

# SCHOOL FACILITY I.Q. INVENTORY (SFIQI): AN ESSENTIAL TOOL FOR SCHOOL FACILITY MANAGEMENT

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## **ABSTRACT**

*This article is on the development of the School Facility I.Q. Inventory (SFIQI), an instrument to assess the extent of knowledge a school administrator possesses in delivering their assignment to manage his/her school building. The instrument was designed based on the current literature. The validity of the instrument was verified by a panel of judges and its reliability was tested by using split-half reliability method. Embedding eight themes on school facility management, SFIQI consists of five sections with a total of 71 quantitative questions. The instrument can be used for self assessment of a school administrator's knowledge about school facilities. It can also be used as a teaching tool in the school leadership preparation programs.*

## **INTRODUCTION**

School principals play many roles in their daily duties serving as the heads of schools (Chan, Jiang, Chandler, Morris, Rebisz, Turan, Shu, & Kpeglo, 2019). Their major roles are instructional leadership and business management. While instructional leadership is focused on effective teaching and learning, business management includes personnel, finance, community relations and school operation (*School principal job description*, 2022; *The building principal - My Tennessee public schools*, 2022). The focus of this article is on how the school principals maintain their school facilities in operation as their daily duty. How much do they need to know about their school buildings to maintain their smooth opening to serve the education purpose?

## **REVIEW OF LITERATURE**

### **Preparing Principals to Manage School Facilities**

Most of the candidates in the school principal preparation programs have only limited knowledge and background of school facilities. They know very little about the principals' roles and responsibilities in managing school buildings. Therefore, it is absolutely necessary that the preparation programs include at least one course offering on school facility management so that these candidates can be well prepared to deal with school building issues (Chan, Patterson, Tubbs, Holliday, Terry, & Rowe, 2007). Educational leaders assigned to open up new school buildings are usually faced with unexpected facility challenges (Chan, 1983; Chan, 2001; Chan & Ledbetter, 1999). They also need to be prepared to handle new school building problems by going through the proper channels.

### **School Facility Management**

The planning of school facility management involves a targeted practical plan supported by sufficient resources and appropriate personnel (Chan & Richardson, 2005). It also calls for a system of supervision and evaluation for the planning effort to be effective (Chan, Whitson, McLeod, & Bessette, 2005; Kowalski, 2002). Bessette, Bowen and Chan (2006) also recommended a team approach to school building management which involves the administrators, the custodians, the teacher representatives, the student representatives and the parent volunteers. They claimed that the team effort is the best collaborative approach to school facility management.

## **School Building Maintenance Program**

An effective school building maintenance program could prolong the life expectancy of a school building (Castaldi, 1994; Earthman, 1994). The school administrators and staff need to work with the school district maintenance department to make best use of the available resources to achieve the best purpose of keeping the school building in excellent shape (Tanner & Lackney, 2006). An accurate record of all school building data has to be well kept and accessible for emergency use. Serious consideration has to be given to the extent and frequency of application in all areas of school maintenance (Davis & Loveless, 1981; Herman, 1995). Chan (2000) claimed that the school maintenance program has to start from day one when the new school building is turned over to the school district. The conditions of a new school building begin to run downhill when it is first opened. An effective maintenance program will slow the downhill process.

## **School Building Capacity and Utilization**

A school principal needs to have good record of the capacity of the school building he or she is administering. He or she also needs to have knowledge of all the spaces and their usage in the school building. Many states require that school principals report the school capacities and space utilization in their annual performance assessment (U.S. Department of Education National Center of Educational Statistics, 2007). In determining the capacity of a school building, consideration has to be given to program requirements, sizes of spaces and the functions of utilization (Chan, 1997a). Different states have their individual formulae for the calculation of school building capacity and its utilization (Chan, 1997b).

## **School Portable Classrooms**

Portable classrooms are often placed in overcrowding schools to help provide additional capacities to house the student population. However, portable classrooms are usually perceived by the public as second quality instructional space (Patterson, Chandler, Jiang, & Chan, 2009). School principals have the responsibility to support teachers teaching and students learning in portable classrooms and turn portable classrooms into positive instructional spaces (Chan, Patterson & Chandler, 2009; Chan, Tubbs & Jiang, 2005).

## **School Safety and Healthy Environment**

School as a facility to house teaching and learning has to be designed safely and healthily to be a positive environment (Chan & Dishman, 2011). A new school building has to pass the county/city inspection for safety and health conditions (Crisler & Chan, 2007). Under the leadership of the school principals, school buildings need to be maintained at a high level of safety and healthy practices to meet the building, fire, and sanitation codes (Schneider, Walker, & Sprague, 2000).

## **School Aesthetic Environment**

An aesthetically beautiful design school is a positive environment for teaching and learning (Earthman, 2013; Kowalski, 2002; Tanner & Lackney, 2006). It displays the love and care of the designers and the educational planners for the teachers and students (Chan, 1988; Jarman, Webb, & Chan, 2004). Beautiful school buildings are taken as a pride of the community where they are located. They often win strong support of the community (Kowalski, 2002). School principals and the custodial staff can help maintain the school buildings looking beautiful inside and outside (Strickland, & Chan, 2002).

## Green School Leadership

Energy conservation and preservation in school buildings have been advocated by many planners and designers for a long time (Earthman, 2013; Kowalski, 2002; MacKenzie, 1989; Tanner & Lackney, 2006). School principals play a unique role in administering the sustainable energy conservation program and supervising the application of such practices (Chan, Saunders & Lashley, 2015). Green school principals can make the connection among green school practices, student achievement, healthy school environments and project-based learning (Blendinger, Hailey & Shea, 2015; Carrick & Caywood, 2015; Lemoine, Mense & Richardson, 2015; Wolsey, 2015). Putney, Morris, and Sargent (2015) also promote school principals' effort toward designing green school curriculum to transform the schoolhouse and classroom.

## THE SCHOOL FACILITY IQ INVENTORY (SFIQI)

### Description

The School Facility IQ Inventory (SFIQI) is an instrument developed to measure the extent of knowledge a school administrator has in relation to issues concerning the school building he or she is administering. It is an instrument constructed by the author with reference to current literature, field practices and city/county and state regulations. It consists of eight sections with a total of 71 quantitative questions. A two-point scale is used for scoring answers to all the yes/no and true/false questions. Principals' demographic information is also solicited for useful references. (See Appendix 1)

### Theoretical Framework

Kerlinger (1986) and Rychlak (1968) provided a description of theory as a series of two or more constructs, abstractions, concepts, variables, definition, and propositions, which are interrelated and developed with a systematic view of phenomena. Since the SFIQI underdevelopment is facility related, it is evident that concepts, constructs, and variables will be involved in the content identification process. Therefore, the definition of theory by Kerlinger and Rychlak fits in well in support of the construction of this instrument.

### Underlying Themes

There are eight underlying themes in this instrument consisting of building demographics, educational orientation, policies, procedures, security, safety, healthfulness, and aesthetics. These themes are derived from the review of literature. They represent the major areas of a school building a principal needs to know and do. (See Appendix 2)

**Building demographics** – The basic demographics of the school building such as square footage, number of classrooms, student capacity, and room assignment need to be properly recorded and conveniently filed for timely use.

**Educational orientation** - The principal needs to understand the fundamental functions of a school building. Each instructional area is designed with special features to serve the particular purposes of teaching and learning.

**Policies** – School district policies in relation to school building management need to be closely observed. School principals need to work with his/her custodians to ensure that all the county or city building codes are strictly followed.

**Procedures** – In the management of school buildings, principals need to be very familiar with the procedures of how school building issues are handled. The assistant principals and the head

custodians could be assigned with specific management responsibilities so that they all know the different channels of getting things done.

**Security** – The security of a school building is a big concern of parents who have children in school. An efficient and effective security system needs to be installed and to be in proper operation in school. All the school administrators, teachers and staffs need to understand how the system works just in case of emergency.

**Safety** – When a new school building is completed, it is inspected for meeting all the building codes and fire codes. However, these school safety features have to be properly and frequently maintained to be functional. The school administrators have major responsibilities to understand and supervise that these safety designs are in place.

**Healthfulness** - To serve the educational purposes, a school building has to be kept in excellent healthful conditions. Indoor air quality and water quality are the two biggest community concerns. School administrators and staffs need to develop a systemic plan to check on the sanitation environments and to maintain them at the highest standards.

**Aesthetics** - The school building as a teaching and learning environment can be kept aesthetically pleasing. The community enjoys working with the school administrators and staff to maintain the school building as a beautiful and lovely environment for the children.

### **Validity and Reliability**

The contents and the division of the instrument were organized with reference to the current literature on school facility planning and management. The initial draft of the instrument consisted of eight divisions of seventy-five questions soliciting school principals' responses to True/False and Yes/No items. A panel of judges was established to confirm the validity of the instrument. The panel consists of three school principals (one from each school level), three school custodians (one from each school level), a school district maintenance official, and a school district facility planning director. The judges were asked to examine the instrument in terms of its relevant contents, language appropriateness, measuring format and scoring methodology. As a result of the panel discussion, eight items were deleted from the original draft and three new items were introduced. Therefore, the revised instrument consists of seventy-one items embedded in eight divisions. Slight modifications were also made to the language of the instrument as recommended by the panel of judges.

The reliability of SFIOI was determined by employing the statistical procedure of split-half reliability. As described by Warner (2013):

This is a type of internal consistency reliability assessment that is used with multiple-item scales. The set of  $p$  items in the scale is divided (either randomly or systematically) into two sets of  $p/2$  items, a score is computed for each set, and a correlation is calculated between the score on the two sets to index split-half reliability. (p. 1117)

The test application involved fifteen school principals, five from each of the three school levels. The responses of the school principals were split into two halves, the singular half and the even half. Spearman's Correlation Analysis was used to examine the correlation of the two halves of responses. The result of the analysis showed a correlation coefficient of .765 indicating an acceptable level of internal consistency of the instrument.

### **Scoring System**

A two-point scale is used to score the answers to the 71 quantitative questions. The answers to the questions are designed to be either "True" or "False" and "Yes" or "No." The correct answer to each of the "True" or "False" and "Yes" or "No" questions are awarded 1 point. The incorrect

answer to each of the “True” or “False” and “Yes” or “No” questions is awarded 0 point. The total highest score that could be attained is 71 and the lowest score is 0. An entire list of all the correct and incorrect answers and their corresponding scores is included in Appendix 3.

### **INTERPRETATION OF RESULTS**

School leaders who check the extent of their knowledge about their school buildings by using the School Facility IQ Inventory (SFIQI) will result in getting their total scores calculated. Additionally, each of the school facility area score will also be calculated. These eight areas are building demographics (17 items), educational orientation (6 items), policies (10 items), procedures (26 items), security (6 items), safety (24 items), healthfulness (12 items) and aesthetics (8 items). (See Appendix 2) The school leader’s school facility IQ level is determined by using percentiles over the total scores. Leaders who score between 25th and 50th percentile are classified as achieving at a low school facility IQ level. Leaders who score below the 25th percentile are classified as not meeting the standard of a low school facility IQ level. Leaders who score between 50th and 75th percentile are classified as achieving at an average school facility IQ level. Leaders who score between 75th and 100th percentile are classified as achieving at a high school facility IQ level. (See Appendix 5) In each of the eight school facility areas, if a school leader gets less than half of the answers right, he or she is considered to be at a low school facility IQ level in that area. If a school leader gets more than half of the answers in each area correct, he or she is considered to be at an average or a high school facility IQ level in that particular area. (See Appendix 4)

### **SIGNIFICANCE OF THE INSTRUMENT**

The SFIQI instrument is designed as a test on the school facility knowledge level of school leaders, particularly school building administrators who are assigned with fully responsibilities of managing the entire buildings. The result of the test will indicate their total score and each of the school facility area scores. It is a good way to display all the areas of strengths and weaknesses about their school facility knowledge. Consequently, school administrators will identify areas that they can continue to work on to become good school building managers.

The SFIQI can also be used as a self-assessment tool of school facility knowledge a school administrator possesses. School administrators are considered as instructional leaders of schools. Many of them are not aware of the school facility knowledge they need to have to serve as school building managers as well. The SFIQI helps to remind them of the aspects of their school building responsibilities they could possibly overlooked.

### **CONCLUSION**

The School Facility IQ Inventory (SFIQI) is designed to identify the school facility knowledge level of school administrators who are assigned as school building managers of their schools. The instrument also helps display school administrators’ strengths and weaknesses of their knowledge in certain school facility areas. School districts could adopt the instrument as a required check on school administrators’ knowledge of school buildings before they are assigned with their school building management responsibilities. School leader preparatory programs could also use the School Facility IQ Inventory (SFIQI) as an instructional tool to let potential school leaders be aware of what their school building management responsibilities are.

## REFERENCES

- Bessette, H., Bowen, C., & Chan, T. C. (2006). Effective teams improve school facility management. *School Business Affairs*, 72(7), 6-8.
- Blendinger, J., Hailey, L. A., & Shea, D. (2015). "Green" teaching and learning in schools. In T.C. Chan, E. G. Mense, K. E. Lane, & M. D. Richardson (Eds.) (2015). *Marketing the green school*. IGI Global. (p. 183-193)
- Carrick, C. F., & Caywood, D. B. (2015). Green schools as teaching tools. In T. C. Chan, E. G. Mense, K. E. Lane, & M. D. Richardson (Eds.) (2015). *Marketing the green school*. IGI Global. (p. 155-170)
- Castaldi, B. (1994). *Educational facilities: Planning, modernization, and management* (4<sup>th</sup> ed.). Allyn and Bacon.
- Chan, T. C. (1983). *Operating new school buildings – Suggestions to school principals*. The School District of Greenville County, South Carolina.
- Chan, T. C. (1988). The aesthetic environment and student learning. *School Business Affairs*, 54(1), 26-27. (ERIC No.: EJ364814)
- Chan, T. C. (1997a). Determining realistic school capacity. *The Educational Facility Planner*, 34(3), 17-19. (ERIC No.: EJ562728)
- Chan, T. C. (1997b). School capacity assessment worksheets. *The Educational Facility Planner*, 34(3), 20-21. (ERIC No.: EJ562729)
- Chan, T. C. (2000). Beyond the status quo: Creating a school maintenance program. *Principal Leadership*, 1(3), 64-67. (ERIC No.: EJ616321)
- Chan, T. C. (2001). Opening a new school building: Be prepared! *Educational Planning*, 12(3), 65-72.
- Chan, T. C., & Dishman, M. (2011). Maintaining a safe and healthy school environment for learning. *The American Clearinghouse on Educational Facilities (ACEF) Journal*, 1(1), 5-13. Available online: <http://www.acefacilities.org/ACEFJournal.aspx>
- Chan, T. C., Jiang, B., Chandler, M., Morris, R., Rebisz, S., Turan, S., Shu, Z., & Kpeglo, S. (2019). School principals' self-perceptions of their roles and responsibilities in six countries. *New Waves Educational Research and Development Journal*, 22(2), 37-61. [http://www.viethconsulting.com/members/publication/new\\_waves\\_home.php](http://www.viethconsulting.com/members/publication/new_waves_home.php)
- Chan, T. C., & Ledbetter, D. (1999). How to manage a new school building. *Principal*, 79(2), 25-26.
- Chan, T. C., Patterson, J., & Chandler, M. (2009) Best practices for the best interests of students: Principals' strategies in managing portable classrooms. *Journal of School Business Management*, 21(1), 28-36.
- Chan, T. C., Patterson, J., Tubbs, J. E., Holliday, H. E., & Terry, D., & Rowe, R. (2007). Teaching school Facilities in a principal preparation program: Meeting ELCC Standards. *Educational Planning*. 16(3), 10-15.
- Chan, T. C., & Richardson, M. (2005). *Ins and outs of school facility management*. Scarecrow Education.
- Chan, T. C., Saunders, R., & Lashley, L. (2014). Green school leadership: What does it really mean? In T. C. Chan, E. Mense, K. Lane, & M. D. Richardson (eds.). *Marketing the green school: Forms, functions, and the future*. Los Angeles, CA: IGI Publisher, p. 232-242.
- Chan, T. C., Tubbs, E., & Jiang, B. (2005). Turning portable classrooms to positive learning environments. *School Business Affairs*, 71(5), 14-18.
- Chan, T. C., Whitson, J., McLeod, A. D., & Bessette, H. (2005). The roles of school principals in facility management. *Journal for the Liberal Arts and Sciences*, 9(3), 28-33.

- Crisler, A., & Chan, T. C. (2007). Ensuring safe schools for safe learning. *School Business Affairs*, 73(5), 24-26.
- Davis, J., & Loveless, E. E. (1981). *The administrator and educational facilities*. University Press of America.
- Earthman, G. I. (1994). *School renovation handbook: Investing in education*. Technomic Publishing.
- Earthman, G. I. (2013). *Planning educational facilities (4<sup>th</sup> ed.)*. Rowman and Littlefield Education.
- Herman, J. I. (1995). *Effective school facilities: A development guidebook*. Technomic Publishing.
- Jarman, D., Webb, L., & Chan, T. C. (2004). A beautiful school is a caring school. *School Business Affairs*, 70(6), 37-38.
- Kerlinger, R. (1986). *Foundations of behavioral research*. New York, NY: Holt, Rinehart, & Winston.
- Kowalski, T. J. (2002). *Planning and managing school facilities (2<sup>nd</sup> ed.)*. Bergin and Garvey.
- Lemoine, P. A., Mense, E. G., & Richardson, M. D. (2015). Green school principals: Making the connection between student achievement, healthy school environments, and project-based learning. In T. C. Chan, E. G. Mense, K. E. Lane, & M. D. Richardson (Eds.) (2015). *Marketing the green school*. IGI Global. (p. 144-145)
- MacKenzie, D. G. (1989). *Planning educational facilities*. University Press of America.
- Patterson, J., Chandler, M., Jiang, B., & Chan, T. C. (2009). Portable classrooms: Immediate solutions to a growing problem. *School Business Affairs*, 75(6), 23-25.
- Putney, D., Morris, R. C., & Sargent, P. R. (2015). Toward a green curriculum: Transforming the schoolhouse and classroom. In T. C. Chan, E. G. Mense, K. E. Lane, & M. D. Richardson (Eds.) (2015). *Marketing the green school*. IGI Global. (p. 194-210)
- Rychlak, J. F. (1968). *A philosophy of science for personality theory*. Boston, MA: Houghton Mifflin.
- Schneider, T., Walker, H., & Sprague, J. (2000). *Safe school design: A handbook for educational leaders*. ERIC Clearinghouse on Educational Management, University of Oregon. *School principal job description* (2022). <https://resources.workable.com/principal-job-description>
- Strickland, J. S., & Chan, T. C. (2002). Curbside critique: A technique to maintain a positive school yard image. *School Business Affairs*, 68(5), 24-27. (ERIC No.: EJ648728)
- Tanner, C. K., & Lackney, J. A. (2006). *Educational facilities planning: Leadership, architecture, and management*. Pearson. *The building principal | My Tennessee Public Schools* (2022). <https://mytennesseepublicschools.net/theschoolsystem/the-building-principal/>
- U.S. Department of Education National Center of Educational Statistics (2007). *Public school principals report on their school facilities: Fall 2005 Statistical Analysis Report*. Washington, D.C.: Author.
- Warner, R. M. (2013). *Applied statistics – from bivariate through multivariate techniques*. (2<sup>nd</sup> ed.) SAGE Publications.
- Wolsey, T. D. (2015). The school walls teach: Student involvement in the green school. In T. C. Chan, E. G. Mense, K. E. Lane, & M. D. Richardson (Eds.) (2015). *Marketing the green school*. IGI Global. (p. 171-182)

## Appendix 1: School Facility I.Q. Inventory

**This is an inventory of principals' school facility I.Q. Your professionalism and honesty in completing this inventory are highly appreciated.**

**A. School Facility Concepts.** (Please check "true" or "false.")

- | TRUE | FALSE |  |
|------|-------|--|
|      |       | 1. Educational literature shows that there is a positive relationship between school physical environment and student attitude, achievement, and behavior. |
|      |       | 2. A school building is designed to support community programs.  |
|      |       | 3. Construction materials determine how schools are designed.  |
|      |       | 4. Effective maintenance prolongs the life of a school building.   |

**B. School Facility Facts:** (Please check "yes" or "no.")

- | YES | NO | Do you know.....   |
|-----|----|--|
|     |    | 5. Your school's year of original construction and renovation (if applicable)?   |
|     |    | 6. The total square footage of your school building?   |
|     |    | 7. The total acreage of your school site?  |
|     |    | 8. The total number of classrooms by type (i.e., general classrooms, science labs, resource rooms, computer labs, etc.)? |
|     |    | 9. The locations of all the utility main valves?   |
|     |    | 10. The capacity of your school building?  |
|     |    | 11. The special design features of each instructional area?  |
|     |    | 12. The technology capabilities of your school?  |
|     |    | 13. The color schedule of paint in your school (brand, tone, etc.)?  |
|     |    | 14. The fire zones of your school?   |
|     |    | 15. The system of keying doors in your school?   |
|     |    | 16. The heating and air-conditioning zones in your school?   |
|     |    | 17. The handicapped accessibility designs for your school?   |
|     |    | 18. The location of the closest fire hydrant to your school?   |
|     |    | 19. If your school has surveillance cameras?   |
|     |    | 20. If your school has a sprinkler system?   |
|     |    | 21. If your school has fire escape windows?  |
|     |    | 22. If your school has security lights?  |
|     |    | 23. If your school has an inventory of facilities and equipment?   |
|     |    | 24. If your school has a floor plan and a site plan readily available?   |
|     |    | 25. If sidewalks are available for walkers to come to your school?   |

**C. School Facility Maintenance.** (Please check “yes” or “no.”)

		Do you know.....
YES	NO	
_____	_____	26. Who mows the lawn for your school?
_____	_____	27. Who cleans the classrooms in your school?
_____	_____	28. Who changes the light bulbs in your school?
_____	_____	29. Who takes care of landscaping at your school?
_____	_____	30. What determines the number of custodians in your school?
_____	_____	31. What your custodian can fix and what maintenance should fix?
_____	_____	32. How often the carpet is shampooed in your school?
_____	_____	33. How often the floor tiles are buffed and waxed in your school?
_____	_____	34. How often are heating and air-conditioning filters changed in your school?
_____	_____	35. How often the lawns are irrigated at your school?
_____	_____	36. How often light fixtures are cleaned?
_____	_____	37. How much and what kind of custodial supplies are needed for your school?
_____	_____	38. How to maintain the good appearance of your school building?
_____	_____	39. That the urgency of critical maintenance items needs to be stressed?
_____	_____	40. If community volunteers can help with school maintenance?
_____	_____	41. If outsourcing maintenance is a school decision?
_____	_____	42. If a record of school maintenance is available?
_____	_____	43. When is your school scheduled for re-roofing?
_____	_____	44. When is your school scheduled for repainting?
_____	_____	45. When is your school scheduled for carpet replacement?

**D. School Facility Operation.** (Please check “yes” or “no.”)

		Do you know.....
YES	NO	
_____	_____	46. How often the grease trap in your school is cleaned?
_____	_____	47. How often fire extinguishers and exit light batteries are checked?
_____	_____	48. How often the playground equipment is checked?
_____	_____	49. How often the dumpster is emptied for your school?
_____	_____	50. How often air quality is tested in your school?
_____	_____	51. How often mold and radon is checked in your school?
_____	_____	52. How often water quality is tested in your school?
_____	_____	53. How often your school is sprayed for extermination?
_____	_____	54. How often you need to practice fire drills in your school?
_____	_____	55. How the fire doors in the hallways work?
_____	_____	56. How the security alarm system works in your school?
_____	_____	57. How the emergency power generator works in your school?
_____	_____	58. How the smoke detectors and the heat detectors work in your school?
_____	_____	59. How the intercom system works in your school?

60. How the telecommunication system works in your school?  
  61. How the fire alarm system works in your school?  
  62. How safe and healthy environments are maintained in portable classrooms?  
  63. That chaining the exit doors is a fire code violation?  
  64. That only licensed plumbers are permitted to service the boiler?  
  65. If emergency plans are developed in your school?  
  66. If your school participates in the district-wide energy management plan?  
  67. If the doors in your school are fire-rated?  
  68. If the traffic flow on your campus is safe and efficient?  
  69. The good and poor qualities of your school building?  
  70. The normal boiler temperature of your school?  
  71. The energy conservation plan of your school?

**E. Principal's Demographics:** (Please check one of the spaces in the following:)

Age:  Under 30  30-40  40-50  50-60  Over 60

Gender:  Male  Female

Years as Principal:  1- 5  6-10  11-15  16-20  Over 20

Education:  M.Ed.  Ed.S.  Ed.D./Ph.D.

**END OF SCHOOL FACILITY I.Q. INVENTORY**

**Your School Facility I.Q. is \_\_\_\_\_**

## Appendix 2: Principals' School Facility I.Q. Inventory

### Analytical Themes

<b>Building Demographics:</b>	Items 5, 6, 7, 8, 9, 10, 13, 14, 16, 17, 18, 19, 20, 21, 22, 24, and 69
<b>Educational Orientation:</b>	Items 1, 2, 3, 11, 12 and 60
<b>Policies:</b>	Items 4, 17, 23, 24, 30, 31, 37, 40, 41, and 66
<b>Procedures:</b>	Items 26, 27, 28, 29, 32, 33, 34, 35, 36, 37, 39, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 66, and 71
<b>Security:</b>	Items 15, 19, 22, 56, 59 and 65
<b>Safety:</b>	Items 9, 14, 15, 17, 18, 20, 21, 22, 25, 47, 48, 54, 55, 56, 57, 58, 61, 62, 63, 64, 65, 67, 68, and 70
<b>Healthfulness:</b>	Items 16, 27, 32, 33, 46, 49, 50, 51, 52, 53, 62, and 69
<b>Aesthetics:</b>	Items 13, 26, 29, 32, 33, 35, 36 and 38

### Appendix 3: Scoring Sheet

No.	Rubric	Answer	Score	No.	Rubric	Answer	Score
1	T = 1; F = 0			37	Y = 1; N = 0		
2	T = 0; F = 1			38	Y = 1; N = 0		
3	T = 0; F = 1			39	Y = 1; N = 0		
4	T = 1; F = 0			40	Y = 1; N = 0		
5	Y = 1; N = 0			41	Y = 1; N = 0		
6	Y = 1; N = 0			42	Y = 1; N = 0		
7	Y = 1; N = 0			43	Y = 1; N = 0		
8	Y = 1; N = 0			44	Y = 1; N = 0		
9	Y = 1; N = 0			45	Y = 1; N = 0		
10	Y = 1; N = 0			46	Y = 1; N = 0		
11	Y = 1; N = 0			47	Y = 1; N = 0		
12	Y = 1; N = 0			48	Y = 1; N = 0		
13	Y = 1; N = 0			49	Y = 1; N = 0		
14	Y = 1; N = 0			50	Y = 1; N = 0		
15	Y = 1; N = 0			51	Y = 1; N = 0		
16	Y = 1; N = 0			52	Y = 1; N = 0		
17	Y = 1; N = 0			53	Y = 1; N = 0		
18	Y = 1; N = 0			54	Y = 1; N = 0		
19	Y = 1; N = 0			55	Y = 1; N = 0		
20	Y = 1; N = 0			56	Y = 1; N = 0		
21	Y = 1; N = 0			57	Y = 1; N = 0		
22	Y = 1; N = 0			58	Y = 1; N = 0		
23	Y = 1; N = 0			59	Y = 1; N = 0		
24	Y = 1; N = 0			60	Y = 1; N = 0		
25	Y = 1; N = 0			61	Y = 1; N = 0		
26	Y = 1; N = 0			62	Y = 1; N = 0		
27	Y = 1; N = 0			63	Y = 1; N = 0		
28	Y = 1; N = 0			64	Y = 1; N = 0		
29	Y = 1; N = 0			65	Y = 1; N = 0		
30	Y = 1; N = 0			66	Y = 1; N = 0		
31	Y = 1; N = 0			67	Y = 1; N = 0		
32	Y = 1; N = 0			68	Y = 1; N = 0		
33	Y = 1; N = 0			69	Y = 1; N = 0		
34	Y = 1; N = 0			70	Y = 1; N = 0		
35	Y = 1; N = 0			71	Y = 1; N = 0		
36	Y = 1; N = 0						

Total I.Q. Score =

Percentage I.Q. Score =

### Appendix 4: School Facility Areas Scoring Sheet

Area & Item	Rubric	Answer	Score	Area & Item	Rubric	Answer	Score
Demographics			Total =	Ed. Orient.			Total =
5	Y = 1; N = 0			1	T = 1; F = 0		
6	Y = 1; N = 0			2	T = 0; F = 1		
7	Y = 1; N = 0			3	T = 0; F = 1		
8	Y = 1; N = 0			11	Y = 1; N = 0		
9	Y = 1; N = 0			12	Y = 1; N = 0		
10	Y = 1; N = 0			60	Y = 1; N = 0		
13	Y = 1; N = 0			Security			Total =
14	Y = 1; N = 0			15	Y = 1; N = 0		
16	Y = 1; N = 0			19	Y = 1; N = 0		
17	Y = 1; N = 0			22	Y = 1; N = 0		
18	Y = 1; N = 0			56	Y = 1; N = 0		
19	Y = 1; N = 0			59	Y = 1; N = 0		
20	Y = 1; N = 0			65	Y = 1; N = 0		
21	Y = 1; N = 0			Safety			Total =
22	Y = 1; N = 0			9	Y = 1; N = 0		
24	Y = 1; N = 0			14	Y = 1; N = 0		
69	Y = 1; N = 0			15	Y = 1; N = 0		
Policies			Total =	17	Y = 1; N = 0		
4	T = 1; F = 0			18	Y = 1; N = 0		
17	Y = 1; N = 0			20	Y = 1; N = 0		
23	Y = 1; N = 0			21	Y = 1; N = 0		
24	Y = 1; N = 0			22	Y = 1; N = 0		
30	Y = 1; N = 0			25	Y = 1; N = 0		
31	Y = 1; N = 0			47	Y = 1; N = 0		
37	Y = 1; N = 0			48	Y = 1; N = 0		
40	Y = 1; N = 0			54	Y = 1; N = 0		
41	Y = 1; N = 0			55	Y = 1; N = 0		
66	Y = 1; N = 0			56	Y = 1; N = 0		
Procedures			Total =	57	Y = 1; N = 0		
26	Y = 1; N = 0			58	Y = 1; N = 0		
27	Y = 1; N = 0			61	Y = 1; N = 0		
28	Y = 1; N = 0			62	Y = 1; N = 0		
29	Y = 1; N = 0			63	Y = 1; N = 0		
32	Y = 1; N = 0			64	Y = 1; N = 0		
33	Y = 1; N = 0			65	Y = 1; N = 0		
34	Y = 1; N = 0			67	Y = 1; N = 0		
35	Y = 1; N = 0			68	Y = 1; N = 0		
36	Y = 1; N = 0			70	Y = 1; N = 0		

37	Y = 1; N = 0			Heathfulness			Total =
39	Y = 1; N = 0			16	Y = 1; N = 0		
42	Y = 1; N = 0			27	Y = 1; N = 0		
43	Y = 1; N = 0			32	Y = 1; N = 0		
44	Y = 1; N = 0			33	Y = 1; N = 0		
45	Y = 1; N = 0			46	Y = 1; N = 0		
46	Y = 1; N = 0			49	Y = 1; N = 0		
47	Y = 1; N = 0			50	Y = 1; N = 0		
48	Y = 1; N = 0			51	Y = 1; N = 0		
49	Y = 1; N = 0			52	Y = 1; N = 0		
50	Y = 1; N = 0			53	Y = 1; N = 0		
51	Y = 1; N = 0			62	Y = 1; N = 0		
52	Y = 1; N = 0			69	Y = 1; N = 0		
53	Y = 1; N = 0			Aesthetics			Total =
54	Y = 1; N = 0			13	Y = 1; N = 0		
66	Y = 1; N = 0			26	Y = 1; N = 0		
71	Y = 1; N = 0			29	Y = 1; N = 0		
				32	Y = 1; N = 0		
				33	Y = 1; N = 0		
				35	Y = 1; N = 0		
				36	Y = 1; N = 0		
				38	Y = 1; N = 0		

### Appendix 5: School Facility IQ Level

Total Scores	Percentiles	School Facility IQ Levels
1 – 17.75	1 - 25%	Not meeting low level requirements
17.75 – 35.50	25 – 50%	Low Level
35.50 - 53.25	50 – 75%	Average Level
53.25 – 71.00	75 –100%	High Level