

**Manuscript n. 497-1. Eduardo de Carvalho Andrade  
and Luciano I. de Castro:**

**Tougher Educational Exam Leading to Worse Selection.**

**Summary**

This paper examines whether it is desirable to increase the toughness of examination standards. In their model, individuals with differences in cognitive and non-cognitive skills decide their effort for passing an examination. The result of the examination (high or low) is observed by employers who pay a higher wage to those who got a high grade. The examination assesses only cognitive skills, thus individuals make an effort to improve cognitive skills only. The analysis can be also interpreted in a more general way without labeling the assessed characteristics as “cognitive” and the non-assessed ones as “non-cognitive”. They consider exogenous and endogenous wages, separately. In the latter, wage has the same value of the expected productivity. This framework is based on the Betts’ model on educational standards (1998), whereas Betts does not take into account the role on non-cognitive skills in determining productivity.

Their findings suggest that to increase educational standard may in fact decrease the average productivity of the individuals who manage to pass the examination. The reason is that the production function depends also on non-cognitive skills that are not assessed by the examination. Thus individuals with low cognitive skills but high non-cognitive skills are productive but do not pass the examination. As a result, the average productivity may diminish. Their policy implications is that to arrange the examination in order to take into account non-cognitive skills also, rather than to raise the examination standard for the cognitive skills.

## **My opinion**

The paper is well written and the model looks solid. The point is relevant in the educational policy and the contribution is significant. Also I personally agree with the thesis of the authors.

In their comparative statics, they consider only small increase in standard. The reason is that “most changes in the standard are typically not dramatic” and “a large change in the standard may harm the society in different ways, by abruptly pushing a large number of potential workers to the non-certified category”. Then they examine increases in standard from 0.1% to 6%.

I really need to understand what is the meaning of “a large change in the standard”. I do not think that a policy maker willing to increase the educational standard is going to do that for 0.1%, 0,2% or in general less than 5% and I can imagine standard changes at least to 10-15%. I may be wrong, but I need to see some evidence of that.

Indeed, according to their comparative statics, they may minimise the chance of decreasing average productivity by raising standard examination consistently (Note that, when Proposition 2 does not hold, productivity actually increases by raising educational standard), because this way they shrink the range where Proposition 2 hold. And this is of course in contrast with their interpretation of the results.

Hence, although I share the authors’ view and I generally like their analysis, I really think they should strengthen this point.

**Recommendation: acceptance after a revision along the line of this review.**

## **Minor points, typos etc...**

- p.5, line 3. erase “s” in “examines”.
- p.5, line 10. What happens to the quality of male teacher?
- p.5, footnote. erase “in” in “will imply a fall”.

- p.14, footnote. erase “the” in “the wages”.
- p.16, substitute “lemma 1” with “Lemma 1”.
- p.18, line 5 after “Conclusions”, add “s” to “lead”.
- p.19, line 19, substitute “are” with “is”.
- p.23, point number [3], erase “March”. (or add month in point [5])
- p.24, point number [8], erase “September”. (or add month in point [5])