HIGH SCHOOL SPORTS PARTICIPATION AND EDUCATIONAL ATTAINMENT:

RECOGNIZING, ASSESSING, AND UTILIZING THE RELATIONSHIP

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Dr. Douglas Hartmann

University of Minnesota
Department of Sociology

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EXECUTIVE SUMMARY

This report provides a brief summary overview of scholarly research, knowledge, and understanding of the relationship between interscholastic high school sports participation and educational achievement in the United States. It is organized into three main parts, each detailing a key aspect of the literature. The first reviews the preponderance of evidence that has been accumulated over the years which documents the strong and positive correlation between athletic involvement and the academic success of student-athletes. The second section summarizes the research into the social sources of this association between sports and education (its causes), as well as the ways in which the relationship varies for certain social groups, different types of sports, and in different kinds of school settings. The third and final section of the report highlights implications for policy formation, program design, and training as well as suggestions for future research and analysis. Through, the goal and intent is to focus attention on the educational possibilities and potential of interscholastic athletics.

High School Sports Participation and Educational Attainment: Recognizing, Assessing, and Utilizing the Relationship

The relationship between high school athletic participation and educational achievement is one of the most discussed, debated, and researched topics in all of sport scholarship, particularly when one looks at the social scientific research focused on sport and society interactions and their consequences. Dozens of dissertations have been written on the topic, and new studies and papers—the best and most important of which are reviewed in this report—appear every year. Ongoing for nearly half a century (as old as sport studies itself), research and writing on this topic has come from academic disciplines ranging from sociology, psychology, and economics to sport management, kinesiology, and education, and yielded some of the most sophisticated and clear findings of any topic in the field.

Two main insights or findings emerge from this voluminous body of work for the general, non-specialist audience. First and most important, this research has time and again demonstrated a strong and positive correlation between high school sports participation and academic achievement. This basic, baseline finding holds for a wide variety of measures and on a whole range of data sets, methodological approaches, and social conditions. In contrast to prevailing 'dumb-jock' stereotypes, kids who play sports, on average, tend to perform better

in school than kids who don't. That said, scholars have also discovered that the factors and forces that help produce and explain the basic relationship or association between athletics and academics are far more complicated and multifaceted than sports idealists have often believed or assumed. The relationship between athletic involvement and academic success is not, for the most part, a direct, causal one. It can, in fact, vary dramatically depending upon type of sport, level of participation, the background of the student-athletes involved, school characteristics, and the relationship between the athletic program and the academic curriculum. Indeed, for some groups under certain conditions, sports participation can be detrimental, functioning as a risk factor for academic performance or substance abuse. This variability is the second basic insight of the field, and has led to an ongoing scholarly effort to isolate and evaluate the causal factors that account for the correlation between sport participation and academic achievement and its limitations. A comprehensive examination and assessment of the limitations and variability of the sport/education relationship is crucial if we are to understand how to best utilize and exploit sports programming and participation for educational benefit.

The report is an attempt to discuss and elaborate these basic insights as a way to summarize what scholars and other experts know about the relationship between athletic participation and educational achievement. It has three specific objectives, organized into three main sections. The first is to demonstrate the strong, positive correlation between high school athletic participation and educational achievement. The second is to explore the causal links and social

variations that constitute and complicate this basic relationship—factors ranging from sampling and selection issues to subgroup variations and mediating, contextual influences. The third and final section will then highlight and discuss some of the implications of these relationships and variations as they apply to program development and policy formation.

I. Recognizing the Basic Relationship

Current scholarly knowledge about the relationship between sports and academic performance derives from and is based upon a long-term, multi-faceted body of research and writing. Much of the inspiration for this work came from James Coleman's classic *The Adolescent Society* (1961) which posited the powerful impact of interscholastic athletics in general and athletes in particular on American high school culture. Though focused on peer group dynamics and institutional effects and somewhat critical of the status of sport as related to the academic mission of schools, Coleman's work gave rise to numerous academic studies of the relationship between athletic participation and education for individual students and student-athletes (Cf. Rehberg and Schaefer 1968; Spady 1970; Hanks and Eckland 1976; Otto and Alwin 1977; Landers and Landers 1978). The basic result of this work was to establish a strong and positive baseline correlation between high school sports participation and academic achievement. Students who participate in high school sports tend, on average or in general, to perform better academically than their non-athletic peers.

The explanations for this association—that is, its social sources, the causal factors and actual mechanisms that produce it—are complicated, and much of the research on the topic in recent years has been devoted to trying to analyze and unpack it, identifying the underlying causes or sources of this correlation as well as exploring its variability and limitations. In terms of causal factors, for example, there is an ongoing debate about the extent to which the relationship is the result of being involved in high school athletes (thus suggesting that sports participation directly facilitates or enhances academic achievement) as opposed to being the product of other, related social factors such as parental income or education (factors that are well known to determine much educational attainment and correlate highly with sports participation). In terms of variations, researchers have been examining how this relationship may be impacted by different types or levels of sport participation as well as how it may operate differently for diverse social groups or under different institutional conditions and configurations. (The following section, in fact, offers a more detailed discussion of these and other ongoing discussions and debates in the literature).

Nevertheless, the crucial point for a general audience is that periodic updates, reviews, reappraisals and re-evaluations (Braddock 1981; Picou et al. 1985; Holland and Thomas 1987; and Marsh 1992) have, over the years, consistently and invariably yielded evidence concluding that there is a significant baseline correlation between high school sports participation and higher rates of academic achievement and aspiration for individual students. This strong,

positive relationship—memorably characterized by Marsh and Kleitman (2003) as “mostly gain with little pain”—appears to hold for a whole range of educational outcomes ranging from good grades and better test scores to higher graduation rates and college aspirations as well as the avoidance of negative trajectories such as dropouts (McNeal 1995; Mahoney and Caines 1997) or, in a more complicated case, delinquency (see footnote below). Even research that is critical of the sports/education nexus or that seeks to complicate and unpack this statistical association begins from this basic assumption and understanding. The relationship between high school sports participation and scholastic achievement is, in the words of one such research team (Miller et al. 2005), a “fact, well-established.” (For additional examples and evidence, all reviewed further below, see: Lipscomb 2006; NASBE Special Commission 2004; Eitle and Eitle 2003; Guest and Schneider 2003; Crosnoe 2002; Videon 2002; Fejgin 1994; Sabo, Melnick, and Vanfossen 1993).

This knowledge and information is important for several reasons. First and most significantly, it dispels—or perhaps more accurately *could* dispel if more widely promoted, publicized, and understood—prevailing cultural stereotypes and myths about “dumb jocks” and thus helps focus attention instead on the educational benefits, opportunities, and possibilities of high school sports participation. Indeed, when it comes to educational attainment, interscholastic athletics compare favorably to other, more stereotypically “intellectual” extracurricular activities such as band, debate, music, and the arts that facilitate

learning and achievement (Barber, Eccles, and Stone 2001; Eccles and Barber 1999; and Marsh 1992).

Here it is also worth pointing out that educational attainment is far from the only pro-social activity, attitude, or outcome associated with high school sports participation. Developmental theorists, for example, have long talked about the character-building and socializing impacts of sport, based upon a correlation between skills and habits required for success in the classroom, sports arena, and daily life (Cf. McHale et al. 2005; Eccles et al. 2003; Danish 2002; Ewing, et al. 2002; Larson 1994; Spreitzer 1994). Recent psychological and social psychological research appears to confirm a relationship between sports participation and both mental health and self-esteem (Miller et al. 2005; Darling et al 2005), and in recent years economists have found that sports participation is associated with higher post-school wages and income (Ewing 2007, 1995; Curtis, McTeen and White 2003; Barron, Ewing, and Waddell 2000; Howell 1984). Even more recently, sociologists have begun to explore the role that sports participation plays in community involvement and the cultivation of social capital more generally (Perks 2007; Harvey, Levesque, and Donnolly 2007; McHale, et al. 2005).[1]

[1] An additional body of work that is relevant here but a bit more mixed in its findings is the literature on relationship between sport participation and delinquency/deviance. The classic, foundational treatment was from Schafer (1969) in the tradition of Coleman's classic study of adolescents. A whole host of speculative and theoretical works appeared in subsequent years, including Purdy and Richard 1983; Hughes and Coakley 1991, that were far more uneven and even contradictory in their claims about this relationship and the impacts of athletic activities. In recent years, a new, more empirically-based, testing-oriented series of studies has begun to appear. These include: Hartmann and Massoglia 2007; Hoffman 2006; Eitle and Eitle 2002; Crosnoe 2002; Begg, et al. 1996.

At the same time, all of the empirical evidence that demonstrates a strong statistical correlation between sports participation and educational attainment does not mean that sports automatically and inevitably contributes to academic achievement at either an individual or institutional (i.e., school) level. Correlation, in short, does not necessarily indicate causation. In fact, scholars and other experts believe that the relationship between sports participation and academic achievement—or any other type of positive social outcome, for that matter—is far more complicated, multifaceted, and contingent *and* less direct than this. An understanding of the complexities and variations of sport's educational impact is crucial if sports programming and policy is able to take full advantage of the educational potential of sport (and avoid the potential pitfalls and shortcomings). It is thus incumbent upon us to better understand the nature and complexity of the relationship between athletic involvement and academic achievement; more specifically, to identify the underlying causes or sources of this correlation as well to explore its variations and limitations. For scholars, educators, and sports policy makers and practitioners establishing the basic link between high school sports and educational attainment is not the end of the discussion—only its beginning.

II. Assessing the Relationship, Unpacking its Complexities

Scholars have taken many different approaches to the challenge of analyzing and unpacking the basic, positive correlation between interscholastic sports participation and individual educational outcomes. For some, the primary

objective is to try to estimate or determine the magnitude of sport's impact on academic achievement. In a recent econometric analysis, for example, Lipscomb (2006) found that high school sports participation resulted in a two percent (2%) increase in standardized math and science test scores on a national survey sample, net of other background factors and social variables. Moreover, student-athletes were five percent (5%) more likely to aspire to college attendance than their non-athletic peers (a number that doubled to 10% if sports participation was paired with some other form or forms of extracurricular participation). For others, the approach is more comparative, situating the academic impact of sport in relation to other school activities and pursuits. Such analyses, as mentioned above (see, once again, Barber, Eccles, and Stone 2001; Eccles and Barber 1999; and Marsh 1992), have yielded results that are encouraging for sports advocates and practitioners eager to tout the educational potential of sports; however, these studies also tend, perhaps appropriately, to be somewhat less precise and definitive in their claims and conclusions.

Such assessments of magnitude and significance assume, almost by definition, a direct, causal link between sport participation and educational attainment. Athletic involvement, in other words, is believed to directly produce academic success that can be measured and assessed accordingly. However, many experts and scholars are unwilling to grant this assumption automatically or without qualification.

There are several reasons for the skepticism surrounding causal claims. Part of the problem is the implication or outright assertion that all sports

participation has the same effects for all social groups even under different conditions. Researchers have long called such generalizations into question on both methodological (McCormack and Chalip 1988; Chalip 1980) and empirical (Chalip et al. 1984) grounds. It is "increasingly apparent," as Miller and colleagues (2005) summarize, that "the protective effects of sports with respect to academic outcomes is neither universal nor indisputably causal in nature" (p. 179). Another issue has to do with mechanisms. Even assuming that athletic participation directly produces academic achievement, what is it that actually brings about a positive, significant effect? The answer to this question is crucial not only for scholarly or theoretical reasons but also for practical ones. If we are to create and sustain programs and policies that utilize sport to promote academic achievement, policy makers, program designers, and practitioners have to understand what it is about sports participation that is positive and beneficial in the first place. For these reasons (and others), the bulk of research and writing in the field over the last two decades has been devoted analyzing and explicating the causes or actual mechanisms behind the sports/education correlation as well as assessing the limitations, constraints or variations on this general, positive pattern.

Competing Theories One of the first steps in any empirical analysis of causation is to specify and articulate the various causes that could, hypothetically or theoretically, account for these patterns, processes, and differences. Many different reasons have been offered to account for the strong and significant statistical relationships between athletic involvement and educational attainment.

Perhaps the most frequent in the popular lexicon involve claims about sport being an inherently pro-social cultural form, an activity that helps to instill virtue, character, and discipline in young people. Coaches, parents, educators, and even many scholars claim that youth sports participation gives kids the skills and attention needed to engage in pro-social behavior and the physical activity to maintain a healthy lifestyle. While not necessarily opposed to such explanations, sociologists tend to emphasize more social or institutional factors or mechanisms. Snyder and Spreitzer (1990), for example, lay out the following set of possibilities: increased interest in school, the need to maintain good grades to stay eligible, increased attention from adults like teachers and coaches, membership and interaction with educationally oriented peers, college aspirations for sports participation. In short, more individually-oriented, psychological analysts tend to emphasize and highlight the more individual-level, person-specific explanations and accounts, while more socially or sociologically oriented studies tend to focus on more social or institutional level variables, factors or accounts.

An additional set of theoretical considerations that complicates causal testing further is the possibility that sport may have no causal impact on educational attainment whatsoever, or that athletics may even have negative impacts. The latter possibility cannot be dismissed out-of-hand. It is not just scholarly critics who suggest that sports may be a time and energy drain for student-athletes, or that an over-emphasis on sports might distract attention and concern from the core academic curriculum and educational mission of schools.

In this context, it is important to realize that many sport scholars are not just skeptical of sport's social and educational potential but are openly critical of what they see as sport's role in producing and reinforcing social inequities related to race, class, and gender in contemporary American society (Cf. Foley 1990).

These various (and competing) causal theories and explanations have proven quite difficult to adjudicate and evaluate conclusively. This is not only because of the usual disciplinary differences in method and orientation but, more fundamentally, because all levels and types of analysis have encountered shortcomings with sampling and selection that make any causal analysis difficult to undertake and sustain.

Sampling and Self-Selection Probably the biggest problems with research into the causal links between academic achievement and sports participation have to do with data limitations related to sampling and selection. Sampling is probably the more basic issue and the easier to comprehend.

Basically, the studies that present the best models and make the strongest causal claims are almost all based upon samples of students and student-athletes that are too small for sophisticated statistical analysis or too localized and specific to be able to generalize from in any meaningful way. It is not uncommon to see studies making causal claims based upon samples of students and student athletes drawn from only one or a handful of schools, and/or from a very particular (i.e., non-representative) population or locale. One recent and well-known set of papers in sociology, for example, comes from a survey of some 600 students in rural, upstate New York. While the findings and models from

such studies are not without value, they are far from providing the empirical foundation for definitive conclusions about the factors that drive and determine the link between academics and athletics.

The flip-side of the problems of sample size and lack of generalizability is that the large, representative national longitudinal data sets typically utilized for research on educational attainment and social mobility—the High School and Beyond (HSB) study, for example, or the National Education Longitudinal Study (NELS) or the Adolescent Health Longitudinal Study (Ad-Health)—have only the most basic of data and measures on sport participation to draw from. The researcher may be able to determine if a particular student was involved in athletics in some fashion, but this is typically just a self-reported measure and it is usually impossible to specify what sport (or sports) he/she played, what level they played at, and how much time and energy was invested in the pursuit (not to mention the school/community context in which sport was practiced).

The absence of rich, reliable data on sport participation is especially problematic for establishing causal relationships and mechanisms because young people who typically get involved (or "choose" to participate) in sports are generally from richer, more educated, and more privileged families—backgrounds which are highly correlated not only with success in schools but also with sports participation itself (Fejgin 1994). In this case, the success in school of students who play sports may not be because of sports but because students who play sports tend to be better students in the first place. This is

what is called in the field a “selection problem” or “self-selection bias” (see, especially, Eitle and Eitle 2003; Crosnoe 2002).

In one of the most sophisticated and comprehensive sociological studies of this topic, Tamela and David Eitle found African American boys are 1.6 times more likely than their white counterparts to play football, and 2.5 times more likely to play basketball. White boys, on the other hand, are more likely to play all other sports than African Americans. When other factors are controlled for, black males are actually 2.5 times more likely to play football and 5.7 times more likely to play basketball than white males. (See Goldsmith 2004, 2003 for additional and more detailed discussion and analysis). These racialized patterns of participation and self-selection are crucially important because, as is detailed further below, participation in sports like basketball and football appears to be less likely to be linked with academic achievement, and may even be associated with more negative affects. For what it is worth, participation in all other sports (which richer, white students tend to select into) is where the positive correlations are the most pronounced.

Obviously, then, the relationships between and among family background, sports participation, and academic achievement are complicated and multifaceted. More than a few studies have aspired to “unpack” and clarify the causal nature and direction of these relationships (Miller et al. 2005; Videon 2002). Nevertheless, without good nationally representative data, appropriate measures of sport participation, and/or comparable student-athlete/non-student

athlete samples, it is simply impossible to prove that it is sports participation itself that is the variable or factor that is producing strong academic performance.

Social and Contextual Variations If empirical research and researchers have been hard pressed to confirm a straightforward causal link between interscholastic athletic participation and academic achievement, they have become quite adept and successful in documenting variations in social background and sporting experience that appear to impact the strength and direction of the statistical correlation between athletic participation and educational attainment. The most powerful and important of these are: type and intensity of sports participation; social background variables of race and gender; and socio-institutional factors such as school type and the relation of the sports program and academic curriculum.

Type and Intensity of Sports Participation Not all sports participation is created equal (or functions equally). Quite the contrary, as Chalip and his colleagues (1984) documented in a wonderful experimental study over two decades ago. There are powerful and significant variations in the experience of playing sport, and it seems reasonable to assume that these variations may be associated in different ways with different outcome variables such as academic achievement (see also Sokol-Katz 2006). And indeed as previously mentioned Eitle and Eitle (2002) have suggested that certain sports—basketball and football among the most common—are negatively associated with athletic achievement in certain studies and for certain groups of student-athletes. This is probably not surprising: these are the sports that are typically the most demanding of

students, that receive the most public/community scrutiny and attention, and that are most likely to lead students to believe that college competition and professional contracts are forthcoming.

Another aspect of the athletic experience that appears to have implications for academic achievement is the intensity of the sporting experience, the amount of time and energy devoted to sport. The importance of an athletic or 'jock' identity has become a popular topic for investigation in recent years (Cf. Barber, Eccles, and Stone 2001; Miller et al. 2005; Fischer et al. 1996; Crosnoe 2002) and is probably the best measure or at least most common proxy for this factor. While the literature is not comprehensive and future research could benefit from more in-depth and controlled analysis, early results suggest that a well-developed athletic identity does not detract from academics but in fact is associated positively with educational achievement (though, according to Miller et al. 2005), jock identity can be a potential risk factor for school misconduct as well). Those who have investigated this most thoroughly (Crosnoe 2002; Barber, Eccles, Stone 2001; Guest and Schneider 2004) have postulated that this largely positive relationship is because stronger identification with sport leads to a stronger identification with school, school community, and educational objectives though other explanations and factors probably play a role here as well.

Distinctive Subgroup Variations In exploring limitations and variations to the general sport/educational pattern, race is among the various subgroup differences that scholars have paid the most attention to over the years. Early research on potential racial variations in the relationship between sports

participation and academic achievement focused mainly on black/white differences and was somewhat mixed. On the one hand, there was some evidence that the educational aspirations of African American youth were increased or intensified by athletic involvement (Braddock 1981); on the other hand, evidence for the impact on grades or achievement scores was sparse (Melnick, Sabo, and Vanfossen 1992). In one of the most recent nationally-representative analyses, Tamela and David Eitle (2002) have suggested that African American youth—especially boys—are not only more likely to play football and basketball but also to be negatively impacted by these activities. "Rather than sports serving simply as a drain on energies that could be spent maximizing academic achievement, males may end up pursuing some sports because they lack the resources to perform well academically, which only serves to disadvantage them further in achieving academic excellence" (p. 142).

This stands in stark contrast to the situation for white athletes—who, according to the Eitles, are more likely to play sports other than basketball and football and more likely to benefit from this participation educationally. (Participation in other sports does not appear to be particularly positive for black youth though neither is it negative). Not all researchers are so critical and pessimistic about the impacts of sports participation for African American young men. Indeed, consistent with the "jock identity" work, Jordan (1999) has suggested that athletic participation helps African American students get more connected with and invested in the academic curriculum and mission of schools. In any case, one of the Eitles' chief conclusions is to link together the variables of

type of sports participation with social background and investment: “Our findings suggest that the link between sports and academics may differ, depending on the cultural resources that the student brings to school as well as the particular sport or sports the student plays” (p. 141).

Unfortunately, there is surprisingly little data and analysis on other, ethnic and racial groups in the United States. Despite some promising work in the late 1980s and 1990s by Don Sabo, Mike Melnick and Beth Vanfossen in conjunction with the Women’s Sport Foundation (Sabo and Vanfossen 1993; Melnick et al. 1992), Hispanics or Latino/as, by many measures now the largest minority group in America, are very little analyzed or understood. And this is to say nothing of Asian Americans, Native Americans or other ethnic subgroups and communities. Clearly this is an area in which new data and analysis is sorely needed, possibly utilizing new samples drawn from communities and regions where these various populations are more prominently represented.

The role gender plays in sport participation and academic success also became a central locus of study in the field beginning in the late 1980s. While always dangerous to generalize, two general patterns should be highlighted. First, it appears that boys are more likely to participate in sport than girls, though this has changed dramatically since Title IX and some have suggested is approaching equity (see, for discussions, Duncan 2007; Sabo et al. 2004). The second point—and the one more to the concerns of this review—is that the positive academic effects of sports appear, if anything, to be stronger for girls (Crosnoe 2001; Hanson and Krauss 1998; Sabo, Melnick, and Vanfossen 1993;

for a dissenting study see Videon 2002), which is especially notable because girls tend to perform better academically than boys to begin with. In one of the most recent studies to the effect, for example, Troutman and Dufur (2007) use NELYS data and multilevel models with randomized effects to show that females who engage in interscholastic high school sports have higher odds of completing college than their non-athletic counterparts.

A third point about the sport/education nexus for girls and young women that comes out of the deviance and delinquency literature (cited above) is also worth mentioning here. In terms of risk behaviors like drinking and drug use, substance abuse, teenage sex, and other forms of delinquent behavior, both boys and girls can be negatively affected by sports participation. Reasons given for these outcomes vary and range from peer pressure in athletic subcultures to a propensity for risk behaviors (for a brief review, see Hartmann and Massoglia 2007, pp. 498-500). However, the key points in this context are that these behaviors have potentially negative consequences for educational achievement and that young female athletes appear to be somewhat more likely to engage in them then male athletes (see for a fuller discussion Crosnoe 2002).

Institutional Contexts Another area that has received a good deal of attention from researchers in recent years is the importance of school and community contexts on the educational outcomes of sport participation. Institutional context can include a whole host of factors and variables ranging from school quality to the composition of the student body (Guest and Schneider 2004) all the way to neighborhood or geographical region (Fauth et al. 2007) or

the importance of sports in a school culture (Crosnoe 2001) or a coach's attitude about school and education more generally (Ryan and Segal 2006). The key point about school or institutional context is the environment within which sporting activities are pursued, and more specifically the question of how or to what extent there is a fit or match between athletic activities and broader academic or educational goals and outcomes. "Social context," as Guest and Schneider (2004) put it, "shapes the effect of participation as it relates to identity, achievement, and ambition" and does so in "ways that reflect school and community values" (p. 104).

The institutional context of athletic participation is vitally important because the research on the topic appears to indicate that while many extracurricular activities have fairly clear and consistent benefits for academic outcomes, sport participation is a bit more variable. Using the example of athlete identity, Guest and Schneider (2004) summarize: "It seems that playing sports and participating in non-sports extracurricular activities are good for academic achievement regardless of the setting, while the value of identifying as an athlete depends upon the setting" (p. 98). The reason for this variable impact, according to Crosnoe (2001) is "rooted in how young people give meaning to the nature and implications of different types of behavior." In his view, "Modeling academic…trajectories without attention to proximate and structural context or issues of timing obscures important differences among students" (Crosnoe 2002, p. 334).

The roles that coach, teacher, and parent play in adolescent sports is perhaps the most obvious and significant example of environmental influence. Some of the most successful sport and education programs are those that can effectively integrate parents, teachers, and coaches into the high school sport experience (Cf. Hartmann 2003). Each of these groups can add an extra level of attention and encouragement to a successful sport and academic experience, but this too is dependent on context. Coaches who also teach and strongly encourage academic success (above athletic success) and teachers who support athletics are the most effective in promoting academic achievement (Coleman 1991; Gould et al. 2007).

III. Implications: Exploiting and Utilizing the Relationship

Clearly, then, there is a strong, positive correlation between interscholastic athletic participation and educational performance. But it is also well-established that this relationship is not directly causal and is, in fact, contingent upon a number of social factors or variables including (if not limited to) social background, type and intensity of sports participation, and how sporting activities are contextualized and connected (or not connected) to academic attitudes and activities. Although the level and complexity of the interplay of factors affecting the relationship between interscholastic athletic activity and educational achievement has a tendency to overwhelm policy and program designers, it is possible to see and seize the opportunity that is presented instead. Simply by acknowledging that sport is not a cure-all for every struggling student in all situations, we can create more effective programs that give adolescents the attention, encouragement, and social bonding that they require using educationally-oriented sports programs as effectively as possible.

Here it is both useful and important to think about high school sports not as an inherently and automatically positive educational force but rather as more of what John MacAloon (2006; 1991) has called “an empty form,” a tool whose social meaning and use and impact is dependent on the ways in which it is employed (see also Hartmann 2003; Coakley 2002). If not properly manipulated or utilized, sport can be detrimental to educational performance and outcomes. Through a careful examination of for whom, where, and when sport is used, athletic and school administrators can design programs that target their

community in the most beneficial way possible. Indeed, these findings and this way of thinking puts a great deal of emphasis and importance on the organization, design, and implementation of interscholastic sports programs and policies—especially on the ground, at the micro everyday level of practice where kids experience and understand their participation in sport and its relation to their education.

Here scholarly research and writing provides us with a road map of many of the key factors that can be controlled and therefore must be taken into account in the development and implementation of school-based athletic programs. These include: type and intensity of sports participation; the different subgrounds, backgrounds, and communities one is dealing with; and the nature of the institutional environment and context within which a sports program is located and experience.

In terms of program design and implementation, two implications should be highlighted. First, it will be important to identify the social subgroups that are most in need of positive, proactive educational intervention in and through their scholastic sports participation and to design and implement sports activities with them and their needs at the forefront. The second implication has to do with creating the proper educational environment for athletic participation, finding the proper balance or relationship between academics and athletes. This process should be a two-pronged effort. One side of the equation would be to educate school administrators and teachers on the potential value of sports participation for educational outcomes. The other aspect—and that one that sports advocates

and practitioners have far more ability and responsibility to deal with—is to educate and train high school coaches and others involved with interscholastic sports on the nature of the relationship and how to facilitate it. Here, the ideas and practices of a program like the one operated by Larry Hawkins at the University of Chicago's community outreach office for many years might be an invaluable resource and guide (see, for discussion, Hartmann 2003).

Finally and in conclusion, it is necessary to reiterate the need for continued research and writing on this topic. For all that scholars know about the basic, statistical correlation between interscholastic high school sports participation and educational achievement, a clear, definitive understanding of the causal mechanisms and factors that produce this relationship is still waiting to be developed. We also need to better understand how these processes work differently for diverse groups of student-athletes and the institutional conditions and practice that can facilitate or inhibit achievement. This means not only *more* research but better, more sophisticated research: studies and analyzes that have larger, more representative samples and that collect better, more multifaceted measures of types and intensity of sports participation and the actual relationships of sports programs to the school and academic curriculum. Perhaps most important of all for practitioners, we need studies devoted not only to analysis but also to evaluation of existing sports programs and policies that are effective and that can therefore serve as models and prototypes for future program design and development.

While much remains to be done, a solid foundation of research and writing is also clearly in place, a body of work that can help us guide and direct sports programs and policies toward even better, more positive educational outcomes and impacts.

BIBLIOGRAPHY

Alwin, Duane F. and Luther B. Otto. (1977). Athletics, aspirations, and attainments. *Sociology of Education*, 50 (2), 102-113.

Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16*(5), 429-455.

Barron, J. M., Ewing, B. T., & Waddell, G. R. (2000). The effects of high school athletic participation on education and labor market outcomes. *The Review of Economics and Statistics, 82*(3), 409-421.

Begg, Dorothy J., John D. Langley, Terrie E. Moffitt, and Stephen W. Marshall. (1996). Sport and delinquency: An analysis of the deterrence hypothesis in a longitudinal study. *British Journal of Sports Medicine, 30*, 335-341.

Braddock, J. H., II. (1981). Race, athletics, and educational attainment: Dispelling the myths. *Youth and Society, 12*(3), 335-350.

Chalip, L. (1980). Social learning theory and sport success: Evidence and implication. *Journal of Sport Behavior, 3*(2), 76-85.

Chalip, L., Csikszentmihalyi, M., Kleiber, D., & Larson, R. (1984). Variations of experience in formal and informal sport. *Research Quarterly for Exercise & Sport, 55*(2), 109-116.

Coakley, J. (2002). Using sports to control deviance and violence among youths: Let's be critical and cautious. Pp. 13-30 Gatz, M. (ed.), *Paradoxes of Youth and Sport,* Albany, N.Y., State University of New York Press.

Coleman, J. S. (1961). *The adolescent society: The social life of the teenager and its impact on education*. New York: Free Press.

Coleman, J. S. (1991). Sport as an educational tool. *School Sports and Education,* (Chicago: University of Chicago), National conference issue, 3-5.

Crosnoe, R. (2001). The social world of male and female athletes in high school. *Sociological Studies of Children and Youth*, *8*, 89-110.

Crosnoe, R. (2002). Academic and health-related trajectories in adolescence: The intersection of gender and athletics. *Journal of Health and Social Behavior, 43*(3), 317-335.

Curtis, J. W. McTeen, and P. White. (2003). Do high school athletes earn more pay? Youth sports participation and earnings as an adult. *Sociology of Sport Journal*, 20 (1): 348-385.

Danish, S. J. (2002). Teaching life skills through sport. Pp. 49-60 in *Paradoxes of Youth and Sport*, edited by M. Gatz, M.A. Messner, and S.J. Ball-Rokeach. Albany, NY: SUNY Press.

Darling, N., Caldwell, L. L., & Smith, R. (2005). Participation in school-based extracurricular activities and adolescent adjustment. *Journal of Leisure Research, 37*(1), 51-76.

Duncan, M. C. (2007). Sociological dimensions of girls' physical activity participation. Tucker Center for the Study of Women and Girls in Sport, Working Paper, Minneapolis, University of Minnesota.

Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*(1), 10-43.

Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59*(4), 865-889.

Eitle, D., Turner, R. J., & Eitle, T. M. (2003). The deterrence hypothesis reexamined: Sports participation and substance use among young adults. *Journal of Drug Issues, 33*(1), 193-221.

Eitle, T. M., & Eitle, D. J. (2002). Race, cultural capital, and the educational effects of participation in sports. *Sociology of Education, 75*(2), 123-146.

Ewing, B. T. (1995). High school athletics and the wages of black males. *Review of Black Political Economy, 24*(1), 65-65.

Ewing, B. T. (2007). The labor market effects of high school athletic participation evidence from wage and fringe benefit differentials. *Journal of Sports Economics,* 8(3), 255-265.

Ewing, M.E., L.A. Gano-Overway, C.F. Branta, and V.D. Seefeldt. (2002). The role of sports in youth development. Pp. 31-48 in in *Paradoxes of Youth and Sport*, edited by M. Gatz, M.A. Messner, and S.J. Ball-Rokeach. Albany, NY: SUNY Press.

Fauth, R. C., Roth, J. L., & Brooks-Gunn, J. (2007). Does the neighborhood context alter the link between youth's after-school time activities and developmental outcomes? A multilevel analysis. *Developmental Psychology*, 43(3), 760-777.

Fejgin, N. (1994). Participation in high school competitive sports: A subversion of school mission or contribution to academic goals? *Sociology of Sport Journal, 11*(3), 211-230.

Fisher, M., Juszczak, L., & Friedman, S. (1996). Sports participation in an urban high school: Academic and psychological correlates. *Journal of Adolescent Health, 18*(5), 329-334.

Foley, Douglas E. 1990. The great American football ritual: Reproducing race, class, and gender inequality. *Sociology of Sport Journal*, 7(2): 111-135.

Goldsmith, Pat Antonio. (2004). Schools' role in shaping race relations: Evidence on friendliness and conflict. *Social Problems*, 51(4), 587-612.

_____. (2003). Race relations and racial patterns in school sports participation. *Sociology of Sport Journal*, 20(2), 147-171.

Gould, D., Collins, K., Lauer, L., & Chung, Y. (2007). Coaching life skills through football: A study of award winning high school coaches. *Journal of Applied Sport Psychology, 19*(1), 16-37.

Guest, A., & Schneider, B. (2003). Adolescents' extracurricular participation in context: The mediating effects of schools, communities, and identity. *Sociology of Education, 76*(2), 89-109.

Hanks, Michael and Bruce Eckland. (1976). Athletics and social participation in the educational attainment process. *Sociology of Education*, 49, 271-294.

Hanson, S.L. and R.S. Krauss. (1998). Women, sports, science: Do female athletes have an advantage? *Sociology of Education*, 71, 93-110.

Hartmann, D. (2003). Theorizing sport as social intervention: A view from the grassroots. *Quest,* 55, 118-140.

Hartmann, D., & Massoglia, M. (2007). Reassessing the relationship between high school sport participation and deviance: Evidence of enduring, bifurcated effects. *The Sociological Quarterly, 48*, 485-505.

Harvey, J., M. Levesque, and P. Donnolly. 2007. Sport, volunteerism, and social capital. *Sociology of Sport Journal*, 24(2): 206-223.

Hoffmann, J. P. (2006). Extracurricular activities, athletic participation, and adolescent alcohol use: Gender-differentiated and school-contextual effects. *Journal of Health and Social Behavior, 47*(3), 275-290.

Holland, Alyce and Thomas, Andre. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known. *Review of Educational Research, 57*(Winter), 437-466.

Howell, F. M., Miracle, A. W., & Rees, C. R. (1984). Do high school athletics pay? The effects of varsity participation on socioeconomic attainment. *Sociology of Sport Journal, 1*(1), 15-25.

Hughes, R., and Coakley, J. (1991). Positive deviance among athletes: The implications of over conformity to the sport ethic. *Sociology of Sport Journal, 8*(4), 307-325.

Jordan, W. J. (1999). Black high school students' participation in school-sponsored sports activities: Effects on school engagement and achievement. *The Journal of Negro Education,* Winter, 54-71.

Landers and Landers. (1978). Socialization via interscholastic athletics. *Sociology of Education*, 51, 299-303.

Larson, Reed. (1994). Youth organizations, hobbies and sports as developmental contexts. Pp. 46-65 in *Adolescence in Context*, edited by Rainer Silberstein and Eberhard Todt. New York: Springer-Verlag.

Lipscomb, S. (2006). Secondary school extracurricular involvement and academic achievement: A fixed effects approach. *Economics of Education Review,* 26(4), 463-472.

MacAloon, J. J. (2006). The theory of spectacle: Reviewing Olympic ethnograpy. Pp. 15-40 in *National Identity and Global Sporting Events*, edited by Tomlinson and Young. Albany, NY: SUNY Press.

_____. (1991). What does sport teach? Why not differential equations, ancient-history, American social studies, human biology...? *School Sports and Education (Chicago: University of Chicago),* National Conference Issue, 9-14.

Mahoney, Joseph L. and Robert B. Cairns. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology, 33*(2), 241-253.

Marsh, H. W. (1992). Extracurricular activities: Beneficial extension of the traditional curriculum or subversion of academic goals? *Journal of Educational Psychology, 84*(4), 553-562.

Marsh, H. W., & Kleitman, S. (2003). School athletic participation: Mostly gain with little pain. *Journal of Sport & Exercise Psychology, 25*(2), 205-228.

McCormick, Jane B. and Laurence Chalip. (1988). Sport as socialization: A critique of methodological premises. *Social Science Journal,* 25, 83-92.

McHale, J.P., P.G. Vinden, L. Bruett, D. Richton, D. Shaw, and B. South. 2005. Patterns of personal and social adjustment among sport-involved and noninvolved urban middle school children. *Sociology of Sport Journal*, 22(2), 119-136.

McNeal, R. B. (1995). Extracurricular activities and high school dropouts. *Sociology of Education, 68*, 62-81.

McNeal, R. B. (1999). Participation in high school extracurricular activities: Investigating school effects. *Social Science Quarterly, 80*(2), 291-309.

Melnick, M. J., Sabo, D. F., and Vanfossen, B. (1992). Educational effects of interscholastic athletic participation on African-American and Hispanic youth. *Adolescence, 27*, 295-308.

Miller, K. E., Melnick, M. J., Barnes, G. M., Farrell, M. P., and Sabo, D. (2005). Untangling the links among athletic involvement, gender, race, and adolescent academic outcomes. *Sociology of Sport Journal, 22*(2), 178-193.

Miller, K.E., D. F. Sabo, M.P. Farrell, G. M. Barnes, and M. J. Melnick. (1999). Sports, sexual behavior, contraceptive use, and pregnancy among female and male high school students: Testing cultural resource theory." *Sociology of Sport Journal*, 16, 366-387.

NASBE, Special Commission. *Athletics and achievement: The report of the national commission on high school athletics in an era of reform* (2004). Alexandria, VA: National Association of State Boards of Education. (Retrieved Oct. 29, 2007, http://www.nasbe.org/healthy_schools/publications/Athletics.)

Otto, Luther B. and Duane F. (1977). High school context effects on aspirations. *Sociology of Education*, 50(4), 259-273.

Perks, Thomas. 2007. Does sport foster social capital? The contribution of sport to a lifestyle of community participation. *Sociology of Sport Journal*, 24, 378-402.

Picou, J.S., McCarter, V., and Howell, F. (1985). Do high school athletics pay? Some further evidence. *Sociology of Sport Journal, 2*, 72-76.

Purdy, Dean and Stephen F. Richard. (1983). Sport and juvenile delinquency: An examination and assessment of four major theories. *Journal of Sport Behavior, 6*, 179-193.

Rehberg and Schafer. (1968). Sport participation and academic achievement. *American Journal of Sociology*, 73, 732-740.

Ryan, T. D., and Sagas, M. (2006). Interrole conflict and turnover intent in the high school Teacher/Coach. *International Journal of Sport Management, 7*(4), 425-444.

Sabo, D., Miller, K. E., Melnick, M. J., & Heywood, L. (2004). *Her life depends on it: Sport, physical activity and the health and well-being of American girls*. East Meadow, NY: Women's Sport Foundation.

Sabo, D., Melnick, M. J., & Vanfossen, B. E. (1993). High school athletic participation and postsecondary educational and occupational mobility: A focus on race and gender. *Sociology of Sport Journal, 10*(1), 44-56.

Schafer, W. E. (1969). Participation in interscholastic athletics and delinquency: A preliminary study. *Social Problems, 17*(1), 40-47.

Sokol-Katz, J., Kelley, M. S., Basinger-Fleischman, L., & Braddock, J. H., II. (2006). Re-examining the relationship between interscholastic sport participation and delinquency: Type of sport matters. *Sociological Focus, 39*(3), 173-192.

Spady, William. (1970). Lament for letterman: Effects of peer status and extramural activities on goals and attainment. *American Journal of Sociology*, 75, 680-702.

Spreitzer, Elmer. (1994). Does participation in interscholastic athletics affect adult development? *Youth and Society*, 25, 368-387.

Synder, E. E., & Spreitzer, E. (1992). Social psychological concomitants of adolescents' role identities as scholars and athletes: A longitudinal analysis. *Youth and Society, 23*(4), 507-522.

Troutman, K. P., and Dufur, M. J. (2007). From high school jocks to college grads: Assessing the long-term effects of high school sport participation on females' educational attainment. *Youth and Society, 38*(4), 443-462.

Videon, T. M. (2002). Who plays and who benefits: Gender, interscholastic athletics, and academic outcomes. *Sociological Perspectives, 45*(4), 415-444.