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# Activity 1.2

## The Benefits of Education

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### TEACHER'S GUIDE

#### VIDEO SUMMARY AND ACTIVITY OVERVIEW

For this activity, the students examine two tables on annual earnings of young adults from The Condition of Education 2004. (The activity may be updated yearly with new tables from <http://nces.ed.gov/programs/coe/>.) They review the concept of the *median* and then answer questions about the median salaries of young adults with different levels of education. The activity suggests some of the benefits of investing in human capital by staying in school.

#### CONCEPTS

Costs and benefits  
Career choices  
Investing in human capital  
Trade-offs

#### MATERIALS

Duplicated **Student Activity 1.2**, one for each student

### PROCEDURE

1. Explain that one reason for getting an education is to increase your earning power. Each year that you stay in school, you increase your knowledge and skills.
2. Distribute a copy of **Student Activity 1.2** to each student. Point to the two tables that summarize annual earnings of young adults. The first table shows median annual earnings for men and women with different levels of educational attainment. The second table shows the same information in ratio form.
3. Explain that half of the workers earn above-median salaries, while the other half earn below-median salaries. The salary in the middle is the median.
4. Ask the students to work in groups to come up with answers to the **Questions for Discussion** included in **Student Activity 1.2**. After allowing a suitable time, call on different groups to present answers to the class.

**A.** Table 1 shows median salaries. The median salaries for degree holders are higher than those of high school graduates. Does this mean that every degree holder made more than every high school graduate? Explain. *No. It means only that degree holders typically made more than high school graduates. In 2002 the midpoint salary for high school male graduates was \$29,647, but there are individual high school graduates who are unusually successful could make millions.*

**B.** In the year 2002, which group of males had the highest median salary? *Bachelor's degree or higher. How much money was that? \$48,955.*

**C.** Write down the salary of the highest-salaried male group in 2002. Now

divide it by the salary of the males who had a high school diploma or GED that year. Make your answer correct to two decimal places. What number did you get?  $\$48,955/\$29,647 = 1.65$  Can you find it in Table 2? *It is located in the next-to-last column of Table 2 for the year 2002.*

D. In Table 2, what do the entries “greater than 1.00” represent? *They represent groups with higher median salaries than the salaries of high school graduates of the same gender.*

E. In Table 2, what do the entries “less than 1.00” represent? *They represent groups with lower median salaries than the salaries of high school graduates of the same gender.*

F. Why would a business pay more to hire an employee with more education, instead of saving money by hiring someone with less education? *The employee with more education may be more productive and more capable of assuming responsibility. Also, by completing more education, the employee may have shown an ability to stick with a job until it is done.*

G. Looking at Table 2, has the earnings advantage of degree holders gone up or gone down since 1971? *The earnings advantage has gone up. How can you tell? For males and females, the ratio is substantially higher than it was in 1971. It went from 1.25 to 1.65 for males and from 1.43 to 1.71 for females.*

the Information Age—a time when it is especially important to get a good education.

## ASSESSMENT

- Which of the following represents the midpoint of individuals’ earnings, with half earning more and half earning less?
    - Median earnings
    - Unweighted average earnings
    - Normal earnings
    - Taxable earnings
  - There is a gap between the earnings of high school graduates and college degree holders. What has happened to that gap since 1971?
    - It has remained the same.
    - It has become smaller.
    - It has become larger.
    - It has become larger for women and smaller for men.
  - If college graduates’ earnings are greater than high school graduates’ earnings, then the ratio of college graduates’ earnings to high school graduates’ earnings will be
    - greater than -1 but less than 0.
    - greater than 0 but less than 1.
    - exactly 1.
    - greater than 1.
- Explain that while education has long been associated with greater earnings, the gap between those with more education and less education seems to be growing. Formal classroom education is one way of investing in human capital—gaining knowledge and skills. Explain that other forms of education, such as vocational training and on-the-job training, have similar effects on earnings.
  - Conclude by telling the students that they live in an important time in history. It is

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# Student Activity 1.2

## The Benefits of Education

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### Activity Summary

For this activity, you will examine two tables on annual earnings of young adults. Through investigation of salary figures, you will learn about the benefits of investing in human capital by staying in school.

Table 1 shows the median annual earnings of all full-time, full-year wage and salary workers, ages 25-34. [http://nces.ed.gov/pubs2004/2004077\\_App1.pdf](http://nces.ed.gov/pubs2004/2004077_App1.pdf) (Table 14.1)

Table 2 shows ratios calculated from the same information.  
[http://nces.ed.gov/pubs2004/2004077\\_App1.pdf](http://nces.ed.gov/pubs2004/2004077_App1.pdf) (Table 14.2)

### Questions for Discussion

- A. Table 1 shows median salaries. The median salaries for degree holders are higher than those of high school graduates. Does this mean that every degree holder made more than every high school graduate? Explain.
- B. In the year 2002, which group of males had the highest median salary? How much money was that?
- C. Write down the salary of the highest-salaried male group in 2002. Now divide it by the salary of the males who had a high school diploma or GED that year. Make your answer correct to two decimal places. What number did you get? Can you find it in Table 2?

D. In Table 2, what do the entries “greater than 1.00” represent?

E. In Table 2, what do the entries “less than 1.00” represent?

F. Why would a business pay more to hire an employee with more education, instead of saving money by hiring someone with less education?

G. Looking at Table 2, has the earnings advantage of degree holders gone up or gone down since 1971? How can you tell?

## Annual Earnings of Young Adults

Table 1. Median annual earnings (in constant 2002 dollars) of all full-time, full-year wage and salary workers ages 25–34, by sex and educational level: 1971–2002

Year	Male					Female				
	All males	Grades 9–11	High school diploma or GED	Some college	Bachelor's degree or higher	All females	Grades 9–11	High school diploma or GED	Some college	Bachelor's degree or higher
1971	\$42,918	\$35,087	\$41,113	\$44,743	\$51,218	\$27,567	\$19,888	\$25,217	\$28,749	\$36,096
1972	44,524	36,217	42,630	45,527	52,087	28,848	20,671	25,944	30,122	36,850
1973	44,783	37,029	43,179	44,502	52,273	28,549	21,842	25,289	30,175	36,654
1974	42,726	35,716	41,080	42,581	49,283	27,687	19,392	24,932	28,437	34,323
1975	41,348	34,050	39,464	42,816	47,031	27,794	19,465	25,026	28,370	34,276
1976	41,901	33,355	39,325	42,662	47,584	27,999	19,755	25,310	28,287	34,496
1977	42,362	33,307	40,406	42,324	47,151	28,210	20,316	25,709	28,696	33,451
1978	42,852	32,596	41,542	42,605	47,191	27,879	20,973	25,400	27,734	32,663
1979	41,473	32,131	39,750	41,629	45,842	27,150	20,160	24,581	27,782	32,320
1980	38,693	29,253	36,922	38,833	44,109	26,307	18,951	24,258	26,476	32,509
1981	38,361	28,635	35,376	38,322	44,303	26,036	17,668	23,263	26,532	32,529
1982	37,601	27,765	34,147	37,921	42,593	26,560	18,744	22,824	26,974	32,152
1983	37,584	26,196	34,400	37,841	44,520	26,991	18,104	23,052	27,908	32,143
1984	37,688	26,320	35,381	38,299	45,004	27,053	18,739	23,523	27,193	33,704
1985	37,267	26,167	33,541	37,944	45,938	27,684	18,651	23,838	27,533	35,147
1986	37,314	26,205	33,614	38,430	47,915	27,785	18,902	23,775	27,452	36,030
1987	37,457	27,162	33,693	36,968	48,225	27,610	18,676	24,064	28,101	35,326
1988	36,966	26,012	33,167	38,033	47,181	27,864	16,774	23,499	28,335	36,525
1989	36,073	25,464	31,819	36,981	46,386	28,455	17,533	23,350	27,891	37,467
1990	34,973	24,031	30,441	35,825	43,799	27,495	17,336	22,547	27,622	36,912
1991	34,464	23,366	29,713	34,982	46,457	27,449	15,965	23,053	27,404	35,894
1992	34,051	22,318	29,165	34,024	45,756	27,834	17,315	22,718	27,134	36,177
1993	32,568	22,267	27,988	32,457	44,980	27,103	16,666	22,331	26,475	37,358
1994	32,333	22,112	28,860	32,376	43,901	26,779	16,363	21,748	25,918	35,948
1995	32,524	22,973	28,302	31,428	44,201	26,229	16,260	20,720	25,467	35,514
1996	33,242	21,571	29,146	32,350	44,375	26,668	16,958	21,445	25,499	34,504
1997	33,955	22,974	29,260	33,821	45,070	27,647	16,929	22,250	25,428	35,924
1998	34,886	22,523	29,906	34,597	46,185	28,496	16,619	22,866	26,472	36,622
1999	35,261	22,596	29,920	34,863	47,256	28,441	16,844	21,884	26,770	38,446
2000	36,026	22,115	30,759	36,229	48,506	28,629	17,635	22,369	26,518	37,980
2001	35,778	22,636	29,857	35,598	48,782	29,723	17,021	23,029	26,769	38,331
2002	35,487	22,903	29,647	35,552	48,955	30,093	17,114	23,458	26,828	40,021

**NOTE:** The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted. The Consumer Price Index (CPI) was used to adjust earnings into constant dollars.

**SOURCE:** U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March Supplement, 1972–2003, previously unpublished tabulation (December 2003), as reproduced from The Condition of Education.

## Annual Earnings of Young Adults

Table 2. Ratio of median annual earnings of all full-time, full-year wage and salary workers ages 25–34 whose highest educational level was grades 9–11, some college, or a bachelor’s degree or higher, compared with those with a high school diploma or GED, by sex: 1971–2002

Year	Total population		Grades 9–11		Some college		Bachelor’s degree or higher	
	Male	Female	Male	Female	Male	Female	Male	Female
1971	1.04	1.09	0.85	0.79	1.09	1.14	1.25	1.43
1972	1.04	1.11	0.85	0.80	1.07	1.16	1.22	1.42
1973	1.04	1.13	0.86	0.86	1.03	1.19	1.21	1.45
1974	1.04	1.11	0.87	0.78	1.04	1.14	1.20	1.38
1975	1.05	1.11	0.86	0.78	1.08	1.13	1.19	1.37
1976	1.07	1.11	0.85	0.78	1.08	1.12	1.21	1.36
1977	1.05	1.10	0.82	0.79	1.05	1.12	1.17	1.30
1978	1.03	1.10	0.78	0.83	1.03	1.09	1.14	1.29
1979	1.04	1.10	0.81	0.82	1.05	1.13	1.15	1.31
1980	1.05	1.08	0.79	0.78	1.05	1.09	1.19	1.34
1981	1.08	1.12	0.81	0.76	1.08	1.14	1.25	1.40
1982	1.10	1.16	0.81	0.82	1.11	1.18	1.25	1.41
1983	1.09	1.17	0.76	0.79	1.10	1.21	1.29	1.39
1984	1.07	1.15	0.74	0.80	1.08	1.16	1.27	1.43
1985	1.11	1.16	0.78	0.78	1.13	1.16	1.37	1.47
1986	1.11	1.17	0.78	0.80	1.14	1.15	1.43	1.52
1987	1.11	1.15	0.81	0.78	1.10	1.17	1.43	1.47
1988	1.11	1.19	0.78	0.71	1.15	1.21	1.42	1.55
1989	1.13	1.22	0.80	0.75	1.16	1.19	1.46	1.60
1990	1.15	1.22	0.79	0.77	1.18	1.23	1.44	1.64
1991	1.16	1.19	0.79	0.69	1.18	1.19	1.56	1.56
1992	1.17	1.23	0.77	0.76	1.17	1.19	1.57	1.59
1993	1.16	1.21	0.80	0.75	1.16	1.19	1.61	1.67
1994	1.12	1.23	0.77	0.75	1.12	1.19	1.52	1.65
1995	1.15	1.27	0.81	0.78	1.11	1.23	1.56	1.71
1996	1.14	1.24	0.74	0.79	1.11	1.19	1.52	1.61
1997	1.16	1.24	0.79	0.76	1.16	1.14	1.54	1.61
1998	1.17	1.25	0.75	0.73	1.16	1.16	1.54	1.60
1999	1.18	1.30	0.76	0.77	1.17	1.22	1.58	1.76
2000	1.17	1.28	0.72	0.79	1.18	1.19	1.58	1.70
2001	1.20	1.29	0.76	0.74	1.19	1.16	1.63	1.66
2002	1.20	1.28	0.77	0.73	1.20	1.14	1.65	1.71

**NOTE:** This ratio is most useful when compared with 1.0. For example, the ratio of 1.65 for males in 2002 whose highest education level was a bachelor’s or higher degree indicates that they earned 65 percent more than males who had a high school diploma or GED. The ratio of 0.73 for females in 2002 whose highest education level was grades 9–11 indicates that they earned 27 percent less than females who had a high school diploma or GED. The Current Population Survey (CPS) questions used to obtain educational attainment were changed in 1992. In 1994, the survey methodology for the CPS was changed and weights were adjusted.

**SOURCE:** U.S. Department of Commerce, Bureau of the Census, Current Population Survey (CPS), March Supplement, 1972–2003, previously unpublished tabulation (December 2003), as reproduced from The Condition of Education.