

Wisdom of Education for Globalization

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1. Essential Issues

As a university professor, this is what I tell to my students when they ask (about their possible success strategies and tactics in the era of globalization):

Index Terms—*compatibility, globalization, intelligence dimensions.*

1.1

When you grow up your own children, set up the priorities as follows:

a. Ethical Strength: If a word is given, it should be kept at any cost, even if conditions in the environment change, and keeping the word becomes difficult, or costly, or against our own interests.

b. Multidimensional Personality Strength: First, psychological strength, by having them grow in what appears to them as a harmonic family. Second, physical strength, by running them through an exhaustive athletic program. Third, socio strength, by having them constantly interact with the surrounding in real-problem situations.

c. Multidimensional Academic Strength: First, school (formal education). Second, languages (English is the key to businesses, and other languages are keys to hearts). Third, hobby (preparation for old age); something to keep them busy after retirement – the earlier it is developed - the better it is.

Many would react fiercely to the advocating that academic strength should be the third, rather than the first priority. However, I strongly believe that, after the

critical age is over (teens), things turn upside down, and ethics form the fundamentals, while formal education becomes the mechanism to reach the skies of professional success.

1.2

After the formal education is over (for some, this is Ph.D., for others, this is B.Sc.), it is a must that the young person goes away from its native environment, because the talents can be fully developed only outside the nest of the native culture. However, after the "talent development phase" is over, the young person should return back to the native environment (if conditions permit), since that is where the life is compatible with personality needs (global success can still be achieved, via the Internet). Moving the roots (from one culture to the other) is painful, and could be tragic in the last part of the life (it is tough to be an old person anywhere, but it is the toughest among the people different from you).

1.3

The "going away" helps develop three dimensions of human intelligence:

a. Vertical Dimension: Deep professional knowledge.

b. Horizontal Dimension: Knowledge about other scientific fields, other cultures, other languages, etc. This dimension is important for creativity. Fachidiots are never creative.

c. Perpendicular Dimension: Look-ahead, or ability to anticipate (problems that may create loss or opportunities that may create benefit), get prepared for what is to come, and minimize the loss (if problems) or maximize the benefit (if opportunities). This dimension is especially important for financial success (if one anticipates now what will be a good offer/demand scenario after a certain time interval, and uses that

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time interval to become an expert far what is to be in demand a lot, and doable by few, the market value of the expert knowledge may become so high to bring a financial fortune).

The third dimension is the most difficult one to build; takes talent, travel, and time, and very few achieve it before their strength is over.

1.4

Do not take standard routes! That approach brings incremental benefits. Nonstandard routes, if properly selected, and if the strength is not lacking, may bring extraordinary benefits. Do not teach your child to become a good fisherman (who brings fish for dinner each evening); teach it to become a good sailor (who brings nothing for dinner each evening, but becomes rich in some uncomprehensible way).

1.5

Pay attention to learning, but more to forgetting. Human knowledge is "decayable goods/tissue" and the garbage has to be disposed periodically; otherwise, it piles up in one's brain, and disables one from creating optimal decisions. This applies both to the life wisdom and the professional wisdom. Stay away from "success models" that your parents impose on you by copying from the times of their "full gears." Also, remember, when the technology changes, optimal solutions change as well (e.g., in a Silicon model, carry-lookahead adder is faster than the ripple-carry adder for all except the lowest word lengths; for a GaAs model, ripple-carry adder may be faster for word lengths as large as 16 or 32 bits).

1.6

When you are to form a team, pass the interested candidates first through the filter of ethics, second through the filter of personal strength (the major three dimensions elaborated earlier in this text), and apply the filter of academics criteria only at the very end, i.e., only on those who have passed successfully through the first two filters (ethics and personality). The worst damage to the business is made by intelligent but unethical and of a deviated personality (e.g., socially unadjusted).

Only stupid but well-intended and hard-working can do worse than that.

1.7

When the time comes to "sell" the results of your work, present the results (by using an appropriate output processor) in the

way that helps pass the essence as efficiently as possible (by doing it compatibly with the input processor of those to absorb). Compatibility has three major forms:

a. **Structural Compatibility:** Each presentation must have the following 10 points: (1) Introduction, to tune the audience for faster comprehension of what follows; (2) Problem statement, which also tells why is the problem important; (3) About the existing solutions, and what are their drawbacks; (4) About the proposed solution, and why is it not supposed to have the same drawbacks; (5) Conditions and assumptions of the analysis to follow; (6) Details of the solutions to be compared - proposed versus existing; (7) Analytical modeling, to show the essence; (8) Simulation analysis, to show performance or speed, (9) Implementation analysis, to show complexity or price; (10) Conclusion from the performance/complexity point of view.

b. **Semantic Compatibility:** Each presentation should use the symbols compatible with the semantics of the subject matter. One picture is worth 1000 words, a done MPEG "picture" is worth 1000 JPEG "pictures".

c. **Syntactical Compatibility:** Each presentation must have the form that matches the essence; for example, if a bullet of a PowerPoint presentation spreads over two or more lines, each line must be a different thought, with line boundaries and thought boundaries at the same places.

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At all times, keep in mind that one possible system of human knowledge implies the following seven layers:

- a. *Philosophy*
- b. *Logic*
- c. *Mathematics*
- d. *Sciences*
- e. *Engineering*
- f. *Commonsense*

Religion is where we put the un-comprehensible.

I also tell the students that the higher is the layer they reach in their professional lives, the lower is the level they reach on their bank accounts.

2. PRACTICAL ADVICES:

2.1

Make sure that at birth you select parents who place the children education on the top of the list of their priorities. A good alternative is no parents at all (if you survive, you have good chances to be more successful than anybody from the first group).

2.2

Make sure that you understand that it is much less important what is written about you (what people read in your CV), and much more important what is being told about you (what people talk about you, and how people view you as a complete person, with many of the components not found in typical CV).

2.3

Make sure that you know how to learn from your students.

2.4

Make sure, when things go wrong, that your attitude is "who knows why is this good for me," and when things go superb, that your attitude is "I know that this will not last for ever!"

2.5

Make sure that you have a good balance of work, sports, and hedonism; otherwise, your success does not make much sense. Too much work can ruin both the physical and the mental health.

2.6

Make sure that you recognize the moment when you have to be patient!

2.7

Make sure that you have a good source of inspiration at all times!

3. CONCLUSION

I usually wait for 30 years before I ask my students about the feedback. Any comments or additions to all of the above are welcome!



Veljko Milutinovic is known as the co-architect/co-designer of the World's first 200MHz microprocessor, for DARPA, back in 80s, a decade before Intel. In 80s he taught at Purdue University, USA. Since 1.1.1990. he teaches at the University of Belgrade, Serbia. He is a Fellow of the IEEE.