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PREFACE

Linda K. Lemasters

With the publication of Issue 17:3, many of us are looking forward to our October visit to Istanbul, Turkey. There will be good news about *Educational Planning* at the annual conference of the International Society of Educational Planning: we have enough articles being submitted that we can have a greater focus on planning and its many components in future issues. This can be contributed to the active recruitment of our board, reviewers, and members who have made announcements for us at other conferences and to other organizations to which they belong.

The rst article begins our issue by a discussion of planning for principal evaluations. Teachers were asked to evaluate their administrators' instructional planning, school facilities planning, decision-making skills, and other pertinent topics, especially those related to school climate. From planning principals' evaluations, the next authors have a lengthy discussion of planning school science laboratories. This article culminates with the statement that the center for school improvement resides in the classroom.

The First Year College Experience is the topic of the third article. It is quite a complete discussion of the responsibility of colleges and universities to rst year students. The roots of this reform certainly are rmly based in planning.

The nal article in this issue is an international look at a topic of importance in many countries: school entrepreneurship. The discussion detailed a two-dimensional approach from a macro perspective. This work cannot be read with out a deeper understanding of educational entrepreneurship.

Once more I would like to thank the editorial board, Joseph Emerson, Visiting Assistant Professor at The George Washington University, and of course, Glen Earthman. Publishing a journal takes the collaboration and contributions of lot of people.

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PLANNING FOR PRINCIPAL EVALUATION: EFFECTS ON SCHOOL CLIMATEAND ACHIEVEMENT

Edward Williams
Ganga Persaud
Trevor Turner

ABSTRACT

This study examines the proposition as to whether principals' performances on selected leadership tasks would improve school climate and whether climate would predict student achievement. Teachers evaluated principals on such task areas as: instructional planning, interpersonal skills, decision-making skills, school facilities planning, and evaluation in relation to school climate. Supervisors utilized the data in conferences with principals to engage them in planning for improving school climate with the expectation that climate would improve student performance. In a sample of 81 out of 84 schools, the ve tasks were signi cantly related to school climate, while in a regression analysis of the data only 9% of the variance on achievement scores was predicted by climate.

PROBLEM CONTEXT

A Metro Atlanta school district, whose school board was majority White but whose student population was majority Black, was placed under court order to desegregate the system. At the same time the Black community became vocal about hiring a diversi ed faculty as well as more Black principals. In response, the school board instituted a policy of hiring 70% White and 30% Black teachers in each school and promoting Black teachers as principals. To ensure all teachers' fair treatment from Black or White principals, the school district introduced the policy of all faculty and staff members evaluating the principals and assistant principals, and designed an instrument for teachers to evaluate principals. The instrument was developed under the ve competencies or task areas of instructional planning and leadership, interpersonal skills, decision-making skills, skills in planning and management of school facilities, and personnel evaluation skills. The instrument also measured the climate of the school as perceived by teachers. The results were provided to the supervisor of each principal. In a post evaluation conference with the supervisor, each principal prepared a plan to improve on human relations skills when performing tasks so as to improve school climate. Most principals were able to improve their human relations skills when performing tasks and monitoring their school climate. The few principals who obtained persistently low ratings from teachers were replaced. As a result, the school system met the goal of teachers and communities' acceptance of the appointments of more Black principals and maintaining reasonable school climate throughout the system as evidenced by lack of protests. In a ten-year period, however, test scores declined and students' referrals and suspensions increased. The school board requested the superintendent develop a plan to improve test scores and reduce student referrals and suspensions. The issue is whether climate or student achievement should be utilized to determine the effectiveness of the leadership tasks.

REVIEW OF LITERATURE

In order to cope with the tax payers' demand for improving student achievement and discipline, school boards have attempted to reform schools in terms of principal leadership styles, school-based management, instructional methods (whole language, constructivism, learning styles, brain-based learning, etc), scheduling, and canned reading and math programs and discipline policies. Such reforms, however, have not made the desired improvement (Fullan & Miles, 1992). Ubben and Hughes (2001) indicated that most effective schools have strong creative principals who work with their administrative teams in the following ways: setting the agenda and forming needed advisory groups and coalitions; creating a positive image for the schools; pursuing autonomy for themselves and the schools; delegating authority at all levels; bringing innovative projects, providing training opportunities and new resources; anticipating impending issues; and, changing, planning, and staf ng creatively to meet needs of their students. Some researchers, mainly with small sample size, stated that strong leadership skills in instruction and evaluation tended to facilitate positive climate that supported student achievement in low

socio-economic schools (Brookover et al, 1978; Edmonds, 1979). Grobe and Bishop (2001) identi ed certain essential attributes as principal leadership, teacher morale, and student behavior as fundamental for promoting student achievement. According to Marsden (2005), safe and orderly classroom environment and school facilities signi cantly were related to student achievement in elementary schools. Glassman (1994) found that professional treatment by the principal towards the teachers, such as trust and con dence, a comfortable and caring environment, professional and personal respect, delegation of decision-making, and other attributes helped to contribute to student academic achievement. In the area of leadership style, Freeland (2006) found that transformational leadership (measured in terms of demonstrating charisma /inspiration/vision, intellectual stimulation, individual consideration, contingent reward, high performance expectations, goal consensus, modeling, culture building, and structuring) did not signi cantly correlate with achievement gains, and contextual variables such as socioeconomic status (SES) and size in of schools.

In contrast, Hallinger, Bickman, and Davis (1996) found no direct effect of principal instructional leadership on student achievement. Their results did, however, support the belief that a principal can have an indirect effect on school effectiveness through actions that shape the school's learning climate. They also found that principal leadership itself is in uenced by both personal and contextual variables (SES, parental involvement, and gender). The most enduring ndings (Coleman Report, 1965) supported the view that socio-economic variables tend to predict student achievement. Ma and Williams' (2004) seven dimensions of school disciplinary climate were identi ed based on a representative sample of grade 8 students in the United States. Within schools, students varied considerably in their perceptions and experiences about discipline. The variation was related mainly to students' SES, sex, and ethnicity. Easton-Brooks (2006) found that socioeconomic indicators (parents' education, parents' occupation, parents' income, and wealth) predicted both African American and European American academic outcomes, though wealth/assets accounted for more variance in the academic outcomes of African American students than of European American students. Kunjufu (1989) recognized that socioeconomic status is an indicator of student achievement; however, he contended it is not the cause; instead, how teachers view and teach African American students are the underling variables. Ford (1997) found that parents who were of low SES and in a minority, when they instilled a positive achievement orientation in their children, encouraged them to perform highly. According to Sanders (1999), the single important factor affecting the academic growth of any population of youngsters was the effectiveness of the individual classroom teacher. Sanders based teacher effectiveness ratings on relative year-to-year achievement gains of students. This study used only one teacher-related demographic variable that was the teacher average years of experience, and it did not have any signi cant relationship to student achievement.

It is a common belief that the principal sets the tone for effective school planning and management, and that "what gets evaluated gets done" (Brookover, et al, 1978; Edmonds, 1988). Apparently, the architect of a school system's ve tasks, as articulated to impact school climate, is motivated by the school board's mission to ethnically diversify the principals while maintaining positive school climate. Cook (1995) in strategic planning argued that planning begins with a mission statement and participation about strategies for achieving it. MBO techniques in planning suggest that the outputs be considered as the basis for estimating the effectiveness of planning, and obviously, the school board appears to select climate as the output. Stuf ebeam (1973) indicated that the context, process, and product should be the basis for both planning and evaluation for effectiveness. NCATE suggested that the results of assessment and evaluation on school outcomes should be the basis for conducting planning inputs for teacher education effectiveness. It would appear, therefore, that to better inform planning for effectiveness, planners should utilize the ultimate outcomes of schools, such as student achievement and the causes for student achievement (Persaud & Turner, 2002). The No Child Left Behind Act (2001) requires that every child meets or exceeds performance expectation on standardized tests. The challenge is for such a school district to demonstrate that students performing below expectation level have improved to meet or exceed expectation levels.

Overall, planning models have not indicated how the results of evaluation were utilized in planning. Similarly, the literature that identi ed possible variables that might explain student achievement have not systematically indicated how the results of teacher evaluation of principal leadership have been

utilized in school climate management so as to impact student achievement. This study attempts to ll the gap.

THEORETICAL FORMULATION OF PLANNING AND EVALUATION

The effective leadership instrument consisted of ve tasks identi ed earlier in relation to school climate, as shown in the diagram (Figure 1) for de nition purposes. Essentially, the school system appears to propose that school climate could be in uenced by such principal leadership skills as: instructional planning, interpersonal management, decision-making, school facilities planning, and evaluation. The school system does not utilize the school performance on the Georgia Criterion Reference Competency Test (GCRCT), when considering the effectiveness of the principal leadership in a school. Principals, however, who were viewed negatively by teachers have been replaced. Therefore, in this study the various leadership skills will be analyzed in relation to student performance on the GCRCT in fourth grade reading, and the new principal is considered as an independent variable to estimate if it changed teachers' perceptions and if it made a contribution to improvement in climate and student performance. Essentially, the following research questions are to be examined: Is there a signi cant relationship between each of the ve leadership tasks and school climate? What are the leadership variables that might be related to achievement performance levels at or above expectations? Is school climate related to student achievement? Does a new principal contribute to improvement on the ve leadership tasks and school climate?

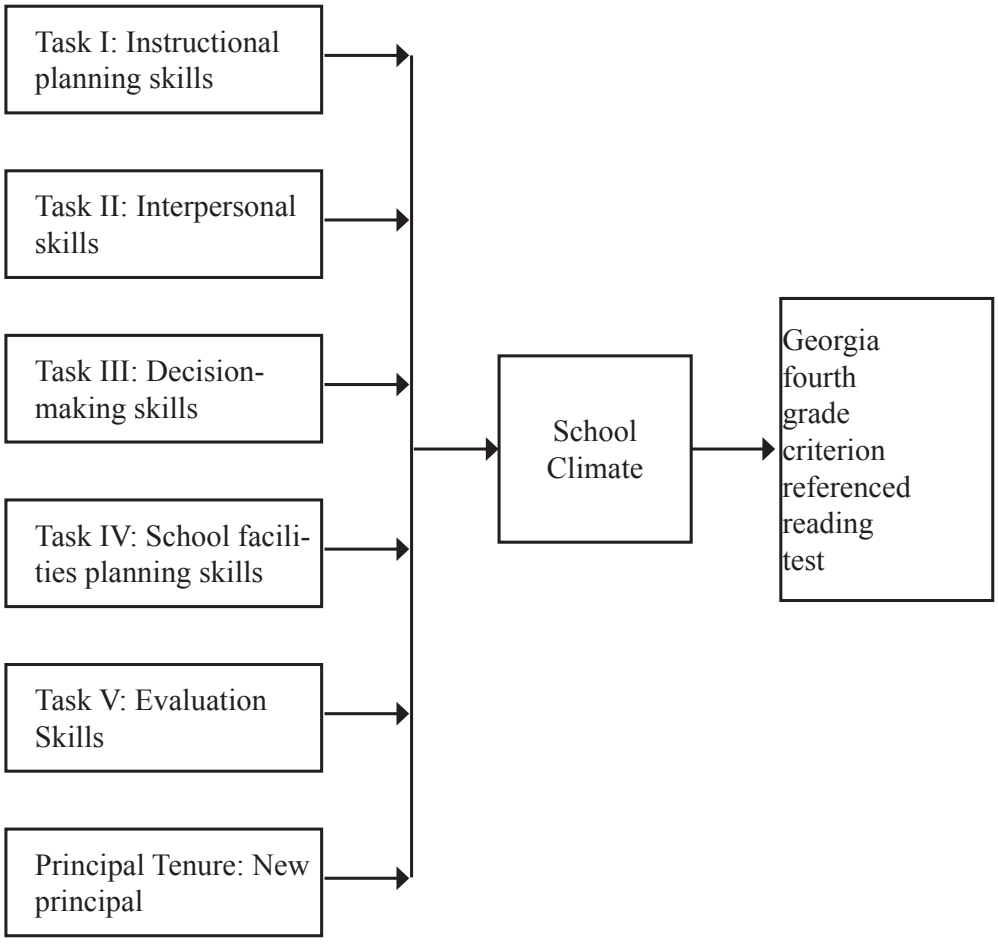

Figure 1. Five Tasks

DEFINITION OF VARIABLES

Task I - Instructional planning assessed the extent to which the principal demonstrated collaborative and appropriate communication skills in setting high expectation for students' performance, protecting

time on task, assigning work appropriately, providing resources appropriately, and encouraging effective use of curriculum materials and staff development (47 items).

Task II - Interpersonal skills assessed the extent to which the principal demonstrated human relation skills in terms of sensitivity, courtesy, impartiality and could prevent and/or resolve con icts effectively (14 items).

Task III - Decision making skills assessed the extent to which the principal demonstrated skills in reviewing decisions based on data, making timely decisions, and providing reasons (8 items).

Task IV - School facilities and organizational planning assessed the extent to which the principal demonstrated skills in allocating resources appropriately, maintaining facilities
in a clean, orderly, safe manner, and implanting procedures for maintaining proper student behavior (8 items).

Task V-Teacher evaluation assessed the extent to which the principal demonstrated skills in pre-evaluation conferences, observations of teaching, post evaluation conferences, and quality of feedback and follow-up when using the State instrument and guidelines (12 items).

School climate assessed the extent to which teachers in a school enjoy the work environment, believe their views are valued by their peers and administrators and are proud of their principal, fellow teachers, students, and parents (11 items).

Expected relationship among the variables

The leadership task areas appear to be selected on the basis of theoretical models in the literature. Getzel and Guba's (1957) social system model stated that a social system consists of: (a) An institutional structure that assigns roles for tasks' performance expectation, and (b) Individuals with variances in personalities and needs. The principal as the leader is responsible for de ning tasks, assigning, and evaluating teachers in roles for performance towards school outcomes. Theoretically, if the principal engaged teachers in groups for designing tasks and assigning roles for implementation, teachers' diverse personalities and needs would be accommodated. This would set up a positive school climate that would in uence teachers' intentions to increase their efforts in task completion for effective school outcomes.

Conversely, if the principal arbitrarily de ned the tasks and assigned role functions, teachers' diverse personalities and needs would be neglected. This would set up a negative school climate that would decrease teachers' intentions to work, leading to ineffective school outcomes. Maslow's (1943) hierarchy of needs supported the view that every teacher had a need for acceptance and recognition and to feel belonging to a given group as the fundamental basis for self-actualization. Blake and Mouton's model (1991) of the collaborative leader supported this theory and suggested that a leader that is high both on task and participation is likely to lead to productive organizational outcomes. Research supported the view that the democratic leader is more effective in building both a cohesive and productive group (Lewin, Lippitt, & White, 1939). Vroom's (1964) expectancy theory of motivation also supported the view that if the leader sets the goals at the capability level of the followers they would make the effort to complete the tasks, and they are likely to continue the effort if the tasks were valued and reward was forthcoming. The critical issue in planning is how does the leader and followers know that they have made effective choices. According to NCATE, assessment and evaluation are the means for determining the baseline performance outcomes and utilizing such assessment results for selecting diverse strategies for improving the outcomes on an on-going basis. The issue is whether school climate is the critical outcome or student achievement.

According to Glickman and Gordon (2004), "A paradigm shift toward the collegial supervision model, if it is to succeed, must include a shift away from conventional or congenial supervision toward collegial supervision" (p. 7). He de ned collegial supervision to include: reduction of the hierarchical relationships between the principal and teachers, the involvement of both the principal and teachers in the supervision process, a focus on teacher growth rather than teachers' compliance, facilitation of teachers collaboration with each other in instructional improvement efforts, and teacher involvement in ongoing re ective inquiry.

The theoretical alignment of the variables through participation would suggest that the more the principal's interpersonal behavior is the focal axis for engaging teachers in a participatory mode in decision making about curriculum planning, school facilities planning, and teacher evaluation, the more the school climate is likely to be high, thereby leading to effective school outcomes.

METHODOLOGY

The school system administered the leadership skills instrument consisting of 99 items to all teachers in each school. A teacher administered the leadership instrument at a faculty meeting in the absence of all administrators and in an atmosphere of anonymity. The completed questionnaire was sealed and immediately dispatched for scanning and data analysis. The sample included 81 of the 84 elementary schools in the 2005-06 academic year. Kunjufu (1989) argued that schools tend to fail African males, especially in the fourth grade. In order to test the proposition that school climate would impact student achievement positively, the 4th grade Georgia Criterion Referenced Tests (CRCT) reading scores from the (2005-06) academic school year were attached to each school le. Before utilizing the data in statistical analyses, the items to scale validity and reliability of each task were calculated and each task was found to have a Cronbach alpha of above .8.

RESULTS OF CORRELATION ANALYSES

A Pearson correlation analysis was conducted to provide data with respect to the research question: Is there a signi cant relationship between each leadership task and school climate?

The results in Table 1 indicated that each task area is signi cantly correlated with school climate at the probability level of .01 as follows: instructional leadership (r = .899), interpersonal skills (r = .890), making decisions (r = .888), facilities planning (r = .887), and evaluation guidelines implementation (r = .794). The data supported the view (Brookover, 1978) that appropriate leadership skills are related to climate and appear to justify the school's district's tactic in planning leadership behaviors on this account.

A Pearson correlation analysis was conducted to provide data with respect to the research question: Is school climate signi cantly related to student reading performance? The results in Table 2 indicated that school climate is inversely (r = -.321*) but signi cantly related to the number of students who did not meet expectation. The inverse relationship would imply that when teachers perceived the school climate high there were fewer number of students who did not meet expectation in those schools, indicating the need for low achieving schools to increase school climate in order to reduce low student performance in reading. School climate is positively and signi cantly related to students' excelling performance (r = .372*), indicating that higher climate results in higher student performance. There were no signi cant relationships between school climate and students meeting expectations in reading (r = -.183). The majority of the students were in this category. Therefore, school climate improvement appears to be good for lowest and highest performing students, but not the "meet expectations" group.

Table 1:
Leadership Competencies with School Climate (N = 81 Elementary Schools)

Independent variables	School Climate
Instructional Leadership (Competency 1)	.899**
Interpersonal Skills (Competency 2)	.890**
Making Decisions (Competency 3)	.888**
Facilities Planning & (Competency 4)	.887**
Evaluation Guidelines Implementation (Competency 5)	.794**

** P < .01

Table 2 also provides data in response to the research question: What are the leadership tasks that might be signi cantly related to reading performance levels at or above expectations? This strategy was designed in relation to the No Child Left Behind Act that requires that all students should meet or exceed expectation, necessitating the breakdown of the data by levels of performance. In Table 2, instructional leadership is signi cantly related only to students' exceeding reading performance (r = .253*), and, hence not effective for students performing below or meeting expectation. This might be because instructional planning tasks were not selected in alignment with the strategies required for students with such characteristics.

Table 2:
Leadership Competencies with Student Achievement (N = 81 Elementary Schools)

	Does Not Meet	Meets	Exceeds
School Climate	-.321*	-.183	.372*
Instructional Leadership (Competency 1)	-.215	-.131	.253*
Interpersonal Skills (Competency 2)	-.266*	-.123	.291*
Making Decisions (Competency 3)	-.196	-.080	.209
Facilities Planning & (Competency 4)	-.251	-.118	.272
Evaluation Guidelines Implementation (Competency 5)	-.204	-.256*	.315*

* P < .05.

Principal interpersonal skill task is positively and signi cantly related to students exceeding expectations, meaning that the higher the leadership interpersonal skills the greater the number of students who exceed performance. Conversely, principal interpersonal skill task is inversely (r = -.266*) but signi cantly related to students not meeting expectations, indicating that higher interpersonal skills resulted in lower numbers of students not meeting expectation. There is no signi cant relationship between principal interpersonal skills and students meeting expectation. Therefore principal interpersonal skills did not appear to be supportive of the middling performing students.

Evaluation guidelines implementation task is inversely (r = -.256*) but signi cantly related to students meeting expectations and positively (r = .315*) and signi cantly related to students exceeding expectations. Therefore, evaluation appears to be effective for reducing the number of students below expectation category and increasing students in the exceeding expectation category. In the area of meeting expectation, evaluation did not appear to be correlated meaningfully. Since the majority of students are in this category, the school district might want to rethink its method of conducting evaluation.

RESULTS OF FACTOR ANALYSIS

Since, in the correlation analyses, several leadership skills were signi cantly correlated with school climate and student performance that exceeded grade level, a factor analysis was conducted to determine whether or not these variables would be placed in the same factor as the student performance variables. The results in Table 3 indicate that:

Factor I is loaded with leadership skills: instructional, interpersonal, decision-making, facilities planning, evaluation, and school climate, indicating that these variables are independent from all other variables including student reading scores.

Factor II is loaded with exceeded expectations in reading and inversely with not meeting expectations in reading. Hence, schools with high percentages of students not meeting expectations tend to have fewer percentages that exceeded expectation.

Factor III is loaded with meet expectations in reading and whether a principal is new at the school. Hence, new principals tend to be associated with meeting expectations in student performance

Table 3:
Leaderships Competencies and Achievement Performance Level Variables (N = 81 Elementary Schools)

	Factor 1	Factor 2	Factor 3
Instructional Leadership	.982	.080	-.028
Making Decisions	.980	.055	.031
Interpersonal Skills	.956	.139	.005
School Climate	.922	.218	-.029
Facilities Planning	.900	.136	.029
Evaluation Implementation	.896	.092	-.191
Reading Percent in Does Not Meet	-.135	-.972	-.132
Reading Percent in Exceeds	.178	.881	-.418
Reading Percent in Meets	-.115	-.139	.898
New Principal	.032	.095	.520

Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained

Component	Total	% of Variance	Cumulative %
1	5.826	52.963	52.963
2	2.395	21.769	74.733
3	1.291	11.735	86.468

Extraction Method: Principal Component Analysis.

Overall, the results indicated a stronger bonding among leadership skills and school climate than with student achievement variables. The school system appears, however, to be justi ed in placing new principals in low performing schools, as new principal is loaded positively with students' meeting expectations in Factor 3.

RESULTS OF REGRESSION ANALYSIS

A regression analysis was conducted to estimate the separate effects of the independent variables on the dependent when controlling for other selected independent variables. The results are presented in response to the following research questions: What variables would explain student reading scores that meet or exceed grade level?

The results in Table 4 indicated that only school climate predicted signi cantly student reading scores that met and exceed expectation. The variance explained, however, was small. The ve leadership task areas were excluded from the equation. It appears that high student reading gains were associated with positive school climate and the relation was small but signi cant. The percent variance explained is 9 percent.

Table 4:
Student Reading Scores that Meet or Exceed Grade Level as Dependent with All Leadership Skills and Demographic Variables as Independent (N = 81 Elementary Schools)

Model		Std. Error	Beta	t	.Sig
1	(Constant)	20.112		.580	.564
	School Climate	5.763	.323	3.032	.003

Dependent Variable: Student Achievement (meet and exceeded expectations)
Adjusted R square = .09; F=9.19; .Sig = .003

RESULTS OF ANALYSIS OF VARIANCE

Because "new principal" is associated with student meeting reading expectation performance in Factor 3, an analysis of variance was conducted to estimate the separate effects of the independent variable principal tenure with teachers' perceptions of leadership behavior. The results are presented in response to the following research questions: Does changing the principal have an impact on the perceptions of teachers in terms of the principal leadership behavior?

The results in Table 5 indicated that there is no signi cant difference between whether a principal has served only a year or been in place for several years in regards to teachers' perceptions of leadership behavior.

SUMMARY AND DISCUSSION

In the correlation analyses, the principals' instructional, interpersonal skills, decision-making, facilities planning, evaluation and guidelines implementation were significantly related to school climate, thereby supporting the literature (Brookeover, et al, 1978). Higher school climate also was associated with a fewer number of students below expectation (inverse relationship) and a higher number of students performing above expectation, note there was no significant relationship with students performing at expectation level. Therefore, climate was not effective for the average or middle group of students. Based on the climate relationships, principals were advised not to rely on climate as the basis for improving the average students to the level of exceeding expectation.

Regarding the task areas, instructional leadership was significantly related only to the number of students exceeding expectation, indicating that the strategies were biased in favor of highly achieving students supporting the view that instruction is high ability students-oriented. It is recommended that instructional leadership be directed at diversifying instruction to meet the needs of the diverse student population. The findings and recommendation are supportive of NCATE, Standard IV, requiring diversity throughout program planning in order to impact p-12 students' outcomes in terms of knowledge, skills, and dispositions. The principal's interpersonal skill was inversely and significantly correlated with students not meeting expectation and positively and significantly correlated with students exceeding expectation, indicating that, while there was no significant relationship with students meeting expectation, interpersonal management served low and high ability students but not the average students. It is recommended that interpersonal management be associated with diversity of instructional strategies. The principal's decision-making and school facilities planning tasks were not significantly related to students' performance at any level, indicating that these tasks were not sufficiently aligned to students' performance outcomes. It is recommended that these tasks be re-planned in alignment to students' outcomes. The principal's evaluation task was inversely and significantly correlated with students meeting expectations and positively and significantly correlated with students performing above expectation.

That is to say, the more principals evaluated their teachers according to state guidelines fewer students met performance expectations in such schools, though the strategy increased the number of students exceeding performance. Principals were recommended to examine the technical quality of evaluation and to diversify the evaluation strategy to meet the conditions of diverse students (a requirement for NCATE). Persaud and Turner (2002) demonstrated that teachers should be concerned with the amount of higher order thinking skills that are being transacted by both the teachers and student in relation to student experiences and textbook knowledge.

Even so, correlation is not causation, and the above relationships and recommendations might appear to be premature when the results of factor and regression analyses are examined. The results of factor analysis clearly demonstrated that none of the leadership variables is loaded with any of the student performance levels. Further, the results of regression analysis indicated that the leadership variables did not predict student achievement. Climate had a small (nine percent) though significant effect. Based on these findings, it is recommended that the leadership tasks on the instrument might not be appropriately defined to counteract factors such as socio-economic status of students in each classroom (Coleman, et al, 1965). SES as a variable was not measured in this study; therefore, the critical recommendation is for researchers to examine the role of the SES background of students.

Since, the demographic variables of each school were not included, it is recommended that a study be conducted to include the demographic variables of students to determine if climate still would persist as a contributor to student achievement. The school system might want to redefine the leadership tasks in relation to what teachers need to do to meet the needs of diversity (including abilities and socio-economic and family structure) in the student population.

The results have consequences for the various planning models. Despite the role of SES in students' performance, Cook in strategic planning argued that planning begins with mission statement and participation about strategies for achieving it. The model appears to require the planner to examine the mission as the focal influence of the selection of planning strategies rather than the characteristics of students as the basis for planning. MBO techniques in planning and evaluation suggests that the achievement of objectives should be considered as the basis for estimating the effectiveness of planning (McGregor, 1960). This would indicate that the non-achievement of objectives should result in abandonment of the planned strategies. Stufflebeam (1973) demonstrated that the context, process, and product should be the basis for both planning and evaluation for effectiveness. It would appear, therefore, that to better inform planning for effectiveness, planners should utilize the ultimate outcomes of schools, such as student achievement, and should examine the causes for student achievement as the basis for informing planning as suggested by Persaud and Turner (2002).

Teacher education institutions are required by NCATE to utilize diversity, assessment, and evaluation as the hub for aligning all variables in planning. Levine (2006) stated that teacher education training was not in alignment with the functional roles of educators in schools for effectiveness. Based on the results of this study, it is clear that colleges of education should examine the quality of their assessment and evaluation methods in defining outcomes and the causes for non-attainment of outcomes. Further, educational leaders should be trained accordingly.

Table 5:

Leadership Competencies in Terms of Principal Longevity Independent (N = 81 Elementary Schools)

		Sum of Squares	df	Mean Square	F	Sig.
Instructional Leadership	Between Groups	.001	1	.001	. 012	.913
	Within Groups	6.638	80	.083		
	Total	6.639	81			
Interpersonal Skills	Between Groups	.022	1	.022	.202	.655
	Within Groups	8.901	80	.111		
	Total	8.923	81			
Making Decisions	Between Groups	.006	1	.006	.053	.819
	Within Groups	9.059	80	.113		
	Total	9.065	81			
Facilities Planning & Student Behavior Expectations	Between Groups	.033	1	.033	.347	.558
	Within Groups	7.715	80	.096		
	Total	7.749	81			
Evaluation Guidelines Implementation	Between Groups	.026	1	.026	.389	.534
	Within Groups	5.334	80	.067		
	Total	5.360	81			
School Climate	Between Groups	.017	1	.017	.293	.590
	Within Groups	4.670	80	.058		
	Total	4.687	81			

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IN PLANNING SCIENCE LABS: BEWARE OF UNINTENDED CONSEQUENCES

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ABSTRACT

The role of designed classrooms and the use of space as components of education have not received a great deal of attention since open classrooms were studied in the early to mid-1970's. Instead, researchers have focused on curriculum. "One thing we have learned from examining the history of curriculum in the 20th century is that curriculum reform has had remarkably little effect on the character of teaching and learning in American classrooms" (Larabee, 2000, p. 148). Required new patterns of instruction and testing forms point to the need to reconsider spaces designed for science learning. Better use of existing classroom space can provide a nurturing, learning environment (Simplicio, 1999). Duncanson (2001) found that classroom space has a high positive correlation to hands-on science skills (r = .910, p = .032). Rooms with larger amounts of oor space per student promoted higher attainment of student outcomes. In addition, researchers in Kentucky found that school climate as a correlate of student achievement was more important than curriculum, assessment, and professional development. Successful schools had a learning environment that respected the needs of students (Browne-Ferrigno, et al., 2006). These results point to the fact that the center for school improvement resides in classrooms.

INTRODUCTION

Prior to 1990, science laboratories for chemistry and physics commonly used xed lab tables that doubled as desks for four to eight students. Earth science and biology classrooms tended to have tables for two students arranged in the traditional pattern of rows with narrow aisles. Both formats supported teacher directed activities in a teacher-centered science classroom. New buildings sometimes incorporated a seating area in front of a separate laboratory area in the back of the room. A few schools used separate rooms for classroom and laboratory areas, but this arrangement hindered class-lab instruction continuity. In the 1990's, architects began adding more counter space to the outside edges of classrooms and increased storage spaces. This created larger work spaces for students in support of national curriculum projects [e.g. Biological Sciences Curriculum Study (BSCS), and the Earth Science Curriculum Project (ESCP)] that involved students in a wider variety of hands-on activities. Laboratory facilities designed and built since 2000 tended to feature widely separated work areas on the edges of the room. The spacious classrooms and large work areas are meant to parallel "real world" conditions, where scientists have separated work spaces. This horizontal layout was intended to promote a student-centered learning approach emphasizing analytical or applied questioning by teachers (Betoret & Artiga, 2004).

The physical condition of many science labs is also an area of concern. The American Society of Civil Engineers (ASCE) reported that while school enrollment was increasing, funding for renovating older classrooms was decreasing. The available money is below what is needed to bring schools to good overall conditions. The ASCE assigned a grade of 'D' to the physical quality of American schools (ASCE, 2007). The size and design of science facilities have had unintended negative consequences for instruction, safety, and personalization. Science labs must change to accommodate new testing and instruction.

INSTRUCTIONAL SPACE

Teachers and the physical environment are two important "tools" that can bring about new outcomes. Proxemics--the study of space and the way people use it--is important in designing classrooms. "No matter what happens in the world of human beings, it happens in a spatial setting, and the design of that setting has a deep and persisting in uence on the people in that setting" (Hall, 1966, p. xi). Classrooms often support teaching, ignore students' interests.

Unintentionally and non-verbally teachers expose their educational philosophy in the ways they use space (Sommer, 1977). People react to space between themselves and other human beings. Hall (1966) created a scheme that divided space for human interactions into four regions: intimate, personal, social, and public. The size of each territory in uences eye contact, the level of voice used, and the

nature of the conversation taking place. “The boundaries of the territories remain reasonably constant” (Hall, 1966, p. 102-103). When people are within 1 inch of each other (intimate range), they can whisper, communicating personal information not meant to be repeated. Personal space extends from 1.5 feet to 4 feet. At this distance, about an arm’s length, people can communicate in a soft voice while discussing personal subject matters. A normal speaking level can be used for a social distance of 4 feet--8 feet. Between 8 feet and 12 feet a speaker must raise his or her voice level. “At this distant phase, the voice is noticeably louder than for the close phase, and it can usually be heard easily in an adjoining room if the door is left open” (Hall, 1966, p. 122). Public space begins at 12 feet from the speaker. The speaker’s voice must be loud but not shouting.

Table 1:
*Required Shifts in Voice Levels Driven by Distance Between Communicators**

Communication Type	Distance	Level/Topics (verbal and nonverbal)
Intimate	up to 1 ft.	whisper; con dential information
Personal	1.5 ft. – 4 ft.	soft voice, personal matters
Social – near	5 ft. – 8 ft.	full voice; information of a non-personal nature
Social – far	8 ft – 12 ft.	raised voice; public information
Publicover 12 ft.	loud voice; speaking to a group	

Adapted from Hall, 1959

Note: The exact distances may have varied somewhat since 1966, but the four categories are still relevant. Cultures may differ in their use of space and eye contact.

Multiple hidden non-verbal dimensions are part of culture. How teachers use space is related to their use of time. When classrooms have narrow pathways, little space per student, and lack useable work space, teachers are forced to teach in constrained space and emphasize rote learning activities. Communication is narrow and one-way with the teacher doing the talking. Larger classrooms offer more space per student, broad pathways, and open areas where students can self-select comfortable work areas (Hall, 1976). Spacious environments support inquiry learning where students engage in different activities at the same time. Teachers can coach students in small groups “as they become deeply involved in the knowledge and skills needed to complete the activity” (Duncanson, 2003b, p. 3).

“It is dif cult, if not impossible, to separate instructional activity from the physical environmental setting within which it occurs” (Lackney & Jacobs, 2002, p. 1). The physical environment may impede the effectiveness of instruction. When classrooms remain unchanged despite changes in teaching strategies a mismatch occurs. “As a result, the program and the setting in which that program takes place are often in con ict with each other hindering both teaching and learning” (Lackney & Jacobs, 2002, p. 4). Increasing student space has been shown to improve student achievement signi cantly. “Collectively, the hands-on skills of classifying, manipulating materials, measuring, recording data, and using non-standard units of measurement, and the thinking skill of making predictions show a high positive correlation to classroom space” ($r = .881$, $p = .048$) (Duncanson, 2003, p. 110).

Overly large classrooms may lead to multiple problems for the teacher. In newly designed classrooms, continuously speaking across large distances has created medical problems for teachers. “Teachers are 32 times more likely than other professionals to have voice disorders” (Wagner, 2004). At distances over 8 feet a raised teacher voice may discourage students from asking higher-order thinking questions. The non-verbal message of space should encourage on-subject conversation (Richards, 2006).

Research in 16 science labs has shown that in a class setting with the teacher standing near the chalk/whiteboard, that some students were 25 feet or more away from the instructor (Duncanson & Achilles, 2007). The distance was even greater when students are using lab stations on the perimeter of the room. Long distances require the teacher to speak continually at an elevated level. Large distances create line-of-sight (LOS) problems for the teacher enabling some students to escape the teacher's field of vision. Individual monitoring of students becomes difficult.

Impersonalization can lead to misuse of equipment and students who are off-task (Connolly, 2007). Few teachers know how to create learning environments that address the needs of today's curriculum, testing forms, and student preferences. Teachers report that they received no formal training on how to plan space use and room arranging; many teachers learn about organization patterns by looking into the classrooms of other teachers (Weaver, 1998). "A new teacher-training model must prepare teachers to become environmentally competent 'placemakers' for student instruction and learning" (Lackney & Jacobs, 2002, p. 3). This is not as easy as it sounds. "A major challenge in professional development is helping teachers unlearn the beliefs, values, assumptions and cultures underlying schools' standard operating practices" (Dede, 2004, p. 16). Allocation of space is a major ingredient for improving teaching and learning (ASCD, 2007). The National Science Teachers Association (NSTA) said that science labs must be remodeled to promote safe habits and procedures. Laboratory teaching needs to support inquiry-based learning that is part of daily instruction and help students learn in a collaborative setting. Science activities should be conducted in a well-equipped, safe, laboratory space (NSTA, 2007).

SAFETY

Students are asked to 'do' science rather than just read about it in a book. "If students themselves participate in scientific investigations that progressively approximate good science, then the picture they come away with will likely be reasonably accurate. But that will likely require recasting typical school laboratory work" (AAAS, 1993, p. 9). Hands-on laboratory experiences help students make sense of the environment, and are related to student outcomes (NRC, 2005). Teachers are expected to use laboratory activities as a teaching technique (NSTA, 1985).

In this new teaching environment, teachers are also expected to meet standards of the EPA, OSHA, and/or the appropriate state and local regulatory agencies (NSTA, 2000), but few teachers have received formal training in laboratory safety (Flinn, 2006). A major factor in lab safety is the number of students in class. The National Fire Protection Association (NFPA) requires 50 ft^2/person in labs used for educational purposes (NFPA, 2006). This amount of space improves traffic flow, student supervision, and overall control. Assigning more than 24 students to a lab can result in an increase in discipline problems and result in unsafe conditions (Flinn, 2007). Inflexible space encourages teachers to remain at the front of the room separating the teacher from students using chemicals, scalpels, and electrical equipment.

PERSONALIZATION

The public has consistently reported in polls and studies that educators can do a good job and form meaningful links with students. "(People) have confidence in schools and school districts when buildings are well maintained with bright, clean interiors; when there are committed, competent, and caring educators; when quality education is offered; when there is good discipline in a safe environment; when schools contain achievement-oriented students, have involved parents, and offer a selection of optional programs and activities to meet special needs and enhance the growth of all students" (Carol & Cunningham, 1984, p. 122).

Parents are convinced that teachers make a significant difference in schooling. They see educators in high-confidence schools counteracting the impersonal character of institutional life by providing students with meaningful contacts with significant adults. Many adolescents in American high schools complain that they have little personal contact with anyone other than peers. Educators can recognize the isolation many students feel and devise means to provide them with close contact with adults (Wayson et al., 1988). "Staff members in high-confidence schools use the physical facilities in ways that enhance and reinforce relationships. These schools are attractive, clean, and welcoming. Both students and staff accept responsibility for keeping them that way" (Wayson et al., 1988, p. 61).

The National Association of Secondary School Principals (NASSP) has recommended that personalization and interactions between teachers and students be increased; students need trust, closeness, genuineness, a sense of caring, and meaningful contact with adults. Caring interactions help students believe that they have a personal adult advocate (PAA) who is truly interested in their concerns (NASSP, 2003). Personalization involves active listening, respect, courtesy, and fairness (Mawhinney & Sagan, 2007), and student-teacher communication held at a distance of 1.5-4 feet so students can feel connected to and feel supported by staff (ASCD, 2007). Science labs, often with a fixed demonstration table and desks defeat personalization when students are forced to be 12 feet or more from the teacher in a science classroom (Duncanson & Achilles, 2007). A distance of 12 or more feet between persons makes personalization difficult to achieve. Teachers who know their students and allow the students to know them find that they begin to treat each other as human beings (Mawhinney & Sagan, 2007). "Teachers are in uniquely powerful positions to positively impact youths who are at risk for school failure. Youths who overcame serious risk factors often report that a teacher, coach, or other adult provided a mentoring relationship that sustained them. Developing classroom routines that meet the needs of all students is an essential first step" (Rockwell, 2006, p. 17).

THE ROLE OF TEACHERS

Teachers can design classrooms and enhance student achievement positively and they need to recognize and act on opportunities to do so. "Teachers have a significant control over classroom adaptability, instilling a sense of personalization and ownership within their students" (Lackney & Jacobs, 2002, p. 1). Redesign of classrooms is a first step. "Structure must change before culture can change" (Ouchi, 2004, p. 18). Cultural changes do not happen overnight. "If you alter the structural arrangement and then have patience, within a year or two the culture will begin to change" (Ouchi, 2004, p. 20-21). This is not an easy process. Teachers resist making fundamental changes that make a significant difference in the essential practices of teaching and learning (Washor & Mojkowski, 2006). Change will occur one classroom at a time (VanHorn, 2006).

Improving personalization requires teachers to include students in the conversation about improving the classroom climate (Dudley-Marling, et al., 2006; Sommer, 1977). By engaging students in the process, a student-centered classroom can be created that will influence students' academics, behavior, and engagement in positive ways. Through trial and error teachers can establish new classroom designs to support learning and personalization. Students often want to put the teacher in the middle rather than on one side. Learning happens more in that kind of environment (ASCD, 2003).

DESIGN AND PROCEDURES

This action-research study followed Johnson's (2001) cross-sectional explanatory design format (Type 8) (p. 10). The researchers first established a framework from research, theory, and practice base, then observed a "grab" sample of 41 science labs in 4 high schools and 6 labs in one middle school. They conducted measurements and analyses of instructional space use relative to Hall's (1966) typology of space usage and key concepts of personalization (proximity), safety (lines of sight), and instruction. They engaged teachers in informal discussions of observations during "walk throughs" to validate their own conclusions. Conversations centered around room usage, teaching methods, and the strength and weaknesses of room design. The nature of the study makes generalizing results the reader's task.

FINDINGS

It is clear that one lab design does not meet the instructional needs of all sciences. Earth science teachers favor large desks that seat two students. The desks are useful in class where students may be using a text, notebook, and reference tables while engaged with instruction. The expansive desk tops provide ample space for map projects, soil analysis and examination of earth materials. Each desk should have an electrical outlet. The lab should include wide counters around the outside of the room to provide additional work space and include a small number of sinks. Biology teachers favor the same desks but require a larger number of sinks on the perimeter of the room. Chemistry teachers favor lab stations where students stand while working with chemicals. Each station needs to be supplied with gas, water

and electricity. Physics teachers need solid lab stations and wide counters that are 12-15 feet long to accommodate specialized equipment.

Open oor space needs to be ample enough to prevent crowding but not so expansive that lines of sight are compromised. Lab activities often involve instruction and practice in the use of new, and expensive, equipment. Teacher supervision to minimize breakage and the occurrence of unsafe lab practices is favored when the space is just suf cient for the activity. Proximity and short lines of sight enhance student safety. Long distances and poor design force teachers to raise their voices. In addition, instruction is negatively affected when students who are furthest from the teacher do not pay attention. This is especially true in classrooms with a full complement of students. The average number of students in observed labs was 23. Teachers reported classes as large as 35. The observed designs in uenced the teacher and instruction. On average, teachers provided directions/procedures to be followed 22 times/class. By contrast, teachers asked only ve questions on a knowledge or comprehension level. Only one student asked a higher order thinking skill (HOTS) question. No teacher asked a single HOTS question.

Teachers spent their time reacting to student behavior. On-subject conversations did not occur. Instead, student and teacher interactions focused on directions and procedures. Lab facilities with xed furniture arrangements hinder teachers from meeting NSTA (2002) recommendations exible space. Teachers reported that newly built lab rooms with xed furniture offered poor lines of sight (LOS), poor use of space, poor student control, unsafe conditions (e.g. students can 'jimmy' electrical outlets), and constraints on teaching methods to the degree that teaching is dictated by the space. Classrooms arranged vertically provided fair-to-good LOS (only a few students are outside a direct LOS). A demonstration table at the front of the room between the chalkboard and student desks immediately increased the distance between the teacher and student thus diminishing opportunities to promote personalization (Figure 1). When the room design is horizontal, a larger number of students fall outside the teacher's LOS resulting in a poor situation regarding safety. More space per student conveys a sense of trust which helps to foster personalization (Figure 2).

Teachers were observed using a wide variety of teaching methods. Forms of direct instruction included: explanation followed by a demonstration, student use of the information, and a formative assessment by the teacher; micro-teaching in 10 minute lessons; recitation; and demonstrations. Indirect instruction included teachers using several levels of inquiry (guided, discovery, challenge, and student initiated), cooperative learning, and independent learning. Some teachers described using new teaching methods to deal with safety issues created by the impersonal distances between students and the teacher. For example, chemistry teachers have moved to 'micro-chemistry' so they can bring students to small desks to enhance chemical safety while reducing the problem of chemical disposal. But students lose the WOW! factor associated with "test-tube chemistry," and do not develop laboratory skills and make real-world connections to their work. The researchers did not observe any teacher-student personal contact in any lab setting.

CONCLUSIONS AND RECOMMENDATIONS

New science labs have become larger to accommodate new design ideas but there have been some unexpected consequences of this trend. Appropriate instructional strategies, safety, and personalization have all suffered. Present lab designs force teachers to focus on teacher-centered methods to deliver instruction rather than using instructional methods that promote student inquiry. The need to use new instructional strategies to meet mandates for inquiry-based science has not been accompanied by a change in the design of science labs. The architecture creates problems: students are too far away from the teacher, sight lines are too long, instructional time is reduced, attention to classroom control is increased, opportunities for inquiry-based instruction are compromised, and meaningful student-teacher interaction is reduced. Dialog in large lab sections often is limited to a few low-level questions and a plethora of directions or procedures for students to follow. The horizontal layout described by Betoret and Artiga (2004) to promote a student-centered learning approach and high order thinking has not yet been ful lled.

Teachers must be involved in the design of lab facilities that promote good teaching practices, safety, and personalization: "Spaces designed with learning scenarios in mind" (AAF & KnowledgeWorks, 2006,

p. 44). Science labs designed with a student-centered focus can accommodate a variety of learning styles and promote different forms of inquiry teaching. Teachers need to create environments that promote academic conversations with students no further than 8' away, a distance that enables teachers to speak in a normal tone, monitor student work, promote student inquiry, and assume the role of a PAA. Teachers need to be agents of change both individually and by working through professional organizations to encourage of cials to pay more attention to school learning conditions. The American Federation of Teachers (AFT) has recommended that the federal government should, "Require a 'learning environment index' be used. . ." (AFT, 2006, p. 12); administrators can show support for teacher's efforts by controlling class sizes and providing assistance in classroom design.

A well designed school must support teaching and learning. There is a continuing need to examine how architectural design and space use (proxemics) in uence teaching strategies and student achievement. "Given information they can act upon, teachers can effectively evaluate their own classroom environment and plan how to use space. Individual mentoring, administration-provided incentives, and time can entice a faculty to design settings that improve student achievement" (Duncanson & Achilles, 2006, p. 9). *The center for school improvement* resides in classrooms.

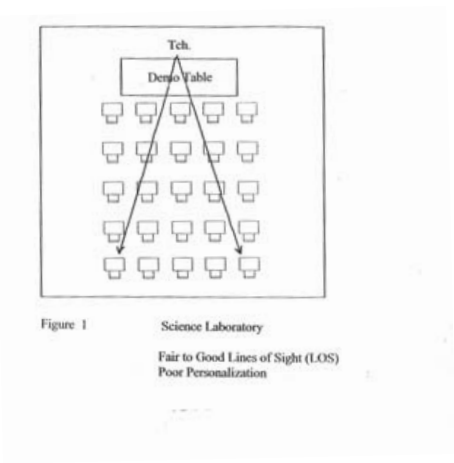

Figure 1 Science Laboratory

Fair to Good Lines of Sight (LOS)
Poor Personalization

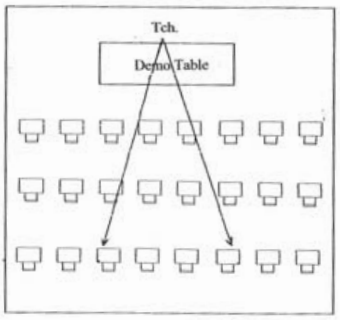

Figure 2 Science Laboratory

Poor Lines of Sight (LOS)
Fair Personalization

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FIRST-YEAR-EXPERIENCE: REFORM IN COLLEGE FRESHMEN PROGRAMS FOR FIRST YEAR STUDENTS

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ABSTRACT

Since its inception in the 1980s, First Year Experience (FYE) programs remain an essential part of ensuring the success of freshmen, promoting retention, and further developing the strength of American higher education. Because of the stamina of the FYE reform, substantiation of this reform is apparent across the campuses of American colleges and universities. Undeniably, the reform has stood the test of time, and through endless efforts, continues to in uence rst-year students across the United States. Different today, however, American colleges and universities have not changed in the responsibility for providing positive experiences for students, faculty, and administrators.

INTRODUCTION

Describing the signi cance of education reform, renowned art and social critic John Ruskin (1907) declared, "Let us reform our schools and we shall nd little need of reform in our prisons"(essay 2, p.136). Paving the way for educators to acknowledge, Ruskin identi ed a pressing factor faced in the twenty- rst century. Throughout the history of higher education, issues of reform never cease in challenging existing missions, programs, admissions, policies, and overall academics. From the inception of American higher education, individuals hoping to further the cause and increase the potential of one the most in uential American institutions continuously explore opportunities for making American colleges and universities even better. Reform in higher education is incredibly complex. Often starting out as a simple suggestion, educators work tirelessly to implement what are perceived improvements, and an outright better way of doing things. Elaine El-Khawas (2002) wrote, "Most reforms do not emerge from mandates by government but instead are shaped form the ideas that emerge from the ideas that certain individuals or campuses develop" (p. 5). Surprisingly, the issues begin at the campus level through the in uence of individual interest and campus wide concern. Support comes from a variance of sources from both inside the higher education system and voluntary associations outside of the individual college or university. Consequently, reform helps de ne the purpose of higher education. The demand of addressing issues rivals the potential of stagnant, non-productive tendencies.

Undeniably, the numbers of reforms in American higher education are countless. Described in three different phases, reforms are often misunderstood and overlooked as a means of implementing change (El-Khawas, 2002). The rst phase of educational reform is the initiation phase. The ideas are tossed around; success potential becomes evident. Next is the implementation phase in which the characteristics of a reform issue become a part of the program. The nal and often breaking point of determining the success of a reform issue is the institutional phase. Often measured in "enclaves" (El-Khawas, 2002, p. 2), survival of reform is only on indicator of the overall success of the issue. Other measures are evident through the acceptance of the particular issue from other institutions and the creation of professional networks (El-Khawas, 2002).

As mentioned, the test of time is often an indicator of a reform's success. The birth of a discussion on reform never ensures victory. One issue proving its worth is the First-Year-Experience (FYE) reform. Since its inception in the 1980s, the need to address college freshmen programs and improve the students' experiences remains a focus throughout American colleges and universities. As a result of a riot on the campus of the University of South Carolina in 1970, protesting the invasion of Cambodia and other local issues, the university's president, Tom Jay, determined the need for teaching students to love their schools and provide a positive rst year experience (Gardner, 2006). Different today, however, American colleges and universities have not changed in the responsibility for providing positive experiences for students, faculty, and administrators. With the number of students attending colleges increasing, First-Year-Experience programs remain an essential part of ensuring the success of freshmen, promoting retention, and further developing the strength of American higher education.

During the end of August and the early part of September, recently graduated high school seniors

embarked on the next phase of their academic career. Whether attending a family alma mater, a specialized college or university with a particular major in mind, or a local community college, freshmen come with the same goals and aspirations. For most, the academic and social structures are unfamiliar and the routine is dif cult to manage. The rst few weeks of the foreign program can determine the outcome of student's ful llment of goals.

Kirk Kidwell (2006) wrote, "Most will survive the rst-year at college and go on to graduate, but all too many drop out before the freshmen year is over" (p. 253). On the contrary, factors in uencing the decisions are numerous. Though not new, college students have faced these challenges from the inception of American higher education. Evident is the aspects that rarely are rst-year college students prepared for the demands of the freshmen year.

Primarily, those that remain develop similar patterns that result in what Kidwell referred to as the "purgatorial zone" of the rst year of college (p. 253). In the initial few weeks, the goals and hopes seem achievable, and students settle in the obvious differences. Managing class schedules, getting from one end of campus to the other in fteen minutes, and nding a seat in a class of fty or more students does not seem as frightening. All of the challenges that were frustrating in the beginning seem under control. Suddenly, academics are an emphasis. Thinking that all of the strategies that were successful in high school will help with survival, the students realize most are archaic and inapplicable. Evaluation of students' understanding of the reading for one class and the labs for another class come in the form of an exam, essay, or presentation. Frequently, the evaluations occur in the same week if not on the same day. At a point of insanity, the aspiring, young freshmen have just entered the purgatorial zone of the rst year.

As Kidwell pointed out, one of the most dif cult aspects rst-year students must manage are the course requirements for each class. Unlike high school instructors, professors do not consult with one another when determining schedules for assignments. Therefore, affording empathy to students failing to meet deadlines or perform poorly on an exam due to other obligations, unlikely yields rewards. At the end of the rst wave of assignments, freshmen generally are unaware that another wave is in store. The process seems endless. Lack of neither intelligence nor aptitude has any bearing on the students' success. Slowly, the transformation begins, and students realize the importance of adapting to an entirely different pattern that is necessary for college achievement. Old habits die-hard and new methods of studying, planning, preparing, and thinking emerge by end of the rst year. Hopefully, students begin thinking critically and taking responsibility for their learning (Kidwell, p. 254). Though dif cult lessons for students to learn, the element of purgatory is most challenging for anyone, especially the freshmen students entering their rst year of college, Kidwell indicates, "Students may appear cynical or jaded but actually begin playing the game to earn the best grade" (p. 254). These skills carry on, and the survival of the rst year is proof enough that the student can continue.

Though students succeed while others fail, ignoring these patterns is detrimental to higher education. Obviously, there is a horri c breakdown in the freshman year of college. First, the pro le of the average college freshman is continuously changing. A variance in gender, socioeconomic class, race, religious af liations, sexual preferences, and overall background make up the faces on American college campuses. Students enter their rst year with a variety of experiences contributing to their success. Some have strengths while weaknesses inhibit others. The breakdown begins with failure to meet these needs. Fortunately, educators recognize this, and through reform, the rst year experience, the purgatorial zone, is becoming manageable.

One educator that felt the need to change rst year experiences for students entering college is John Gardner. In 1967, John Gardner arrived in South Carolina serving as a psychiatric social worker for the United States Air Force. (Policy Center of the First Year of College). In 1970, Gardner embarked on a lifelong academic career as fulltime faculty member, teaching courses in history, communications, higher education, and a variety of special topics. Along with distinguished awards in his efforts in education, Gardener is best know for initiating the reform movement in 1982, bringing attention to improving the freshmen year (Policy Center for the First Year of College). Coined by Gardner as the First-Year-Experience, (FYE), the concept enhances "the learning, success, retention, and graduation of students in transition, especially rst year students. . ." (Policy Center for the First Year of College).

Through endless efforts, John Gardner implemented, initiated, and institutionalized reform practiced throughout American college campuses. In 1986, Gardner founded The National Resource Center and later in 1995, renamed the organization, The National Resource Center for The First-Year-Experience and Students in Transition. Recruited by former University of South Carolina President, Tom Jay, John Gardener welcomed the opportunity to explore ways of discouraging future riots, disruptions, and overall disenchantment as expressed by students participating in the riot in May of 1970. Like many rst year students or students in transition, Gardner too experienced many disputes that could have destroyed his college career within the rst year experience in college. Never forgetting the strife, John Gardener took the necessary steps to make University 101 more, "intellectually stimulating. . .combining it somehow with professional development. . .and to somehow made it a more scholarly endeavor" (Gardner, 2006). Thus, Gardner established a master model for following and received unending approval and praise from his colleagues and other constituents. Across the campuses of American colleges and universities, evidence of his tireless efforts is apparent in various forms. Generally, all missions resemble the outline implemented from the inception, and it is a hope that students' attitude about their school and their purpose for attending the school is more prideful than when the students rst began.

Because of the stamina of the FYE reform, substantiation of this reform is apparent across the campuses of American colleges and universities. Undeniably, the reform stands the test of time, and through endless efforts, continues in uencing rst-year students across the United States. According to Mary Stuart Hunter and Carrie W. Linder, "First–year seminars have become a common approach adopted by higher education intuitions in their efforts to ease the transition to college for new students, and to systematically address unacceptable rates of student attrition"(p. 1). With the impeccable record of accomplishment, FYE reform proves as one of the most successful higher education movements in all of American higher education. Unique in purpose, rst year seminars "satisfy both institutional and student needs" (Hunter & Linder, 2007). The seminars are unique in purpose, instruction, and goals. Following the common idea of seminar forms, rst year seminars are small and are open in exchange of ideas between both instructors and students. Most often, the seminars fall into ve categories: basic study skill seminars, professional or discipline linked seminars, extended orientation seminars, academic seminars on various topics across sections, and academic seminars with generally uniform content across sections (Hunter & Linder, 2007). In the case that a seminar does not necessarily match up to an existing category, other elements help establish criteria. No matter the title of the seminar, all of the seminars share common objectives, in that the focus is on individual student needs. Each course shares in striving to make the rst-year experience more realistic with assistance the transition into college and the academic and social development of rst-year students.

While modeling recommendations from The National Resource Center for The First-Year-Experience and Students in Transition, higher education programs across the United States exempli ed good practice creating distinctive programs and replicating existing programs. The Centre for the Advancement of University Teaching (2007) suggested that the freshmen year should consist of integrated, interdisciplinary, and inquiry-based learning.

The freshman year:

- Marks a transition in the lives of young people both socially and academically;
- Needs to bridge between high school and home and to excite the student by wealth, diversity, scale, and scope of what lies ahead; and,
- Must be intellectually integrated, so that the student will not learn to think of the academic program as a set of disparate and unconnected requirements (Centre for the Advancement of University Teaching).

Recommendations for the rst year included: A student should be adequately prepared to meet the intellectual challenges of that program; if remediation is necessary, it should be completed before entering that program.

1. All rst-year students should have a freshman seminar, limited in size, taught by experienced faculty and requiring extensive writing, as a normal part of their experience.
2. The freshman year must include opportunities for learning through collaborative efforts, such as joint projects and mutual critiques of oral and written work.

3. The freshman program should be carefully constructed in an integrated, integrated, Interdisciplinary, inquiry based experience.

Overall, the plan and efforts seem quite explanatory and offer room for exploration and re nement for existing FYE programs and those that are just beginning. New program implementation often presents challenges, but with experienced professionals offering guidance, the recommendations provide a structure that leaves room for exibility in adapting to individualized additions speci c to any campus' pro le.

In an effort to encourage more colleges and universities to think about the way in which the rst year is portrayed, Robert D. Reason, Patrick T. Terenzini, and Robert J. Domingo (2006) presented research supporting the importance and impact the rst year of college has on a students overall success. As indicated, "The rst college year is critical not only for how much students learn but also for laying the foundation of which their subsequent academic success and persistence rest" (p. 150). Though not new to John Gardner and his colleagues, the study that was part of The Foundations of Excellence Project clearly supported, "The losses that many individuals and most institutions experience during a student's rst year re ect and unacceptable and unnecessary waste of individual, institutional, and national talent and resources" (Reason, et al. p. 150). So much happens within the rst few moments that a student ascertains a relationship with a college or university. The moments are critical and if approached effectively, this waste is preventable and avoidable. Undeniably, interconnected factors of the college (Reason, et al., p. 150) "in uence academic success and persistence among rst year students" (p. 150). Identi cation of this connection surely strengthens FYE programs importance.

According to the ndings of the study, seven principals, or Foundation Dimensions, were effective in promoting the success of rst year students. (p. 151) The principles were:

1. Have organizational structures and policies that provide a comprehensive, integrated, and coordinated approach to the rst year.
2. Facilitate appropriate recruitment, admissions, and student transitions through policies and practices that are intentional and aligned with institutional mission.
3. Assign the rst college year a high priority for the faculty.
4. Serve all rst-year students according to their varied needs.
5. Engage students, both in and out of the classroom, in order to develop attitudes behaviors, and skills consistent with the desired outcomes of higher education and the institution's philosophy and mission.
6. Ensure that all rst-year students encounter diverse ideas, world views, and people as a means of enhancing their learning and preparing them to become members of pluralistic communities.
7. Conduct assessment and maintain associations with other institutions and relevant professional organizations in order to achieve ongoing rst –year improvement. (p. 151-152)

From 2005-2007, there were 57 colleges and universities accepted to participate in the self-study for the Foundations of Excellence Project. Two-year and Four-year institutions, such as Spokane Falls Community College, Longview Community College, New Mexico State University, The University of Akron, and Georgia Southern University, schools from all regions across the country participated to enhance and improve rst-year initiatives. The measuring of the institution's current level of achievement demonstrated the need for change, and the Dimensions statements were utilized for suggestive actions that a college or university might take to improve the rst year. Many task forces discovered ways they could immediately improve the rst year and initiated actions as a result of the self-study process. The University of Akron, located in the Midwest had a mission and vision for the rst-year experience similar to Georgia Southern University, located in the South.

The University of Akron had taken positive steps to make a positive difference for students, the members of their Dimensions' committees found the following areas for growth: a need for a rst-year philosophy that is disseminated across campus, the need to include more exposure to diversity modules within students' rst-year, and General Education courses; more extensive professional development for faculty and administrators working with rst-year students; common components within rst-year course syllabi; the need for a University-wide communications audit to determine the best ways to communicate with the rst-year students; development of opportunities for students and faculty to interact outside

of class through participation in service learning, mentoring, and undergraduate research programs; a reward system for faculty with high levels of interaction with rst-year students; and the need to assess and address students' computer literacy (The University of Akron, 2007). According to the University of Akron Foundations of Excellence Self Study Report (2007) "The faculty and administrators who served on the various Dimensions committees gained a better understanding and appreciation of the work of others on campus who assist new students" (p. 3).

Georgia Southern University (GSU) submitted a Quality Enhancement Plan (QEP), as part of the University's reaf rmation through the Southern Association of Colleges and Schools (SACS) in 2005. Three of the ve objectives of the QEP focus on the rst year:

- Freshmen will apply behaviors that demonstrate their responsibilities as engaged learners.
- Freshmen will practice behaviors that lead to lifelong learning.
- Freshmen will evaluate their responsibilities as engaged members in diverse communities.

Through its participation in the Foundations of Excellence® project, the First Year Experience (FYE) program at Georgia Southern University is helping the larger University community achieve these objectives. This process yielded many signi cant ndings, three of which signi cantly shaped the work of the Faculty Task Force:

1. Compared with other institutions who participated in the Foundations of Excellence project, Georgia Southern scored fairly well when it came to affective measures of student engagement, but underperformed in areas of academic engagement.
2. On the whole, faculty envisioned the First-Year Experience as a Student Affairs unit rather than an Academic Affairs one. Because of this, efforts to improve FYE were not seen as an Academic Affairs responsibility.
3. Students did not, in large numbers, report that Georgia Southern accurately communicated academic expectations prior to enrollment. Only 49 percent indicated that the University did so to a "very high" or "high" degree.

As a part of this process, the FYE program has revised the learning outcomes for the GSU 1210 course to embrace the objectives. Listed below are the Student Learning Outcomes:

Seminar outcomes
Students will be able to. . .
S1. Critically evaluate print and electronic information for its currency, relevancy, authority, accuracy and purpose.
S2. Apply documentation guidelines for print and electronic information used in assignments.
S3. Articulate what constitutes plagiarism and avoid representing the work of others as their own.

Extended orientation outcomes
Students will be able to. . .
EO1. Examine societal rationales for supporting college education and their own personal motivations for attending college.
EO2. Locate Georgia Southern resources and services necessary for their academic and personal success.
EO3. Analyze their use of time in relation to their goals and either: 1) develop a plan to align their use of time more closely with their goals; or, 2) defend their use of time as appropriate for achieving their goals.
EO4. Describe and explain academic expectations in relation to their course of study.
EO5. Identify different learning styles, evaluate which learning styles are most effective for their academic success, and develop personal strategies for learning that take into account their preferred learning styles.
EO6. Examine common college-student choices and relate them to their academic and personal circumstances.

Because of these ndings, the Provost formed the Faculty Task Force and charged the group with developing challenge/support initiatives, particularly academic in nature, to strengthen the First-Year Experience on campus. The group is charged with examining students' experiences before enrollment, during the GSU 1210 course administered during the rst semester, and beyond the rst semester.

Common themes among the numerous American institutions have been reported. Project leaders from former participating universities and colleges are reporting results such as:

- Enrollment gains;
- Increased campus-wide awareness of the importance of the rst year;
- Improved academic affairs/faculty/student affairs collaboration;
- More faculty buy-in to rst-year efforts;
- Connection with institutional reaf rmation of accreditation;
- Creation of philosophy and mission statements for the rst year;
- Creation of new rst-year structures;
- Creation of permanent task forces, advisory councils, committees for oversight of the rst year; and,
- Creation of new or improved rst-year programs and activities, such as improved student-to-student mentoring (fy.foundations.org).

Clearly, the framework presented assists in promoting rst-year success for students. Though unambiguous, room for error still exists and not all students will necessarily bene t from every aspect of the principals or from the guidelines of The National Resource Center for The First-Year-Experience and Students in Transition. Research is ongoing and the efforts of the reform are not in vain. The desire for change and will for successful students persists. Educators agree there is room for growth in the foundations of American higher education. Careful planning along with dedicated participants supports research presented. Willingness for trial and error supports potential growth in FYE throughout American higher education.

Equally important with the guidelines and implementation, exploration of individual institutions FYE programs is signi cant. In a survey of students attending Emory University, Georgia State University, Kennesaw State University, and Le Grange College, consistent responses regarding freshmen experiences prevail. For the most part, the participants indicated a positive outcome of First-Year-Experience membership. Individuals agree FYE programs play a signi cant role. Though sharing similar characteristics such as grouping, topics of discussions, and required involvement, it is conclusive that each school added a particular aspect that made the program unique to the school. At Emory University, Kennesaw State University, and Georgia State University, students participated in the program for the entire semester while students at Le Grange College only devoted three days to the plan. Characteristically different names such as Cornerstone and PALS add to the distinctive nature of the programs. Shared distinctiveness among all schools mentioned included active parts of freshmen orientation, student lead seminars, creative approaches to social issues and providing peer support.

Positive attributes of the First-Year Experience programs included trusting environment, individualized guidance, camaraderie, mentorship, instilling school and class pride, development or organizational skills, and understanding of the rst year. Role-playing and team building were two common areas of activities shared by the groups. All agreed that every incoming student should take the course and that it should constitute part of the core curriculum and students should receive credit hours for participation. Each concurred there were memorable experiences shared, and two of the four individuals actively remained in contact with someone from the group. Though not emphasized, negative aspects discussed during the interviews provided insightful information. All students agreed that the outside commitment of after school and weekends created stress throughout the class. The required reading, testing, and nal exam aspects generated additional pressure participants felt was unneeded. Another common complaint was disorganization among the instructors. Two students indicated that on different occasions, it was unclear, which instructor would teach the course and if they were there by choice or forced into carrying the class.

Though a primary focus of First-Year Experience Reform, John Gardner emphatically stated his

intentions for establishing FYE was never about retention (Gardner, 2006) While American colleges and universities steadily progress into corporations, not all involved can ignore attrition numbers. Undeniably, long-term outcomes of FYE programs prove higher graduation rates for students that complete the programs. In re ecting on the twenty- ve years of FYE, John Gardner comments at a 2006 conference,

> Well, we have had many successes. The rst year is taken much more seriously today than it was 25 years ago. The notions of the " rst-year experience" are well established in the lexicon of higher education. Now it is not only or even primarily chief student affairs of cers who are pushing the agenda for an improved focus on the rst year, but the chief academic of cers. Hundreds, actually, thousands, of campuses now have the archetypal rst-year signature interventions such as the rst-year seminar, learning communities, service learning. Supplemental instruction and campus-wide initiatives known as "the rst-year experience" focus on the needs of rst-year students and has led to the creation of a quasi rst-year profession, such that professional positions are advertised in higher education trade publications.

Disciplinary and professional associations focus on rst-year courses and improvement strategies. The press covers campuses' efforts to improve the rst-year experience. The original language, "the freshman-year experience" has become more inclusive and accurate in its reconstitution as "the rst-year experience." And many campuses have stopped referring to their predominantly female, and overwhelmingly not "fresh" new students as "freshmen." The original conference organization and then higher education center that promoted this increased level of attention to the rst year, has ourished and moved to successively greater levels of impact. Other higher education centers beyond University of South Carolina (USC) also have taken up this banner.

Graduate courses on the study of the rst-year experience movement are beginning to nd their way into the curricula of schools of education. A legitimate new eld of scholarly research and publishing, thanks largely to USC (and Jossey-Bass Publishing Company) has developed around this larger effort to improve the rst year of college foundations, and government agencies award grants to improve the rst year.

A huge for-pro t industry, or industries, have developed to cultivate, support, and sell products and services to this burgeoning eld of activity. The focus on the rst year has led to an expanded application of lessons learned to other critical transitions during the undergraduate years; in particular, what is called "the sophomore year experience" and "the senior year experience."

Thanks to The Pew Charitable Trusts, George Kuh, and the Indiana University Center for Postsecondary Education, a powerful national conversation and action steps have occurred focusing on the concept of "engagement" behaviors and practices of both students and institutions (as in the use of the National Survey on Student Engagement (NSSE) and Community College Survey on Student Engagement (CCSSE) in four-year and two-year institutions, respectively). The rst year improvement efforts are gradually being folded into the work of regional accreditors, most notably now, the Higher Learning Commission, thanks to the leadership of its Executive Director, Steve Crow, whereby any of their 1000 institutions may now accomplish reaf rmation of accreditation by doing either a special emphasis self study such as the Program to Evaluate and Advance Quality (the PEAQ option) or a special improvement project such as the AQIP-Academic Quality Improvement Program (the AQIP option) focusing on the rst year.

In the Southern Association of Colleges and Schools (SACS) region, a focus on the rst year is increasingly being integrated into Quality Enhancement Plans. A set of standards for excellence in the rst college year, for purposes of both measurement of institutional performance and aspirational design, have been developed by over 300 participating two and four-year colleges and universities (www.fyfoundations.org). What began as, at best, a national set of activities has greatly expanded to a true international set of partnerships, scholarly works, convening, and movement.

Though numerous, the list of accomplishments are prideful in tone and appreciative in support. Gardner too recognizes areas of growth. He indicated that in spite of all the energy, action, positive outcomes:

> There is abundant evidence that students are not as engaged as we would like. There is also evidence that students are not as engaged during the rst year of college as they thought they would be!

Levels of performance in high DWFI rate courses should be a cause for embarrassment and action, especially in mathematics. There is still too much unacceptable attrition. There is much instability in the viability and leadership rst-year "programs"; the response of the academy to the challenges of the rst year has been primarily to design "programs" rather than a more comprehensive institutional response. On some campuses these "programs" are, at best, still eating crumbs on or under the table the mantra that surrounds the rst year, as the basis for reform is not academic and not suf ciently motivational (i.e. retention) to take us to the next level. We are competing for ever-scarcer resources in a larger society that does not currently share our values, and we are competing for students' most precious of resources: their time, energies, attention, priorities, discretionary monies—our rst college year endeavors vis a vis their jobs, families, pursuits of pleasures, busy demanding lives.

Knowingly successful, Gardner constructively recognizes areas of growth and willingly challenges striving for bettering existing First-Year-Experience for American college campuses. Conclusions regarding First-Year-Experience indicated countless af rmative qualities. John Gardner, along with his constituents, identi ed an imperative area for reform and strived for improvement and excellence. Evidence indicated the realization of the individuals and the passion they posses for educational reform and student achievement. Educational reform, regardless of the issue, whole-heartedly begins with belief. The conviction of student success began with one person, and with the dedication of one man, the reform became a reality, offering promise for the future of American higher education and the guarantee of promising college students.

Should your campus consider participating in the Foundations of Excellence Project? Over the past 25 years, the importance of the rst year of college has been acknowledged to some degree by a wide range of American colleges and universities. The result has often been the creation of an array of program-level initiatives, many of which operate on the margins of the rst year and have only limited impact on students. Such well intentioned efforts have existed in the absence of a structured model of excellence that goes beyond a single program to a broader vision of a campus's comprehensive approach to the rst year. By conducting a systematic rst-year self study under the guidance of the Policy Center on the First Year of College, a campus can take a candid look at its strengths and weaknesses and, based upon its ndings, develop a strategic action plan that can lead to enhanced student learning and persistence. Participation can be an invigorating, institution-wide experience that brings together a multitude of constituent viewpoints about improving the campus's rst year and can lead to substantive institutional change and improved student outcomes. The following publications may be useful to leaders and administrators interested in planning for change (Policy Center on the First Year of College):

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A TWO-DIMENSIONAL MODEL OF SCHOOL ENTREPRENEURSHIP

Ori Eyal

ABSTRACT

Schools seem to be caught in a constant tension between their conservative nature and their need to behave entrepreneurially. By adopting the perspective of network theory as developed by Barabasi (2003), I argue that different levels of deregulation and the presence or absence of competition may interact to produce different niches that may inhibit or facilitate the emergence of radical school entrepreneurship. The proposed model seeks to deepen our understanding of educational entrepreneurship.

INTRODUCTION

Schools seem to be caught in a constant tension between their conservative nature and their need to behave entrepreneurially. It has been suggested that reforms involving school competition and deregulation may resolve this tension by providing the appropriate ground for entrepreneurship. However, it has been argued that these reforms have failed to support the emergence of radical entrepreneurship. In this paper, which takes a macro perspective,[1] I attempted to enhance our understanding of educational entrepreneurship in the context of competition (i.e., school choice) and deregulation. By adopting the perspective of network theory as developed by Barabasi (2003), I argue that different levels of deregulation and the presence or absence of competition may interact to produce different niches that may inhibit or facilitate the emergence of radical school entrepreneurship. The proposed model seeks to deepen our understanding of educational entrepreneurship and to indicate what policies will create the structural conditions for the growth of radical educational entrepreneurship.

THEORETICAL FRAMEWORK

"School entrepreneurship" is a term that re ects an intrinsic tension. On the one hand, state-funded schools are conservative monopolies that avoid proactive innovation (Chubb & Moe, 1990; Gauri, 1998; Peterson, 1990). On the other hand, schools have to engage in entrepreneurial behavior in order to satisfy their consumers' needs and preferences (Eyal & Inbar, 2003). Avoiding entrepreneurial behavior might make schools irrelevant in a competitive market where alternative entrepreneurial agencies are liable to threaten their monopoly (Drucker, 1985).

This intrinsic tension has led many scholars to argue that only a fundamental reform in the educational system can reinvent the school as a legitimate entrepreneurial pedagogical organization. This challenge has been addressed through the introduction of two policies—school choice and governmental deregulation—which are discussed in the literature as facilitators of entrepreneurship (Adnett & Davies, 1999; Adnett & Davies, 2000; Coulson, 1996; Davies, Adnett & Mangan, 2002). School choice introduces competition into the school arena and, therefore, is supposed to inevitably increase entrepreneurship (Adnett & Davies, 2000; Chubb & Moe, 1990; Foss, 1994; Kirzner, 1997; Levin, 1991; Tooley, 1996).

Governmental deregulation reduces government control over schools. It complements school choice and is believed to provide the freedom needed for entrepreneurship (Fuhrman & Elmore, 1995; Hanson, 2001). It has been argued that schools that face competition outperform those regulated by the government because they re ect diverse consumer preferences (Hoxby, 2003; Levin, 1991; Tooley, 1996).

Enthusiasm about school choice and deregulation have been questioned by several scholars on the grounds that these policies are mostly related to schools' adherence to traditional educational practices and limited expansion of their activity (Fitz, Halpin & Power, 1997; Lubienski, 2001; Plank &

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1 Methodologically, school entrepreneurship can be studied from either a micro or a macro perspective. Whereas the former focuses on the direct incentive or motivation for entrepreneurship, restrictions on it, and the availability of resources, the latter concentrates on structural differences that shape the degrees of freedom for entrepreneurship in the larger system. This paper adopts the macro perspective exclusively.

Sykes, 1999). For example, with these policies, school entrepreneurship was found to be mainly commercial and did not concern fundamental changes in core instructional practices, i.e., pedagogy (Davies & Hentschke, 2002; Lubienski, 2005; Maguire, Ball & Macrae, 1999). In other words, radical school entrepreneurship, which involves fundamental changes in pedagogy (Cuban, 2006; Williams, 2006) that may spur change in the larger system over time (Smith & Petersen, 2006; Teske & Williamson, 2006), was not apparent under deregulation and school choice policies (Hess, 2006).

In New Zealand and Great Britain, for instance, competition between schools resulted in an emphasis on appearance and image over the adoption of distinct pedagogical visions (Meyer, 1992). Under privatization in Chile, it was found that, ironically, classroom innovations occurred in public schools rather than in private schools (Lubienski, 2001; Parry, 1997).

Concerning deregulation, it was found that charter schools in the US were associated with fundraising, entrepreneurial organizational marketing, and administrative innovations, such as parent contracts or employment of teachers rather than classroom-level curricula or instructional innovations (Lubienski, 2003; Lubienski, 2006; Plank & Sykes, 1999). Along the same lines, it was found that decentralization in England limited school innovations to the margins of the schools' activity (i.e., education for values, tutorial support, assemblies, and religious education) (Adnett & Davies, 2000; Fitz et al., 1997).

Thus, even if we accept the controversial proposal that competition among schools and deregulation promote productivity, ef ciency, and student outcomes (Peterson & Hassel, 1998), research nd-ings seem to converge on the conclusion that they do not inspire meaningful pedagogical-educational entrepreneurship (Fitz et al., 1997).

The limited impact of school choice and deregulation policies on radical entrepreneurship is usually explained by arguing that (a) education is merely a quasi-market and therefore not fully competitive (Henig, 1994; Lubienski, 2005; Malen, 2003), and (b) regardless of any reform, government regulation remains a constant feature in K–12 schools. I will now elaborate on both major issues.

Competition as a catalyst of entrepreneurship is limited. To begin with, school effectiveness is hard to measure, due to the imprecision of educational outcomes and the dif culty of establishing a causal connection between school practices and outcomes (Lubienski, 2003). Thus, competition is not necessarily grounded in clear, valid indicators of success. Lubienski (2001) argued that when consumers had to choose among providers, their decision-making process was irrational and "image-based." Under these circumstances, schools may improve their competitive position and increase their market share by presenting a normative image of success without being involved in any genuine innovation (Hanson, 2001; Lubienski, 2006).

The second point about competition is that school choice policies usually do not motivate radical entrepreneurship. As education is acknowledged as a public good, choice programs are publicly funded to ensure the service. That is, choice is funded and regulated by the government, which controls fundraising, consumer recruitment, and charges (Lubienski, 2001). As a result the competitive pressure on schools, as well as their ability to generate pro ts, is limited. Thus, it has been claimed that schools can maximize pro t only by reducing costs associated with research and development (R&D) and experimentation (Davies & Hentschke, 2002), since these activities are not copyright-protected and cannot secure future bene ts (Lubienski, 2006). Consequently, instead of radical entrepreneurship, image management and marketing of well-established educational practices are used as non-risky strategies for attracting consumers (Davies et al., 2002; Kerchner, 1988; Lubienski, 2005).

The second major issue is that government has maintained a constant presence in schools despite supposed deregulation. In most cases, reforms involving decentralization, charters, and choice are accompanied by increased systematic governmental regulation (Malen, 2003). For instance, standardized testing based on a compulsory national curriculum, which has characterized decentralization reforms, is said to represent a control mechanism imposed as an alternative to centralization (Adnett & Davies, 2000; Malen, 2003). Moreover, the use of a single system of curriculum-based external examinations is said to encourage uniform preferences among parents, thus promoting school conformity, which in turn discourages diversi cation. Thus, it is not surprising that under the decentralization reform in Great Britain the biggest barrier to school entrepreneurship was the government (Adnett & Davies, 2000; Boyett, 1997; Boyett & Finlay, 1993). Israeli schools during decentralization reform also avoided radi-

cal entrepreneurship (Eyal & Inbar, 2003; Eyal & Kark, 2004). In addition, legislated regulation of charter schools is reportedly a crucial factor in controlling their prevalence and innovativeness (Kuscova & Buckley, 2004). This control process is said to make charter schools resemble regular schools, which face the same structural restrictions (Bulkley, 1999; Hanson, 2001). Accordingly, it seems that governments still regulate school functions even with school choice and decentralization reforms, thus restricting schools' ability to stray from conventional teaching methods and curricula and to adopt radical educational entrepreneurship.

The researcher might thus conclude that institutional considerations are stronger than competition in determining the form of school entrepreneurship (Borins, 2000; Hanson, 2001). Yet in practice, the interaction between the presence or absence of competition and differing levels of deregulation may produce different niches that may facilitate or hinder radical entrepreneurship. The following sections explore this interaction with the aim of enriching our view of radical entrepreneurship under conditions of deregulation and competition.

A TWO-DIMENSIONAL MODEL OF SCHOOL ENTREPRENEURSHIP

The level of governmental regulation, as manifested, for example, by a national curriculum or standards, represents the system's control and supervision of educational endeavors. School choice, the second dimension of the model, is the citizen's right to choose a school from among several options. School choice was intended to induce competition. Although it can take many forms (e.g., de-zoning or vouchers), the main goal of choice programs is to increase the potential for consumer mobility between schools. Effective mobility is attained when irrelevant factors that might prevent the actualization of consumers' free choice are removed. Thus, when choice is introduced into an educational system, government schools lose their monopoly. As a result, the threat to a school's existence and to its ability to obtain resources increases. Once the interdependence between the recruitment of consumers and resource allocation reaches a certain point, school entrepreneurship should become indispensable.

Although deregulation and school choice must be measured along a continuum, a binary table has been drawn up for conceptual clari cation of the various frameworks in which entrepreneurship can be generated. Although regulation may be referred to as "high" or "low," school choice is referred to here as "present" or "absent" for the sake of the overview. A 2x2 table illustrates the intersection of the two policy dimensions. The four table cells represent different niches that generate different types of entrepreneurship. Table 1 shows the different types that, according to the hypothesis, evolve from the different options. The hypothesis is that most of the niches do not provide the grounds for the emergence of radical school entrepreneurship, except in conditions of low regulation without school choice. Although the model suggested by the table refers to asynchronic dynamic processes, it is shown in static form for analytical clarity only.

Table I:

The two-dimensional model of school entrepreneurship

		Governmental regulation	
		High	Low
Choice	Absent	No Entrepreneurship	Radical Entrepreneurship
	Present	Manipulative Entrepreneurship	Popular Entrepreneurship

The following sections discuss the four niches and the hypothesis regarding the evolution of entrepreneurial types.

Niche 1: High governmental regulation with no choice

This niche represents complete governmental control of educational services and consumption thereof. In these circumstances, close state supervision of curricula, resource allocation, and staff employment minimizes the differences between state schools and other educational agencies. When education is not only sponsored by the state, but also exclusively and directly delivered by it, a *centralized educational system* results, like the educational systems of Eastern European countries under Communism. This system is designed to provide universal education in a uniform manner because it is considered a basic public service needed to ensure "obvious" outputs (Drucker, 1985). To achieve this aim, education is fully funded by the state and the intervention of private and/or non-governmental organizations in providing educational services is forbidden. Moreover, even when some parents try to in uence their children's education, a dearth of information about public services and rights make their attempts ineffective. For this reason, the public as individuals, groups, or communities lacks bargaining power vis-à-vis the service providers.

When schools do not face competition and are highly controlled by the state, demand for local adaptation of educational services is low. The state prevents school responsiveness to consumer demands, and school administrations avoid exposure to market uncertainties. As a result, it seems that there is neither the need nor the motivation to act entrepreneurially. As a matter of fact, any entrepreneurial activism will be regarded as irrational and inef cient (Covin & Slevin, 1991).

When no degrees of freedom exist for bottom-up initiatives in the educational system, obviously no entrepreneurship will appear, or if it does, it will take the form of a technical innovation aimed at resolving practical issues related to maintaining the status quo. Using the perspective of network theory (Barabasi, 2003), a highly regulated system with no choice may be described as a scale-free network in which a few nodes act as highly connected "hubs." These hubs are introduced into the system by the government, and most other nodes have no choice but to be connected to these central hubs. These hubs represent the institutionalized norms with which all schools must align themselves.

Niche 2: Low governmental regulation with choice

This niche represents the other extreme of the model. It characterizes educational systems that adopt *privatization reform*. Governments that adopt this free-market ideology tend to believe that the "hidden hand" of the market can best determine the composition, quality, and value of educational services (Oplatka, 2004). Such reforms stem from the notion that consumers know best, and that schools will be motivated to improve under conditions of competition. Moreover, it is assumed that freedom is a basic requisite for people to fully realize their potential in general, and their professional aspirations and dreams in particular. For all these reasons, under the circumstances of privatization, state regulation is replaced with competition and schools are only partially funded by the state. Thus, the survival of an educational enterprise depends on its ability to attract consumers, satisfy their demands, and outperform its competitors. As was previously discussed, the assumption that low regulation and choice would lead to radical entrepreneurship has been empirically refuted. Nevertheless, it is important to examine this stance from a theoretical perspective.

It is customarily argued that this kind of environment is fertile ground for entrepreneurship. However, if a school's survival fully depends on its ability to satisfy consumer preferences that mostly converge on several hubs, we will probably encounter a type of *popular entrepreneurship* that attempts to resonate with the convergent tastes of the public, whimsical or fashionable as they might be. In other words, the distribution of individual preferences within a given society seems to converge on several major hubs. In contrast with Niche 1, however, in which the hubs are enforced top-down by the government, in Niche 2 the hubs emerge from the free dynamic of the network as guided by the logic of "preferential attachment." *Preferential attachment* means that the more connected a node is, the more likely it is to receive new links (Barabasi, 2003). In our case preferential attachment should not be confused with school choice. Preferential attachment is the dynamic in which schools align themselves with several limited

norms/standards ("hubs") of the system.

Assuming that the dynamic of preferential attachment underlies the path taken by the system under conditions of low regulation and high choice, it is likely that most schools would join the hubs of the system instead of initiating radical entrepreneurship. Although this structure may tolerate a few radical entrepreneurs who enter the market with novel ideas, on the systemic level it would lead to convergence of taste through imitations of the successful product, i.e., a connection to hubs.

Niche 3: High governmental regulation with choice

The niche of high regulation with choice seems to be internally inconsistent, since it tries to weave together diametrically opposing forces: top-down regulation by the government and bottom-up choice by the citizenry. Although this condition might sound like an imaginary construct, it is clearly evident in many educational systems that have implemented quasi-market reforms.

Ef ciency underlies *quasi-market reforms* that manifest these structural conditions. In these reforms, choice programs supplement decentralization processes, which are accompanied by an increase in standardization.

Decentralization supposedly represents a shift in the power structure, as authority is delegated to local-level administrators to ensure a better t between the service provided and consumer needs. Such a reform re ects the idea of "subsidiarity," which stems from the notion that "a central authority should have a subsidiary function, performing only those tasks which cannot be performed effectively at a more immediate or local level" (OED, 2d ed., 1989). Thus, although power may be delegated to regional or local administrators, its potential may be fully materialized only when it is devolved to the end provider of educational services, as in the case of *school-based management reform* (David, 1989; Leithwood & Menzies, 1998; Nir, 2003).

Under these circumstances, parental and community pressure on educational providers (i.e., schools) should intensify, thereby increasing the in uence of the parents and the community on schooling. These pressures are expected, theoretically, to increase school diversity as different communities are believed to require distinct educational services. This is especially evident when choice mechanisms are introduced into the system. Then schools are expected to generate pedagogical innovations in order to satisfy their clients' diverse needs--i.e., to generate radical entrepreneurship. In fact, however, the in uence of consumers on schooling is limited due to governmental constraints. Decentralization reforms seldom change the power structure in the system in practice and are often associated with heavy regulation, with standardization and national and international testing used as alternative control mechanisms. As I suggested above, the norms imposed by the government may be considered hubs to which each school must be connected. Using Barabasi's ideas (2003), we can argue that when mandatory hubs exist, consumer choice is not real choice because the logic of preferential attachment will inevitably lead most schools to align with these hubs/norms.

When the outcomes of schooling are rigid and predetermined by the system, and when regulation of pricing and fundraising is high and resources are limited, schools may adopt a low-cost entrepreneurial strategy that is not radical entrepreneurship. This strategy is employed to establish or maintain the school's public image as a successful school as ef ciently and inexpensively as possible. This will be done by using proven practices in whatever way is most fashionable: providing attractive extracurricular programs, engaging in prestigious projects, and producing impressive events. All these activities, however, most of which are marginal to the core pedagogical activity of the school, are mainly for PR purposes. Impression management might then become a major characteristic of these schools. Marketing efforts will be direct toward attracting consumers, as their participation is no longer guaranteed.

This entrepreneurship may be termed "*manipulative entrepreneurship*" because consumers are manipulated to believe that novel radical endeavors are initiated to address their needs, while actually the purpose is to serve the system's agenda. For example, although parents and children may consider the proactive introduction of new subject matter, such as law studies, to be a radical change in the traditional school curriculum, it may represent nothing more than the conventional pedagogy of "educational banking." In the same vein, information technology (IT) initiatives, which are sometimes presented as a revolutionizing force, may be used by entrepreneurial schools to "support, rather than alter, their existing

teacher-centered practices" (Peck, Cuban & Kirkpatrick, 2002).

Niche 4: Low governmental regulation with no choice

Unlike the previous niches, the fourth niche is evident when the policy is to support *communitarism*.[2] In this case, in contrast with decentralization, the government gives up its regulation of the educational system in certain communities (Bryk & Driscoll, 1988; Lee et al., 1993). The communities maintain their schools autonomously with minimal regulation by the state.

However, the community members have little choice because by joining the community they empower the collective to choose for them (Feinberg, 1995; Lee et al., 1993). For example, the Amish in United States run their own schools with low regulation by the federal government and no choice for community members. In practice, a member of the Amish community cannot choose a school for her children, even though in theory she could send them to a public school. Under conditions of no choice and low regulation, *radical entrepreneurship* may emerge. The isolated "islands" of the diverse communities are not connected/obliged to major hubs. They are separate networks (Barabasi, 2003) that have an obligation to maintain their ideological distinctiveness, which constitutes and legitimizes their separate existence. Under these conditions, the system moves toward increasing divergence. It also maintains this divergence so the community itself is not dominated by others. Communitarian schools may necessarily be pushed toward innovation to maintain communal identity. Innovation, as epitomized by radical entrepreneurship, is the way the system maintains its distinctiveness and assures the community's survival.

The Amish educational system is a good example in support of the above argument (Johnson-Weiner, 2006), although it is a rarity. The Amish have been able, by legal means, to organize school life and curricula in harmony with the community's worldview. This means, among other things, that students are involved in community life through work. In addition, only Amish teachers work in their schools, so the children are exposed to a coherent educational message. In a sense, the Amish have been able to develop a rather closed system that reinforces community identity and values. Moreover, because different Amish communities are loosely connected and react differently to pressures from the dominant society, the Amish school bears responsibility for constantly de ning the borders and the identity of the community against the world and other Amish groups (Johnson-Weiner, 2006). This is accomplished by designing the school curriculum, pedagogy, and school architecture in accordance with the community's religious ideology. Thus schools have become "agents of change as well as agents of resistance to change" (Johnson-Weiner, 2006). Whereas most Western schools have traditionally attempted to (a) provide abstract knowledge, (b) separate children from their family and community, and (c) disconnect learning from real life (Bekerman, 2002; Cole, 1990), the Amish schools do exactly the opposite. Thus, although Amish schools seem like a remnant of the past, they continuously create and revise their own model as an alternative to public education.

In sum, while the proponents of the free-market ideology describe low regulation and choice as the optimal conditions for the emergence of radical school entrepreneurship, the current model challenges this "indisputable" axiom and suggests that conditions of low regulation and no choice, as evident in communitarism, are the best soil for the growth of radical entrepreneurship. This strategy may facilitate the emergence of varied educational models in which conventional practices are rejected in favor of diverse pedagogical and organizational arrangements, practices, agendas, norms and values.

CONCLUDING REMARKS

School entrepreneurship is supposedly connected to decentralization and school choice reforms.

2 Communitarism is a philosophy that critiques Rawl's liberal individualism by countering that individuals are social creatures shaped by their communal identity (Bell, 1993; Caney, 1992). A communitaristic community is a distinct and cohesive community with shared values due to a common heritage, culture, language, and/or religion, and its educational system usually promotes and protects the family or in-groups and community goals (Arthur, 1998; Etzioni, 1993; Etzioni, 1995). Schools serve the communitaristic community as model "small societies" (Lee, Bryk & Smith, 1993).

Although these reforms may increase motivation to engage proactively in entrepreneurial endeavors, they do not necessarily ensure the emergence of radical educational entrepreneurship as opposed to mere business ventures.

The introduction of choice into educational systems eventually makes schools focus on the issue of relevance. For a school, being relevant means satisfying students' needs, or supposed needs, as manifested in students' or parents' preferences. Schools remain relevant if the services, competencies, or knowledge they provide can assist students in adult life and increase their present well-being.

In contrast to school choice, governmental regulation makes maintaining legitimacy the main focus of schools. Maintaining legitimacy implies that a school's main concern is recognition by governmental authorities. Thus, avoiding clashes with the educational system and preventing deviation from norms become important missions for the school. Otherwise the school is liable to lose the educational system's full sponsorship. The tension between maintaining legitimacy and remaining relevant is a constant feature of school entrepreneurship.

The two-dimensional model presented in the current paper represents this inherent tension, and thus offers some hints about how schools resolve it, while acting entrepreneurially under different conditions. With centralization, where schools strive mainly to remain legitimate, entrepreneurship will probably not emerge. In contrast, popular entrepreneurship will probably characterize schools whose main challenge is to maintain their relevance under privatization. Schools operating in the context of quasi-market reform, which stresses the equally important role of legitimacy and relevance, may adhere to manipulative entrepreneurship. In contrast, radical entrepreneurship may flourish under communitarism, where neither legitimacy nor relevance is considered important.

I have discussed the hypothesized impact of school choice and deregulation policies on school entrepreneurship by employing Barabasi's concepts. Applying ideas from network theory to the study of radical school entrepreneurship can provide fresh perspectives to develop novel hypotheses. As Efroni and Cohen argued (2003), albeit in a totally different context: "A good [biological] theory is one that serves the process of discovery and opens the way to 'otherwise unthinkable research.' " The ubiquity of scale-free networks and the dynamic of preferential attachment justify the use of these concepts as new perspectives on educational policy that can lead to more research. Moreover, based on ideas from network theory, I proposed a major hypothesis that can be tested empirically: that radical school entrepreneurship may flourish under communitarism. Thus this paper suggests the need for further research.

The implications of this hypothesis hold many ethical implications. From an ethical perspective, the flourishing of radical entrepreneurship under conditions of low regulation and no choice may pose a threat to the nation-state. Moreover, individual freedom, including free choice, and the equal opportunity to move from one community to another or to leave the community and its segregated way of life for larger society, might be severely impeded under communitarism. In this context, it is an open question whether the nation-state should promote radical school entrepreneurship in segregated communities that may threaten its unity.

The proposed model points out macro-level constraints on micro-level entrepreneurial behavior. These constraints do not determine the micro-level behavior in the strong causal sense, but they do limit the degrees of freedom for school entrepreneurship. In this sense it is hypothesized that although radical school entrepreneurship is rare, it can be seen under certain circumstances. One example might be when a school decides to ignore market considerations and government control mechanisms and give precedence to professional or ideological considerations.

To conclude, the present paper gives us a more complex understanding of school entrepreneurship by pointing out the interplay of macro-level constraints and micro-level behavior. It also stresses that the impact of structural reforms on schooling is overrated (Cuban, 1990). Moreover, it claims that in many cases the new structural arrangements adopted may hinder the original, stated intentions of the reform. Finally, it suggests that although radical school entrepreneurship is frequently praised for its potential to create an educational environment that best suits students' needs, it should not be embarked upon lightly. Thus, educational entrepreneurs' good intentions and the social benefits of their entrepreneurship should not be taken for granted.

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