

# The managerial capacity of physical education teachers – principals: The case of Greece

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## ABSTRACT

The purpose of the present study was to identify and compare the management skills that relate to school efficacy of Physical Education Teachers (PETs) who work as junior and senior high school principals. A total number of 580 teachers of 12 junior high schools and 12 senior high schools participated. The teachers rated their principals' skills using the Principal Instructional Management Rating Scale-PIMRS, after being adapted to the Greek reality. Independent samples t-test was used for data analysis. Results showed statistically significant differences between junior and senior high school principals in certain managerial skills. Specifically, senior high school teachers believe, more than their junior high school colleagues, that their principals demonstrate school management skills concerning a) parent involvement, b) professional development, and c) curriculum. Contrary to that, the two groups of teachers presented no significantly different perceptions of their principals' skills on a) student progress and b) school climate factors. These findings could be used in improving school effectiveness as well as today's and future school principals' managerial capacity in different school level. **Key words:** SCHOOL PRINCIPAL, SCHOOL EFFECTIVENESS, ADMINISTRATION, LEADERSHIP, HIGH SCHOOL.

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## INTRODUCTION

School management plays an important role in the qualitative upgrading of the education provided and, consequently, in the effectiveness of the school (Hoy & Miskel 2005). The connection between school effectiveness and leadership quality can be achieved by: a) formulating a vision, b) setting clear goals, and c) creating a sense of sharing a common mission (Bush & Jackson 2002). Factors such as a) defining a mission, b) planning, c) growth of educators, d) supervision of teaching, e) monitoring learner progress, and f) promoting an educational climate are considered important for effective leadership (Blase & Blasé 1998; Krug 1992).

Specifically, the concept of the school principal's leadership evolves from manager, to instructional leader and ends in his/her role as a transformational leader (Hallinger & Heck 1998). According to Pashiardis (2004), experts claim that the achievement of school goals should serve as a criterion of school effectiveness, suggesting the transformational role of school leader. The variables that interpret transformational leadership and shape the perceptions of educators on their leaders are: a) school mission, b) school goals, c) school culture, d) organizational structure, e) planning, f) decision-making, and g) educators' training (Leithwood & Jantzi 1997).

Research evidence has shown the catalytic role of the principal for the effective function of a school unit (Fullan, 2007; Hallinger & Heck, 1998; Harris, 2003; Brown, Anfara, Hartman, Mahar & Mills, 2002) while Bolam (2005) connected the effective function of a school unit with the abilities and the vision of its principal.

Despite the great importance of management in schools, in Greece – as opposed to other EU countries – the proper efforts to develop leaders in education have not been made yet. According to Georgogiannis, Lagios and Kouneli (2005), Greek school principals lack management competence and, by extension, management readiness, since the subject of organization and management of education is not taught in university departments that train and educate public education teachers and future school principals. This lack in administrative training and education (Gkousia-Rizou 2002) of Greek principals, including physical education teachers (PETs), results in an adverse impact on their effectiveness (Theofilidis & Stylianidis 2002, p. 153).

Regarding PETs, all Schools of Physical Education and Sports Science (PESS Schools) in Greece, from where potential Greek PETs and school principals graduate, offer undergraduate courses in sports management in their curricula. However, these same curricula do not include any undergraduate courses in schools' management. In particular, graduates of the National Academy of Physical Education (EASA), who completed their studies before the Academy's upgrading to a Higher Education Institution through the establishment of the PESS Schools (under Article 47 of Law 1268/1982), did not attend any undergraduate courses in management. It should be mentioned that the majority of PETs and principals of urban schools participating in the survey were graduates of EASA.

On the other hand, in a survey conducted by the Greek Pedagogical Institute (2010) with regards to the design and implementation of the "Major Teacher Training Program" in which 3.435 school principals participated (23.99 %), physical education teachers (PETs) was the fourth most populous specialty among principals (130 individuals). Philologists came first (301 individuals), followed by Mathematicians (261 individuals) and Physicists (240 individuals). Out of the 130 PET-Principals, 53.1 % were employed in junior high schools and 24.6 % in senior high schools.

It has to be taken into account though that the role of the school principal in Greece is much different than the principal in European educational systems which are characterized by decentralization; the principal influences greatly teachers' work (Iordanidis & Tsagalidou, 2002). On the other hand, Greek school reality is centralized. For this reason the principal abilities/skills related to effective school management require investigation. In international literature, teachers' perceptions are considered indices of principal effectiveness regarding school management or their satisfaction from their job (Bogler, 2001; Leithwood & Jantzi, 1997; Linn, Sherman, & Gill, 2007; Pashiardis & Orphanou, 1999; Rhodes, Brundrett, & Nevill, 2008; Saiti, 2007; Saitis & Eliophotou, 2004).

Specifically, international literature includes several studies investigating teachers' perceptions as a process of identifying the quality of school leadership and the principals' administrative capacity (Barnett, McCormick & Conners 2001; Rhodes & Brundrett 2009; Saitis & Eliophotou 2004; Wahlstrom & Louis 2008). For instance, Rhodes and Brundrett (2009) showed that, according to the views of the educators, the four most significant factors demonstrating leadership talent were "people skills", "communication skills", "respect to personnel" and "the existence of a vision", while factors such as "being an able educator", "having relevant knowledge", "having the experience of a leadership programme", "having a positive disposition", "being ambitious" and "participating in a series of courses on the development of educational leadership", received the lowest rating.

Wahlstrom and Louis (2008), in an attempt to identify factors that influence the work of educators, concluded that educators' gender and years of educational experience as well as leaders' behaviour towards them do indeed influence the achievement of their work objectives. Saitis and Eliophotou (2004) studied the views of prospective and in-service primary education teachers on the effectiveness of school leadership, and highlighted their different views on the subject. Also, Barnett, McCormick and Conners (2001) indicated that at schools applying transformational leadership, teachers tend to evaluate principals as being efficient; they experience greater job satisfaction and demonstrate willingness to make further efforts.

However, only few studies similar to the aforementioned have been conducted in Greece (Melissopoulos, 2006; Stravakou, 2003) while teachers' perceptions on their principals' effectiveness have not been investigated. Also, to our knowledge, the PETs-principals' administrative capacity in general but also in different school level has not been studied. Only results on PETs' teaching effectiveness have been reported (e.g., Derri, Vasiliadou, & Kioumourtzoglou 2015; Emmanouilidou, Derri, Antoniou, & Kyrgiridis 2012; Kyrgiridis, Derri, Emmanouilidou, Chlapoutaki, & Kioumourtzoglou 2014). Therefore, the present study extends prior research on effective management by PETs-school principals in different school level; junior and senior high school, examining the perceptions not only of physical education teachers, but also of teachers from other fields of specialisation.

Specifically, the purpose of this study was to examine the school management skills of PETs as gymnasium and lyceum principals, and whether these skills are affected by the educational level they are employed, based on the views of their educators. It was hypothesized that junior and senior high school PETs-principals would not differ in the managerial skills they present in the school setting.

The results of this study are likely to define the managerial abilities/skills that effective school principals should acquire. Also, the skills and good practices that principals use for the effective accomplishment of their duties could serve as a reference point in their official evaluation. In addition, the results could be useful for the creation and implementation of effective undergraduate and postgraduate programs for future and in-service principals, respectively.

## METHOD

### *Participants*

Overall, 580 teachers (321 gymnasium teachers and 259 lyceum teachers) of all disciplines, coming under the Regional Administration of Primary and Secondary Education of Central Macedonia, the principals of which were PETs, participated in the study. Table 1 depicts the number of male and female teachers, and the corresponding percentages according to their gender and education level.

Table 1. Demographic characteristics of participating teachers

<b>Gender</b>	<b>N</b>	<b>%</b>
Males	248	43
Females	332	57
Total	580	100
<b>Education Level</b>	<b>N</b>	<b>%</b>
Junior High School	321	55,26
Senior High School	259	44,74
Total	580	100

### *Instruments*

For the present research, the Principal Instructional Management Rating Scale-PIMRS (Hallinger, 1982, 1983, 1990) was selected. Researchers of school leadership consider the PIMRS scale as the most appropriate tool for measuring effective school management, based on the teachers' perceptions (Hallinger 2008). Initially, the scale consisted of 11 factors (subscales) and 72 questions. After being reviewed, it was limited to 10 factors (subscales) and 50 questions (Hallinger 1983). Hallinger (1983) reported high reliability standards for this tool, with an internal consistency index over 0.8, in alpha Cronbach test. Ever since, several studies have supported the validation of the scale (e.g., O'Day 1983; Taraseina 1993).

More specifically, PIMRS questionnaire assesses three dimensions of educational leadership: i) defining school objectives and mission; ii) training program management; and iii) promotion of a positive learning environment at school. The first dimension "defining school objectives and mission" regards the operations of the role of the principal in cooperation to the teachers to ensure that the school follows a clear mission focused on the academic progress of its students. The second dimension "training program management" includes the supervision and assessment of directions, and the coordination and monitoring of the students' progress. The third dimension "promotion of a positive educational environment" includes various operations of leadership such are the promotion of professional development of teachers, the motives for teachers as well as the creation of a culture for continuous improvement through the development of high expectations and specifications (Hallinger, 2008, 2011, 2013). Many researchers conclude that leadership operations adopted for an effective educational leadership include the definition of mission, programming, education, supervision, control of student progress and the promotion of an educational environment (Blase & Blasé, 1998; Krug 1992).

These dimensions represent special factors of administrative management capacity, as follows: i) Educational mission and goal setting, ii) Curriculum: Monitoring & Improvement of learning process, iii) Principal's training, iv) Monitoring and assessment of students' progress, v) Teachers' professional development, vi) Principal's Professional Credibility – Responsibility, vii) School climate, viii) Parents' involvement (Hallinger, 2008; 2011).

Each item is answered on a 5-point Likert Scale ranging from almost never to very almost always. For the needs of the present study the questionnaire was partially modified to respond more efficiently to research. The adjustment to the Greek language was done through the back translation procedure. Its translation in Greek was done with the assistance of two bilingual experienced translators, followed by the procedure of back translation. During adjustment in the Greek data, eight factors (sub-scales) were kept along with 43 questions. Specifically, factor analyses which were performed to test construct validity of the questionnaire showed that the KMO index was particularly high (0.921). Also, Bartlett's test of Sphericity rejected the null hypothesis ( $p\text{-value}=0.000<0.01$ ) that the correlation matrix is an identity matrix. Following the rotation of the rectangular axes using the varimax method, the exploratory factor analysis showed the existence of eight factors explaining 63.82% of the overall sample. In order to have a reliable assessment of the construct validity, a test was conducted to discover whether the model resulting from the exploratory factor analysis properly adapts the data. In order to achieve proper adaptation, the CFI and NFI were set at .90 and over, while RMSEA was set at .05 and under. The Keiser-Meyer-Olkin test was performed in order to test the suitability of factor analysis as a statistical method. The fact that the KMO index was particularly high (0.926) proved that the correlations amongst our data are particularly high. Also, Bartlett's test of Sphericity rejected the null hypothesis ( $p\text{-value}=0.000<0.01$ ) that the correlation matrix is an identity matrix. Therefore, there was a correlation amongst our data, which allowed for their use in this particular factor analysis. Following the rotation of the rectangular axes using the varimax method, the confirmatory factor analysis showed the existence of eight factors explaining 67.57% of the overall sample. It is concluded that the adaptation of the hypothetical model to the data is marginal since  $CFI=0.698$ ,  $RMSEA=0.111$  and  $NFI=0.665$ . Even though the exploratory factor analysis showed the existence of eight factors, the loading of some items was not as anticipated. In the confirmatory factor analysis, some indicators of the suitability of the eight factor model were low. Yet, the research was conducted because even the authors of the questionnaire (Hallinger & Murphy 1985; Hallinger, Wang & Chen 2013) reported the use of inter-correlations for checking construct validity, without performing additional factor analyses.

### **Procedure**

The questionnaires were distributed to the school teachers by the first author in person, and were filled in anonymously at the Teachers' Room during teachers' breaks.

### **Statistical Analysis**

Statistical analysis was performed by means of statistical software SPSS 16.0. In an effort to adapt it to the Greek reality, eight factors (subscales) and 43 questions were maintained. The alpha Cronbach's analysis of this study revealed satisfactory results. The internal consistency of the factors (subscales) was high (.782 - .898), thus confirming results of previous studies. Table 2 shows the consistency principal factors and Cronbach's alpha results.

Interval scale was used to allow for parametric methods. Independent samples t-test was used in order to examine null hypothesis ( $H_0$ ) that there were no statistically significant differences between the perceptions of the two teacher groups, concerning their principals' effective administration-leadership ( $\mu_{\text{Gymnasia}} = \mu_{\text{Lyceums}}$ ,  $p<0.05$ ).

Table 2. Competency Principal Factors.

Competency Principal Factors	Cronbach's Alpha
Educational mission and goal setting	.798
Curriculum	.782
Instruction	.791
Student progress	.898
Professional development	.872
Professional accountability	.849
School climate	.828
Parent involvement	.809

RESULTS

Figure 1 shows that senior high school teachers presented higher perceptions than junior high school teachers on their PETs-principals' skills.

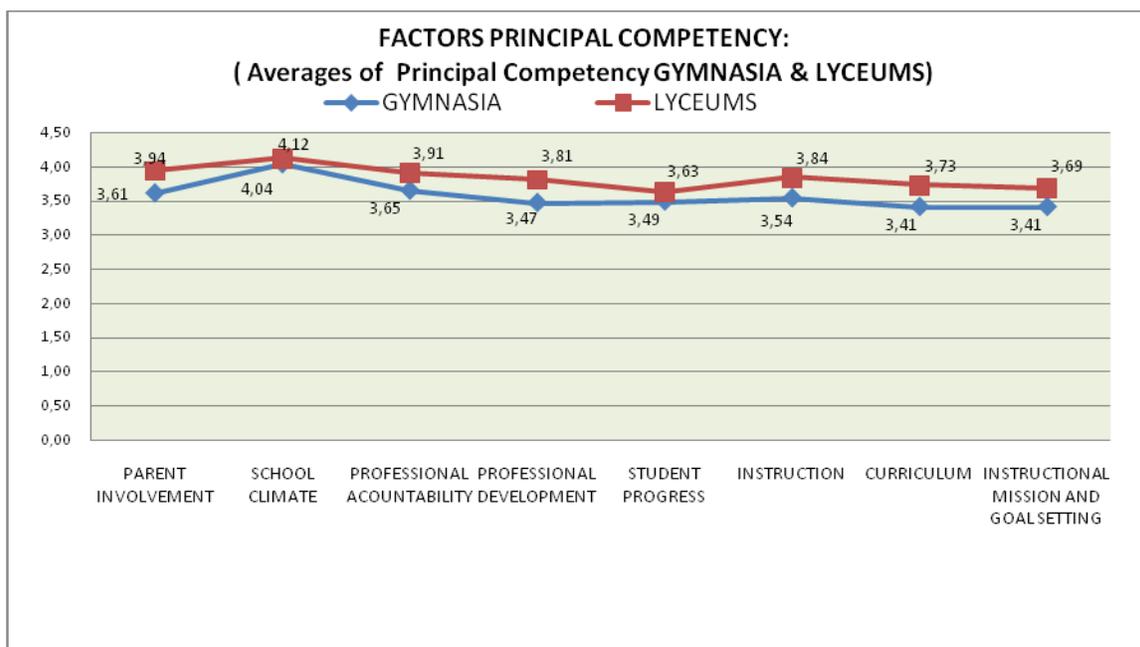


Figure 1. PETs-principals' averages of competency in gymnasia & lyceums.

Independent samples t-tests indicated that there were statistically significant differences between junior and senior high school teachers' perceptions concerning PETs'-principals' administration capacity in their schools. More specifically, there were statistically significant differences between junior and senior high school teachers' perceptions concerning PETs'-principals' capacity in: i) 'educational mission and goal setting' ( $t_{(577)} -3.085, p=.002$ ); ii) 'curriculum' ( $t_{(577)} -3.111, p=.002$ ); iii) 'instruction' ( $t_{(576)} -3.072, p=.002$ ); iv) 'professional development' ( $t_{(577)} -3.145, p=.002$ ); v) 'professional accountability' ( $t_{(575)} -2.937, p=.002$ ); vi) 'parents involvement' ( $t_{(573)} -3.681, p=.000$ ), in favor of the latter group. On the contrary, there were no statistically significant differences (the corresponding null hypotheses were not rejected) between the perceptions of the two teacher groups with regard to PETs'-principals' capacity in 'student progress' ( $t_{(577)} -1.428, p=.154$ ) and 'school climate' ( $t_{(576)} -.991, p=.322$ ).

## DISCUSSION AND CONCLUSIONS

The present research established a statistically significant difference between junior and senior high school teachers' perceptions on the effective principal's skills. Junior high school teachers presented lower perceptions than senior high school teachers of their principals' skills. These findings do not agree with those of other studies which concluded that the school level does not affect the views of educators on the administrative capacity of principals (Omeregje 1995; Oyewole 2013). The above are also in contrast with Pashiardi's (2000) study, which indicated that the views of educators do not change based on the level of education they are working in. Moreover, the results of the present study are in contrast to studies which show that educators in lower education levels report greater satisfaction with school leadership than teachers in higher levels (Eliophotou- Menon, Papanastasiou & Zempylas 2008).

Specifically, the results of the present study yielded greater mean differences in teachers' perceptions with regard to principal abilities/skills included in: a) parent involvement, b) professional development, and c) curriculum. Lyceum teachers believe – more than gymnasium teachers do – that, during the exercise of the above administrative duties, their principals demonstrate better skills. Regarding the PETs-principals' capability to involve parents in school life (parent involvement), it is established that in senior high school this skill is considered more necessary because of the significance of the students' efforts to access higher education. To achieve this goal, it is likely that PETs-principals stress more the collaboration with parents. As regarding the PETs-principals' capability to promote teachers' professional development (professional development), it is established to be more evident in senior high school, probably due to the increasing demand for effective teaching required in this educational level.

Similarly, the PETs-principals' capability to shape and guide the teaching and learning processes (curriculum), is more stressed in senior high school than in junior high school. By all probability, this is due to the fact that the higher education access system requires absolute compliance of the senior high school to the curriculum set by the Ministry of Education. Monitoring the nationwide uniform curriculum of the Ministry of Education for the purposes of the entrance, the exam system does not allow any deviations and thus the curriculum plays a pivotal role in school life. Therefore, senior high school PETs-principals are required to acquire advanced skills in observing and improving the educational process.

Teachers' perceptions in regards to the factors educational mission and goal setting, instruction, and professional accountability were also significantly different. Senior high school teachers believe more than their junior high school colleagues that their principals exhibit the above skills. This finding might be attributed to the higher demands of both parents and students in senior high school, in terms of the learning outcomes and the credibility of this school level. Specifically, learning outcomes in lyceum require from both teachers and principals to intensify their efforts since these are objectively determined in Pan-Hellenic exams which provide access to higher education. In contrast, in junior high school where a Pan-Hellenic system to determine the learning outcomes is absent, goal setting (educational mission and goal setting), maintenance of the role of the educator leader-mentor (instruction), and duty awareness and execution (professional accountability) are not perceived as high as in senior high school.

It is worth mentioning that teacher perceptions do not differ as concerning the implementation degree, on their principals' part, in case of 'student progress' and 'school climate' factors. An initial explanation could be that the school climate factor scored the highest according to both junior and senior high school teachers' perceptions. This confirms that junior and senior high school PETs-principals implement actions that ensure a pleasant and orderly climate in the school, to the teachers' desire. As regards the 'student progress' factor,

it is maintained that such competency is perceived to the same degree by both junior and senior high school teachers; yet their scores were lower than in other principal competency factors. Such finding implies that PET-principals themselves either do not consider equally important to prioritize monitoring and assessing student progress or do not possess the necessary skills to create and implement a student evaluation system; to determine clear student assessment goals, to use elements of such assessment for the redesigning of teaching, to promote changes for the improvement of school and student progress, and to support teachers for differentiated teaching. Low principal competency in this factor may also reflect in-service teachers' low level on student assessment found in a number of studies conducted in Greece (e.g., Emmanouilidou et al., 2012).

Determining the skills required of school principals in gymnasiums and lyceums and identifying the differences in the administrative capacity of PETs-principals in gymnasiums compared to PETs-principals in lyceums, contributes to the identification of needs, the development of self-awareness and the detection of shortages in basic administrative skills of principals. In addition, the present study makes a new and significant contribution to the running of effective schools, which will be staffed by efficient and able leaders to meet the requirements of an effective and qualitative school. Having identified those skills that, in the opinion of teachers, contribute to the effective running of schools, this study may also be helpful in the creation of useful training programmes for future school principals, either as part of university under- and postgraduate programmes specializing in the organization and administration of education, or as part of targeted principal training programmes organized by the Ministry of Education.

However, limitations exist in this present study. In order to conduct it, the method of handing out an anonymous written questionnaire to the educators making up the sample was used. Consequently, the results of the study depend on the answers provided by the participating teachers. Also, the survey identified the views and opinions of teachers at a specific point in time, during which the collection of data was carried out. It is likely that these views and opinions may change at a different point in time. Thus, a long-term study, i.e., a four year one (a full service period) could possibly result in more reliable findings than this which focuses on the present time. Also, the survey did not take into account the views and opinions of other individuals who participate in the educational process (e.g., pupils, parents) regarding the administrative competence of the PETs as school principals. Therefore, further research is required to highlight the PETs-principals managerial capacity, taking into account the aforementioned factors of time and sources in the data collection process.

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