EDUCATION IN HAPPINESS: LOWER AT THE MICRO LEVEL OF INDIVIDUALS THAN AT THE MACRO LEVEL OF NATIONS

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ABSTRACT

Education provides individuals with a set of skills that are assumed to allow them to drive better lives and, in the end, live happier. The fact that higher levels of education are associated with better living conditions, might lead to the assumption that education as such is related to higher levels of happiness. However, this relationship is not clearly established in the literature. The aim of this chapter is to provide an overview of the existing evidence on the relationship between education and happiness to inform the discussion of the past, present, and future of the field. For this purpose, two studies were conducted, one at the micro-level of individuals and the other at the macro-level of nations using a quantitative approach based on the finding archive World Database of Happiness (WDoH; https://worlddatabaseofhappiness.eur.nl/). In study one, the micro-level of analysis explored the link between individuals' years of schooling and educational level and happiness. The analysis of 86 correlational findings shows a small average zero-order correlation (r = +0.09) and much variation (SD = 0.13). This small correlation is wiped away in multi-variate analyses that control possible spurious variables, such as income; the average partial correlation is zero. In study two, a macro-level analysis comparing average education and average happiness across 147 nations, found a strong positive relationship: r = +0.59. This difference between correlation at the micro and macro level present a question for future research, why does education add to the happiness of the average citizen in nations but not to the happiness of higher educated?

Keywords: Life satisfaction, school education, research synthesis, micro-macro level difference[2]

INTRODUCTION

Today, we invest more in school education that ever in human history. In contemporary modern nations, 48% of young adults achieve their tertiary degree (OECD, 2022), meaning that they spend about a quarter of their life in school benches. And, particularly on OECD countries, the average expenditure in educational system per

student takes about 26% of GDP per capita (OECD, 2022). These, and between other arguments, raises the question of whether that massive investment is worthwhile, and in that context, a major question is whether all this schooling makes us any happier.

Theoretically, there are good reasons to assume that school education does foster happiness. Through teaching and training schools play an important role on the individual's development, not only transmitting knowledge and training skills, but fostering students' potentialities, shaping their character and values and urging them to become contributing citizens to society (e.g., Carneiro & Draxler, 2008). In this sense, formal education fosters individuals' autonomy, judgement and responsibility and equip them with the ability to choose among available alternatives (Haack, 1981). Thus, schools provide the conditions and opportunities for individuals to succeed personally, socially and professionally and, ultimately, achieve a better life (Maniar, 2019) and the research literature has confirmed that higher levels of education are associated with better living conditions (Noddings, 2003).

However, the empirical evidence for an effect of school education on happiness is mixed. A growing body of literature in this field has found that higher levels of schooling have little relation with happiness (Layard, 2005; Michalos, 2017), others have found that lower levels of schooling are associated with greater happiness (Layard, 2005), while others have found mixed results (Kim, 2018; Ruiu & Ruiu, 2019; Stewart-Brown et al., 2015).

If school education does not add to the happiness of educated individuals personally, it is still possible that the massive investment in school education benefits the happiness of the average citizen, such as by its effects on culture and economy. A pattern of that kind was observed earlier for intelligence by Veenhoven and Choi (2012) who found no greater happiness among smart people within countries, while average happiness was much higher in countries where average intelligence is higher. The same could apply for school education, which is a major producer of intelligence. In this chapter we check that possibility.

Aims

We seek answer for the following research questions:

1. Is there a relation between personal education and personal happiness within countries? This micro-level question is addressed in study 1.

2. Is there a relationship between average education and average happiness across nations? This macro level question is addressed in study 2.

METHOD

To explore the above-mentioned research questions, we followed a quantitative approach using research findings gathered in the World Database of Happiness (WDoH; https://worlddatabaseofhappiness.eur.nl/). A description of that findings archive is given in Veenhoven (2020).

For study 1, we selected findings on the relationship between education and happiness at the individual level as observed in the general public and expressed in comparable statistics[3] which yielded 86 findings.

For study 2, we used the data-file 'States of Nations'[4], which part of the World Database of Happiness and involves nation scores on several characteristic, among which indicators of average happiness and average education.

Happiness: Concept and measures

The word "happiness" is often used interchangeably with terms such as "quality of life" or "well-being" and conveys 'a good life' In that use, it denotes a 'sensitizing' concept that is not well measurable. Today, the word is increasingly used for a 'satisfying life', which is a more distinct concept that appears to be well measurable. In this chapter we focus on that latter meaning. Following Veenhoven (1984) we define happiness as the degree to which individuals judge the overall quality of their life-as-a-whole favorably. This is the conceptualization followed by the World Database of Happiness, on which we draw the results of the study. Measures of happiness in that finding archive are self-reports on questions such as 'Taking all together, how satisfied or dissatisfied are you with your life-as-a-whole these days?

Education: Concept and measures

With its origin in Latin, education is derived from 'educare', which refers to 'raise' or 'bring up', implying the act of teaching and training to bring someone forward (Gupta et al., 2014). Although education can be used as a broader concept that integrates the sum of a person's experiences, it is often considered in a narrower sense, referring to what is done at the institutional level, particularly in schools.

In this chapter education was assessed through individuals' "years of schooling" which corresponds to the number of years of education completed, excluding years spent repeating grades, and by individuals' "level of education" which corresponds to the highest level of education attained when leaving formal education or, for those still in formal education, the level they are currently attending. These indicators are recognized by United Nations Educational, Scientific and Cultural Organization [UNESCO] (n.d., 2012).

RESULTS

Study 1

In this study, the relationship between years of schooling and level of education with happiness was considered at the micro level of analysis. A synthesis of 86 findings found that, in general, the link between education and happiness was, at best positive, but weak and, in many cases the relationship was not significant. See table 1. The coefficients in Table 1 involve links to online detail about each finding in the World Database of Happiness.

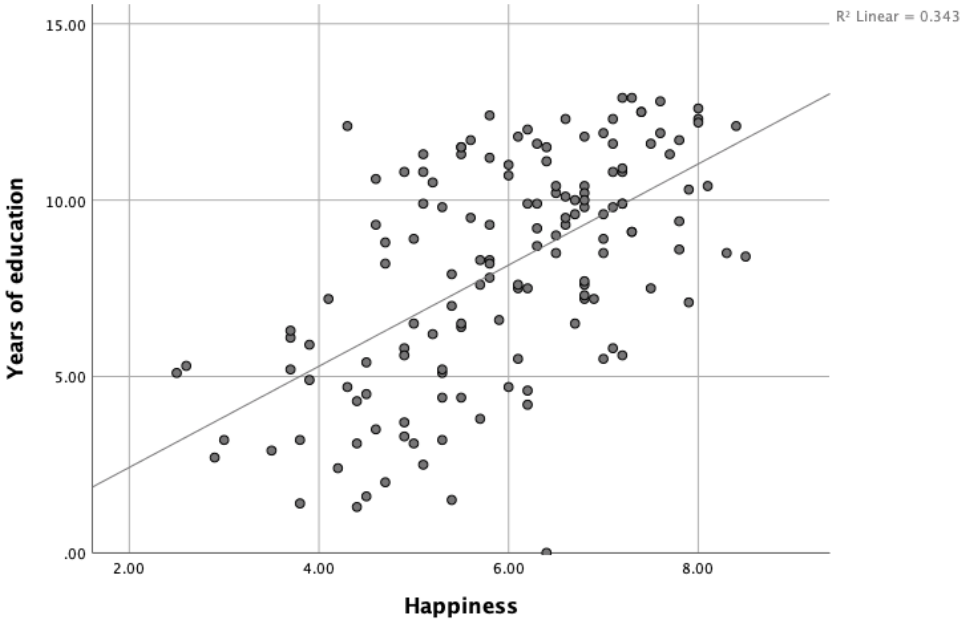
The average zero-order correlation is +0.09 and the variation in correlations appears to be high (*SD* = 0.13). This small correlation is wiped away in multi-variate analyses that control possible spurious variables, such as income; the average partial correlation is zero.

Study 2

To assess the macro level relationship between average education and average happiness in nations we could use data for 147 contemporary nations. We found a strong positive correlation of +0.59 between years of education and happiness level across 147 countries. The plot presented on Figure 1 shows a linear relationship.

Figure 1

Scatter plot of years of education by happiness in the Nations macro-level analysis.



DISCUSSION

Explanations

One reason why more years spend in school-benches does not go with greater happiness could be in the possible negative effect of school-education as such, e.g., being longer dependent on teachers and parents, being more prepared to evaluations and tests but less trained for real life, among which unrealistic expectations. This can be observed, for example, in terms of intrinsic motivation, that typically decreases during schooling (e.g., Gnambs & Hanfstingl, 2016), meaning that policies and also practices in schools, don't allow students to satisfy their basic needs of autonomy, competence and relatedness, factors highly related to happiness. Another reason is in possible negative instrumental effect, such as that many high educated people spend their working life behind an office desk. Tasks related to management, coordination and bureaucracy that we don't assume to add directly to happiness. Another possible reason could be that schools tend focus on curriculums and programs to accomplish, to value effort and especially performance, with possible effects on stress and anxiety of teachers and students. If students don't have the opportunity or support to buffer these negative emotions with all the demands of education, we can end up with less happiness. In

short, such negative effects can balance the positive effects of education that are commonly assumed.

The main reason why people live happier in nations where the level of education is high seems to be in the fact that such nations are typically modern nations where the level of happiness tend to be high. In spite of qualms about modernity, people appear to be happier the more modern the nation where they live is (Veenhoven & Berg, 2013). An educated population is functionally required for modern nations, among other things to run the complex division of labor. One of the reasons why people live happier in modern societies is that they allow individuals more freedom to choose a way of life that fits them.

A methodological point to keep in mind is that correlations at the macro-level of nations tend to be higher than at micro-level of individuals, because individual variations balance out in the national average. Even so, the macro level correlation is higher in this case, because the individual level correlation is close to zero.

Implications

The finding that more school education does not make individuals happier should not be ignored, the discrepancy with current belief and interest of the sector should be acknowledged.

What to do with this disturbing fact? The first thing is to gain better understanding of the phenomenon; why does more education not pay in greater happiness of the educees? A leading question is then which skills are required for a happy life in modern society and to what extent is the development of these skills boosted of hampered during the years spend in school-benches.

In that context, it is worth looked beyond *what* is learned in schools to *how* knowledge is transferred. Also, what is the time and space to develop their social and emotional skills in the context of each time larger, longer and more complex contents to be learned. There is rising evidence that traditional top-down teaching undermines the self-esteem and motivation of students (e.g., Gnambs & Hanfstingl, 2016), which makes them less assertive later in life and as a result less happy (Brule & Veenhoven, 2014). Reversely, there is strong evidence that democratic or horizontal teaching is more satisfying for students than directive teaching (Bartolini & O'Connor, 2022) and better prepares them for functioning in modern individualized multiple-choice society. This means that we need innovative practices to foster social and emotional skills that allow

students to learn better and live happier (Goldberg et al., 2019). Given the social and cultural changes of modernity, particularly considering digitalization, a significative leap in schools is urgent. As we can expect that education and schools will need to adapt and change to ensure the best possible preparation, development and happiness for upcoming generations, it is crucial to reflect on the present available evidence and take decisions to meet existing and future educational challenges.

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Table 1

The association of years of schooling and level of education and happiness based on 86 research findings.

Education	**Observed correlation with happiness**	
	Bi-variate	Partial
Year of schooling	**+.06/+.08/+.05/+.07** -.05 **+.12** **+.08**/+.03 **-.08**/+.01 **+.06**/+.04 **+.08**/+.02 **-.02/-.04** **+.05**/+.00 **+.08/+.08** **+.07/+.06** **+.08/+.12** **+.16/+.15** +.04/**+.08/+.11**/+.01/+.02/**+.05** +.02/**+.13/+.06/+.13**/+.02/**+.06/+.10/+.04**/+.02/+.02/**+.04/+.10** +.00/**+.19/+.19**/+.00/+.01/.01//**+.14/+.14**/-.02/+.01 -.07 **+.11/+.10/+.34**/+.23 +.05/+.03/**+.12/+.05**/+.02/**+.07** **+.22/+.20** **+.08/+.06**+.01/**+.12**/+.00/**+.19/+.15/+.08**/+.04/**+.12**/+.00/**+.19**/+.01/**+.06/+.14**/+.01/**+.14**/+.01/**+.04/+.10**/+.02 **/+.04/+.07/+.10** **+.14/+.07**/+.05/**+.11/+.06/+.04** **+.07**/-.01/**+.06**/.00 +.03/**+.13/+.06/+.06**/+.02/-.03/**+.03/+.04**/+.02/+.02/**+.04/+.10** **-.10**/-.06/-.04/-.06/-.04/-.02 **+.12**/+.04/+.05/**+.09**/+.03/**+.03** +.05/+.03/**+.05**/+.02 +.03/-.02/+.09/+.01/-.02/**+.07** +.03/+.03/**+.06**/+.03/+.02/**+.05** +.06/-.02/+.02/**+.04**/+.01/+.03 +.06/-.02/+.02/+.03/-.02/+.00 +.01/**+.10/+.19**/+.00/+.01/-.04/+.01/**+.14/+.07**/+.01/-.04 **+.10**/-.02/+.02/+.03/-.02/+.01 **+.13**/+.03/**+.06/+.08**/+.02/**+.05** **+.15/+.08/+.19/+.11/+.05/+.15** -.03/+.02/**+.14**/-.04/-.01/**+.10** **+.14/+.11/+.22/+.10/+.08/+.16** +.01/**+.08**/+.00/**+.19/+.12/+.08**/+.04/**+.12**/+.00/**+.19**/+.01/+.04/**+.14**/+.01/**+.14**/+.01/+.02/**+.04**/+.02/**+.04/+.07/+.07** **+.17/.13/+.06/+.20**/+.02/-.02/**+.16**/-.03/**+.16**/+.02/**+.04/+.10** **+.05/+.11**/+.04/**+.11/+.05**/+.04/**+.09**/+.02/**+.03/+.03**/+.02/**+.09** **+.09/+.18**/+.03/**+.18/+.09**/+.03/**+.14**/+.02/**+.07/+.07**/+.02/**+.14** **-.06/-.07**/-.01/**-.04/-.05**/+.02 **+.28/+.27/+.35/+.24/+.21/+.27** -.02/+.03/**+.08**/-.01/-.01/**+.06** +.03/-.02/-.01/+.03/-.01/-.01 +.05/-.02/**+.08**/+.03/-.01/**+.05** **+.09**/+.03/-.00/**+.05**/+.01/-.01 +.05/**-.06/+.08**/+.03/**-.06/+.06** **+.14**/+.00/+.05/+.01/+.03/-.00/+.01/+.03/**+.10** -.01/-.04/**+.10**/-.02/-.04/**+.06** **+.08**/+.03/**+.09/+.06**/+.01/**+.07** +.03/+.01/**+.19**/+.00/+.01/+.07/+.01/**+.14**/+.01/+.03/+.03 +.05/**+.13/+.06/+.07**/+.02/+.04/**+.06**/+.02/+.02/+.02/**+.04/+.10** +.07/+.06/+.07/**+.23/+.19**/+.01/**+.19**/+.06/+.00/+.00/+.01/**+.23/+.18**/+.03/**+.06**/+.01/**+.06/+.14**/+.01/**+.14**/-.02/+.03/**+.18** **+.09/+.14/+.13/+.07/+.09/+.09** **+.06**/-.01/**-.07/+.10/-.06/+.04**/+.00/+.02/ .02/**-.04/-.05**/+.02	-.03/+.01/+.04 **+.06**/+.02/**-.05**/-**.05**/+.02/**+.06**/ -.03/-.04/**+.11**/-.04/-.03/**+.11** -.02/-.03/+.05 <+.10/<+.10 -.03/-.04/**+.07/+.08/+.06**/+.02/**+.15/+.11**/-.04/-.03/+.01/**+.11** **+.11**/+.05/+.03 +.04/-.02/+.00/**-.05**/+.02/**+.06** **+.08**/+.02 -.10/-.06/-.08 **+.09**/+.03/+.04 -.02/-.03 -.08/-.07/+.00 .00/+.02/+.02 +.04/-.03/+.01 +.04/-.03/+.01 -.03/-.04/+.04/-.04/-.07/**+.11** +.03/-.04/-.00 **+.09**/+.02/+.03 +.04/+.00/**+.10** -.09/-.05/+.04 +.04/+.02/**+.13** -.03/-.04/**+.06/+.08/+.06**/+.02/**+.08/+.11**/-.04/-.03/+.02/**+.11** **+.18**/+.02/+.15/+.15/-**.05**/+.02/**+.06** **+.04/-**.03/-.05/-.05/-.03/**+.04** **+.08**/-.04/+.06/+.06/-.04/**+.08** **-.12/-.11/-.07** **+.12/+.11/+.21** **-.06**/-.02/**+.04** +.00/-.03/-.02 +.00/-.04/+.01 +.03/-.05/-.03 -.03/-.05/+.05 -.01/-.00/-.03/-.04/**+.13** +.00/-.02/**+.09** -.01/+.00/-.01 -.03/-.04/+.04/+.04/+.07/**+.11** **+.08**/+.02/+.03/-**.05**/+.02/**+.06** +.05/+.03/-.04/**-.12/-.11/-.07** -.04/-.03/**+.11/+.13**/+.05/+.01/-04/-.03/**+.13**/+.05/+.01/**+.11** +.01/**+.11/+.09**

	Bi-variate Mean (SD) 0.06 (.07)	Partial Mean (SD) -0.00 (.30)
Level of education	+.03/+.05 **+.07/+.08** **+.10/+.22** -.02/-.02 **+.09/+.14** **+.21/+.36** **+.15/+.29** **+.13/+.20** -.09/+.04/+.02/+.06 +.13/+.17/**+.24/+.23** **+.16/+.24/+.17/+.18/+.16** **+.35/+.12/+.17/+.16/+.22/+.35/-.12/-.17/-.16/+.22** **+.16/+.29/+.25**/+.02/**+.10/-.16/-.29/-.25**/-.02/**+.10** -.02 **+.01** +.00/+.01/-.02 +.03 **+.03/+.16/+.06** **-.01** **+.08** **+.13/+.06** **+.12/+.08** -.00/-.05 **+.13**/+.08 **+.12/+.08** **+.13** **+.12/+.11** **+.04** **+.00** **+.08** **+.09** +.01	**+.13/+.21/+.50** **+.13** **+.17** **+.07** **-.07/-.08** **-.06/-.04** **+.11**/+.05/+.03 +.04/-.02/+.00/**-.05**/+.02/**+.06** **+.08**/+.02 -.10/-.06/-.08 **+.09**/+.03/+.04 -.02/-.03 -.08/-.07/+.00 .00/+.02/+.02 +.04/-.03/+.01 +.04/-.03/+.01 -.03/-.04/+.04/-.04/-.07/**+.11** +.03/-.04/-.00 **+.09**/+.02/+.03 +.04/+.00/**+.10** -.09/-.05/+.04 +.04/+.02/**+.13** -.03/-.04/**+.06/+.08/+.06**/+.02/**+.08/+.11**/-.04/-.03/+.02/**+.11** **+.18**/+.02/+.15/+.15/-**.05**/+.02/**+.06** **+.04/-**.03/-.05/-.05/-.03/**+.04** **+.08**/-.04/+.06/+.06/-.04/**+.08** **-.12/-.11/-.07** **+.12/+.11/+.21** **-.06**/-.02/**+.04** +.00/-.03/-.02 +.00/-.04/+.01 **+.08/-.03/-.02**
	Bi-variate Mean (SD) 0.09 (.13)	Partial Mean (SD) 0.01 (.08)

Note: + positive but not significant; **+ bold** positive and significant; – negative but not significant; **– bold** negative and significant; +\– different results in the same study; +/+ = same results in the same study;

Links in the above coefficients lead to detail about the study in which this correlation was observed as available in the inline finding archive ‘World Database of happiness

[1] Ruut Veenhoven, Erasmus University Rotterdam in the Netheerlands, Erasmus Happiness Economicas Reserch Organization and North-West University in South Africa, Opentia research Program

[3] Query “Subject Classification, Education>Current education>Level of school-education, General public, Statistics used Product-Moment Correlation Coefficient (Also "Pearson's correlation coefficient' or simply 'correlation coefficient')” and “Beta coefficient in random effects model” (cf. https://worlddatabaseofhappiness.eur.nl/search-the-database/correlational-findings/#id=5rr-VYYBZb1NVO-7aWxX

[4] https://worlddatabaseofhappiness.eur.nl/related-sources/data-set-states-of-nations/2023