case teachers get involved as changing agents with a sense of ownership and the results are more fruitful (Driel et al., 2001).

### Exploring the Teacher Change Process

Teacher change has been studied and researched from many perspectives. Two of the perspectives that have been used to examine this change process are: frameworks for change and contextual factors. The teacher change is a complex process difficult to examine and therefore needs to be looked from different perspective to be understood (Bechtel, 2001). The extensive literature on educational reform and concretely teacher change attest to its impact on the education.

**Frameworks for Teacher Change**

Different frameworks have been used to examine teacher change. In a case study Fullan (1992b) concluded that schools need to know the reason for change and how that change takes place. He identified four important elements that affect the change process: active initiation and participation of teachers, need and support for change, behaviors and

beliefs changes, and the ownership of change (Fullan, 1992b).

Shaw, Davis, and McCarty (1991) developed a framework with four key components: the cultural environment, quality of perturbations, their commitment to change, and a vision of the change they desired to make (Shaw et al., 1991). Teacher reflection was fundamental in order for teachers to examine themselves and make the necessary changes to improve. In this framework, perturbation is needed to ignite the change process, followed by a commitment to change the teacher needs a vision of where he or she wants to go. These three aspects happen within a school culture which may offer resources, support, a belief system, etc. (Shaw, Davis, & McCarty, 1991).

Fullan and Stiegelbauer (1991) consider both the classroom and the school improvements in their model of change. They identify 5 themes that explain the change process: vision-building, evolutionary planning and development, initiative taking and empowerment, professional development and support, coping with problems and restructuring. The second theme (evolutionary planning and development) in this model explains the importance of a relation top-down and bottom-up in sharing ideas and practices. The last component (coping with problem s and restructuring) is essential in this model because school structures must evolve for effective change to take place.

**Contextual Factors**

Some of the contextual factors that have been examined to explain the teacher change process are: school culture, principal support, teachers' role, the role of social organization, status of physical education, curriculum and instruction issues, and curricular change (Bechtel, 2001).

**School culture:**  A study on school culture conducted by Schweiker-Marra (1995) examined the norms, beliefs, and values teachers share while dealing with change. One important conclusion was that the cultural norms can encourage and support the change process.

Rovegno and Bandhauer (1997) did a study on teacher change in physical education focusing on school culture norms. They observed a teacher's adoption of a new curricular approach (movement education) over a three year period. They determined that five norms affect the process, namely: school philosophy, the learning of the teacher, teacher participation, power and responsibility, and the tendency that it can be done. In the school where they conducted their study, the administration, staff, and faculty had similar goals. Therefore the norm defining the school philosophy was supportive of the change process. The teacher in this case study didn't feel isolated. They also found that the other norms contributed to a positive and empowering environment (Rovegno & Bandhauer, 1997).

Pope and O'Sullivan (1998) studied the professional culture in the process of teacher change during a curricular model implementation. They examined the culture of the school and the culture of the teacher. The themes that emerged in this study were: distraction, distance, dismay, and determination. They concluded that the cultural context is essential to understand the change process in PE.

**Principal support:**  Faucette (1987) did a study on PE participation styles and concerns during in-service. This study provides some insight about principals' support during the teacher change process. The seven elementary teachers who participated were classified as actualizers (users), conceptualizers (they think the change is good but they

don't adopt the innovations), and resisters to innovation. In this study the actualizers felt that the principal was supportive of their teaching efficacy.

The literature of change addresses the importance of the principal as an educational leader and facilitator of change (Fullan, 1992a; Richardson & Placier, 2001). Principal's support during the AE adoption process of the participants was an important finding in a study by Fullan (1992). Fullan (1992) found that when principals act as educational leaders they facilitate change. They can also impede change when they don't act on the process.

Fullan and Hargreaves (1996) conducted a research study on principals and teachers roles during the change process. Their study offered several guidelines to principal to guide the change process: know the culture, know and value the faculty, promote collaboration, plan instead of mandate, be a facilitator. They also offered guidelines for teachers: voice your inner teacher, practice reflection, trust people and processes, make commitments, redefine yourself as teacher in class and beyond, keep students' development in sight while you develop (Fullan & Hargreaves, 1996)

**Social Organization:** Ward and his colleagues in the Saber-Tooth Project addressed the issue of reform and teacher change of PE in middle schools (Ward, Doutis, & Evans, 1999). Collegiality was one of the themes that emerged out of this study. A sense of unity and collaboration took place during this project. Planning and assessments was a second theme as a component of the change process. The third theme was professionalism. Teachers in this project felt their teaching role to be more important and that affected them positively. An interesting finding from this project was that teachers were not aware of teaching using different PE curricular models. An important

conclusion of this study is that we need to move away from the multi-activity approach in PE in favor of a curriculum that is more relevant and with more focus.

**Curriculum and instructional issues:**  Siedentop, Doutis, Tsangaridou, Ward, and Rauschenbach (1994) conducted a study of curricular and instructional issues among PE teachers. The part of the study that address the curriculum remarks aspects such as the functionality of the curriculum, the amount of autonomy teachers had and how students were scheduled in their classes. A finding in this study was that teachers needed students' cooperation for classes to work. Another important finding was that PE needs to be presented differently if we wanted to improve the status of PE.

**Curricular change:**  Cothran (2001) conducted a study to research the characteristics of PE teachers who successfully adopted new curricular models. All the participants in this study self-initiated curricular change. These teachers went through three stages during the curricular change process: initiation (curriculum change was considered), implementation (the change took place), and continuation (the change was successful and continued for several years). It was found that these six teachers possess three similar characteristics, namely: they reflect on their program and how it affects students, they consider students a source of power during the change process, and they look beyond their gyms and schools for support during the change process.

Ni (2008) conducted a study in the field of computer science to find out "what convinces a CS [computer science] teacher to change and adopt something new--- or not?" (p.1). This study tried to find out which are the factors that motivate teachers to adopt a new CS curriculum. Findings of this study indicated that, "teachers' attitudes and beliefs about curriculum, students and teachers themselves influenced their decision on

adoption of curricular innovation" (p.4).

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