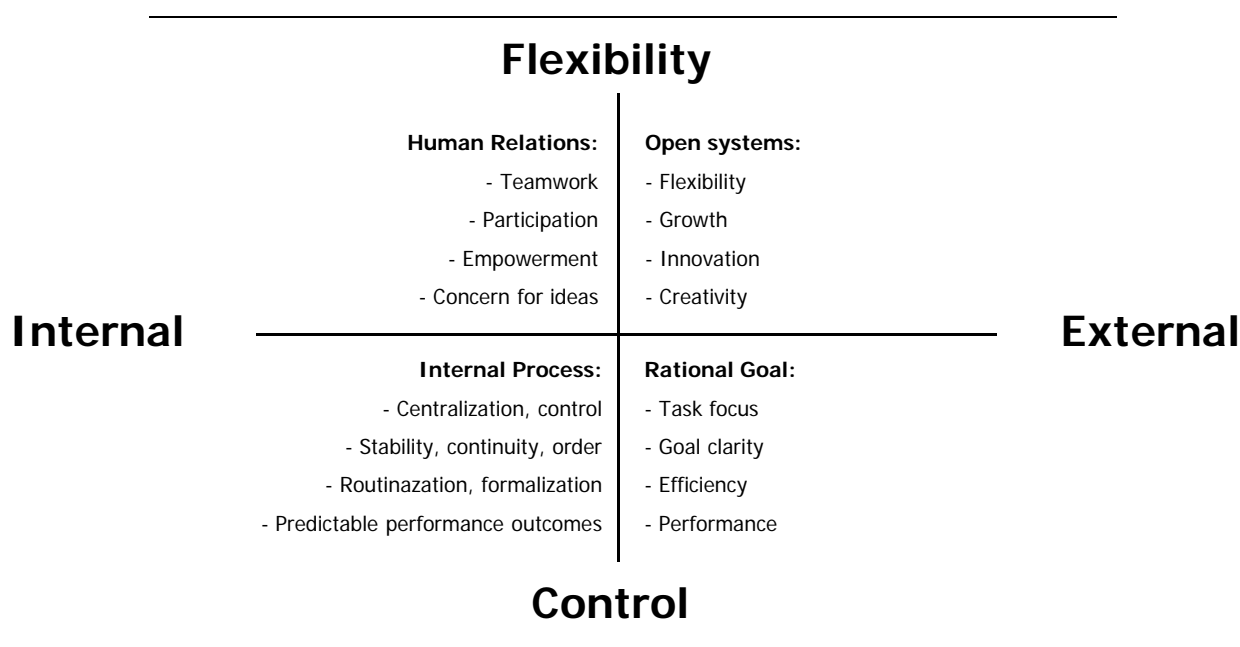


Supplemental Digital Figure 1

The Competing Values Framework comprises elements of organizational effectiveness sorted along two axes: 'flexibility – control' and 'internal – external', which results in four competing organizational models: human relations, open systems, rational goal and internal process. Reproduced with permission from Quinn R, Spreitzer G. The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on the quality of life. Research in Organizational Change and Development. 1991;5:115-42.



Supplemental Digital Table 1

Overview of Countries Studied With the Number of Medical Schools and Participants, Including the National Levels of GDP per Capita (US dollars) and Hofstede's¹ National Culture Scores: PD (Power Distance), IDV (Individualism), and UA (Uncertainty Avoidance), From an International Study of the Influence of National and Organizational Culture on Curriculum Change, 2012

Country	No. medical schools	No. participants	GDP	PD	IDV	UA
Albania ^{ab}	1	9	8,258	76	27	88
Australia	7	42	37,165	36	90	51
Austria	2	4	39,799	11	55	70
Azerbaijan ^{ac}	2	10	8,714	93	39	95
Bahrain ^{ad}	1	10	25,800	80	38	68
Belgium	3	51	36,992	65	75	94
Brazil ^e	1	1	10,408	69	38	76
Canada	5	57	38,994	39	80	48
Chile	2	26	14,541	63	23	86
China	2	8	6,204	80	20	30
Colombia	1	7	8,960	67	13	80
Dominica ^{af}	1	3	11,968			
Ecuador	1	17	7,741	78	8	67
El Salvador	1	6	6,680	66	19	94
Ethiopia	1	16	884	70	20	55
Finland ^e	1	1	38,000	33	63	59
Georgia ^{ac}	2	14	4,905	93	39	95
Germany ^e	1	1	37,064	35	67	65
Ghana	1	9	1,499	80	15	65
India	7	7	3,020	77	48	40
Indonesia	8	111	3,877	78	14	48
Iran	3	3	11,293	58	41	59
Israel	1	7	27,652	13	54	81

Italy	4	8	33,269	50	76	75
Japan	10	42	33,802	54	46	92
Kazakhstan ^{ac}	1	3	11,370	93	39	95
Kuwait	1	8	52,657	90	25	80
Malaysia	1	9	14,055	104	26	36
Mexico	4	29	14,741	81	30	82
Nepal ^f	5	35	1,109			
Netherlands	3	23	42,747	38	80	53
New Zealand	2	28	29,159	22	79	49
Norway	1	5	60,490	31	69	50
Oman ^{ad}	1	3	26,767	80	38	68
Pakistan	2	13	2,516	55	14	70
Phillipines	3	12	3,674	94	32	44
Poland	1	18	18,058	68	60	93
Romania	1	29	14,658	90	30	90
S. Korea	1	20	26,877	60	18	85
Saudi Arabia	2	21	22,334	95	25	80
Singapore	2	15	52,125	74	20	8
Spain	2	13	33,201	57	51	86
Sudan ^{ae}	5	30	2,128	64	27	52
Sweden	1	11	39,476	31	71	29
Switzerland	2	14	45,964	34	68	58
Thailand	4	12	8,013	64	20	64
Tunisia ^{af}	1	5	8,887			
Turkey	1	15	14,995	66	37	85
UAE	3	50	55,781	90	25	80
Uganda	1	6	1,172	64	27	52
UK	3	25	36,820	35	89	35
Ukraine ^{ac}	1	12	7,314	93	39	95
Uruguay	1	13	12,679	61	36	100
USA	3	33	46,971	40	91	46

Vietnam	2	9	2,835	70	20	30
Yemen ^{ad}	1	2	2,446	80	38	68
Total	131	991				

^a No original score available.

^b Used score for Yugoslavia instead.

^c Used score for Russia instead.

^d Used score for Arab world instead.

^e Used score for East Africa.

^f No cultural neighbouring country score available required deletion of participants from analysis.

^g Only one participant per medical school required deletion of participant from analysis.

References

¹ Hofstede G. Cultures and Organisations: Software of The Mind. London: McGraw-Hill; 1991.

Supplemental Digital Table 2

MORC Questionnaire Consisting of Two Positive Dimensions, “Motivation” (3 Subscales) and “Capability” (7 Subscales), and One Negatively Phrased Dimension, “Extrinsic Pressure” (2 Subscales), to be Scored on a Five-Point Likert Scale, From an International Study of the Influence of National and Organizational Culture on Curriculum Change, 2012

Medical school’s Organizational Readiness for curriculum Change (MORC)	1 = strongly disagree	2 = disagree	3 = neutral	4 = agree	5 = strongly agree	NA
1. Pressure for change						Motivation
<i>Current pressure to change the curriculum comes from:</i>						
Bottom-up:						
1. Students in the program	1	2	3	4	5	NA
2. Teaching staff	1	2	3	4	5	NA
3. Hospital staff	1	2	3	4	5	NA
Top-down:						
4. Educational committee	1	2	3	4	5	NA
5. Dean/rector	1	2	3	4	5	NA
External:						
6. Accreditation authorities	1	2	3	4	5	NA
7. Ministry of Health/Education	1	2	3	4	5	NA
2. Need for change						Motivation
<i>There is a need for change</i>						
8. There is a significant difference between the current and the desired state of our curriculum	1	2	3	4	5	NA
9. We need a major change of our curriculum	1	2	3	4	5	NA

3. Appropriateness						Motivation
<i>This change project meets a real need for change</i>						
10. This change project is tailored to the needs for change in our school	1	2	3	4	5	NA
11. There is a high priority for the success of this change project	1	2	3	4	5	NA
12 (R). The potential benefits of this change are not worth its costs in time and resources required to implement it	1	2	3	4	5	NA
13. This change serves an important purpose	1	2	3	4	5	NA
14. This change will put us higher on (inter)national ranking	1	2	3	4	5	NA
15. This change will improve the knowledge and skills of our graduates	1	2	3	4	5	NA
4. Efficacy						Capability
<i>Shared belief in the conjoint capabilities to organize and execute the courses of action required to implement this change successfully</i>						
16. We have the skills in our school that are needed to implement this change	1	2	3	4	5	NA
17 (R). Considering the trouble we had in previous change efforts, we will have difficulty to implement this change successfully	1	2	3	4	5	NA
18. We have been through well-executed changes in the past, and we are confident in our capacity to implement this change	1	2	3	4	5	NA
5. The leaders of this change project (such as the head of curriculum change committee):						Capability
19. Are committed to this change	1	2	3	4	5	NA
20. Seem to accept full responsibility for this project	1	2	3	4	5	NA
21. Have the authority to carry out the implementation	1	2	3	4	5	NA
22. Work well with the implementation team	1	2	3	4	5	NA
23. Share responsibility for this project	1	2	3	4	5	NA

						Capability
6. The implementation team members (such as the curriculum change committee):						
24. Have clearly defined roles and responsibilities	1	2	3	4	5	NA
25. Have release time for this change project or can combine the tasks within their regular work	1	2	3	4	5	NA
26. Have staff support and other resources required for the project	1	2	3	4	5	NA
7. Staff innovativeness						Capability
<i>The majority of staff members involved with teaching:</i>						
27. Have a sense of personal responsibility for improving education	1	2	3	4	5	NA
28. Are willing to innovate and/or experiment to improve teaching	1	2	3	4	5	NA
8. Communication						Capability
29. There is good communication between project leaders and staff members about the school's policy towards the change	1	2	3	4	5	NA
30. Information provided about the change is clear	1	2	3	4	5	NA
31. In this school we are sufficiently informed about the progress of the change	1	2	3	4	5	NA
32. Departments are consulted about the change sufficiently	1	2	3	4	5	NA
33. Staff members are sufficiently informed about the reasons for the change	1	2	3	4	5	NA
34. Our medical school has a clear vision on this change project	1	2	3	4	5	NA
35. Our vision of this change project is widely communicated and understood throughout our medical school	1	2	3	4	5	NA

9. Project resources						Capability
<i>The following are available to make this change project work:</i>						
36. Financial resources	1	2	3	4	5	NA
37. Staff development (such as courses/workshops regarding change project)	1	2	3	4	5	NA
38. Facilities (such as teaching rooms, books, computers, etc.)	1	2	3	4	5	NA
39. Sufficient staff	1	2	3	4	5	NA
40. Incentives for staff that support the change project (either financial, material, or promotional)	1	2	3	4	5	NA
41. Student awareness/needs	1	2	3	4	5	NA
42. Evaluation protocol	1	2	3	4	5	NA
10. The implementation plan for this change project:						Capability
43. Identifies specific roles and responsibilities for the staff	1	2	3	4	5	NA
44. Clearly describes tasks and long run timelines	1	2	3	4	5	NA
45. Includes appropriate staff/student training	1	2	3	4	5	NA
46. Acknowledges staff input and opinions	1	2	3	4	5	NA
11 (R). External innovativeness inhibition						Extrinsic pressure
<i>The majority of staff members involved with teaching:</i>						
47. Feel that there is ineffective cooperation between departments concerning educational issues	1	2	3	4	5	NA
48. Feel that many departments are afraid to lose power in controlling the teaching of their discipline	1	2	3	4	5	NA
49. Feel that this change will increase their workload	1	2	3	4	5	NA
50. Feel restricted by strong hierarchy to express their views	1	2	3	4	5	NA
51. Are afraid to lose income when this change is implemented	1	2	3	4	5	NA

12. Extrinsic motivation to change							Extrinsic pressure
52. We have to change because our management wants us to change	1	2	3	4	5	NA	
53. In our school we feel pressure to go along with this change	1	2	3	4	5	NA	
Concluding remarks (You may use this space for remarks about the survey or elements that have not been addressed): 							

Abbreviation: MORC indicates

Supplemental Digital Table 3

Means, Standard Deviations (SD), and Pearson Correlations Among all Variables (National Culture, GDP, Organizational Culture, and Successful Curriculum Change) (N = 911), From an International Study of the Influence of National and Organizational Culture on Curriculum Change, 2012^a

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
National culture													
1. Uncertainty avoidance	65.86	21.60	1										
2. Power distance	64.0	21.32	0.33 ^b	1									
3. Individualism	44.23	27.51	-0.15 ^b	-0.76 ^b	1								
4. GDP	24,086	17,410.6	-0.08	-0.42 ^b	0.63 ^b	1							
Organizational culture													
5. Internal process	19.58	3.72	-0.01	0.06	-0.01	0.04	1						
6. Rational goal	21.05	3.88	-0.04	-0.04	0.13 ^b	0.14 ^b	0.76 ^b	1					
7. Open systems	19.24	4.30	-0.02	0.03	0.06	0.04	0.65 ^b	0.72 ^b	1				
8. Human relations	19.43	4.37	0.03	0.06	0.00	-0.01	0.69 ^b	0.75 ^b	0.84 ^b	1			
Successful curriculum change													
9. MORC-motivation	49.22	6.92	-0.06	0.12 ^b	-0.13 ^b	-0.07 ^c	0.26 ^b	0.25 ^b	0.32 ^b	0.31 ^b	1		
10. MORC-capability	108.16	18.66	-0.10 ^b	0.10 ^b	0.00	0.05	0.39 ^b	0.44 ^b	0.53 ^b	0.48 ^b	0.44 ^b	1	
11. MORC-extrinsic pressure	22.39	4.08	0.06	0.01	-0.06	-0.08 ^c	-0.11 ^b	-0.14 ^b	-0.22 ^b	-0.20 ^b	-0.10 ^b	-0.28 ^b	1
12. Active and passive resistance	27.67	17.80	0.09 ^b	0.09 ^b	-0.15 ^b	-0.16 ^b	-0.24 ^b	-0.31 ^b	-0.34 ^b	-0.31 ^b	-0.10 ^b	-0.32 ^b	0.23 ^b

Abbreviation: MORC indicates

^a These correlations omit the nested structure of participants within medical schools and countries and therefore should be interpreted with caution.

^b Significant at $P < .01$ level.

^c Significant at $P < .05$ level.