

How U.S. Children and Adolescents Spend Time: What It Does (and Doesn't) Tell Us About Their Development

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Abstract

Young people develop as "the sum of past experiences," and data on their time use are one means of quantifying those experiences. U.S. children and adolescents spend dramatically less time than in the agrarian past in household and income-generating labor. Because such labor is usually repetitive and unchallenging, this reduction has probably not deprived youths of crucial developmental experience. The schoolwork replacing this time has a clearer relationship to developmental outcomes. American teens, however, spend less time on schoolwork than teens in other industrialized countries. American teenagers have more discretionary time, much spent watching television or interacting with friends; spending large amounts of time in these activities is related to negative developmental outcomes. Increasing amounts of young people's discretionary time, however, appear to be spent in structured voluntary activities, like arts, sports, and organizations, which may foster initiative, identity, and other positive developmental outcomes.

Keywords

time use; developmental experiences

Children's and adolescents' use of time, a topic of public debate since the 1920s, has reemerged as an issue of national concern. Alarm is voiced that American youths do too little homework, spend too little time with their parents, and spend too much time watching television and, now, playing computer games or surfing the Internet. The after-school hours have been identified as a time of risk, when unsupervised children are endangered and teenagers use drugs, commit crimes, and have sex. The underlying question is whether young people are spending their time in ways that are healthy and prepare them for adulthood in the competitive, global world of the 21st century. Another, related question is whether young people are being overscheduled and denied the creative, exploratory freedom of youth.

Time, as economists tell us, is a resource—one that can be used productively or squandered. For developmental psychologists, study of children's and adolescents' use of this resource offers a means to examine their portfolio of daily socialization experiences. Data on their time spent in different activities provide estimates of how much they are engaged with the information, social systems, developmental opportunities, and developmental liabilities associated with each context. Of course, information on time spent in specific activi-

ties is only a rough proxy for actual socialization experiences. The impact of watching TV for 2 hr depends on whom a child is with, what the child watches, and how the child interprets it. Even two siblings eating supper with their parents each night may have much different experiences of this time. Nonetheless, assessment of time spent in different activities provides a useful starting point for evaluating a population's set of developmental experiences.

A LIFTED BURDEN OF REPETITIVE DRUDGERY

If we look back over the past 200 years, the most striking historic change in young people's use of time is that youths spend much less time on labor activities today than they did in America's agrarian past. In current nonindustrialized agrarian settings, household and income-generating labor fills 6 hr a day by middle childhood and reaches full adult levels of 8 or more hours per day by the early teens. By comparison, in the contemporary United States, time spent on household chores averages 15 to 30 min per day in childhood and 20 to 40 min in adolescence; income-generating activities account for little or no time, except among employed older teenagers (Larson & Verma, 1999).

Has this dramatic reduction in labor taken away valuable developmental experiences? In a comprehensive review, Goodnow (1988) found remarkably little evidence that household chores foster development. Children gain activity-specific skills (e.g., cooking skills), and care of younger children, if well-supervised, may bring positive outcomes. But evidence for broader developmental gains is thin. In reality,

much time spent on chores in traditional agrarian settings involved highly repetitive activities, like carrying water and weeding fields; likewise, in contemporary America, most chores are mundane, with little challenge or developmental content. Evidence on the developmental benefits of U.S. adolescents' employment is more positive but also mixed. Definitive longitudinal studies indicate that employment during adolescence increases likelihood of employment and wages in early adulthood; however, teen employment over 20 hr per week is associated with greater delinquency, school misconduct, and substance use (Mortimer, Harley, & Aronson, 1999). Except in atypical circumstances in which youths have intellectually challenging jobs, it is hard to argue that more than 15 to 20 hr of employment per week brings additional developmental gains. Certainly, spending some time in chores and, especially, employment may provide useful learning experiences, but the dramatic reduction in youths' time in these repetitive labor activities appears to be a developmental plus.

Historically, this large burden of labor has been replaced by schooling, and schooling has clearer benefits. Young people often feel

bored and unmotivated while doing schoolwork, as they do during chores and employment, and many experience schoolwork, too, as drudgery. But unlike labor activities, schoolwork brings experiences of high challenge and concentration. Amount of time spent in education correlates with youths' knowledge, intelligence, and subsequent adult earnings (Ceci & Williams, 1997), and is related to growth of a society's economy. Thus, economically and in other ways, the displacement of labor by schoolwork is a positive change in young people's time use.

American youths, however, spend less time on schoolwork than youths in most industrialized nations. As with other activities, the largest cross-national differences occur in adolescence (Table 1). U.S. teens spend approximately three fifths the amount of time on schoolwork that East Asian teens do and four fifths the time that European teens do. These differences are mostly attributable to American teens doing less homework, estimated at 20 to 40 min per day, as compared with 2.0 to 4.0 hr in East Asia and 1.0 to 2.5 hr in Europe. These figures do not take into account national differences in length of the school year (it is shortest in

the United States) and overlook differences between individual students and school districts—some U.S. schools and state legislatures have recently taken action to increase homework. These figures also overlook possible differences in quality of instruction: An hour of schoolwork may yield more learning in one country than in another. Nonetheless, they provide one explanation for American students' lower test scores and raise questions about whether American youths are being disadvantaged in the new competitive global marketplace.

THE EXPANSE OF FREE TIME

What American youths, especially adolescents, have in greater quantities than young people in other industrialized nations is discretionary time. Studies carried out since the 1920s have found that 40 to 50% of U.S. teenagers' waking time (not counting summer vacations) is spent in discretionary activities. Current estimates are 25 to 35% in East Asia and 35 to 45% in Europe. Whether this time is a liability or gives American youths an advantage depends largely on what they do with it.

Table 1. Average daily time use of adolescents in 45 studies

Activity	Nonindustrial, unschooled populations	Postindustrial, schooled populations		
		United States	Europe	East Asia
Household labor	5–9 hr	20–40 min	20–40 min	10–20 min
Paid labor	0.5–8 hr	40–60 min	10–20 min	0–10 min
Schoolwork	—	3.0–4.5 hr	4.0–5.5 hr	5.5–7.5 hr
Total work time	6–9 hr	4–6 hr	4.5–6.5 hr	6–8 hr
TV viewing	<i>insufficient data</i>	1.5–2.5 hr	1.5–2.5 hr	1.5–2.5 hr
Talking	<i>insufficient data</i>	2–3 hr	<i>insufficient data</i>	45–60 min
Sports	<i>insufficient data</i>	30–60 min	20–80 min	0–20 min
Structured voluntary activities	<i>insufficient data</i>	10–20 min	1.0–20 min	0–10 min
Total free time	4–7 hr	6.5–8.0 hr	5.5–7.5 hr	4.0–5.5 hr

Note. The estimates in the table are averaged across a 7-day week, including weekdays and weekends. Time spent in maintenance activities like eating, personal care, and sleeping is not included. The data for nonindustrial, unschooled populations come primarily from rural peasant populations in developing countries. Adapted from Larson and Verma (1999).

Media Use

American teens spend much of their free time using media, particularly watching television. Studies indicate that TV viewing is American youths' primary activity for 1.5 to 2.5 hr per day on average. Curiously, the averages in other nations are quite similar. Within the United States, rates of viewing are found to be highest in late childhood and among boys, youths of low socioeconomic status (SES), and African Americans across income levels.

Current theories emphasize that viewers are active, not passive—they "use" media. Research indicates, however, that TV is rarely used for positive developmental experiences and that viewing is associated with developmental liabilities. A high amount of time watching entertainment TV—which constitutes most of youths' viewing—is associated with obesity and changed perceptions of sexual norms. Watching more than 3 to 4 hr per day is associated with lower school grades. Controlled longitudinal studies show that rates of viewing violence predict subsequent aggression (Strasburger, 1995). TV watching may sometimes be used for relaxation: Much viewing occurs in the late evening, when young people wind down before bed. But, on balance, TV time is developmentally unconstructive.

The new kid on the block, of course, is computer and Internet use, and we know little about developmental impacts of these new media. Rates of use in the United States are still small, but are increasing steadily. A recent national survey found recreational computer use to account for an average of 30 min per day for youths over age 8, with greater use among higher-SES youngsters (Roberts, Foehr, Rideout, & Brodie, 1999). Children spend more time playing computer games, whereas adolescents devote more time to e-mail

and other Internet activities. As with television, there are important concerns: about effects of violent and pornographic content, commercial exploitation, participation in deviant Internet groups, and social isolation among frequent users. At the same time, computers and the Internet permit more active individualized use than television and thus have more developmental promise. Young people can use these media to obtain information, develop relationships with people different from themselves, learn job skills, and even start companies, irrespective of their age, gender, ethnicity, and physical appearance. The question of developmental benefits versus liabilities for this use of time is not likely to have a singular conclusion; answers are likely to differ across uses and users.

Unstructured Leisure

The largest amount of U.S. youths' free time is spent playing, talking, hanging out, and participating in other unstructured leisure activities, often with friends. Play is more frequent in childhood than in adolescence, accounting for 1.5 to 3.0 hr per day in the elementary years. It is gradually displaced by talking, primarily with peers. U.S. first graders appear to spend about as much time playing as first graders in Japan and Taiwan, but play falls off more quickly with age in East Asia (Stevenson & Lee, 1990).

Abundant theory and research suggest that play promotes positive development. Piaget viewed play as an arena for experimentation and adaptation of mental schemas (including concepts and strategies) to experience. Research substantiates that play has relationships to children's cognitive, linguistic, social, and emotional development (Fisher, 1992). McHale, Crouter, and Tucker (2000), however, found that among 10-year-

olds, more time spent in outdoor play was associated with lower school grades and more conduct problems. Thus, more time playing does not necessarily facilitate more development.

Adolescents' talking, it can be argued, is play at a symbolic level. Social interaction is an arena for exploration and development of emotional, interpersonal, and moral schemas. Therefore, we might expect time spent interacting with peers to be associated with developmental gains similar to those for time spent playing. Little research has directly addressed this question, but longitudinal research shows that spending more time interacting with friends in unstructured contexts predicts higher rates of problem behavior (Osgood, Wilson, O'Malley, Bachman, & Johnston, 1996). This relationship is undoubtedly complex, depending on the content of interaction, individual dispositions, and numerous other factors. But these findings certainly contradict the argument that youths need large amounts of unstructured, free time.

Structured Leisure Activities

U.S. adolescents stand out from East Asian youths in time spent in voluntary structured activities, like sports, arts, music, hobbies, and organizations. (Insufficient comparative data exist for younger children.) Even so, the current media image of "overscheduled kids" is misleading. Among American teens, the average amount of time spent in these activities per day is measured in minutes, not hours (Table 1), although there is mixed evidence suggesting this time is increasing (Fishman, 1999; Zill, Nord, & Loomis, 1995).

What are the developmental benefits and costs of spending time in these activities? When participating, young people report experi-

encing high challenge, concentration, and motivation. This combination, which rarely occurs elsewhere in youths' lives, suggests they are engaged and invested in ways that provide unique opportunities for growth. Theory and a partial body of research suggest that these activities are associated with development of identity and initiative, reduced delinquency, and positive adult outcomes (Larson, 2000; Mahoney, 2000), although some studies have found sports participation increases alcohol use. More research is needed, but there is good reason to hypothesize that, under the right conditions, structured activities provide unique developmental experiences.

CONCLUSIONS

Are U.S. children and adolescents spending their time in ways consistent with optimal development? This question, I confess, makes me cringe. Taken to its logical conclusion, it suggests submitting every moment of youth to utilitarian "time and motion study." We know too well from current trends in education that when things can be measured—for example, by test scores—policy discussions focus on measures as ends in themselves, irrespective of more important harder-to-measure variables. Given our limited state of knowledge and the loose relationship between how time is spent and what youths actually experience, overemphasis on time allocation is certain to mislead. It also overlooks individual and cultural differences in learning processes and developmental goals. Human development is not a board game that can be won by having one's pieces spend the most time on selected squares. Developmental science needs models that conceptualize time as one among many variables affecting growth.

With these cautions firmly in mind, it seems important to consider quantities of time as part of the package when appraising young people's portfolio of developmental experiences. Should U.S. teenagers' schoolwork time be lengthened to match that of East Asian teens? In fact, East Asian societies are engaged in intense public debates about the stress and developmental costs associated with their adolescents' exclusionary focus on school achievement. Recent U.S. efforts to require more homework for all young people are probably justified, and there are empirical rationales for experiments with lengthening the school year and redistributing summer vacation throughout the calendar. But I think the most pressing issue for U.S. youths is not further increasing schoolwork time, but ensuring consistent quality in what happens during this time. My research shows that adolescents, including honor students, are frequently bored during schoolwork (this is also true in East Asia). It may be less important to pack more studying into the day than for researchers and practitioners to find ways to increase the quality of engagement for all students.

Are Americans' large quantities of discretionary time—40 to 50% of waking hours—a developmental asset or liability? A romantic view sees large blocks of unstructured time giving youths opportunities to explore, create structure on their own, learn to think outside the box, and perhaps "find themselves" in the existential ground zero of free choice. The underlying reality is that, left to themselves, children and adolescents often choose to spend time in unchallenging activities, like hanging out with friends and watching TV. Although some social interaction and time for relaxation are undoubtedly useful, it seems unlikely that spending many hours in unchallenging

contexts fosters development. The hypothesis that youths need and benefit from unstructured free time, nonetheless, remains worthy of creative research, especially if the time they spend on schoolwork increases.

The small but possibly growing amount of time children and adolescents spend in structured voluntary activities provides more developmentally promising use for some of these discretionary hours. In these activities, youths often experience challenge and exercise initiative. When adult leaders give responsibility to youths, they may provide better contexts for learning to create structure and think outside the box than can be found in free play or social interaction (Heath, 1999). In the absence of better knowledge, however, the current rush to create activities for after-school hours is unwise. Research is needed to determine the features of these activities associated with positive outcomes and how to fit participation to individuals' developmental readiness. A fundamental question is how to create activities with enough structure to contain and channel behavior without compromising youths' sense of agency.

Ultimately, development is probably best served by combinations of complementary activities, including those that shape good habits, teach literacy, build interpersonal relationships, foster initiative, and provide relaxation. The task of future research is to illuminate how quantities and qualities of experiences in different activities act in combination to affect development. Certainly, development is much more than an additive "sum of past experiences." We need to consider how individuals interpret, synthesize, and grow from experiences. Evaluation of time allocation is a useful entry point for examining links between experience and development, but only one small piece of a much more complex inquiry.

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Note

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