

CHAPTER IV

RESULTS OF THE PILOT SAMPLE ANALYSES

Item Analyses

Development of the Bureaucratization Scale

The pilot sample was used for testing the instrument. Items that have been used for measuring bureaucratic dimensions and sense of power were analyzed. Items that survive the analyses using the pilot data were included in subsequent analyses using the research sample data.

Identification of the Pool of Items

From a review of the literature on organizations, six instruments were found that measured Hall's six dimensions of bureaucracy. All items originated from Hall's work in 1961. Items from six authors were selected. Hall's six bureaucratic dimensions are: (1) hierarchy of authority, (2) division of labor, (3) rules and regulations, (4) procedural specifications, (5) impersonality, and (6) technical competence. The six Authors were (1) Hall, (2) MacKay, (3) Punch, (4) Isherwood, (5) Sousa, and (6) B. Anderson. The items listed by dimensions and authors are in Table 7. All authors used Likert-type response scales. Most of the items were used by more than one author to the bureaucratic dimensions.

For each teacher in the pilot sample, scores on seven scales were computed for each of Hall's six dimensions, six of the seven scales were based on the items of above named researchers used in his instrument to define a particular dimension. The seventh scale was based on responses to all of the items within a dimension, regardless of the authorship of the item.

Reduction of the Pool of Items

The process of reducing items measuring each of the six dimensions of bureaucracy had three parts: (1) elimination of items based on the correlation of items with the average score of the scales of the six authors and of an average score calculated from all items of all authors, (2) elimination based on the corrected item-total correlation and "alpha if item deleted" statistics in

the reliability procedure in SPSS, and (3) elimination based on a factor analysis of all items remaining after the first two elimination procedures.

Data for the elimination of items based on item to total correlations across authors are in the Tables 6 through 11. The tables show the correlation coefficients between responses to each item and scores on each of the six scales defined by six authors for each of the six dimensions plus a total scale based on all items. The light shading among the coefficients in tables 6 through 11 identify the items associated with each researcher. The criterion for eliminating an item was a minimum item to total correlation of .35 on at least three of the seven scales for a given dimension. If an item did not have at least three correlation coefficients of .35 with the average score of seven potential scale, the item's statement is darkly shaded at the first column. The dark shading of the item statements indicate items that were eliminated from further consideration on the basis of their coefficients. Seven items were eliminated in the hierarchy of authority scale (Table 6). Sixteen items were eliminated in the division of labor scale (Table 7). Nine items were eliminated the rules and regulations scale (Table 8). Six items were eliminated in the procedural specifications scale (Table 9). No item was eliminated in impersonality scale (Table 10). One item was eliminated in the technical competence scale (Table 11).

Those items that survived the correlational analysis were subjected to a reliability analysis. A separate reliability analysis was conducted for the items defining each of Hall's dimensions. Data for the elimination of items based on the corrected item-total correlation coefficients and "alpha if item deleted" statistics in the reliability procedure of SPSS are in Tables 12 through 17. The corrected item-total correlation is the correlation between the item score and the total scale score calculated by not including the item's score. If an item has a negative "corrected item total correlation coefficient"; the item was eliminated from further consideration. Also, if this statistic is lower than .20, the item was considered for elimination. Additionally, If the deletion of an item improves the reliability coefficient the item will be considered for elimination. Eliminations were done one item at a time. After an item was eliminated reliability of a scale was recalculated with remaining items. The item with highest negative score was eliminated first. If an item's elimination improved the reliability coefficient by two (.02) points, the item is considered for elimination. For the hierarchy of authority scale (Table 12), three items were eliminated: HA3, HA7, and HA10. These three items had low item

Table 6. Item to Total Correlations Across Scales Defined by each Author for the Hierachy of Authority Dimension

	ALL	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
HA1 I feel that I am my own boss in most matters (Reversed).	<u>.395</u>	.333	<u>.517</u>	<u>.297</u>	.293	<u>.309</u>	<u>.039</u>
HA2 Even small matters have to be referred to some one higher up for a final answer.	<u>.558</u>	<u>.398</u>	<u>.500</u>	<u>.564</u>	<u>.613</u>	<u>.622</u>	<u>.422</u>
HA3 A person can make his own decisions without checking with any one else (Reversed).	.333	.226	<u>.429</u>	<u>.361</u>	<u>.423</u>	<u>.436</u>	.060
HA4 I have to check with the boss before I do almost anything.	<u>.596</u>	<u>.559</u>	<u>.495</u>	<u>.613</u>	<u>.554</u>	<u>.534</u>	<u>.676</u>
HA5 A person who wants to make his own decisions would quickly become discouraged in this school.	<u>.615</u>	<u>.557</u>	<u>.449</u>	<u>.573</u>	<u>.440</u>	<u>.427</u>	<u>.547</u>
HA6 Everyone here has one superior to whom he regularly reports.	<u>.376</u>	<u>.385</u>	.326	<u>.434</u>	<u>.417</u>	.184	.186
HA7 People can get supplies without clearing it with their superiors (Reversed).	.285	<u>.421</u>	<u>.475</u>	<u>.374</u>	<u>.404</u>	<u>.438</u>	-.051
HA8 There can be little action until an administrator approves a decision.	<u>.595</u>	<u>.532</u>	<u>.496</u>	<u>.582</u>	<u>.609</u>	<u>.628</u>	<u>.696</u>
HA9 People here get their orders from different person all the time (Reversed).	-.186	-.071	-.027	-.297	-.264	-.220	-.250
HA10 Any decision I make (do not) have to have the boss's approval	.328	<u>.422</u>	<u>.477</u>	.258	<u>.437</u>	<u>.483</u>	-.009
HA11 How things are done in the classroom is left pretty much up to the individual teacher (Reversed).	.242	<u>.395</u>	<u>.368</u>	.330	.174	.175	-.133
HA12 Staff members of this school always get their orders from higher up.	<u>.524</u>	.292	.248	.382	<u>.503</u>	<u>.495</u>	<u>.545</u>
HA13 People here allowed to do almost as they please (Reversed).	.167	.260	.309	.218	.215	.258	-.095
HA14 In the final analysis, the principal, of this school has a lot of authority over me.	<u>.450</u>	.196	.177	.293	.312	.294	<u>.656</u>
HA15 When my interests conflict with the interests of those who run the school, they make the final decision.	<u>.487</u>	.219	.156	.257	.286	.289	<u>.677</u>
HA16 There are people in this school who are empowered to give me orders and they often do.	<u>.495</u>	.212	.152	.277	.250	.257	<u>.713</u>
HA17 I get approval for decision I make.	<u>.395</u>	.182	.135	<u>.390</u>	.198	.177	.370
HA18 Only administrators can decide how things are to be done	<u>.518</u>	<u>.469</u>	.234	<u>.397</u>	.319	.280	<u>.473</u>

Note. Average scores were calculated across all items in an instrument. Items in a potential instrument are indicated with light shading (light grey) on the coefficients. Only items across the shaded coefficients were used to arrive at the average score of each instrument. Items with dark shading (Red) at the first column were eliminated because they did not have at least three item-mean correlations of .350 or more with seven average scores. Correlations that are higher than .35 are underlined.

Table 7. Item to Total Correlations Across Scales Defined by each Author for the Division of Labor Scale

	ALL	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
DL1 One thing teacher like in this school is the variety of work	.189	.164	.371	.446	.230	.282	.171
DL2 Most jobs have something different happening from day to day	.142	.303	.416	.138	.043	.057	-.074
DL3 People teaching in this school usually find their job to be very monotonous.	.149	.436	.333	-.228	-.249	-.270	-.116
DL4 We usually work under the same circumstances from day to day.	.266	.544	.180	-.097	-.153	-.159	-.080
DL5 Everyone has a specific job to do.	.387	.506	.061	.083	.067	.057	.094
DL6 This organization is characterized by a complex division of labor.	.431	.368	.138	.179	.135	.138	.267
DL7 No two days are ever the same in this job (Reversed).	.196	.350	.432	.133	.087	.085	-.066
DL8 Every employee has a specific function, which he has to perform.	.465	.508	.074	.169	.213	.155	.162
DL9 Most jobs in this organization involve a variety of different kinds of activities.	.287	.327	-.067	-.048	.012	-.013	.268
DL10 Standardized classroom methods and procedures are used by all staff-members.	.253	.334	.351	-.162	-.135	-.158	-.038
DL11 The instructional program is departmentalized into specific subject areas with specific teachers assigned.	.488	.158	.462	.432	.446	.454	.238
DL12 When an unusual problem arises the teacher must refer the matter to a definite person within the school organization	.338	-.047	.308	.268	.207	.246	.335
DL13 We are expected to teach in more than one subject area (Reversed).	.319	-.104	.433	.575	.316	.533	.458
DL14 Few people here find their work challenging.	-.030	.244	.033	-.350	-.200	-.272	-.183
DL15 Teaching in this school involves a variety of tasks and responsibilities from day to day (Reversed).	.421	.238	.532	.463	.215	.264	.087
DL16 Teachers receive help from the custodial staff in setting up audio-visual equipment.	.306	.088	-.028	.271	.361	.317	.613
DL17 Instead of one general program there are several specialized programs of instruction in this school.	.120	.130	-.165	-.205	-.103	-.151	.388
DL18 I have certain duties and responsibilities that few other people in this school perform.	.155	.014	-.040	-.142	-.131	-.117	.382
DL19 We do a lot of paper work, which could be done by a school office staff (Reserved).	.469	.121	.298	.654	.633	.634	.499
DL20 Discipline problems are referred to a definite person within the school.	.161	.120	.023	.035	-.200	-.183	-.025
DL21 Teachers do their own preparation of stencils for classroom use (Reserved).	.103	-.149	-.094	.353	.458	.428	-.013
DL22 Teachers are required to sponsor extra-curricular activities for which they have no suitable background (Reversed)	.343	-.080	.131	.524	.608	.603	.142
DL23 Assignment of teaching duties is made without regard for the teacher's experience or training (Reversed).	.456	.048	.165	.601	.693	.665	.185
DL24 There is an overlap in the job responsibilities of the principal and vice principal (Reversed).	.227	.003	.109	.383	.417	.415	.075

Table 8. Item to Total Correlations Across Scales Defined by each Author for the Rules and Regulations Scale

	ALL	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
RR1 The school has a manual of rules and regulations to be followed.	<u>.189</u>	<u>.422</u>	<u>.416</u>	<u>.337</u>	<u>.480</u>	<u>.536</u>	<u>-.007</u>
RR2 Smoking is permitted only in certain designated places.	<u>.498</u>	<u>.485</u>	<u>.547</u>	<u>.554</u>	<u>.316</u>	<u>.257</u>	<u>.548</u>
RR3 There really are no specific rules, but the employees understand how they shall act (Reversed).	<u>-.338</u>	<u>-.141</u>	<u>-.316</u>	<u>-.309</u>	<u>-.186</u>	<u>-.126</u>	<u>-.501</u>
RR4 The teachers are constantly being checked upon for rule violations.	<u>.545</u>	<u>.608</u>	<u>.563</u>	<u>.365</u>	<u>.508</u>	<u>.508</u>	<u>.239</u>
RR5 It seems as though there is a rule for everything here.	<u>.304</u>	<u>.425</u>	<u>.223</u>	<u>.083</u>	<u>.178</u>	<u>.212</u>	<u>.082</u>
RR6 Nothing is said if you come to work late occasionally (Reversed).	<u>.164</u>	<u>.375</u>	<u>.336</u>	<u>.336</u>	<u>.388</u>	<u>.447</u>	<u>-.129</u>
RR7 Teachers do not know the rules of the school (Reversed).	<u>.251</u>	<u>.013</u>	<u>.036</u>	<u>.072</u>	<u>-.026</u>	<u>-.050</u>	<u>.110</u>
RR8 People here make their own rules on the job (Reversed).	<u>.385</u>	<u>.376</u>	<u>.391</u>	<u>.418</u>	<u>.198</u>	<u>.156</u>	<u>.281</u>
RR9 Teachers are rarely supervised to see that they follow the rules (Reversed).	<u>.177</u>	<u>.122</u>	<u>.099</u>	<u>.075</u>	<u>.085</u>	<u>.101</u>	<u>.056</u>
RR10 Employees are expected to follow written orders without questioning them.	<u>.543</u>	<u>.647</u>	<u>.640</u>	<u>.567</u>	<u>.614</u>	<u>.586</u>	<u>.356</u>
RR11 Teachers do not leave their classroom unless they have permission.	<u>.559</u>	<u>.397</u>	<u>.503</u>	<u>.560</u>	<u>.468</u>	<u>.250</u>	<u>.537</u>
RR12 The time for informal get-togethers during the school day is strictly regulated.	<u>.306</u>	<u>.117</u>	<u>.364</u>	<u>.302</u>	<u>.401</u>	<u>.393</u>	<u>.161</u>
RR13 Staff members feel as though they are constantly being watched to see that they obey all the rules.	<u>.549</u>	<u>.632</u>	<u>.611</u>	<u>.402</u>	<u>.436</u>	<u>.402</u>	<u>.300</u>
RR14 Rules govern the style and type of clothing, which I wear to school.	<u>.555</u>	<u>.291</u>	<u>.360</u>	<u>.427</u>	<u>.304</u>	<u>.208</u>	<u>.664</u>
RR15 I am careful not to violate school rules regarding my relationships with others.	<u>.504</u>	<u>.134</u>	<u>.219</u>	<u>.278</u>	<u>.201</u>	<u>.137</u>	<u>.701</u>
RR16 I follow rules stating when I am to arrive and/or depart from the school.	<u>.601</u>	<u>.302</u>	<u>.383</u>	<u>.519</u>	<u>.392</u>	<u>.323</u>	<u>.771</u>
RR17 I obey a lot of rules regarding my personal behavior in and around the school.	<u>.535</u>	<u>.201</u>	<u>.300</u>	<u>.399</u>	<u>.271</u>	<u>.229</u>	<u>.702</u>
RR18 I follow school rules, which regulate my attendance	<u>.558</u>	<u>.189</u>	<u>.283</u>	<u>.402</u>	<u>.247</u>	<u>.140</u>	<u>.779</u>
RR19 Teachers are aware of rules regarding their behavior in and around the school.	<u>.488</u>	<u>.219</u>	<u>.261</u>	<u>.414</u>	<u>.205</u>	<u>.138</u>	<u>.619</u>
RR20 Teachers are careful not to violate the rules in this school.	<u>.368</u>	<u>.094</u>	<u>.148</u>	<u>.274</u>	<u>.042</u>	<u>-.036</u>	<u>.634</u>
RR21 The rules set for this school are questioned by teachers (Reversed).	<u>.087</u>	<u>.016</u>	<u>-.034</u>	<u>.182</u>	<u>.053</u>	<u>.077</u>	<u>-.211</u>
RR22 Teachers abide by the spirit of rules rather than stick to the letter of rules (Reversed).	<u>-.058</u>	<u>-.086</u>	<u>-.157</u>	<u>.039</u>	<u>.101</u>	<u>.138</u>	<u>-.352</u>
RR23 Written orders from higher up are followed unquestioningly.	<u>.344</u>	<u>.093</u>	<u>.114</u>	<u>.149</u>	<u>.102</u>	<u>.057</u>	<u>.249</u>

Table 9. Item to Total Correlations Across Scales Defined by each Author for the Procedural Specifications Scale

	ALL	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
PS1 Standard procedures are to be followed in almost all situations.	<u>.533</u>	<u>.493</u>	<u>.373</u>	<u>.624</u>	<u>.442</u>	<u>.422</u>	<u>.403</u>
PS2 We are encouraged to "cut red tape" in order to get the job done (Reversed).	<u>.116</u>	<u>.238</u>	<u>.057</u>	<u>-.036</u>	<u>.010</u>	<u>.043</u>	<u>-.116</u>
PS3 Red tape often is a problem in getting a job done (Reversed).	<u>-.051</u>	<u>.064</u>	<u>.040</u>	<u>.067</u>	<u>.010</u>	<u>.117</u>	<u>-.103</u>
PS4 The organization stresses following the established procedures.	<u>.529</u>	<u>.503</u>	<u>.396</u>	<u>.610</u>	<u>.428</u>	<u>.411</u>	<u>.333</u>
PS5 Employees are often left to their own judgement as to how to handle most problems (Reversed).	<u>.279</u>	<u>.449</u>	<u>.436</u>	<u>.354</u>	<u>.182</u>	<u>.465</u>	<u>.021</u>
PS6 We are to follow strict operating procedures at all times.	<u>.480</u>	<u>.439</u>	<u>.401</u>	<u>.527</u>	<u>.430</u>	<u>.398</u>	<u>.296</u>
PS7 Most of us are encouraged to use our own judgement (Reversed).	<u>.156</u>	<u>.303</u>	<u>.319</u>	<u>-.037</u>	<u>.072</u>	<u>.133</u>	<u>-.159</u>
PS8 Going through the proper channels is constantly stressed.	<u>.499</u>	<u>.330</u>	<u>.335</u>	<u>.323</u>	<u>.370</u>	<u>.319</u>	<u>.367</u>
PS9 Whatever situation arises, we have procedures to follow in dealing with most matters.	<u>.631</u>	<u>.575</u>	<u>.641</u>	<u>.609</u>	<u>.584</u>	<u>.654</u>	<u>.665</u>
PS10 The same procedure is used in different situations	<u>.468</u>	<u>.327</u>	<u>.443</u>	<u>.282</u>	<u>.582</u>	<u>.361</u>	<u>.270</u>
PS11 There is only one way to do the job- the principal's way.	<u>.637</u>	<u>.555</u>	<u>.655</u>	<u>.450</u>	<u>.664</u>	<u>.625</u>	<u>.440</u>
PS12 The same procedures are to be followed in most situations.	<u>.535</u>	<u>.332</u>	<u>.510</u>	<u>.475</u>	<u>.486</u>	<u>.375</u>	<u>.499</u>
PS13 Standard forms are used for sick leaves	<u>.383</u>	<u>.187</u>	<u>.204</u>	<u>.339</u>	<u>.274</u>	<u>.184</u>	<u>.598</u>
PS14 Rules regulate where I sit in relation to the students.	<u>.351</u>	<u>.137</u>	<u>.149</u>	<u>.190</u>	<u>.156</u>	<u>.168</u>	<u>.657</u>
PS15 Teachers' experiment with procedures for classroom teaching and other school work (Reversed).	<u>.118</u>	<u>.049</u>	<u>.006</u>	<u>.136</u>	<u>.009</u>	<u>.040</u>	<u>-.109</u>
PS16 Teachers follow clearly specified procedures for doing the job here.	<u>.473</u>	<u>.363</u>	<u>.311</u>	<u>.579</u>	<u>.386</u>	<u>.358</u>	<u>.325</u>
PS17 Whenever we have a problem, we are supposed to go to the same person for an answer.	<u>.525</u>	<u>.554</u>	<u>.565</u>	<u>.514</u>	<u>.598</u>	<u>.589</u>	<u>.216</u>
PS18 Going through the proper channels is constantly stressed.	<u>.676</u>	<u>.700</u>	<u>.663</u>	<u>.624</u>	<u>.693</u>	<u>.692</u>	<u>.344</u>
PS19 Standardized classroom methods and procedures are used by all staff-members.	<u>.446</u>	<u>.359</u>	<u>.341</u>	<u>.614</u>	<u>.558</u>	<u>.372</u>	<u>.399</u>

Table 10. Item to Total Correlations Across Scales Defined by each Author for the Impersonality Scale

	ALL	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
IM1 No matter how serious a person's problems are, he is to be treated the same as anyone else.	<u>.068</u>	<u>.362</u>	<u>.525</u>	<u>.434</u>	<u>.599</u>	<u>.264</u>	<u>-.204</u>
IM2 Everyone who calls the organization from outside is treated in exactly the same manner.	<u>.142</u>	<u>.428</u>	<u>.577</u>	<u>.322</u>	<u>.415</u>	<u>.203</u>	<u>-.207</u>
IM3 The organization is always sponsoring employee get-togethers (Reversed).	<u>.218</u>	<u>.190</u>	<u>.152</u>	<u>.270</u>	<u>.273</u>	<u>.257</u>	<u>.161</u>
IM4 A Person gets the chance to develop good friends here (Reversed).	<u>.397</u>	<u>.190</u>	<u>-.197</u>	<u>-.053</u>	<u>-.174</u>	<u>.005</u>	<u>.485</u>
IM5 People are to be treated within the rules, no matter how serious a problem they may have.	<u>-.073</u>	<u>.251</u>	<u>.517</u>	<u>.390</u>	<u>.611</u>	<u>.126</u>	<u>-.411</u>
IM6 A very friendly atmosphere is evident to everyone who works here (Reversed).	<u>.382</u>	<u>.181</u>	<u>-.254</u>	<u>-.176</u>	<u>-.366</u>	<u>-.040</u>	<u>.409</u>
IM7 We are expected to be courteous, but reserved, at all times.	<u>.152</u>	<u>.326</u>	<u>.550</u>	<u>.462</u>	<u>.621</u>	<u>.476</u>	<u>-.179</u>
IM8 The administration here sticks pretty much to themselves.	<u>.410</u>	<u>.322</u>	<u>.216</u>	<u>.035</u>	<u>-.051</u>	<u>.398</u>	<u>.268</u>
IM9 No one here calls his superior by his first name.	<u>.339</u>	<u>.440</u>	<u>.158</u>	<u>.132</u>	<u>.073</u>	<u>.206</u>	<u>.041</u>
IM10 The relationship in this organization is really very impersonal.	<u>.526</u>	<u>.416</u>	<u>.173</u>	<u>.311</u>	<u>.045</u>	<u>.304</u>	<u>.265</u>
IM11 People who have contact with parents and other citizens are instructed in proper procedures for greeting and talking with them.	<u>.440</u>	<u>.285</u>	<u>.536</u>	<u>.233</u>	<u>.411</u>	<u>.631</u>	<u>.080</u>
IM12 The administration does not like staff get-togethers if it is not for official matters.	<u>.477</u>	<u>.196</u>	<u>.342</u>	<u>.098</u>	<u>.069</u>	<u>.555</u>	<u>.255</u>
IM13 A lot of the people get together over weekends. REVERSED	<u>.279</u>	<u>.301</u>	<u>.183</u>	<u>.046</u>	<u>-.003</u>	<u>.250</u>	<u>.033</u>
IM14 The organization is always sponsoring employee social -get-togethers (Reversed).	<u>.380</u>	<u>.158</u>	<u>-.060</u>	<u>.248</u>	<u>.176</u>	<u>.060</u>	<u>.308</u>
IM15 The relations between teachers and students are friendly and warm (Reversed).	<u>.123</u>	<u>-.055</u>	<u>-.344</u>	<u>-.289</u>	<u>-.321</u>	<u>-.161</u>	<u>.467</u>
IM16 The personal cautions which exist between teachers and administrators are friendly and warm (Reversed)	<u>.436</u>	<u>.113</u>	<u>-.164</u>	<u>-.085</u>	<u>-.185</u>	<u>.084</u>	<u>.662</u>
IM17 I address the school administrators formally	<u>.215</u>	<u>.182</u>	<u>.277</u>	<u>.534</u>	<u>.306</u>	<u>.197</u>	<u>.264</u>
IM18 My relations with other teachers are formal and impersonal	<u>.409</u>	<u>.159</u>	<u>.122</u>	<u>.418</u>	<u>.047</u>	<u>.184</u>	<u>.660</u>
IM19 Teachers' closest friends are other staff members at this school REVERSED	<u>.203</u>	<u>-.028</u>	<u>-.203</u>	<u>.108</u>	<u>-.174</u>	<u>-.094</u>	<u>.147</u>
IM20 Staff meetings proceed in a formal manner	<u>.363</u>	<u>.231</u>	<u>.272</u>	<u>.486</u>	<u>.189</u>	<u>.274</u>	<u>.119</u>

Table 11. Item to Total Correlations Across Scales Defined by each Author for the Technical Competence Scale

	ALL	HALL	MACKAY	PUNCH	ISHERWOOD	SOUSA	ANDERSON
TC1 Employees are periodically evaluated to see how well they do their job	<u>.262</u>	<u>.305</u>	<u>.252</u>	<u>.318</u>	<u>.079</u>	<u>.230</u>	<u>.400</u>
TC2 All the administrators in this school have experience qualifying them for the job	<u>.610</u>	<u>.598</u>	<u>.503</u>	<u>.482</u>	<u>.408</u>	<u>.511</u>	<u>.397</u>
TC3 People are not promoted simply because they have a "pull"	<u>.638</u>	<u>.678</u>	<u>.666</u>	<u>.467</u>	<u>.500</u>	<u>.626</u>	<u>.441</u>
TC4 promotions are based on merit in this organization	<u>.567</u>	<u>.604</u>	<u>.583</u>	<u>.641</u>	<u>.449</u>	<u>.442</u>	<u>.712</u>
TC5 Some teachers are kept on payroll even though they are not good teachers REVERSED	<u>.534</u>	<u>.570</u>	<u>.415</u>	<u>.415</u>	<u>.321</u>	<u>.392</u>	<u>.408</u>
TC6 People here are given raises according to how well they are liked rather than how well they do their job REVERSED	<u>.555</u>	<u>.610</u>	<u>.589</u>	<u>.486</u>	<u>.576</u>	<u>.598</u>	<u>.387</u>
TC7 There is little chance for promotion unless you are "in" with the boss REVERSED	<u>.565</u>	<u>.591</u>	<u>.596</u>	<u>.537</u>	<u>.486</u>	<u>.607</u>	<u>.302</u>
TC8 There is really no systematic procedure for promotions REVERSED	<u>.428</u>	<u>.455</u>	<u>.358</u>	<u>.285</u>	<u>.324</u>	<u>.358</u>	<u>.226</u>
TC9 In order to get a promotion, you have to "know somebody" REVERSED	<u>.477</u>	<u>.419</u>	<u>.531</u>	<u>.263</u>	<u>.534</u>	<u>.505</u>	<u>.182</u>
TC10 Staff members must possess above-average qualifications before they are hired in this school.	<u>.355</u>	<u>.217</u>	<u>.374</u>	<u>.466</u>	<u>.469</u>	<u>.338</u>	<u>.540</u>
TC11 Assessment of teaching performance is based on objective standards, not on personal preferences of administrators.	<u>.367</u>	<u>.215</u>	<u>.242</u>	<u>.521</u>	<u>.493</u>	<u>.378</u>	<u>.609</u>
TC12 Past teaching experience plays a large part in the assignment of a teacher to this school	<u>.624</u>	<u>.476</u>	<u>.624</u>	<u>.526</u>	<u>.664</u>	<u>.640</u>	<u>.447</u>
TC13 A record of every staff member's job performance is kept	<u>.448</u>	<u>.294</u>	<u>.444</u>	<u>.492</u>	<u>.279</u>	<u>.472</u>	<u>.239</u>
TC14 If you do not support administration, how well you do your job is not important REVERSED	<u>.502</u>	<u>.407</u>	<u>.394</u>	<u>.331</u>	<u>.360</u>	<u>.537</u>	<u>.191</u>

Note. Average scores were calculated across all items in an instrument. Items in a potential instrument are indicated with light shading (light grey) on the coefficients. Only items across the shaded coefficients were used to arrive at the average score of each instrument. Items with dark shading (Red) at the first column were eliminated because they did not have at least three item-mean correlations of .350 or more with seven average scores. Correlations that are higher than .35 are underlined.

Table 12 Items Eliminated in Hierarchy of Authority Scale Based on Reliability Analysis

(N =162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alfa if item deleted
HA2	32.0459	42.0665	.4558	.6665
HA3	31.3359	48.2113	.1878	.7051
HA4	31.9965	41.3419	.4917	.6600
HA5	32.1400	41.1430	.5617	.6504
HA6	32.6713	44.4968	.2805	.6964
HA7	32.7268	47.9075	.1109	.7227
HA8	31.9348	41.6094	.5036	.6589
HA10	32.4885	47.7335	.1484	.7141
HA12	31.5459	42.5647	.4333	.6704
HA17	31.3360	46.7822	.2564	.6971
HA18	32.4595	42.8546	.4417	.6696

Note. Items HA3, HA7, and HA10 were eliminated one at a time. Alpha coefficient is .70 before eliminating these three items. Alfa is .77 after eliminating the items.

total correlations (.18, .11, and .14, respectively) and their elimination improved the reliability of the scale from .70 to .77. For the division of labor scale (Table 13) one item was eliminated: DL21. The item had a corrected total correlation of .18 with the total and elimination of this item improved the reliability of the scale from .62 to .65. For the rules and regulations scale (Table 14) three items were eliminated: RR1, RR6, and RR12. These three items had low item total correlations (.08, .01, and .17, respectively) Eliminating these items improved the reliability of the scale from .73 to .82. For the procedural specification scale (Table 15) one item was eliminated: PS5. The item had a corrected total correlation of .09 with the scale. Eliminating this item improved the reliability of the scale from .81 to .83. For the impersonality scale (Table 16) items 1, 2, 5, 7, and 17 were eliminated. These items were negatively correlated to the corrected total score. Elimination of these items improved the reliability of the scale from .44 to .69. For the technical competence scale (Table 17) no item was eliminated.

The 64 items that survived the item analyses were subjected to a factor analysis conducted using the pilot sample data. Principal axis factor analysis was used to extract the factors, which were rotated to an oblique solution using oblimin procedure. Examination of scree plot suggested seven to ten factors. Eight, nine, and ten factor solutions were found to be non-interpretable because of the factorial complexity of many items. The seven factor solution was the most interpretable. Out of 64 items, four items were (TC10, TC11, TC13, and RR4) eliminated due to their factorial complexity and due to low item total correlations with scales. The 60 items survived analyses were subjected to a principal axis factor analysis using the pilot sample. Although only an exploratory analysis, with a limited people to item ratio, this analysis provided some insight as to the structure of these items. Seven factors explained 40% of the variance. The rotated factor loadings are displayed in Table 18. To facilitate interpretation only loadings greater than .30 are reported in Table 18. It was found that items in impersonality dimension loaded under two different factors. Items identified in impersonality dimension measure two different things: (1) friendliness of school climate and (2) formality in relations. The interpretation of items in the climate factor without reverse coding becomes more meaningful. Items in this factor are less likely to be measures of bureaucracy. Sousa and Hoy (1981) reported a similar finding regarding the impersonality dimension. According to Sousa and Hoy (1981) impersonality dimension is not a measure of bureaucratic structure. Merton (1957)

Table 13 Items Eliminated in Division of Labor Scale Based on Reliability Analysis (N = 162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alfa if item deleted
DL11	22.4884	32.7564	.2649	.6201
DL13	22.1625	29.7415	.3837	.5886
DL15	21.4643	32.5718	.2992	.6122
DL19	21.8841	28.7079	.4407	.5712
DL21	22.0878	31.8166	.1866	.6506
DL22	21.9506	29.7437	.4031	.5835
DL23	21.6495	28.7605	.4849	.5605
DL24	22.7051	33.5519	.2022	.6351

Note. Item DL21 was eliminated because of its low corrected item total correlation. The alpha coefficient is .60 before eliminating this item. The alpha coefficient is .65 after the elimination.

Table 14 Items Eliminated in Rules and Regulations Scale Based on Reliability Analysis

(N = 162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alfa if item deleted
RR1	51.8861	54.1687	.0845	.7581
RR2	49.9417	48.4574	.4272	.7080
RR4	50.5034	50.5764	.4002	.7121
RR6	51.2885	56.0593	.0097	.7656
RR8	49.5034	54.1277	.3202	.7223
RR10	50.3861	48.2484	.4959	.6997
RR11	49.6310	49.9670	.5023	.7023
RR12	50.9120	52.9492	.1728	.7422
RR13	50.6541	49.7595	.4578	.7056
RR14	49.6947	49.7937	.4988	.7022
RR16	49.5528	50.3982	.5458	.7007
RR17	49.8182	51.7159	.4629	.7091
RR18	49.3923	52.2403	.5158	.7082
RR19	49.6824	52.3179	.4354	.7121

Note. Items RR1, RR6, and RR12 were eliminated because of their low corrected item total correlation. The alpha coefficient is .73 before the elimination and it is .82 the after elimination.

Table 15 Items Eliminated in Procedural Specifications Scale Based on Reliability Analysis

(N = 162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alfa if item deleted
PS1	40.0195	69.5860	.5244	.7986
PS4	39.9214	70.4325	.5055	.8004
PS5	40.6429	77.7854	.0950	.8302
PS6	39.3431	74.0554	.4346	.8069
PS8	40.4310	70.1748	.4217	.8067
PS9	40.2752	67.0411	.6036	.7915
PS10	40.7849	70.3881	.4027	.8084
PS11	40.3616	66.8571	.5733	.7936
PS12	40.1750	69.1380	.5169	.7989
PS16	40.0016	72.1382	.4142	.8070
PS17	40.6165	69.2153	.4399	.8054
PS18	40.2568	67.1161	.5236	.7979
PS19	40.0283	69.3952	.4743	.8022

Note. Item PS5 was eliminated because of its low corrected item total correlation. The alpha coefficient is .81 before the elimination and it is .83 after the elimination.

Table 16 Items Eliminated in Impersonality Scale Based on Reliability Analysis (N = 162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alfa if item deleted
IM1	55.7378	58.4235	-.1156	.4797
IM2	55.2797	56.7862	-.0294	.4583
IM3	55.7601	55.2214	.0327	.4471
IM4	56.5564	51.9430	.2460	.3996
IM5	55.2416	61.0711	-.2385	.5004
IM6	56.5070	51.9932	.2215	.4037
IM7	55.3157	56.5824	-.0099	.4526
IM8	56.5502	51.1092	.2401	.3977
IM9	55.4144	52.2465	.1383	.4226
IM10	56.5256	49.6454	.3950	.3678
IM11	56.3033	50.4203	.2715	.3895
IM12	56.7293	50.2474	.3305	.3795
IM13	55.4577	54.0836	.1115	.4283
IM14	55.4144	51.6391	.2023	.4065
IM15	56.8651	57.0691	-.0254	.4534
IM16	56.7312	51.5764	.3013	.3905
IM17	55.0811	55.4323	.0598	.4383
IM18	56.5811	52.1858	.2756	.3967
IM19	55.9021	55.5808	.0310	.4458
IM20	55.5379	52.8936	.2230	.4065

Note. Items IM1, IM2, IM5, IM7, and IM17 were eliminated because of their negative correlations to total score. Items IM3 and IM13 were eliminated because of their low corrected item total correlation coefficients. The alpha coefficient is .44 before the elimination and it is .69 after the elimination.

Table 17 Items Eliminated in Technical Competence Scale Based on Reliability Analysis

(N = 162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item- total correlation	Alpha if item deleted
TC2	37.25	73.67	.49	.75
TC3	37.94	70.78	.53	.74
TC4	37.85	74.32	.45	.75
TC5	37.31	74.59	.40	.75
TC6	37.18	72.98	.47	.75
TC7	37.23	73.53	.49	.75
TC8	37.83	77.11	.29	.77
TC9	38.23	75.10	.35	.76
TC10	37.73	79.31	.22	.77
TC11	37.52	78.86	.21	.77
TC12	37.37	73.18	.52	.74
TC13	37.80	77.11	.31	.76
TC14	37.16	75.66	.41	.75

Note. No item was eliminated. The alpha coefficient is .77.

Table 18 Factor Analysis of Items in Bureaucratic Dimensions: Result of Principal Axis**Factoring with Oblique Rotation (Oblimin)**

Item	Factor						
	1	2	3	4	5	6	7
RR18 I follow school rules, which regulate my attendance	.79	.34					
RR16 I follow rules stating when I am to arrive and/or depart from the school.	.65						
RR14 Rules govern the style and type of clothing, which I wear to school.	.65						
RR11 Teachers do not leave their classroom unless they have permission.	.62						
RR17 I obey a lot of rules regarding my personal behavior in and around the school.	.57	.39			.34		
RR19 Teachers are aware of rules regarding their behavior in and around the school.	.56						
PS6 We are to follow strict operating procedures at all times.	.55						
HA17 I get approval for decision I make.	.50			.38			
PS19 Standardized classroom methods and procedures are used by all staff-members.	.46						
RR8 People here make their own rules on the job (Reversed).	.45						.45
PS16 Teachers follow clearly specified procedures for doing the job here.	.45				.39		
RR2 Smoking is permitted only in certain designated places.	.43						
RR10 Employees are expected to follow written orders without questioning them.	.39		.33	.38			
IM16 The personal relations which exist between teachers and administrators are friendly	.33	.73					
IM4 A person gets the chance to develop good friends here		.73					
IM6 A very friendly atmosphere is evident to everyone who works here.	.35	.66					
TC2 All the administrators in this school have experience qualifying them for the job	.33	.65			.33		
IM15 The relations between teachers and students are friendly and warm.	.57	.64					
IM14 The administration is always sponsoring employee get-togethers.		.54					
TC5 Some teachers are kept on payroll even though they are not good teachers (R)		.36					
IM19 Teachers' closest friends are other staff members at this school.		.28					
DL22 Teachers are required to sponsor extra-curricular activities for which they have no suitable background (R)		.30					.46
IM11 People who have contact with parents and are instructed in proper procedures for talking with them.			.71				
IM10 The relationship in this organization is really very impersonal.			.49				
IM12 The administration does not like staff get-togethers if it is not for official matters.			.47		-.32		
IM20 Staff meetings proceed in a formal manner			.36	.34			
IM8 The administration here sticks pretty much to themselves.		-.30	.26	.32			-.39
IM18 My relations with other teachers are formal and impersonal			.25				
IM9 No one here calls his superior by his first name.			.22				

(table continues)

Table 18 (Continues) Factor Analysis of Items in Bureaucratic Dimensions: Result of Principal Axis Factoring with Oblique Rotation (Oblimin)

Item	Factor						
	1	2	3	4	5	6	7
HA5 A person who wants to make his own decisions would quickly become discouraged in this school.				.66			-.35
PS18 Going through the proper channels is constantly stressed.				.63			
PS17 Whenever we have a problem, we are supposed to go to the same person for an answer.				.63			
HA18 Only administrators can decide how things are to be done				.63			
HA8 There can be little action until an administrator approves a decision.				.60			
HA4 I have to check with the boss before I do almost anything.				.60			
HA12 Staff members of this school always get their orders from higher up.				.56		-.38	
HA2 Even small matters have to be referred to some one higher up for a final answer.				.48			
PS4 The organization stresses following the established procedures.	.45			.45			
RR13 Staff members feel as though they are constantly being watched to see that they obey all the rules.	.40		.41	.45			
HA6 Everyone here has one superior to whom he regularly reports.				.36			
PS1 Standard procedures are to be followed in almost all situations.	.40		.34	.40			
DL11 The instructional program is departmentalized into specific subject areas with specific teachers assigned.					.49		
TC12 Past teaching experience plays a large part in the assignment of a teacher to this school	.33	.45			.46	.33	
DL19 We do a lot of paper work, which could be done by a school office staff (R).				-.34	.40	.45	
DL15 Teaching in this school involves a variety of tasks and responsibilities from day to day (R).					.39		
DL13 We are expected to teach in more than one subject area (R).	-.31				.34		
DL23 Assignment of teaching duties is made without regard for the teacher's experience or training (R).			-.34		.31		.46
TC7 There is little chance for promotion unless you are "in" with the boss (R).				-.32		.68	
TC6 People here are given raises according to how well they are liked rather than how well they do their job (R)						.67	
TC9 In order to get a promotion, you have to "know somebody" (R).				-.31		.62	
TC14 If you do not support administration, how well you do your job is not important (R).						.54	.36
TC3 People are not promoted simply because they have a "pull"						.46	
TC8 There is really no systematic procedure for promotion (R).						.36	.43
TC4 promotions are based on merit in this organization			.32			.33	
DL24 There is an overlap in the job responsibilities of the principal and vice principal (R).	-.34					.29	
PS10 The same procedure is used in different situations							-.61
PS11 There is only one way to do the job- the principal's way.	.33			.37			-.55
PS12 The same procedures are to be followed in most situations.	.46						-.51
PS9 Whatever situation arises, we have procedures to follow in dealing with most matters.	.41			.33			-.48
PS8 Going through the proper channels is constantly stressed.				.35			-.46

suggested that impersonality was a dysfunction of bureaucratic structure. Following the suggestion of Sousa and Hoy (1981) climate items will not be treated as a bureaucratic dimension. However, remaining items that converged under the another factor will treated as a bureaucratic dimensions because the content of items is closely related to Max Weber's and Hall's definitions of impersonality. This factor is named formality after examining the content of the items.

Generally, the results of the factor analysis make sense from a posthoc perspective, even though somewhat different from apriori expectations for a number of items. The first factor was named rules and regulations. As shown in table 18, the highest loading scores for this factor are associated with these items thought to be measuring rules and regulations. Grouped along with these items are three procedural specifications items and one hierarchy of authority item. The second factor was named intimate climate. Grouped along with these items are two technical competence items and one division of labor item. This factor was interpreted as a non-bureaucratic dimension. The third factor was named formality in relations. As shown in table 18, the highest loading scores for this factor are associated with these items thought to be measuring impersonality. This factor will be used as the measure of impersonality but it will be named formality because of the content of the items. No items from other dimensions converged under this factor. The fourth factor was named hierarchy of authority. Out of twelve items, that converged under this factor, four procedural specifications items and one rules and regulations items also loaded under this factor. The fifth factor was named division of labor. Out of six items, that converged under this factor, one technical competence item also loaded under this factor. The sixth factor was named technical competence. Out of eight items, which converged under this factor, one division of labor item loaded on this factor. The seventh factor was named procedural specifications. No items from other dimensions converged under this factor.

Development of Sense of Power Scale

From the literature, twelve items measuring sense of power were located. To examine items, a reliability analysis and a factor analysis were also administered. As shown in Table 19, the reliability of the scale with 12 items is .72 and no item is eliminated. All 12 items were subjected to a principal axis factor analysis. Two items (SP5 and SP8) were eliminated because of their

factorial complexity. After elimination of these two items, the factor analysis was rerun with remaining 10 items. Table 20 reports the final factor structure of ten items. All of 10 items converged under the first factor. The first factor accounted for 29% of the total variance. These 10 items will be used in a factor analysis in research sample to replicate the factor structure.

Table 19 Items Eliminated in sense of Power Scale Based on Reliability Analysis

(N = 162)

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item- total correlation	Alpha if item deleted
SP1	32.2336	54.4215	.4425	.68
SP2	32.4497	56.2544	.4047	.69
SP3	32.1381	56.1536	.4006	.69
SP4	32.4188	56.2184	.3794	.69
SP5	32.6966	59.3107	.2362	.71
SP6	33.0052	54.9561	.4809	.68
SP7	33.2213	55.5225	.4605	.68
SP8	32.2060	58.8007	.2282	.72
SP9	32.3850	55.8033	.4471	.69
SP10	32.4159	60.6017	.1957	.72
SP11	33.3974	62.4252	.1509	.72
SP12	32.6690	56.9270	.3736	.69

Note. No item was eliminated because elimination of any item do not improve the reliability coefficient. The alpha coefficient is .72.

Table 20. Data for the Final Factor Structure of the Sense of Power Scale (N = 162)

Item	Loading
SP1	.49
SP2	.44
SP3	.54
SP4	.47
SP6	.51
SP7	.48
SP9	.56
SP10	.27
SP11	.20
SP12	.52
Eigenvalues	2.87
Percentage of variance explained	29
Cumulative percentage explained	29
Reliability (Alpha)	.72