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Is Education a Good Investment?

High School

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Abstract.

This lesson uses prior learning on the supply and demand for labor and applies it to provide a fuller understanding of how education and training affect earning power. The lesson heavily relies on accessing students understanding through intrapersonal intelligence (e.g. exploiting students own self-interests and self-awareness), visual-spatial intelligence (e.g. the use of charts and graphs to better understand the relationships of the labor market), and logical-mathematical intelligence (e.g. linking worker productivity to the demand for a worker's labor, and linking the acquisition of skills and training to reduced competition with other workers and a smaller supply of labor). Through using the tools of the supply and demand for labor, as well as an in-class activity in which students use data on income and education costs to analyze the return to education, students will develop a solid understanding of how investing in their own human capital will affect their own earning power throughout their lives.

At the end of this lesson students will be able to articulate not only how education affects income, but also why education affects income.

Materials.

Computers with internet access, Choose A Career board from Richmond Federal Reserve Bank educational resources, Smartboard for projecting income and education data, whiteboard for illustrating supply and demand graphs, handout (see attached).

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Career poster: [IMG_20200813_151321057.jpg](#)

[Lesson plan](#) with visuals.

Time required.

90 minute class period.

Economic or personal finance concepts.

supply of labor
demand for labor
equilibrium wage
human capital
labor market
productivity

Virginia Standards of Learning (SOLs).

Virginia standard: EPF.4

Students learn about EPF .4(a) by analyzing the different occupations, their education requirements and the typical wages earned.

Students learn about EPF .4(b) by doing a graphical analysis of demand for labor based on worker productivity and skill levels.

Students learn about EPF .4(c) by doing the online activity Invest In What's Next and thinking about their own future occupation and what type of training and education they will need to achieve that goal.

Students learn about EPF .4(d) by doing the graphical analysis. Teachers also have the option of doing a graphical analysis assessment.

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Student learning outcomes.

Students learn about how the demand and supply for labor affect the equilibrium wage by doing graphical analysis.

Students learn about the relationship between education and earning power by plotting the incomes of various occupations on a graph with education level on the X axis. Students observe, as they are plotting the points, that as education increases, so does the wage. In other words, students see visually the positive correlations between education and wage.

Students are then asked to analyze the scatter plot graph they have created by answering questions about the relationship between income and education.

I include an optional activity in which students go to the Fed website and complete the Invest In What's Next activity which asks them to think about what they would like to do after school and then look into colleges that would be a good fit for them.

I also include an optional quiz that asks students to use graphical analysis to explain wage differentials.

Students also show their knowledge acquired from the lesson with a short summative assessment on the important take-aways of the lesson.

Procedure.

Please see [lesson plan](#).

Ask students to think about the standard of living they hope to have 10 years from now. (Possible responses: "I want to travel," "I want to own a home," "I don't want to have any debt," "I want to have enough money so I don't have to worry about food and shelter.")

Show students the average annual income broken down by education levels. (See appendix A.) This lesson will help them understand what determines the income they will earn someday and what they can do to increase their earning power so that they can have the standard of living they want.



Note: when I do this lesson with my students, we will have covered the supply and demand for labor.

Conversation: Why would you choose to invest in getting an education or training? (Possible answers: so you can earn more money. So you are less likely to be unemployed. To get a more interesting job.) What advantages does more education and training provide for you? (Possible answers: Higher income. Less likely to be unemployed. Better able to negotiate higher compensation. Higher level of job satisfaction.) What are the disadvantages of not finishing high school? (Possible answers: Lower pay. Higher rates of unemployment. Lower job satisfaction.)

Ask students to do a Pair and Share. What are four ways you could increase your earning power? Share with the group. (Potential answers include: work hard (high effort and more hours); acquire valuable skills; find a mentor to help you be more successful at your job; ask for a raise.)

(Note: if you have not covered the labor market, skip step 5 and go to step 6.)

Review the supply and demand for labor. Wage determined by how many workers are offering their labor on the labor market (e.g. your competition) and the demand for your labor by employers. The demand will be determined by the value of your labor. Compare two hypothetical supply and demand graphs: one for an unskilled worker and one for skilled worker, such as a computer programmer. (Supply of unskilled labor will be greater and the demand lower causing a significantly lower wage. Find data on the average wage for computer programmer for actual comparison of the difference in earning power.) (See Appendix B and C.)

Note: it should be pointed out to students that job compensation can include benefits such as health insurance and retirement benefits, in addition to the wage/income. This lesson focuses on wages/income, but the value of benefits will increase the return to additional education since the total compensation package is likely to be more valuable for those with more human capital (<https://www.bls.gov/ncs/ebs/sp/ebnr0017.pdf>).

Hand out the Dollars and Sense Choose a Career chart (for this exercise, just use the chart, not the rest of the activity.) Hand out the questions students will answer using the Choose a





Career chart. Hand out calculators (or allow students to use their cell phone calculators). Explain that each occupation corresponds to an income level and level of student debt (see chart at bottom). Students will assume debt is paid back over 10 years. Complete the activity and answer the questions.

Evaluation.

Students are asked to answer questions based on the activity they completed. Students are asked to complete a quiz. I have provided two quiz options: one is a more supply and demand analysis of the concepts. The other is more intuitive and can be done having only completed the lesson activities contained in the lesson plan.

Extension

The table can certainly be updated with the most recent wage data from the Bureau of Labor Statistics: <https://www.bls.gov/bls/blswage.htm>

Interdisciplinary aspects.

Students are not only asked to create their own graph and analyze graphs, but they are asked to write a short essay on their own future career choice. Furthermore, students are asked to think about the relationship between variables: income and education and how they are correlated.