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## **Literacy and Education as Correlates to National Stability and Human Development**

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### **Abstract**

Statistical analysis of existing databases across nearly 200 countries dealing with national/human development (2 databases) and literacy/education policy (4 databases) shows high correlation between literacy and national development. Correlations were highest between national literacy scores and human/national development. Correlations were lowest, indeed in some cases slightly negative, when comparing percentage of gross national product spent on education with literacy and education.

The analyses indicate countries with higher literacy and better education policies tend to have improved human development and national stability. Money spent on education seemed not to be a deciding factor.

### **Key Words**

Education policy

Human development

Literacy

National development

## 1. BACKGROUND

As with so many other aspects of Western thought, current theories of the role of education in national and social development can be traced in almost a straight line from Aristotle through John Stuart Mill (neither of whom, it should be noted, can really be considered “educational theorists”) and on to John Dewey.

For Aristotle, education was part of the political process. Indeed, Aristotle believed one could not be a good citizen without a proper education, and his stress on the importance of education is a major theme in both the *Nicomachean Ethics* and the *Politics*. Both works provide practical details for establishing national and individual models for education. Said Lee (2001, p. 165), “Simply speaking, in the *Nicomachean Ethics*, Aristotle stressed the Hellenic ideals of moderation that became the center of Realist axiology, while his *Politics*, like Plato's *Republic*, observed that a reciprocal relationship existed between the good human being and the good citizen.”

Admittedly, Aristotle would leave control of education in the hands of the state. However, his word for “education,” *paideia*, means more than simply teaching and learning. For Aristotle, education dealt with the ethical, social, and political life of the community, and extended to both children and adults: “Now [men] become good and excellent through three things. These three things are nature (*phusis*), habit (*ethos*), and reason (*logos*)... What remains at this point is the work of education” (Lord, 1984, p. 218). In other words, true virtue (what is good for the individual and what is good for the state) is dependent on nature, habit, and reason, and these are, in turn, dependent on education. “In brief, the doctrines of education in good habits run through Aristotle's thinking in the *Ethics* and *Politics*, and they are the means for the actualization of an individual and criteria for building an ideal state through education” (Lee, p. 167).

Moving ahead by several centuries, enlightenment philosopher John Stuart Mill, in 1859, noted the importance of education for not only one's personal growth, but also for the growth of society as well:

It still remains unrecognized, that to bring a child into existence without a fair prospect of being able, not only to provide food for its body, but instruction and training for its mind, is a moral crime, both against the unfortunate offspring and against society.

. . . .

[T]he peculiar training of a citizen, the practical part of the political education of a free people, [is in] taking them out of the narrow circle of personal and family selfishness, and accustoming them to the comprehension of joint interests, the management of joint concerns—habituating them to act from public or semipublic motives, and guide their conduct by aims which unite instead of isolating them from one another.

Still later, in the 20th century, John Dewey said in 1939,

Democracy is the faith that the process of experience is more important than any special result attained, so that special results achieved are of ultimate value only as they are used to enrich and order the ongoing process. Since the process of experience is capable of being educative, faith in democracy is all one with faith in experience and education. All ends and values that are cut off from the ongoing process become arrests, fixations. They strive to fixate what has been gained instead of using it to open the road and point the way to new and better experiences.

## 2. METHODOLOGY

For this project, pre-existing databases were used to compare societies and factors related to literacy and education. These included two measures of stability and freedom, and four measures related to education. The description of these databases will also serve to operationally define stability and literacy.

\* National stability data came from the Fund for Peace (2014) Fragile State Index.

Using 12 social, economic, political, and military indicators, the Fund for Peace ranked 178 states in order of their vulnerability to violent internal conflict and societal deterioration. The index scores are based on data from more than 12,000 publicly available sources.

In addition to its index, the Fund for Peace divided its 178-nation list into four groups, based on the degree of instability: alert, warning, moderate, and sustainable. It should be noted that the Fund for Peace does not define these terms in words, but rather uses composite numerical scores to group nations into stability/instability categories.

\* A second measure of national stability came from the Polity IV Project (Marshall and Jaggers, 2007) which measures levels of democracy and authoritarianism.

The Polity IV project . . . cod[es] the authority characteristics of states in the world system for purposes of comparative, quantitative analysis....The Polity Project has proven its value to researchers across the years, becoming the most widely used resource for monitoring regime change as well as for studying the effects of regime authority.

Data on literacy and education also came from four existing databases:

\* The CIA World Factbook (2014) provided information on literacy levels.

There are no universal definitions and standards of literacy [but] all rates are based on the most common definition - the ability to read and write at a specified age. . . . Information on literacy, while not a perfect measure of educational results, is probably the most easily available and valid for international comparisons. Low levels of literacy, and education in general, can impede the economic development of a country in the current rapidly changing, technology-driven world.

\* The second measure of education came from the United Nations Statistics Division (2014), and is called School Life Expectancy.

School life expectancy is defined as the total number of years of schooling which a child of a certain age can expect to receive in the future, assuming that the probability of his or her being enrolled in school at any particular age is equal to the current enrolment ratio for that age.

Purpose : This indicator shows the overall level of development of an educational system in terms of the number of years of education that a child can expect to achieve (United Nations, 2014).

\* Data for Public Expenditure on Education also came from the United Nations, and is simply the amount of money spent on education as a percentage of the Gross Domestic Product.

It should be noted that nation-state scores and the Public Expenditure on Education are indices created by their respective organizations, and represent “real life” only to the extent that the underlying measures are valid and reliable. In all cases, because the data used in this project have been used in previously

published research, and in many cases collected by internationally recognized research agencies, the present author considers them both valid and reliable.

\* Data for corruption in national education systems came from the Global Corruption Report: Education issued by the watchdog group Transparency International (2013).

[C]orruption ruins lives and obstructs attempts at social and economic development. This is particularly true for the education sector. Education gives young minds form and shape and transmits vital knowledge – a process that shapes the societies in which we live. It is therefore essential that education services are not hindered and distorted by corruption. (p. xiii)

### 3. RESULTS

As can be seen in Table 1, national stability and human development measures are highly correlated with measures of literacy and how much time students spend in school. Interestingly, the amount of money nations spend on education seems to be unrelated to the stability and human development. Perhaps this shows that the absolute amount of money spent on education is less important than how the money is spent. In addition, the table shows that as education system corruption increases, stability, human development, and polity all decrease, although the strongest negative relationship was to national stability. Table 1 also includes Salkind's (2000, p. 96) descriptors of correlation coefficients.

Pearson Product Moment Correlations National Development Indices and Education/Literacy Measures				
	Literacy Index	School Life Expectancy	Public Expenditure on Education	Education System Corruption
Stability	r = 0.655 p < 0.001 M	r = 0.815 p < 0.001 S	r = 0.340 p < 0.001 W	r = -0.651 p < 0.001 S
Polity	r = 0.329 p < 0.001 W	r = 0.449 p < 0.001 M	r = 0.223 p = 0.022 W	r = -0.196 p = 0.120 VW
Each cell shows the correlation coefficient, the probability, and Salkind's strength of relationship descriptor (V = very strong, S = strong, M = Moderate, W = weak, VW = very weak)				
Table 1				

Using the Fund for Peace Fragile State Index descriptors that divide the 178-nation list into four groups (alert, warning, moderate, and sustainable), two sets of analyses were run. First, simple average scores for each of the sustainability groups within the four education measures were computed (Table 2), using the two sets of analysis of variance, against the averages shown in Table 2.

Then, using these averages, two sets of analysis of variance were run (Table 3 and Table 4) comparing the two stability measures against the four education scales. These data show significant differences among the four stability groups within the two levels of stability, further validating the strong connections between the stability and education components.

Average Scores National Stability Levels Compared Across Education-Related Scales (Literacy, School Life Expectancy, School System Corruption, Public Expenditure on Education)		
	Avg.	N
<b>Literacy</b>	Average score (index range = 21.8-99.9)	
Alert	44.400	2
Warning	54.218	11
Moderate	78.185	105
Sustainable	96.510	50
<b>School Life Expectancy</b>	Average score (index range =3.00-20.00 )	
Alert	4.00	1
Warning	7.11	9
Moderate	10.42	98
Sustainable	14.96	48
<b>Public Expenditure on Education</b>	Average score (index range = 0.60-9.99)	
Alert	4.300	1
Warning	2.00	1
Moderate	4.412	66
Sustainable	5.191	46
<b>Education System Corruption</b>	Average score (index range = 2.00-4.00)	
Alert	--	0
Warning	3.40	1
Moderate	3.29	33
Sustainable	2.55	31

Table 2

Analysis of Variance Educational Factors with National Stability						
		Sum of Squares	df	Mean Square	F	Sig.
Literacy	Between Groups	25093.489	9	2788.165	10.443	p < 0.001
	Within Groups	44053.457	165	266.991		
	Total	69146.945	174			
School Life Expectancy	Between Groups	1055.044	9	117.227	17.703	p < 0.001
	Within Groups	1013.152	153	6.622		
	Total	2068.196	162			
Public Expenditure on Education	Between Groups	31.390	7	4.484	1.517	p = 0.169
	Within Groups	325.167	110	2.956		
	Total	356.557	117			
Education System Corruption	Between Groups	10.158	3	3.386	12.838	p < 0.001
	Within Groups	16.353	62	0.264		
	Total	25.510	65			
Stability Groups: 1 – Alert 2 – Warning 3 – Moderate 4 – Sustainable						
Table 3						

Analysis of Variance Educational Factors with Polity						
		Sum of Squares	df	Mean Square	F	Sig.
Literacy	Between Groups	29913.181	20	1495.659	6.068	p < 0.001
	Within Groups	32043.160	130	246.486		
	Total	69146.945	150			
School Life Expectancy	Between Groups	1012.396	20	50.620	6.900	p < 0.001
	Within Groups	895.059	122	6.622		
	Total	1907.455	142			
Public Expenditure on Education	Between Groups	108.908	17	6.406	2.759	p = 0.001
	Within Groups	202.014	87	2.322		
	Total	310.922	104			
Education System Corruption	Between Groups	11.300	11	1.027	4.380	p < 0.001
	Within Groups	12.197	52	0.235		
	Total	23.496	63			
Stability Groups: 1 – Alert 2 – Warning 3 – Moderate 4 – Sustainable						
Table 4						

#### 4. DISCUSSION

How, then, do we explain the relationship between the status of the nation-state and education? Let us look at each of the measures in turn.

##### *Stability.*

As noted earlier, the stability index was created by the Fund for Peace and represents how unstable (vulnerable to internal upheaval) a country is. As can be seen in both the correlations and F-scores, there is a direct relationship between education and national stability. Why might this be? After all, education can, in itself, be a destabilizing influence. An educated person will be more likely to point out flaws in the government, and thus upset the people.

An educated population, however, can also provide a check on run-away government, and can give the population a feeling of participating in the system, thus lowering the potential for violent change.

##### *Polity.*

The Polity IV project measured authoritarianism and democracy across nations, and the correlations between polity and education factors were the strongest in this study.

As with national stability, education and literacy is most closely associated with democracy and the ability of the population to participate in government. Obviously, an authoritarian government, which sees itself as having all of the answers to societal problems, will be less likely to tolerate a highly educated population.

#### *Human Development.*

This United Nations -funded index measures how much choice and participation the people have in their government. This index showed the weakest relationship with education, although the results were still significant. Why might that be?

The Universal Declaration on Human Rights (United Nations, 1948), contains three sections that may prove contradictory:

\* Article 12 prohibits “attacks upon . . . honor and reputation. Everyone has the right to the protection of the law against such . . . attacks.”

\* Article 19 states “Everyone has the right to freedom of opinion and expression . . . and to seek, receive and impart information . . . through any media. . . .”

\* Article 26 says “Everyone has the right to education [which] shall be directed to the full development of the human personality and . . . fundamental freedoms.”

Some nations, nevertheless, claim that the exchange of ideas undermines national sovereignty. For example, “Principles for Organizing Satellite Broadcast and Television Transmission and Reception in the Arab Region,” calls on Arab League members to restrict satellite transmissions that “negatively affect social peace, national unity, public morals,” or which “defame leaders, or national and religious symbols” (Human Rights Watch, 2008). The U.N. is thus faced with perhaps conflicting goals: protecting human rights while at the same time not infringing on national sovereignty.

In balancing these competing interests, it makes sense that the world body may take a less absolutist view of the value of education and the exchange of ideas than do organizations that openly espouse the absolute value of education as, among other attributes, the exchange of ideas. This would tend to lower national education scores which would then be reflected in a weakened relationship between human development and education. This notion is further confirmed if we compare the three national development scores, which showed the United Nations’ score had a weaker correlation with polity and stability than did polity and stability between themselves.

At this point, we can conclude that there is a strong positive relationship between each set of variables (measures of national development and measures of education and literacy). However, we must be careful and not assume there is a causative relationship. Indeed, there are two possible directions for causal ordering: national stability leads to more literacy, or higher levels of literacy lead to national stability. Without an analysis of long-term historical trends, the direction of the causal ordering is impossible to determine. Future research can certainly investigate how polity and literacy work together, and what other factors such as press freedom, economics, and political structure contribute to the relationship.

There is also the very pragmatic issue of how to apply this information: should nations with high scores in the areas of polity and humanistic development make efforts to encourage education in an attempt to



influence democratic movements in totalitarian countries, or should those same countries try to influence totalitarian governments in an attempt to encourage literacy? Or can both efforts be carried out simultaneously? Or is it even the place of countries with a tradition of valuing human worth and dignity to try to influence those which place less value on these ideas? Indeed, the answers to these questions may themselves be secondary to the process of the debate itself.

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