

## Curbing Corruption in Pre-University Education

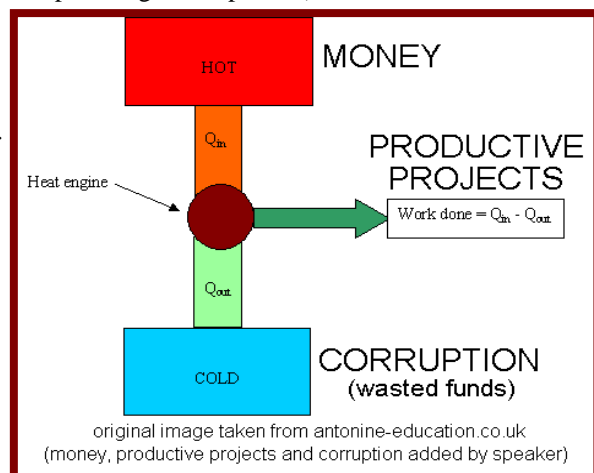
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Corruption in a society is a dissipative force, which tends to slow down the pace of progress<sup>†</sup>. It cannot be eliminated, but it can be quantified, and, possibly, minimized. Corruption can be understood by looking at the *second law of thermodynamics*. Just like flow of heat is the basis of all physical processes, flow of money is the basis of all economic activities. When there is money involved, there appears corruption. The essence of second law of thermodynamics may be summarized in the statement that heat from a hot body is partially converted into work and partially wasted in a heat sink. Money allocated for a project (equivalent to heat extracted from a hot reservoir — *heat source*) ends up partially in infrastructure (equivalent to increase in internal energy, in the context of *first law of thermodynamics*) and services/products (equivalent to work done by the system — *first law of thermodynamics*) and partially goes into corrupt hands (equivalent to heat absorbed by a cold reservoir — *heat sink*). The measures for curbing corruption may be broadly classified as pre-assignment phase (identification of soft areas/

conflict of interest), implementation phase (follow through — *monitoring*) and commissioning phase (follow up — *evaluation*). Public must be made aware that they have a right -to-know and a right-to-question. There should be a website/a hotline to receive complaints, with proper filter to screen out false accusations. A system of reward and recognition should be established to encourage honest practices. The paper, then, focused on the fee structure of private schools. It was suggested that the fee structure should be according to the services provided. In addition, teachers should be compensated in line with the fee charged from the students. It was further observed that hidden charges pose a big burden to parents' pockets. Hence, it is need of the hour to streamline the fee structure of such institutions with strict enforcement of locally applicable laws. The other issue discussed was that of ghost



schools. Besides causing wastage of funds, the unoccupied buildings become sources of garbage dump as well as hub of antisocial activities, *e. g.*, hideouts for criminals and drug addicts. There is a need to keep track of all functional and non-functional schools. As regards religious schools, it was observed that the different philosophies, the different contents and the different pedagogical techniques are creating a divide between religious and secular schools, widening with the passage of time. The mindset of students is shaped by teachers' perception of religion and driven by sources of support. "A teacher has the power to make a student tolerant in one minute and terrorist in another minute, not only, in the religious schools, but also, in the secular schools". The role of a teacher should be to promote tolerance, empathy for emotions/points-of-view of others (discouraging hate towards any community, religion or sect) and use of non-violent means to achieve objectives. Today's religious schools should prepare students to resolve conflicts, not generate new controversies as well as face challenges of modern-day social order (internet, cable TV). It is a wrong assumption that terrorism breeds only in impoverished neighborhoods or when children are exposed to domestic or street violence (gang war, civil war due to political unrest, economic meltdown or natural disasters, war imposed by a foreign power) or any form of abuse (neglect, peer pressure/bullying, verbal, physical, sexual abuse). It has been observed that suicidal tendencies may be present in students, who excel in academics and co-curricular activities. The proposed solutions include (a) continuous monitoring of emotional intelligence of students, (b) integrating secular and religious education in the form of an *Integrated Educational System* (<http://www.ngds-ku.org/Presentations/Education.pdf>), (c) requiring teachers (in particular, the ones entrusted to impart religious education) to declare their religion, school of thought and sphere of influence in writing (cross checked through NN graphs) and (d) ascertaining the sources of support of an institution. It was concluded that SMART (specific-measurable-attainable-realistic-time bound) targets should be set for reducing corruption. This might be achieved by modeling money flow as a *substance-like quantity* (pp 46-47 in <http://www.ngds-ku.org/Papers/C25.pdf>) to obtain an optimal solution using tools of operational research.

**Keywords:** Second law of thermodynamics, money flow modeling, productive projects, corruption, tolerance

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**Express Tribune:** <http://tribune.com.pk/story/280571/education-is-one-of-the-most-corrupt-sectors/> (Monday, October 24, 2011)

**Web address of this document:** <http://www.ngds-ku.org/Presentations/TIP.pdf>

**HTML version:** <http://www.ngds-ku.org/pub/confabstA.htm#C86>:

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<sup>†</sup>In the presence of *dissipative force*, the system dissipates energy to the surroundings, the force law being function of generalized velocities in addition to generalized coordinates; opposed to *conservative force*, which is characterized by the property that total work done along a closed path vanishes, the force law being function of generalized coordinates, only.