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**THE RELATIONSHIP BETWEEN  
LEADERSHIP AND STUDENT CITIZENSHIP  
OUTCOMES IN CYPRUS MIDDLE SCHOOLS:  
A QUANTITATIVE EXPLORATION**

**DOCTORAL DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY**

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## ABSTRACT

Current trends in the globalized environment we live in, and especially the persisting burden of the global economic crisis, require school principals to adopt a broader set of roles and tasks. In fact, principals need to create the conditions for the development of active and responsible students who will be prepared to undertake their role as future citizens. To date, no previous study attempted to explore the association between school leadership and student citizenship outcomes in quantitative terms. Although case studies provide evidence of the contribution of the principal to student active citizenship there is still a need to establish a quantitative linkage between leadership and citizenship outcomes.

Towards this direction, the current study seeks to explore the relationship between School Leadership and improvement in Student Citizenship Outcomes in Cyprus middle schools. Both direct and indirect relationships between School Leadership and Student Citizenship Outcomes (cognitive, affective, behavioural) were investigated. In the case of indirect leadership effects the mediating role of School Academic Optimism and Instructional Quality was examined.

The specific study adopted a value-added quantitative design. Specifically, students were administered a test both at the beginning and end of the term during which Citizenship Education was taught (i.e. January 2011 and May 2011). Students also provided data about the quality of instruction whereas teachers provided data about school leadership and school academic optimism. Overall, a multistage sample of 20 middle schools, 114 classes and 1596 students participated in the current study. Structural equation modelling techniques were used to validate the questionnaires measuring the independent variables (i.e. School Leadership, School Academic Optimism, Instructional Quality) whereas Rasch analysis was used to validate the test measuring the dependent variable, that is Student Citizenship Outcomes. Multilevel modelling and single level regression techniques were used to identify the relationships between the main variables of this study.

The findings of this study lent support to the Pashiardis-Brauckmann Leadership Radius Framework and the Dynamic Model of Educational Effectiveness at the classroom level. School Academic Optimism was found to be a unidimensional construct whereas validation was provided in relation to the cognitive dimension of the Citizenship Education test. The multilevel analysis explained approximately 30% of the variance in student cognitive outcomes. A number of contextual student variables and one classroom variable (i.e. Dealing with Misbehaviour-Positive Aspects) were found to have a direct effect on

student outcomes. Neither School Leadership nor School Academic Optimism were found to have any direct or indirect effect on student citizenship outcomes, at least in the context of this study. However, multiple regression analysis revealed that School Leadership has statistically significant effects on School Academic Optimism. Academic Optimism was also found to be influenced by a number of contextual school and leadership variables.

Overall, the theoretical model of leadership effects derived from this study indicated that there is a missing link between school level variables and civic-related variables at the classroom and student level. This model highlights the importance of the learning domain when searching for effectiveness factors at the classroom and school level. Principals are likely to be in a position to influence Citizenship Outcomes only through a systemic change in the various components which drive school improvement. This change should unequivocally give Citizenship Education a prominent place in the curriculum. Future research into leadership effects should increase the sample power and utilize longitudinal and comparative data on an international level. Further mediating variables, such as Distributed Leadership, should also be added in future frameworks so as to identify the complex chain of variables that principals follow to influence student civic learning.

## ΠΕΡΙΛΗΨΗ

Οι σύγχρονες τάσεις στο παγκοσμιοποιημένο περιβάλλον που ζούμε, και ειδικότερα το συνεχιζόμενο βάρος της παγκόσμιας οικονομικής κρίσης, απαιτούν όπως οι διευθυντές των σχολείων υιοθετήσουν ένα μεγαλύτερο εύρος ρόλων και καθηκόντων. Κατ' ακρίβεια, οι διευθυντές χρειάζεται να δημιουργήσουν τις συνθήκες για την ανάπτυξη ενεργών και υπεύθυνων μαθητών οι οποίοι θα είναι προετοιμασμένοι να αναλάβουν το ρόλο τους ως μελλοντικοί πολίτες. Μέχρι σήμερα, δεν έχει γίνει κάποια ποσοτική μελέτη που να διερευνά τη σχέση μεταξύ της σχολικής ηγεσίας και των μαθησιακών αποτελεσμάτων στην Πολιτική Αγωγή. Παρόλο που περιπτωσιακές μελέτες καταδεικνύουν τη συμβολή του διευθυντή στην ενεργό πολιτότητα των μαθητών εξακολουθεί να υπάρχει ανάγκη για την διαπίστωση μίας ποσοτικής συσχέτισης μεταξύ της ηγεσίας και της μαθησιακής πολιτότητας.

Προς αυτή την κατεύθυνση, η παρούσα μελέτη επιδιώκει να διερευνήσει τη σχέση μεταξύ της Σχολικής Ηγεσίας και της βελτίωσης των Μαθησιακών Αποτελεσμάτων στην Πολιτική Αγωγή στα γυμνάσια της Κύπρου. Τόσο οι άμεσες όσο και οι έμμεσες σχέσεις μεταξύ της Σχολικής Ηγεσίας και των Μαθησιακών Αποτελεσμάτων στην Πολιτική Αγωγή (γνωστικών, συναισθηματικών, συμπεριφορικών) έχουν τύχει διερεύνησης. Στην περίπτωση των έμμεσων ηγετικών επιδράσεων, εξετάστηκε ο ενδιάμεσος ρόλος των Ακαδημαϊκών Προσδοκιών του Σχολείου και της Ποιότητας της Διδασκαλίας.

Για τους σκοπούς της παρούσας έρευνας υιοθετήθηκε ποσοτικός σχεδιασμός προστιθέμενης αξίας. Συγκεκριμένα, χορηγήθηκε δοκίμιο στους μαθητές στην αρχή και στο τέλος του τετραμήνου κατά το οποίο διδάχθηκαν το μάθημα της Πολιτικής Αγωγής (δηλαδή τον Ιανουάριο του 2011 και τον Μάη του 2011). Οι μαθητές παρείχαν επίσης δεδομένα για την ποιότητα της διδασκαλίας ενώ οι καθηγητές του σχολείου παρείχαν δεδομένα σε σχέση με τη σχολική ηγεσία και τις ακαδημαϊκές προσδοκίες του σχολείου. Συνολικά, οι συμμετέχοντες στην παρούσα μελέτη περιλαμβάνουν ένα πολυσταδιακό δείγμα 20 γυμνασίων, 114 τάξεων και 1596 μαθητών χρησιμοποιήθηκαν. Για την εγκυροποίηση των ερωτηματολογίων τα οποία μετρούν τις ανεξάρτητες μεταβλητές (δηλαδή τη Σχολική Ηγεσία, τις Ακαδημαϊκές Προσδοκίες Σχολείου και την Ποιότητα Διδασκαλίας) χρησιμοποιήθηκαν Δομικά Μοντέλα Εξισώσεων ενώ η ανάλυση Rasch χρησιμοποιήθηκε για την εγκυροποίηση του δοκιμίου το οποίο μετρά την ανεξάρτητη μεταβλητή, δηλαδή τα αποτελέσματα στην Πολιτική Αγωγή. Για τη διερεύνηση των

σχέσεων ανάμεσα στις βασικές μεταβλητές της έρευνας χρησιμοποιήθηκε η πολυεπίπεδη μοντελοποίηση και τεχνικές παλινδρόμησης ενός επιπέδου.

Τα αποτελέσματα της έρευνας παρείχαν υποστήριξη στο Πλαίσιο της Ηγετικής Ακτίνας Δράσης των Pashiardis-Brauckmann και στο Δυναμικό Μοντέλο Εκπαιδευτικής Αποτελεσματικότητας στο επίπεδο της τάξης. Οι Ακαδημαϊκές Προσδοκίες του Σχολείου φάνηκε να αποτελούν μία μονοδιάστατη μεταβλητή ενώ εγκυροποιήθηκε και το γνωστικό μέρος του δοκιμίου στην Πολιτική Αγωγή. Η πολυεπίπεδη ανάλυση φάνηκε να εξηγεί περίπου 30% της διασποράς στα μαθησιακά γνωστικά αποτελέσματα. Άμεση επίδραση στα μαθησιακά αποτελέσματα είχε αριθμός μεταβλητών συγκειμένου στο επίπεδο του μαθητή και μία μεταβλητή στο επίπεδο της τάξης (δηλαδή, η Διαχείριση της Μη Αποδεκτής Συμπεριφοράς-Θετικές Πτυχές). Η Σχολική Ηγεσία και οι Ακαδημαϊκές Προσδοκίες Σχολείου δεν φάνηκε να έχουν άμεσες ή έμμεσες επιδράσεις στην επίδοση των μαθητών, τουλάχιστον στο πλαίσιο αυτής της έρευνας. Ωστόσο, η πολλαπλή ανάλυση παλινδρόμησης έδειξε ότι η Σχολική Ηγεσία έχει στατιστικά σημαντική επίδραση στις Ακαδημαϊκές Προσδοκίες Σχολείου. Οι Ακαδημαϊκές Προσδοκίες φάνηκε επίσης να επηρεάζονται και από ένα αριθμό μεταβλητών συγκειμένου που αφορούν το σχολείο και την ηγεσία.

Συμπερασματικά, το θεωρητικό μοντέλο των ηγετικών επιδράσεων που προέκυψε από την παρούσα έρευνα υποδεικνύει ότι υπολείπεται η σύνδεση ανάμεσα στις μεταβλητές στο σχολικό επίπεδο και στις μεταβλητές που σχετίζονται με την πολιτότητα στο επίπεδο της τάξης και του μαθητή. Το μοντέλο αυτό τονίζει τη σημασία του μαθησιακού αντικειμένου κατά τη διερεύνηση παραγόντων αποτελεσματικότητας στο επίπεδο της τάξης και του σχολείου. Οι διευθυντές θα μπορούσαν να είναι σε θέση να επηρεάζουν τα αποτελέσματα στην Πολιτική Αγωγή μόνο μέσα από μία συστημική αλλαγή σε διάφορους παράγοντες που οδηγούν στη σχολική βελτίωση. Αυτή η αλλαγή αδιαμφισβήτητα θα πρέπει να αναβαθμίζει την Πολιτική Αγωγή στο αναλυτικό πρόγραμμα. Η μελλοντική έρευνα για την επίδραση της ηγεσίας θα πρέπει να αυξήσει τη δύναμη του δείγματος και να αξιοποιήσει μακροχρόνια και συγκριτικά δεδομένα σε διεθνές επίπεδο. Περαιτέρω ενδιάμεσες μεταβλητές, όπως η Επιμεριστική Ηγεσία, θα πρέπει να συμπεριληφθούν σε μελλοντικά θεωρητικά πλαίσια έτσι ώστε να εντοπιστεί η πολύπλοκη αλυσίδα των μεταβλητών που ακολουθείται από τους διευθυντές για να επηρεάσουν τη μαθησιακή πολιτότητα.

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Στη μνήμη της γιαγιάς μου Βασιλικής

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# CHAPTER I

## THE RESEARCH TOPIC

### 1.1 Introduction – Statement of the Research Topic

As we move through the 21<sup>st</sup> century we experience a rapidly changing environment characterized by complexity and uncertainty. Nation interconnectedness, changes in demography, the explosion of knowledge through science and technology, and environmental changes are only but a few domains of human activity that give rise to a new era of global development. While these fast-paced transformations are taking place, organizations around the world are facing difficulties in coping with the challenges that they entail and making the necessary adjustments to secure their survival and further development. Difficulties in coping with the new global environment have become even more intensified by an ongoing economic crisis which has placed serious constraints on the span of organizational activities for their future growth.

These societal forces inevitably infiltrate and influence educational organizations as well making them much more dynamic and complex places to manage (Bottery, 2006; Crow, 2006; Day, 2011; Mulford, 2008). Increased globalization raises issues such as the interchangeability of learning programs, a growing trend towards decentralization and privatization, as well as a strong focus on “client” satisfaction. Demographic changes point to the need for integrating cultural funds of knowledge to the curricula and assessment of students while advances in science and technology encourage the provision of enriched and customized learning opportunities. Moreover, environmental pressures, such as global warming highlight the importance of students becoming active citizens of the globe. Most importantly, the current economic crisis renders schools responsible for acquiring additional resources to support their agenda and enriching their programmes with relevant learning activities.

Since school units are open systems they need to adapt to these contemporary demands and secure their sustainability in the years to come. Schools need to be redesigned so as to reflect the educational needs of our times as well as to respond to the increased demands for efficiency and quality in education. To this effect, there is a need to exhibit greater creativity, teamwork and problem-solving, establish flatter organizational structures as well as engage in richer forms of accountability (Bottery, 2006; Leithwood,

Jacobson & Ylimaki, 2011). However, in order to act appropriately at the local level schools need to “understand the ecology of forces which surround, steer and constrain their current existences” (Bottery, 2006, p. 20).

In this novel school environment, where various pressures and external challenges are identified, the role of the school principal is becoming increasingly complex and difficult to perform. In fact, school principals are confronted with a complex fusion of roles, expectations and contexts. The once restricted functions of a bureaucratic administrator seem to give way to a new, broader and more demanding set of tasks that goes beyond what one single individual can handle (Day, 2011; Pont, Nusche & Moorman, 2008; Sebastian & Allensworth, 2012). Today’s school leaders need to monitor the processes of teaching and learning, handle financial and human resources, manage public relations and build networks and coalitions, engage in quality management and public reporting processes and provide leadership for training their staff.

Overall, the emphasis has been placed on leading and improving schools rather than just managing and maintaining them (Huber, 2008). Schools are no longer viewed as static organizations but as learning organizations which need continuous development. It follows that school leaders must act as the “torchbearers of educational change” (Georgiou, Papayianni, Savvides & Pashiardis, 2001) by initiating, supporting and sustaining improvement for the profit of all students. According to Crow (2006, p. 313), “such responsibilities are not simply a more intense work environment but a more complicated one in which capacity building, motivation, and the involvement of an increasing number of roles and people in the knowledge process are critical”.

Undoubtedly, current trends in the field of educational leadership favour the empowered school unit and the need for skilful school leaders who can cope with the multifaceted character of schooling. Most importantly, principals need to be able to demonstrate their effectiveness by showing results in student achievement (Brauckmann & Pashiardis, 2011; Pashiardis & Brauckmann, 2008a, 2008b). However, if principals are to be accountable for the outcomes of their students, we need to establish a clear connection between what principals do and what students achieve. Existing research on the relationship between school leadership and student outcomes is traditionally founded on two types of empirical evidence: case study evidence and large-scale quantitative studies (Kythreotis, Pashiardis & Kyriakides, 2010; Leithwood & Riehl, 2003; Muijs, 2011). The evidence derived from case studies consistently highlights the pivotal role of school leadership in school effectiveness and improvement (Leithwood & Day, 2007; Pashiardis,

Savvides, Lytra & Angelidou, 2011b; Pont et al., 2008). Most of these studies begin by identifying schools that are successful by the student outcomes and then move to investigate the characteristics of leadership in these schools. However, the results of these studies cannot be easily generalized.

On the other hand, the evidence emerging from large quantitative studies appears to be more ambiguous and inconsistent, with effect sizes ranging from non-existent to very significant. Meta-analyses of this type of quantitative studies suggest that the discrepancies can be explained by differences in the conceptual and methodological design they employ (Hallinger & Heck, 1996, 1998; Scheerens, 2012; Witziers, Bosker & Krüger, 2003). In fact, different designs are likely to produce different results. Identifying the limitations of previous studies is an imperative so as to illuminate the inconsistency which is reflected in leadership effects research.

Firstly, from a conceptual point of view there is lack of a really consistent terminology about the meaning of leadership. Many researchers have attempted to define the concept so that the phenomenon of leadership can be better understood. Although providing rich insights into the concept, there is no unique definition of leadership, which is broadly accepted (Hallinger & Heck, 1996, 1998; Kythreotis et al., 2010; Witziers et al., 2003). As a result, the operationalization of leadership in various research frameworks is determined by the respective conceptualization of the term.

Linked to this issue is the limited set of leadership practices utilized in previous research frameworks, mostly related to instructional and transformational leadership. In fact, the research literature is dominated by work on these forms of leadership (Muijs, 2010; Mulford, 2008; Scheerens, 2012). However, as it has already been highlighted, the school principals' roles and responsibilities have been dramatically increased during the past few years. The complex and intense nature of a principal's job suggests that there is no "best" leadership style that when implemented in an unequivocal manner will make all the difference. In practice, successful school leaders adopt a range of leadership styles to meet the changing demands of their context. Taking into account the new realities of the school leadership discipline, one can conclude that the absence of a comprehensive set of leadership practices is likely to have concealed aspects of leadership that may have actually contributed to student learning. Moreover, it is likely that the total leadership effect size on student outcomes was underestimated or diminished to a significant degree.

Moving a step further, we still lack systematic empirical validation of different models (Bruggencate, Luyten, Scheerens & Slegers, 2012; Krüger, Witziers & Slegers,

2007; Mulford, 2008). Earlier studies proposed leadership as having a direct effect on learning outcomes, yet empirical evidence showed that effect sizes are small or even nonexistent. On the contrary, research based on the indirect effects model reveals more effects on students and thus constitutes a more promising approach to shed light on leadership effects. Towards this direction, we need to “improve our understanding of the chain of variables, which are located between the principal and the organizational and student outcomes” (Krüger et al., 2007, p.2). According to Mascal, Leithwood, Straus and Sacks (2008) the challenge is to identify the variables mediating leaders’ influence on students.

Contemporary research shows that several school properties are important in accounting for student achievement. Among these characteristics we can discern the faculty’s collective efficacy (Goddard, Hoy & Woolfolk Hoy, 2000; Tschannen-Moran & Barr, 2004), faculty trust in student and parents (Bryk, & Schneider, 2002; Goddard, Tschannen-Moran & Hoy, 2001; Hoy, 2002), and the school’s academic emphasis (Goddard, Sweetland & Hoy, 2000). McGuigan and Hoy (2006) suggested that these characteristics are three dimensions of a latent construct called Academic Optimism. As a whole, Academic Optimism represents a schoolwide belief that students will succeed academically. However, although a number of studies examined the relationship between the dimensions of academic optimism and student achievement (Bevel & Mitchell, 2012; McGuigan & Hoy, 2006; Smith & Hoy, 2007) there is scant evidence of how school leadership might influence each of these three dimensions as well as the construct as a whole. Much less is known on how academic optimism might mediate the effect of leadership on student achievement.

Research has also shown that classroom practices account for most of the variance in student achievement when controlling for student background characteristics (e.g. Creemers & Kyriakides, 2008; Kyriakides & Creemers, 2009). This is quite natural since it is teachers who are most proximal to students through their instructional behaviour in the classroom. However, there is little quantitative evidence (e.g. Leithwood & Jantzi, 2005; May & Supovitz, 2011; Printy, 2010) on how school principals influence the instructional behaviour of teachers. Such evidence relies mostly on teacher self reports and does not entail observations of specific lessons in class. Furthermore, no comprehensive model of instructional quality has yet been adopted as a mediating factor between leadership and student outcomes.

Previous leadership effects studies also adopted a narrow focus of student outcomes, mostly concentrating on the measurement of literacy and numeracy test scores of students. However, “the size and significance of leadership effects on other areas of achievement cannot be assumed or extrapolated, and should be investigated directly” (Leithwood & Levin, 2008, p. 292). This limitation is strongly related to the debate over what counts as “good” schooling. While the emphasis is placed on scientific and technological knowledge other areas such as social adjustment and citizenship are being consistently undervalued in a time where they matter most. Mulford (2008, 2012) argues that there is a need to broaden what counts in education by paying more attention to non-cognitive outcomes of students. School leaders need to operate in accordance with these broadened outcomes and develop more creative approaches to ensure their acquisition by students.

During the last few years there has been an international concern about the nature and measurement of Student Citizenship Outcomes. This revived interest has been the result of democratic deficits in the functioning of states, immigration, terrorism and violence increase, as well as the enduring financial crisis which seems to constrain the proper functioning of civic institutions. International studies, such as CIVED (Civic Education Study) and ICCS (International Civic and Citizenship Education Study), seek to address the issue of how well prepared students are to act as responsible citizens by measuring their citizenship competencies (Schulz, Ainley, Fraillon, Kerr & Losito, 2010; Torney-Purta, Lehmann, Oswald & Schulz, 2001). Although they have identified a number of factors explaining variation in student outcomes, school leadership has not been included as a likely predictor. To date, we have some evidence from qualitative case studies which link aspects of school leadership to informal learning of active citizenship at school (Pashiardis, Georgiou & Georghiou, 2009; Scheerens, 2009, 2011). Yet, no attempt has been made to examine the relationship between leadership and student citizenship in quantitative terms.

From a methodological point of view, the focus of previous research was on cross-sectional studies which assessed leadership effects on student outcomes at a specific time point of the academic year. However, such studies ignore the growth in student learning thus failing to evaluate the influence of leadership that accumulates over time. On the other hand, value-added designs where repeated measures of achievement are taken seem to be more appropriate to employ. According to Heck and Hallinger (2009), the analysis of temporal sequences provides a stronger basis for making inferences about organizational



relationships than static measures. The absence of such designs seems to be one of the main reasons for the conflicting findings observed in school leadership effects research.

Another methodological limitation that is identified concerns the use of appropriate statistical techniques to analyze data. Specifically, much of the research conducted on the potential relationship between school leadership and student outcomes relied on simple statistical methodologies that weakened the evidence produced (Hallinger & Heck, 1996; Kythreotis, Pashiardis & Kyriakides, 2010; Muijs, 2011; Witziers et al., 2003). Although leadership effects were modeled at various levels there was no partitioning of variance at each of these levels. To this effect, more sophisticated statistical techniques need to be employed in order to account for the hierarchical structure of schools. In other words, future designs should recognize that students are nested within classrooms and classrooms are nested within schools.

The aforementioned limitations in previous studies may account for the failure to identify consistent effects of school leadership on student outcomes. What needs to be done is to initiate further research based on robust conceptual and methodological designs. According to Mulford (2012), there is a need to move to multiple forms of leadership but also to a more complex set of relationships between these forms and a range of other variables, including non-traditional student outcomes such as civic learning. In fact, there is a need to enrich the literature on the potential association between School Leadership and Student Citizenship Outcomes. In this way, we can provide empirical validation of models which are more likely to reflect the claim that school leadership does matter across a range of educational effectiveness criteria, while at the same time addressing a foundational issue of educational effectiveness research, that is the principle of consistency (Creemers, Kyriakides & Sammons, 2010).

## **1.2 Purpose of Research**

The main purpose of this study was to explore the relationship between School Leadership and gains in Student Citizenship Outcomes (cognitive, affective, behavioural) in Cyprus middle schools. Both direct and indirect models of leadership effects were investigated with School Academic Optimism and Instructional Quality constituting the mediating variables in the latter case.

### **1.3 Research Questions**

Based on the aforementioned Statement of the Research Topic and the Purpose of Research this study sought to address the following research questions:

1. Is there a direct relationship between middle School Leadership, as defined in the Pashiardis-Brauckmann Leadership Radius Framework, and improvement in Student Citizenship Outcomes (cognitive, affective, behavioural)?
2. Is there an indirect relationship between middle School Leadership and improvement in Student Citizenship Outcomes (cognitive, affective, behavioural) mediated by School Academic Optimism and/or Instructional Quality?
3. What is the relative strength of the direct and indirect models of School Leadership effects upon gains in Student Citizenship Outcomes (cognitive, affective, behavioural)?
4. What is the total effect of the combined direct and indirect leadership models?

### **1.4 Contribution to Theory**

The current study seeks to provide a theoretical insight concerning the relationship between School Leadership and Student Citizenship Outcomes. Although considerable research has been separately conducted in the specific fields, no serious attempt has been made to explore a likely association among them, especially in quantitative terms. To date, qualitative evidence on the factors affecting the informal active citizenship of students provide evidence of the important role of the school principal (Scheerens, 2009). A further step is therefore needed so as to also establish a quantitative linkage between principal behaviour and student citizenship learning. This endeavour is also responsive to the plea of a number of researchers who have consistently highlighted the need to investigate a broader set of student outcomes beyond literacy and maths (Mulford, 2008, 2012).

Although considerable progress has been made in leadership effects research, we still lack systematic empirical validation of different models (Krüger et al., 2007; Mulford & Silins, 2011; Bruggencate et al., 2012). Earlier studies focused on the direct effects models yet more recent research has shown that school leadership influences student outcomes mostly in an indirect manner. Nevertheless, little is known about the paths through which this influence seeps to students themselves. Thus, there is a need to develop more indirect effects models that incorporate key school and classroom factors as mediators between

leadership and student outcomes (Jacobson & Bezzina, 2008). To date, no previous study inquired about the role of school academic optimism and instructional quality in mediating leadership effects. This research gap was identified as an important caveat that should be addressed by the current study.

The specific study adopts both school and classroom variables as mediators of leadership effects on student outcomes. Such a multilevel design enriches existing frameworks that were concerned only with a single level of variables. In addition, the mediating variables that were chosen to be part of the framework (i.e. school academic optimism and instructional quality) were previously found to have a strong effect on student achievement mainly due to their academic and instructional orientation (Creemers & Kyriakides, 2008; McGuigan & Hoy, 2006). Combining both school and classroom variables that are strong indicators of student achievement is also likely to give a new direction to the kind of mediators that need to be included in indirect models of leadership effects. A significant input is also likely to be derived from the emergence of the relative merits of the indirect effects model over the direct effects model and vice versa.

Furthermore, there is a need to examine the validity of the Pashiardis-Brauckmann Leadership Radius Framework within the context of Cyprus. A relevant study in seven European countries (UK, Norway, Germany, Slovenia, Hungary, Italy, The Netherlands) provided evidence in support to the construct validity of the model (Brauckmann & Pashiardis, 2011; Pashiardis, 2014; Pashiardis & Brauckmann, 2008a). Moreover, multiple logistic regression showed that all of the five leadership styles of the model predicted the odds of a teacher working in a high or low performing school. A more recent study in Cyprus also resulted in a five factor solution representing the five leadership styles proposed by the specific framework (Pashiardis, 2014; Pashiardis, Michaelidou, Kendeou & Lytra, 2011a). Nevertheless, further evidence is needed to confirm the construct validity of the model within the context of Cyprus and especially assess the predictive power of the various leadership styles when it comes to student citizenship outcomes. This is especially important in the case of Cyprus where there is a dearth of evidence on the relationship between school leadership behaviour and student outcomes. According to Moos (2002), leadership should be framed in the light of the particular context of each country and in this effort we need to investigate whether "success" in one country is "success" in another as well.

A further contribution of this research undertaking concerns the examination of the validity of the School Academic Optimism model and the Dynamic Model of Educational

Effectiveness at the classroom level. With regards to the former model, support for its validation has been provided mostly within the context of the USA (Hoy et al., 2006; McGuigan & Hoy, 2006; Smith & Hoy, 2007). Thus, the study can be an important source of evidence as to the transferability of the model irrespective of the particular context in which schools operate. In addition, the Dynamic Model at the classroom level has already been validated in the context of primary education and in relation to Greek Language, Mathematics and Religious Instruction (Creemers & Kyriakides, 2008; Kyriakides & Creemers, 2008; Kyriakides & Creemers, 2009). This study takes a step further in order to validate the model in lower secondary education and in relation to the non-conventional subject of Citizenship Education.

Finally, building on the theoretical evidence through empirical research is intended to provide significant input to the debate over the role and impact of the school principal on student outcomes. The conflicting findings in the specific area render leadership effects on student achievement a challenging research question that needs to be clarified. More quantitative studies in this field are useful in providing evidence over aspects of leadership that have not been investigated to date. However, a different methodological design needs to be employed so as to be able to identify leadership effects that were not evident in previous studies. Towards this direction, value-added measures of student achievement were used in combination with multilevel modeling techniques of statistical analysis (Goldstein, 2010; Snidgers & Bosker, 1999). Multilevel models take into account the multilevel structure of schools and are thus more appropriate to measure the effects of leadership, especially when it comes to indirect effects models that entail variables both at the school and classroom levels. In this way, it is possible that the research gap between qualitative and quantitative studies be diminished otherwise, we could just confirm the elusive search for an association between leadership and student outcomes (Witziers et al., 2003).

## **1.5 Contribution to Policy and Practice**

School leadership seems to have attracted a great share of the international attention and interest. Education ministers of the countries participating in organizations such as the Commonwealth, the European Commission and the Organization for Economic Development and Cooperation (OECD) have emphasized the need to improve school leadership as a way to increase school effectiveness and achieve quality performance.

Moreover, a number of studies concerning successful school leadership have been commissioned by the European Union (e.g. Brauckmann & Pashiardis, 2011; Pashiardis & Brauckmann, 2008a), the Commonwealth (e.g. Brauckmann & Pashiardis, 2012), and the OECD (e.g. Pont et al., 2008). All of these initiatives are concerned with identifying school leadership dimensions which are conducive to student learning in a comparative context.

Overall, there is wide agreement about the need to have school leaders who exhibit the capacity to improve the quality of teaching and learning (Hallinger, 2005; Huber, 2008; May & Supovitz, 2011; Printy, 2010). Based on this acknowledgment, many researchers have attempted to establish links between school leadership and student achievement. Specifically, researchers inquired about those leadership skills, qualities and practices that are most likely to make a difference in student achievement. Research on leadership effects has progressed to such an extent that we are now in a position to conduct meta-analyses of previous studies. In fact, a number of reviews of empirical research on the effects of leadership on student outcomes have recently emerged (e.g. Leithwood, Day, Sammons, Harris & Hopkins, 2006; Marzano, Waters & McNulty, 2005; Robinson, Lloyd & Rowe, 2008; Scheerens, 2012; Witziers et al., 2003).

The current study seeks to investigate school leadership effects on student citizenship outcomes in an effort to enhance our knowledge of what constitutes effective school leadership in practice. A better understanding of how principals' leadership styles relate to student citizenship outcomes will shed more light on those aspects of leadership that are really worth taking into account. According to Pont et al. (2008), school leadership core responsibilities should be clearly defined and delimited by identifying those practices which are most likely to improve teaching and learning. Moreover, the great emphasis placed on citizenship aims by the Ministry of Education, the European Union and other international organizations (European Commission, 2012; Ministry of Education and Culture, 2008a, 2013; Schulz et al., 2010) renders this area of study an important variable that needs to be examined in relation to school leadership (Scheerens, 2009).

The findings derived from the research will directly inform the content of evidence-based, school leadership training programs that take into consideration important aspects of how principals lead student learning, and particularly civic learning. Many countries have come to realize the importance of investing in the development of school leaders. For example, inspection evidence produced by OFSTED in England has guided the government's work on identifying and preparing prospective heads, developing experienced ones and establishing the National College for School Leadership (Riley &

Mulford, 2007; Southworth, 2002). The latter has introduced the National Professional Qualification for Headship (NPQH) for prospective principals and the National Professional Qualification for Serving Headteachers (NPQSH) for the development of existing principals (Weindling & Dimmock, 2006). However, such programs should be continually revised in the light of new evidence produced by research.

At the local level, the key role of school leadership development is highlighted in the Strategic Planning for Education of 2008 undertaken by the Ministry of Education of Cyprus (Ministry of Education and Culture, 2008b). In particular, it is asserted that high caliber principals are considered especially important to the organization and function of successful, flexible and autonomous school units. Moreover, principals are expected to form the primary agents of cultural and educational change within the new era of restructuring and reform. However, no change in the educational scene can be successful unless, at the same time, some things about principals' work and their preparation are modified as well. To this effect, the Ministry of Education and Culture (2009) has promulgated its intention of upgrading the existing system of preparation with the creation of an Academy for Leadership Staff which will also embrace prospective school principals. The Academy will provide relevant training programmes that principalship candidates should successfully complete in order to be considered for promotion to the specific position. Thus, this study is expected to provide evidence as to the content of the programmes needed to prepare effective school principals.

The results of this study are also expected to stimulate interest in the principalship and lead to evidence-based policy and practice with regards to school leadership in-service development in Cyprus. In so doing, it is expected to inform the design of enriched leadership training programs in an era in which education is being under restructuring. Better understanding of the features of principals that can lead student success, and how these can be developed in novice and more experienced principals, is clearly an important element to the successful operation of the Academy for Leadership Staff. It is important to note that the specific Academy is expected to undertake the continuous professional development of principals by offering a systematic and carefully planned range of educational experiences that will be grounded on scientific principles and research findings derived from educational leadership research (Ministry of Education and Culture, 2008).

Beyond preparation and professional development, the findings of this research can contribute to the improvement of the evaluation system of school principals. According to

Pashiardis and Brauckmann (2008b) there is an urgent need to revisit the quality, functionality and effectiveness of principal evaluation systems. These evaluation schemes should identify and reward better principals from not so good ones and should be linked to enhanced student achievement. To this effect, the acquired evidence from this piece of research should lead to the revision of existing instruments and criteria used to evaluate school leadership practices. If principals are to be accountable for student learning then it is important to also evaluate those practices that they really matter in raising student achievement.

The study findings could also inform efforts towards the development of school leadership standards for Cyprus principals. The process of developing standards for school leaders entails the identification of those features which are most valued in the specific profession. Such standards have been introduced in a number of countries, mainly English speaking ones. For example, the Interstate Leaders' Licensure Consortium Indicators and the National Standards for Headteachers are quite popular in the USA and the UK respectively (Council of Chief State School Officers, 2008; Department for Education and Skills, 2004). Also, the Standards Framework for Leaders in Queensland, Australia was developed as the basis for leadership evaluation (Leithwood, Jantzi & Steinbach, 2002). Irrespective of further variations, the standards already mentioned have been developed as a way to promote the success for all students. That is why the standards have been based on research examining the relation between leadership and school effectiveness.

Finally, the study is expected to instigate further action to support and upgrade the subject of Citizenship Education in practice. Identifying those factors at the student, classroom and school level which bear an effect on student outcomes could be an initial step on which concrete policy and practice can be developed in relation to citizenship learning. For example, the Ministry of Education could re-examine the curriculum policy in relation to the subject or provide appropriate professional development opportunities for principals and teachers in order to enhance their capacity in achieving the subject instructional goals. At the school level, both principals and teachers could focus their attention on those behaviours and practices which maximize student learning as evidenced by the findings of the current study. The attempt, especially, to identify how school leadership is linked to student citizenship outcomes (cognitive, affective and behavioural), will significantly leverage Citizenship Education in the instructional agendas of school principals.

## 1.6 Limitations of Study

This piece of research seeks to identify the relationship between School Leadership and Student Citizenship Outcomes. Direct and indirect relationships were explored with School Academic Optimism and Instructional Quality being considered as likely mediators. For the purposes of this research a number of limitations need to be clearly demarcated:

- There might be important variables to student outcomes which were omitted in the design of this study. Omitted variables are likely to yield biased estimates and greater measurement error. However, it is unrealistic to be able to include in a single study all likely predictors of student achievement.
- The specific research undertaking adopts a position-based approach to School Leadership investigation. This means that School Leadership pertains only to the position of the school principal. Although other stakeholders, such as assistant principals and teachers, were previously found to exhibit leadership influence themselves, their contribution to student outcomes was not investigated.
- At the classroom level, Instructional Quality was operationalised in terms of the specific behavior and practices of teachers. Teacher beliefs, attitudes and background characteristics were not investigated.
- At the school level, there are a number of variables which were previously found to affect student achievement and that were not included in the conceptual framework of this research. Such variables include, among others, Evaluation and Feedback Practices, Professional Development Opportunities, Teacher Commitment to Change and Parental Involvement.
- Contextual variables at the system level, such as steering patterns and accountability mechanisms, were not considered in this research. This is because no variance would be produced within the centralized and thus homogeneous educational system of Cyprus.
- At the student level, only Citizenship Outcomes were included in the framework. Other outcomes such as literacy and numeracy were not considered for the purposes of this research.
- This study took place across four of the main cities located in the free areas of the Republic of Cyprus. Only middle school principals were investigated whereas pre-primary, primary and upper secondary education principals were not considered for the purposes of this study.



## **1.7 Organization of the Study**

The current study is constituted by five chapters. In the first chapter, there is a description of the problem, the purpose of research, and the research questions. Moreover, the contribution of the study to theory, policy and practice is discussed whereas the delimitations of the study are defined.

In the second chapter, there is a presentation and description of the theoretical framework of the study. The hypothesized relationships between the variables of the study are defined and their operational definitions are also provided. An extensive literature review follows in relation to the primary variables of this piece of research (i.e. School Leadership, School Academic Optimism, Instructional Quality and Student Citizenship Outcomes).

The third chapter provides information on the research methodology. Specifically, there is a description of the type of research conducted, the sampling method, the data collection instruments, and the research implementation procedure. Furthermore, a description is provided as to the statistical analysis techniques and the basic assumptions of the study. The results of the pilot study findings are also discussed.

In the fourth chapter, the main findings of the study are presented. Initially, there is a report concerning the validation of the instruments used in the main phase of the study. Then, a series of descriptive statistics are presented relating to the main and contextual variables followed by the findings concerning the relationships between these variables.

Finally, the last chapter provides a discussion and interpretation of the findings as well as specific conclusions related to the derived theoretical model. The implications for educational theory, policy and practice are discussed whereas recommendations for further research are also provided.

## **1.8 Summary**

Current trends in the globalized world we live in as well as the ongoing financial crisis require school principals to adopt a broader and more demanding set of tasks, roles and functions so as to cope with the multifaceted character of schooling. Overall, school principals need to move beyond managing and maintain schools to leading and improving them. Most importantly, there is a mandate for principals to be able to demonstrate their effectiveness by showing results in student achievement. However, this demand needs to be based on robust empirical evidence indicating that school leadership does make a

difference in pupil outcomes. To date, research has yielded inconsistent findings with effect sizes ranging from non-existent to very significant. In addition, there is a lack of systematic empirical validation of different conceptual models with a notable absence of the multilevel structure of schools.

Concurrently, during the last few years there has been an international concern about the nature and measurement of Student Citizenship Outcomes. This revived interest has been the result of inefficiencies in the functioning of states and a diverse range of socioeconomic problems confronted by citizens across the globe. International studies, such as CIVED and ICCS, seek to address the issue of how well prepared students are to act as responsible citizens by measuring their citizenship competencies. Although they have identified a number of factors explaining variation in student outcomes leadership has not been included as a likely predictor. To date, we have some evidence from qualitative case studies which link aspects of School Leadership to informal learning of Active Citizenship at school. Yet, no attempt has been made to examine the relationship between leadership and student citizenship in quantitative terms.

Taking these caveats into account, this research study sought to explore the relationship between School leadership and gains in Student Citizenship Outcomes in Cyprus middle schools. Both direct and indirect models of leadership effects were investigated. School Academic Optimism and Instructional Quality constituted the mediating variables in the case of indirect effects. This piece of research is intended to fill the gaps in leadership effects research in Cyprus and abroad as well as provide significant input to the debate over the role and impact of the school principal on student outcomes, especially with regards to a neglected criterion of educational effectiveness, i.e. Citizenship Education. Finally, the results of this study are expected to stimulate interest in the principalship and lead to evidence-based policy and practice with regards to school leadership development and evaluation in Cyprus in an era where comprehensive reform is underway.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### 2.1 Introduction

In the light of an increasing recognition of the pivotal function of school leadership in supporting change and providing for educational quality, it is important to orient the role of the school leader and identify which forms or sets of leadership behaviours and practices influence the main purpose of a school's mission, which is student learning. This endeavour is even more critical in relation to civic learning since there is a dearth of evidence about how principals can effectively promote the objectives of the specific subject domain.

To this effect, the current study seeks to explore direct and indirect relationships between school leadership and student citizenship outcomes as well as provide evidence in regard to the relative advantages of each model. This part of the study is intended to provide a description of the theoretical framework used as well as a review of the literature of the main variables namely, School Leadership, Student Citizenship Outcomes, Academic Optimism of Schools, and Instructional Quality. The literature review is based on the acknowledgment that the investigation of the relationship between leadership and student learning is multilevel and complex in nature.

#### 2.2 Description of the Conceptual Framework

Since the lack of consistency in findings on school leadership effects is largely owed to the use of varying frameworks and models, it was decided to use as a reference base the comprehensive Pashiardis-Brauckmann framework (Brauckmann & Pashiardis, 2011; Pashiardis, 2014; Pashiardis & Brauckmann, 2008a). This framework emanated from a thorough review of the literature on school leadership and school effectiveness over the last few decades. In their study, leadership is treated as a multilevel construct which may affect school, classroom and student variables but is also likely to be influenced by contextual variables. Thus, the revised Pashiardis-Brauckmann Holistic Leadership Framework (Figure 2.1) consists of leadership as well as context, intermediate, and dependent, outcome variables.

Firstly, the framework entails a second order factor of school leadership, i.e. the Leadership Radius which consists of five first order factors. The first order factors refer to five leadership domains or styles that school principals are likely to employ in their work: 1) Instructional Style 2) Structuring Style 3) Participative Style 4) Entrepreneurial Style and 5) Personnel Development Style (Brauckmann & Pashiardis, 2011; Pashiardis, 2014; Pashiardis & Brauckmann, 2008a). Each leadership style consists of specific behaviours or practices which are likely to be exhibited by school principals. The *Instructional Style* entails the practices of defining and enabling the achievement of the instructional objectives, setting high expectations, monitoring and evaluating students and teachers, and stimulating instructional innovation. The *Structuring Style* includes the areas of clarifying the vision and mission of the school, establishing and following clear rules, dividing tasks/responsibilities among staff, enabling restructuring and taking risks as well as managing facilities in an effective manner. Furthermore, the *Participative Style* is conceptualized as adopting a participative approach to formal and informal decision making, fostering staff cooperation, brokering and mediating conflicting situations and promoting staff commitment. Next, the *Entrepreneurial Style* comprises the practices of involving the parents and other external actors in the school processes, acquiring resources for the school's smooth operation, building coalitions with external agents as well as engaging in a market approach to leadership. Finally, effective school leaders are likely to employ a *Personnel Development Style* in their leadership practices and behaviours. This style involves effective teacher recruitment, the assessment of teacher professional needs, the provision of training opportunities to them, the enhancement of their self-efficacy, as well as the provision of recognition and rewards for their exemplary performance.

The framework of this study acknowledges that school leaders do not operate in a vacuum (Brauckmann & Pashiardis, 2011; Pashiardis, 2014). On the contrary, their actions and likely effects are hypothesized to be influenced by the particular context in which they work. The context framework, is divided into two main levels: 1) *School Level Variables* which include items relating to the school size and location, as well as the characteristics of school leaders, that is their years of experience in principalship, their education background in school leadership and their gender, and 2) *Student Level Variables* which consist of items relating to their initial achievement, socioeconomic status, ethnicity, gender, home environment and participation in student councils. The first set of variables is likely to have a moderating effect on leadership effects while the second set of variables is likely to affect directly the dependent variables and therefore should be controlled for.

Furthermore, we are interested in investigating through which intermediate variables school leaders affect the final school outcomes. A number of variables suggested by the literature are identified at this mediating level. At the school level, a new construct labeled as *Academic Optimism of Schools* (Hoy, 2012; McGuigan & Hoy, 2006) was used. Academic Optimism encompasses three distinct dimensions: *academic emphasis*, *faculty trust in parents and students*, and *collective teacher efficacy*. In addition, classroom level variables were examined and specifically the *Instructional Quality* of teachers. The variables which were defined at this level emanate from the Dynamic Model of Educational Effectiveness of Creemers and Kyriakides (2008): *Structuring, Orientation, Teaching Modelling, Application, Questioning, Assessment, Management of time* and *Classroom as a learning environment*. The aforementioned school and classroom level variables are hypothesized to be influenced by the Pashiardis-Brauckmann leadership styles and in turn to affect citizenship outcomes. Therefore, apart from the direct effect of school leadership on citizenship outcomes, the framework purports that leadership may influence student learning in an indirect way.

Student Citizenship Outcomes lie at the end of the leadership effects chain. Citizenship outcomes entail three types of student learning: *Cognitive, Affective* and *Behavioural*, thus capturing a comprehensive range of educational effectiveness criteria. These student achievement criteria are curriculum-based and are measured across three content domains: Fundamental Civic Concepts and Principles, The Individual as Citizen of the Country, The Individual as Citizen of the World. According to the proposed framework, Student Citizenship Outcomes are hypothesized to be influenced directly by student, classroom and school variables. School variables may also influence Citizenship Outcomes in an indirect way.

### **2.3 Operational Definitions**

#### ***Leadership Radius***

A comprehensive set of school leadership styles adopted by principals in order to influence the behaviour of others and accomplish the school goals. Five leadership styles are involved as conceptualized by Pashiardis and Brauckmann (2008a): the Instructional, Structuring, Entrepreneurial, Personnel Development, and Participative Styles.

### ***School leadership style***

The set of those behaviours and practices school principals employ in order to influence the behavior of others and accomplish the school goals.

### ***Instructional Style***

The set of leadership behaviours and practices which focus on the improvement of the quality of teaching and learning.

### ***Structuring Style***

The set of leadership behaviours and practices which provide direction and coordination to the school unit.

### ***Entrepreneurial Style***

The set of leadership behaviours and practices which promote the involvement of external actors and resources in the school affairs.

### ***Personnel Development Style***

The set of leadership behaviours and practices which promote the professional development of teachers.

### ***Participative Style***

The set of leadership behaviours and practices which promote the participation of school members in decision making and provide opportunities for cooperation.

### ***Academic Optimism of Schools***

A school-wide belief that students will succeed academically. It comprises three distinct dimensions: Academic Emphasis, Faculty trust in parents and students and, Collective Teacher Efficacy. School Academic Optimism is also used interchangeably with Academic Optimism of Schools.

### ***Academic Emphasis***

A shared belief of the faculty that academic achievement is important.

### *Faculty trust in parents and students*

The faculty's willingness to be vulnerable to parents and students based on the confidence that both parents and students are benevolent, reliable, competent, honest and open.

### *Collective teacher efficacy*

The faculty's collective belief that they have the capability to produce a positive effect on students' learning.

### ***Instructional Quality***

All those practices and behaviours that teachers adopt at the classroom level in order to influence student learning. It involves eight teacher effectiveness factors: Orientation, Structuring, Questioning, Teaching Modelling, Application, Classroom as a Learning Environment, Management of Time, and Assessment.

#### *Orientation*

Orientation refers to a teacher's behaviour of explicating the reason for which an activity, a lesson or a unit takes place. It also refers to the ability of instigating students to recognize the purpose and utility of the learning activities which are conducted.

#### *Structuring*

Structuring refers to a teacher's competence of illustrating the connections which exist within the same lesson, between lessons, within a thematic unit or among different units.

#### *Questioning*

Questioning refers to those techniques that teachers use to prompt students to answer to a query.

#### *Teaching Modelling*

Modelling concerns the way a teacher assists students to develop skills which will render them capable of regulating learning on their own.

#### *Application*

Application concerns the opportunities a teacher provides to students to exercise on the taught content.

### *Classroom as a learning environment*

Classroom as a learning environment refers to a teacher's contribution in creating a positive classroom environment conducive to learning.

### *Management of time*

Management of time refers to a teacher's behavior of maximizing student engagement rates in learning.

### *Assessment*

Assessment refers to all those activities that enable teachers to judge the progress of student learning.

## ***Student Citizenship Outcomes***

The cognitive, affective and behavioural components of student learning in the subject of Citizenship Education.

### *Cognitive Outcomes*

The knowledge, reasoning and analysis of students in relation to the taught subject matter.

### *Affective Outcomes*

The attitudes and value beliefs of students in relation to the taught subject matter.

### *Behavioural Outcomes*

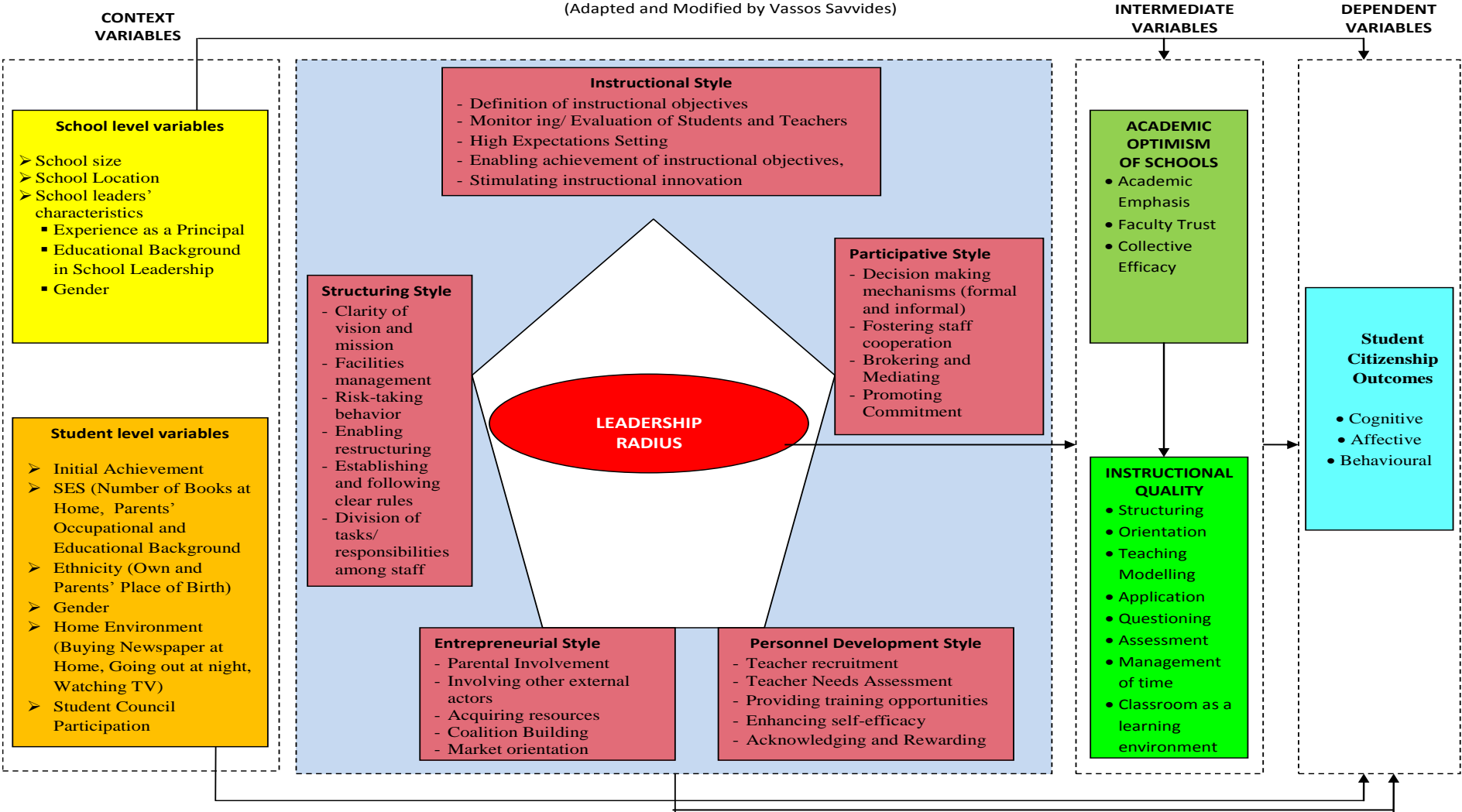
The actual student behaviours and actions related to the taught subject matter.

## **2.4 Review of the Main Variables**

Based on the conceptual framework already presented, it is important to provide a review of the theoretical and empirical underpinnings of the variables and relationships depicted in the framework. Specifically, a review of the literature is provided in relation to the four main variables included in the framework: School Leadership, Student Citizenship Outcomes, Academic Optimism of Schools, and Instructional Quality.



**FIGURE 2.1 THE PASHIARDIS-BRAUCKMANN MODIFIED HOLISTIC LEADERSHIP FRAMEWORK**  
(Adapted and Modified by Vassos Savvides)



## **2.4.1 School Leadership**

School leadership has attracted a great share of the attention of researchers, policy-makers and practitioners. Firstly, researchers seek to explore the nature and effects of successful school leadership and especially how principals influence student learning outcomes. Moreover, policy-makers are interested in reforming the current state of school leadership as a way to enhance the organisational capacity of schools whereas principals themselves seem to be eager about implementing those practices that indeed make a difference to their schools. In this section, a definition of the concept of leadership is provided as well as a brief review of major theories which marked the evolution of leadership through time. In addition, a review of the literature on school leadership effects on student achievement is made followed by empirical evidence in relation to the Pashiardis-Brauckmann Leadership Radius Framework.

### **2.4.1.1 Definition of Leadership**

The concept of “leadership” holds a core position in the various theories of management as well as in the daily operation of contemporary organizations. Many researchers have attempted to define the concept so that the phenomenon of leadership can be better understood. Although providing rich insights into the concept, there is no unique definition of leadership, which is broadly accepted (Hallinger & Heck, 1996, 1998; Kythreotis et al., 2010; Witziers et al., 2003). On the contrary, there is little consensus about what leadership is and what it comprises (Krüger & Scheerens, 2012).

To start with, Chemers (1997) maintains that leadership is a social influence process during which an individual manages to secure the assistance of others in order to accomplish a common goal. Pashiardis (2004, p. 209) also defines leadership as “the nexus of those behaviours used with others when trying to influence their own behaviours”. That is, a leader is the individual, who influences through his/her behaviour, the behaviour of the people in his group. In this way, he/she activates the members of the organization towards the accomplishment of a common vision. According to Hoy and Miskel (2008), what is common in most definitions is the enactment of “intentional influence over others to structure activities and relationships in a group or organization” (p. 419).

Debate however remains as to whether leadership is position-based or diffused throughout the organization. One view supports the distinction between the responsibilities and functions of leaders and their followers (Yukl, 2012), thus attaching a formal, position-

based approach to the meaning of leadership. An alternative view is that leadership is a property of the organization rather than the individual which can be shared among other members as well (Harris, 2006, 2013; Spillane, 2012). This view gave rise to a distributed perspective of leadership, that is examining how leadership is spread over both leaders and followers, given key aspects of their situation. In any case, both approaches can benefit the efforts made to shed light on the complex concept of leadership.

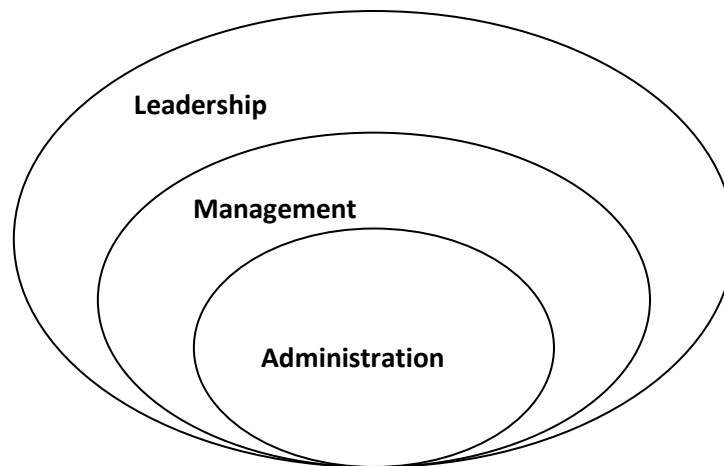
Another fuzzy issue found in the literature concerns the relationship between the concepts of leadership, management and administration. Indeed, the issue of distinguishing between the terms management and leadership and even administration has attracted the attention of researchers in the area of management. As mentioned by Mullins (1995, p. 247) «formerly, these concepts were synonymous...nowadays though, some differences have been identified with respect to the behaviour of the leader or manager towards the other parts of the organization». According to Hoy and Miskel (2008), some view leadership as being fundamentally different from administration. On the one hand, administrators focus on stability and efficiency while, on the other hand, leaders stress adaptive change and influence. In addition, Cuban (1988) views management as a function of maintenance of current organizational arrangements and leadership as a function of change. In both of the aforementioned cases, administration and management are treated as identical constructs.

A distinction between administration, management and leadership has also been made by Pashiardis (2004, 2014) (see Figure 2.2). In his opinion, the term administration has to do with the daily, administrative execution of the everyday tasks in order to assist the bureaucratic functioning of the organization. That is why, he has coined the term '*administrivia*' (Pashiardis, 2001), which reflects the daily routine and mostly operational tasks performed by managerial officers. The term *administrivia* combines *administration* with *trivial*. The concept of management has to do with the daily administration of the organization, but at the same time the manager provides direction to the organization within a time frame of a few months. Moreover, *leadership* is viewed as an overarching concept which encompasses both management and administration. Leadership entails a vision and long term direction of the organization, within the next three to five years or even ten years, thus providing strategic orientation to the organization. Through this reflection, Pashiardis considers the term *leadership* as being superior to the other two, but at the same time, he deems that a good leader has to be a good administrator and a good

manager as well. The terms are complementary to each other, but none can reflect by itself what a contemporary leader ought to be doing.

Figure 2.2 The relationships between the terms leadership, management and administration

(Source: Pashiardis, P. (2004). *Εκπαιδευτική Ηγεσία: Από την Εποχή της Ευμενούς Αδιαφορίας στη Σύγχρονη Εποχή*. [Educational Leadership: From the Era of Benevolent Neglect to the Current Era]. Athens: Metaichmio Publications.)



#### 2.4.1.2 The Evolution of Leadership - Review of Major Leadership Theories

##### *Trait Theory*

Early research on leadership focused on the personal characteristics and traits of leaders. Trait theory is rooted in Aristotle, who believed that leadership is a gift that a person is born with. In this sense, the dimension of inheritance is attached to the concept of leadership. According to the theory, leaders are superior people with special traits which distinguish them from the rest of the population. Stogdill (1948) clustered these special characteristics into the following categories:

- *Capacity*: intelligence, verbal facility, originality, judgment
- *Achievement*: knowledge, athletic accomplishments
- *Responsibility*: initiative, persistence, aggressiveness, self-confidence
- *Participation*: activity, sociability, cooperation, adaptability, humour
- *Status*: socioeconomic position, popularity
- *Situational Components*: characteristics of followers, goals to be achieved

Generally, Stogdill's research has not been fruitful since no group of such characteristics has been found to determine *who* can become a leader or not. That is, he did not find the "right" bodily size or the "right" intelligence quotient etc., so as to conclude with certainty that the person who was born with these traits could become a leader or that he/she holds greater potential to take over the leadership of an organization.

#### *Fiedler's Least Preferred Co-Worker Theory*

Fiedler (1967) proposed that the study of leadership should be conducted on the basis of specific contingency relationships. Specifically, the least preferred co-worker theory is premised on the relationships between the leader style as a trait, situational control and effectiveness. The main assumption is that certain types of leaders are more effective in specific situations and therefore leaders should be placed in contexts which are favourable to their style.

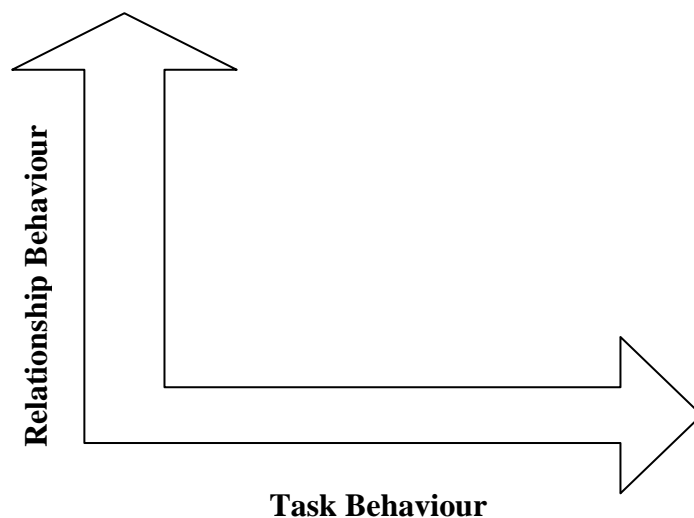
To begin with, *leadership style* was determined by the motivational system which drives the leader to specific behaviours. To measure a person's leadership style, Fiedler used an instrument called the Least-Preferred Co-worker (LPC) scale. This scale asks respondents to describe the person with whom they have been able to work least well using a series of adjectives such as friendly or pleasant. Fiedler argues that high LPC leaders have a relationship-motivated style whereas low LPC leaders have a task-motivated style. In addition, *situational control* is determined by the task structure, the position power of the leader and the leader-member relations. More specifically, Fiedler defined high control situations as cases where we have clearly structured tasks to be achieved, a strong position power, and positive relations between the leader and the group members. Finally, *effectiveness* refers to the extent to which the group achieves its primary goals.

The LPC theory holds that group effectiveness is contingent upon the leadership style and situational control. According to Fiedler, in high and low control situations effectiveness is most likely to be achieved through a task-oriented leadership style. In moderate control situations effectiveness is most likely to be achieved through a relations-oriented leadership style. Fiedler also argued that leadership style is a rather stable characteristic which cannot be adapted to the situation. Instead, he suggested trying to alter the situational control indicators until a match with the leader is achieved.

### *Life Cycle Theory*

The “Life Cycle” theory by Hersey and Blanchard (1988) is based on situational leadership theories. In essence, situational theories support that there is no “perfect” style of leadership, which anyone can employ at anytime or anywhere, but that there are various leadership styles from which leaders can select according to the situation they have to face. In contrast to Fiedler’s contingency theory, this theory posits that leadership styles are not enduring characteristics and that leaders are more flexible in moving from one style to another. An ordinary model of situational leadership (Figure 2.3) entails two axes (X and Y). On the X axis, we can identify the leader’s orientation for tasks, while on the Y axis we can trace the leader’s orientation for human, interpersonal relations.

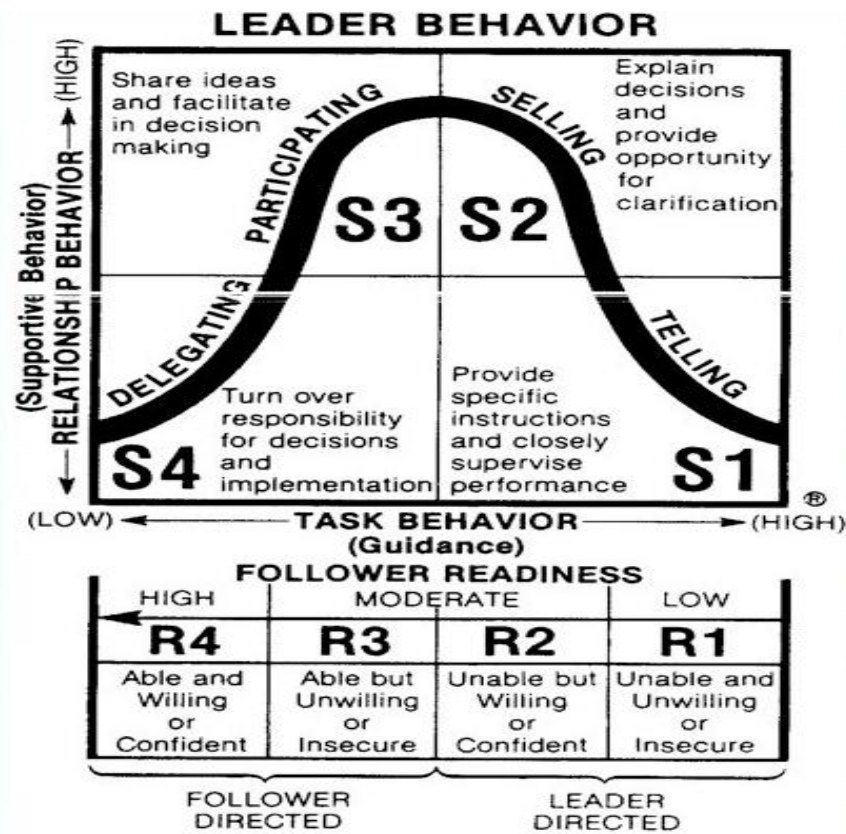
Figure 2.3. Model of Situational Leadership



According to the Life Cycle Theory, the degree of the leader’s orientation towards tasks or interpersonal relations has to be examined in conjunction with the readiness (maturity) of the follower. The term readiness (maturity) does not imply the emotional, physical or psychological maturity but the willingness, ability and confidence of the follower to carry out a specific task. The main idea behind this concept is that the greater the level of maturity of the follower the less directive an effective leader will be. In essence, as the followers become more “professional” and more aware of the task that needs to be accomplished, they need less guidance, while at the same time they do not need much praise in order to be able to work efficiently.

Figure 2.4 Hersey and Blanchard's Situational Model of Leadership

(Source: Hersey, P., & Blanchard, K. (1988). *Management of Organizational Behaviour: Utilizing Human Resources* (5<sup>th</sup> edition). Englewood Cliffs, NJ: Prentice Hall.)



Based on this theory, Hersey and Blanchard (1988) support that there is no best “leadership style” under any conditions. On the contrary, good leaders adapt their leadership style to their followers’ maturity. In particular, their theory describes four basic leadership styles (figure 2.4):

*Telling:* When followers are unable, unwilling or insecure to carry out a specific task, the leader provides specific instructions and closely supervises performance. This style has a high task-low relationship focus and is referred to as the telling style.

*Selling:* When followers are unable but willing and confident to perform the task, the leader explains decisions and provides opportunity for clarification. This style has a high task-high relationship focus and is referred to as the selling style.

*Participating:* When followers are able but unwilling or insecure to perform the task, the leader shares ideas and facilitates in decision making. This style has a low task-high relationship focus and is referred to as the participating style.

*Delegating:* When followers are able, willing and confident to perform the task, the leader delegates responsibility for decisions and implementation to the followers. This style has a low task-low relationship focus and is referred to as the delegating style.

### *Transactional and Transformational Leadership*

The study of leadership has also been influenced by the emergence of the transactional and transformational leadership theories. On the whole, transactional leaders motivate the members of the organization by exchanging rewards for work (Burns, 1978). These leaders identify the needs of the members of the organization and try to satisfy them in return for services rendered by their subordinates. According to Bass (1985), this is a form of a cost-benefit, economic approach to meet the followers' needs in return for their services.

On the contrary, transformational leadership promotes a strong emotional attachment of the followers to the leader (Bass, 1985). Transformational leaders talk about change, build a vision for the organization and inspire followers to achieve unusually high performance outcomes. Four factors characterize transformational leaders referred to as the 4I's of transformational leadership:

#### *1. Idealized influence*

Idealized influence builds trust and respect in followers and provides the basis for profound changes in ways of working (Hoy & Miskel, 2008). Transformational leaders act as role models for their followers who want to emulate them.

#### *2. Inspirational motivation*

Inspirational motivation changes the expectations of the leaders' followers in order to make them believe that the problems of the organization can be solved (Atwater & Bass, 1994). This aspect is central in developing an appealing vision for the development of the organization.



### *3. Intellectual stimulation*

Transformational leaders utilize intellectual stimulation to prompt their followers to be innovative and creative, reframe problems and approach old situations in new ways (Atwater & Bass, 1994).

### *4. Individualized consideration*

Individualized consideration means that transformational leaders assess the needs and strengths of each individual member of the organization and create learning opportunities to assist their growth and development (Atwater & Bass, 1994; Avolio, 1994; Hoy & Miskel, 2008).

#### **2.4.1.3 School Leadership and Student Achievement**

Researchers in the area of educational administration have attempted to identify links between leadership and educational effectiveness. This phenomenon is mainly due to the perception that school leaders, especially school principals, affect organizational performance. However, the empirical literature shows that both the nature and the degree of leadership effects constitute a subject of debate (Hallinger & Heck, 1998; Kythreotis et al., 2010; Nettles & Herrington, 2007; Pitner, 1988). Previous research on the effects of school leadership on students' academic achievement has produced contradictory findings. On the one hand a number of studies found some effects (Cheng, 1994; Edmonds, 1979; Kythreotis et al., 2010; Levine & Lezotte 1990; Mortimore, Sammons, Ecob & Stoll, 1988; Reynolds & Cuttance, 1992). On the other hand, other studies found no statistically significant effects (e.g. Shin & Slater, 2010; van de Grift, 1990) or even negative effects (e.g. Bruggencate et al., 2012).

According to a number of researchers, the way in which the effect of school leadership on achievement is conceptualized bears an autonomous influence on the findings (De Maeyer, Rymenans, Van Petegem, van den Bergh & Rijlaarsdam, 2007; Scheerens 2012). Based on the main research trends of leadership effects, three main causal models of leadership effects on student outcomes can be discerned (Pitner, 1988; Hallinger & Heck, 1998, 2011; Levacic, 2005): the direct effects, the indirect effects and the reciprocal effects models. An explanation of each of the three models is provided in conjunction with supporting evidence for their potential validation.

### *Model A: Direct Effects Model*

The first model supports that leadership has a direct impact on student outcomes, adjusting for prior attainment. An extended model A includes antecedent variables, i.e. school context variables, which may affect student outcomes directly or affect leadership as well. Direct effects models do not provide consistent evidence of leadership effects on student learning. According to Hallinger and Heck's (1998) review, direct effect studies mainly reported insignificant effects of leadership on student outcomes. More recent studies also failed to identify significant leadership effects (Krüger et al., 2007; Shin & Slater, 2010) whereas other studies report small but significant effects (Kythreotis et al., 2010).

The direct effects model has been criticized for failing to consider the complex processes by which principals influence school effectiveness and thus revealing very little about how leadership operates (Huber & Muijs, 2010). Given the conceptual limitations of this model, it was asserted that it cannot make a substantial contribution to understanding school leadership effects on student learning (De Maeyer et al., 2007; Hallinger & Heck, 1998). On the other hand, Nettles and Herrington (2007) maintain that the intense performance requirements and accountability initiatives necessitate that the direct effects of principals-however small- should be understood and exploited.

### *Model B: Indirect Effects Model*

The indirect or mediated effects model asserts that leadership affects student outcomes through intervening variables such as school culture, organization, teacher norms, and practices in the classroom. These models are often expanded by adding antecedent variables. According to Leithwood (2012), school leaders' indirect effects depend on the extent and nature of their influence on key mediating variables that are alterable through their direct intervention. Such effects are dampened or enhanced by moderators such as students' socioeconomic status.

Indirect effects models have shown more promise in capturing the complex organizational dynamics of schools. Scheerens (2012) argues that these models have intuitive appeal since principals are expected to function at a certain distance from teaching and learning. Moreover, they are expected to facilitate these core processes via a range of school conditions. Hallinger and Heck's (1998) review of forty studies published between 1980 and 1995 concludes that principals exercise a measurable, though indirect effect on school effectiveness and student achievement. They also reveal the paths through which principals influence student learning. These paths included school goals, school structure

and social networks, people, and organizational culture. In more recent reviews of leadership effects research (Day, Sammons, Hopkins, Harris, Leithwood, Gu & Brown, 2010; Leithwood, Day, Sammons, Harris & Hopkins, 2006), it was highlighted that school leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment, and working conditions.

#### *Model C: Reciprocal Effects Model*

This is a dynamic model in which leadership affects mediating variables and student outcomes but it is in turn affected by them. It can only be investigated by observing the long-term interactions between leadership, mediating variables and student outcomes. The specific model suggests that leaders adapt their thinking and behaviour to the organization they work (Witziers et al., 2003). According to Hallinger and Heck (2011) this model “may provide a complementary and, perhaps, more comprehensive picture of the processes at work in leadership for learning” (p.167).

The reciprocal effects model is more rare to find in leadership effect studies. In fact, Hallinger and Heck (1998) found no studies modelling reciprocal effects. Progress in testing reciprocal effects models has been hindered by methodological challenges (Hallinger & Heck, 2010, 2011). Specifically, more complex longitudinal designs are required so as to identify the causal ordering of the variables. Nevertheless, suitable and comparable longitudinal data are difficult to obtain. Moreover, it was not until recently that researchers had access to analytical tools to model complex mutual influences over time.

A recent study (Heck & Hallinger, 2010) attempted to conceptualise leadership as a process of reciprocal interaction. Longitudinal data of collaborative leadership, school improvement capacity and student achievement in 198 US primary schools were collected over a period of four years. Latent change analysis, a type of structural equation modeling, was used to analyze the data and test the proposed models. The findings provided support to a reciprocal effects model where mutually reinforcing relationships among the variables were identified. Specifically, initial achievement was positively associated with changes in both collaborative leadership and school improvement capacity. In addition, initial school improvement capacity positively affected changes in collaborative leadership and initial collaborative leadership positively affected changes in school improvement capacity. Finally, the analysis confirmed the existence of an indirect feedback loop between leadership and student achievement. Specifically, changes in collaborative leadership were positively related to changes in school improvement capacity and changes in school

improvement capacity were positively related to growth in student learning. Conversely, growth in student learning was positively related to changes in school improvement capacity and changes in school improvement capacity were positively related to changes in collaborative leadership.

In the last decade, a number of meta-analyses have been conducted in an attempt to estimate the average effect size of school leadership on student achievement. Overall, the findings ranged from very weak effects to strong effects. Firstly, Witziers et al. (2003) conducted a quantitative meta-analysis of direct effects studies between 1986 and 1996 across a variety of countries. According to their results, overall school leadership had a positive and significant impact on student achievement although a very small one. Specifically, the average effect size of leadership was found to be 0.02, which is interpreted as indicating none or very weak impact. However, a more refined analysis showed that contextual differences in the studies had an impact on this finding. For example, no evidence of leadership effects was found in Dutch research or in secondary schools. Moreover, when looking into specific leadership behaviours, it was found that “defining and communicating mission” had an average effect size of 0.19.

Negligible school leadership effects were also found by Creemers and Kyriakides (2008) in their meta-analysis of school effectiveness studies conducted between 1988 and 2008. Specifically, their study showed that leadership has an average direct effect of 0.07 on student outcomes. A sensitivity analysis also showed that when removing the outliers from the sample the effect size is considerably reduced. In congruence with Witziers et al. (2003), Creemers and Kyriakides (2008) also found that studies conducted in The Netherlands and in secondary education had a negative interaction with the reported effect size. Furthermore, the effect size of school leadership was found to be reduced in multilevel as compared to unilevel studies.

More recent meta-analyses reached similar findings to the aforementioned studies. One of these meta-analyses (Leithwood & Sun, 2012; Sun & Leithwood, 2012) showed significant but weak direct effects of transformational school leadership on student achievement (average effect size=0.09) on the basis of 20 unpublished direct effects studies. Analyses of leadership effects on separate achievement measures yielded slightly larger effects, that is, 0.15 for reading and 0.18 for maths. Moreover, two separate dimensions of transformational school leadership – building collaborative structures

(average effect size= 0.17) and providing individualized support (average effect size=0.15) - had also slightly larger direct effects on achievement. The researchers also inquired into indirect leadership effects yet the variety of variables involved and the different types of effect sizes reported reduced the sample to a small number of studies. This analysis showed no significant effects on student achievement when controlling for both socioeconomic status and students' cognitive abilities.

Another meta-analysis investigated both the direct and indirect impact of school leadership on student achievement synthesizing 25 studies conducted between 2005 and 2010 (Hendriks & Steen, 2012). The direct effects analysis was performed using a vote-counting procedure due to the fact that not all studies reported standardized effects for all relevant effects. The vote-count indicated that in 74% of all direct relationships no significant school leadership effect was found. In 20% of the relationships examined a significant positive effect was identified whereas in 4% of the relationships a negative significant effect was found. In the case of indirect effects, 15 publications were used. The mean effect size was found to be 0.031 which does not deviate significantly from 0. However, when removing a publication with highly negative effects the mean effect size equals 0.06 which deviates significantly from 0. Even in this case though, the effect size is deemed to be negligible.

In contrast to the aforementioned meta-analyses, other synthesis attempts found larger effects of leadership on student outcomes, such as the meta-analysis of Marzano et al. (2005) and Robinson et al. (2008). The first meta-analysis, which included 70 studies conducted between 1970 and 2001, revealed 21 responsibilities of school leaders which affect student achievement. The average correlation between the principals' behaviour and achievement reached the size of 0.25, which is much higher than those reported by the previously mentioned meta-analyses. This difference might be attributed to a number of factors. Specifically, this meta-analysis included only studies conducted in the USA which are typically found to have larger effect sizes. Moreover, the correlation coefficient included both direct and indirect effects. In addition, Marzano et al. (2005) did not use a multilevel design and their analysis was based largely on unpublished studies.

Similar findings to the study of Marzano et al. (2005) were reached by Robinson et al. (2008). This meta-analysis included 27 studies on the direct and indirect leadership effects on student outcomes. In the case of Robinson et al. (2008), the meta-analysis captured the practices and behaviours of both the principal and other school leaders thus attaching a distributed perspective to the conceptualization of school leadership. The first analysis,

which included 22 out of the 27 studies, examined the relative impact of two types of school leadership, i.e. Instructional and Transformational Leadership. The findings showed that the mean effect sizes of Instructional and Transformational Leadership were 0.42 and 0.11 respectively. Although the effect size for Transformational leadership was similar to the one found by Leithwood and Sun (2012), it is noteworthy that Instructional leadership had a three to four times larger effect size. Reflecting on this finding, the researchers maintain that the “closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on students’ outcomes” (p.664). However, they also note that the outcome measures used in the transformational leadership studies were mostly social outcomes, whereas instructional leadership studies focused mainly on academic ones. Robinson et al. (2008) also examined the relative impact of five leadership dimensions utilizing 12 of the 22 studies which were included in the first analysis. This analysis indicated moderate to strong leadership effects with the strongest average effect size being that of “promoting and participating in teacher learning and development” (Effect Size= 0.84 standard deviations). However, we must note here as well that no multilevel design was adopted whereas effect sizes resulted from different conceptual models (Leithwood & Sun, 2012).

#### **2.4.1.4 The Pashiardis-Brauckmann Leadership Radius Framework**

Based on the existing literature on school leadership, it is possible to discern a number of leadership practices or behaviours which are deemed critical for raising student outcomes, either directly or indirectly. These leadership practices and behaviours were used in order to formulate the Pashiardis-Brauckmann theoretical framework. These practices may be clustered around five domains or leadership styles (Instructional, Structuring, Participative, Entrepreneurial, Personnel Development) which constitute the *Leadership Radius*, the effects of which were investigated. Thus, instead of adopting a single measure for leadership, an integrated construct (Scheerens, 2012) was proposed in order to examine the effects of each separate style on school processes and outcomes. Next, a review of each leadership style is provided as conceptualized in the specific Pashiardis-Brauckmann framework.

### *Instructional Style*

Instructional leadership has been derived from the effective schools research during the 1980s (Hallinger, 2010; 2011; Krüger & Scheerens, 2012). This body of research pointed to instructional leadership as one of the factors which distinguished effective from less effective schools. The instructional leadership style has a strong focus on the improvement of the quality of teaching and learning. Within the framework of this generic notion, different conceptualizations with regard to the construct have been developed. The Pashiardis-Brauckmann conceptualization of instructional leadership entails the following actions and behaviours that a school leader ought to exhibit: defining instructional objectives, setting high expectations, monitoring/evaluating students and teachers, enabling the achievement of instructional objectives and stimulating instructional innovation.

There is a vast body of evidence with regards to the effectiveness of the foregoing instructional leadership dimensions. To begin with, Dinham (2005) investigated the principal's role in producing outstanding educational outcomes in Years 7 to 10 in 38 secondary, government schools in New South Wales, Australia. One of the findings of the case studies was that effective principals clarify the core purpose of schooling, that is teaching and learning. This is also supported by Hallinger and Heck's (1998) review which showed that the "definition of the school mission" (and consequently the definition of the instructional objectives) is one of the main components of instructional leadership. This initial review has been corroborated by findings from another more recent review, where Hallinger (2005) concludes that instructional leadership in practice places the greatest focus on the dimensions of shaping the school's mission and creating a positive learning environment. Findings revealed that effective school principals lead through building a learning mission and aligning teaching and learning activities with the defined purposes.

In addition, effective school leaders seem to hold high expectations from teachers and students (Hallinger, 2005; 2011). In a review of the direct effects of leadership on student achievement, Nettles and Herrington (2007) identify high expectations for student performance as a primary constituent of effective schools. Mulford and Silins (2003) also conclude that high expectations from students and staff (under the concept of transformational leadership) affect student outcomes through organizational learning and the teachers' work. The specific result has emerged from a longitudinal project in Australia named LOLSO, (Leadership for Organizational Learning and Student Outcomes) which combined both quantitative and qualitative research methods.

A number of researchers also maintain that monitoring and evaluation are primary constituents of an effective instructional leader. Southworth (2002), in a qualitative study of successful leadership in small primary schools in England found that monitoring teacher and student performance were one of the primary strategies utilized by the heads in order to improve the quality of teaching and learning. In addition, in a qualitative study of 49 Cypriot primary school principals nominated as effective by school inspectors it was revealed that effective principals seem to be knowledgeable about learning and instructional problems around the school and well informed about the students' progress (Pashiardis, 1998). They all possessed a personal feeling of responsibility for school results and were aware of the impact the school could have on their students. Most of these principals were keen on evaluating their staff constantly through a formative and developmental process. In addition, Marzano et al. (2005) found in their meta-analysis that monitoring and evaluation of the effectiveness of school practices and their impact on student learning constitutes one of the responsibilities of principals which are positively correlated with higher student achievement. Similarly, in another meta-analysis it was shown that planning, coordinating and evaluating teaching and the curriculum bears a strong impact on student outcomes (Robinson et al., 2008). This leadership dimension involves the support and evaluation of teaching through regular classroom observations and the provision of relevant feedback to teachers as well as the direct coordination and review of the curriculum so that it is aligned to school goals.

The principal's role in enabling the achievement of instructional objectives is also of great importance. One of the practices adopted by instructional school leaders entails the dialogue with teachers in order to promote reflection on teaching and learning. In an exploratory study, conducted by Blase and Blase (2002), an open questionnaire was sent to 890 teachers in order to investigate their perception of the characteristics and effects of instructional school leadership. The inductive analysis of the data identified that *talking to teachers to promote reflection* constitutes a major area of instructional leadership. To this effect, five primary strategies were adopted:

1. Making suggestions
2. Giving feedback
3. Modelling
4. Using inquiry and soliciting advice and opinions about instructional matters
5. Giving praise



The effects of these behaviours were to enhance teacher self-reflection, innovation/creativity, risk taking, motivation, satisfaction, self-esteem, efficacy and sense of security.

The principal may also enable the fulfilment of instructional objectives by protecting the teachers from external interruptions, in a sense acting as a “buffer zone”. This aspect of school leadership has been shown to be positively associated with student achievement (Hallinger, 2003; Marzano et al., 2005; Robinson et al., 2008). Furthermore, Dinham (2005) found student support to hold an important part in enabling the achievement of instructional objectives. In this study, student support was facilitated through the initiation of student welfare programs and procedures. The main idea was that students will learn better when the school responds to their welfare needs. Overall, the principals recognized that they had to create an environment where each student would be assisted to succeed academically.

Furthermore, effective leaders are constant stimulators of instructional innovation. According to Marzano et al. (2005), the “optimizer role” adopted by school leaders contributes to an increase in student achievement. This dimension refers to the principal inspiring and leading new and challenging innovations in the teaching strategies they employ. Other researchers also point to the effectiveness of this domain of leadership practices (e.g. Barnett & McCormick, 2004; Blase & Blase, 2002; Leithwood & Jantzi, 2005).

Instructional leadership remains a dominant paradigm for conceptualising effective school leadership. The strong advocacy for adopting an instructional leadership style has been corroborated by a recent meta-analysis investigating this style as a holistic construct (Robinson et al., 2008). Specifically, Robinson et al. (2008) reached the conclusion that the highest impact function of school principals is related to instructional leadership. In fact, it is reported that the effect of instructional leadership on student learning is notably greater than that of transformational leadership.

### *Structuring Style*

The structuring style of leadership concerns the aspects of providing direction and coordination to the school unit. A first dimension of this leadership style concerns the creation and communication of a clear vision and mission for the school. Kouzes and Posner (2007, p.65) posit that exemplary leaders have a clear picture of the future which

pulls them forward. In a sense, they “live their lives backwards” seeing pictures of the outcomes before even starting their project.

Research has shown that defining a clear vision and mission affects the processes and outcomes of effective schools. Barnett and McCormick (2004), in a combined multilevel and structural modelling analysis concluded that the principals’ vision has a direct effect on task focus goals and excellence in teaching. This vision provided direction and purpose to the school and instigated teachers to adopt innovative and professional teaching practices. With regard to student learning, Witziers, et al. (2003) concluded that the leadership behaviour of defining and communicating the school’s mission is positively related to student outcomes. Mulford and Silins (2003), also found that the communication of a vision and relevant goals to students and staff (within the framework of transformational leadership) affects student outcomes through organizational learning and the teachers’ work. In a similar line of inquiry, Dinham’s (2005) findings showed that effective school leaders build a long-term agenda and vision rather than short-term goals. These principals see the “big picture” and communicate this to the staff through high and clear expectations.

The establishment of an orderly environment is another important facet of effective structuring leaders. A piece of research which investigated the greatest needs of improvement of Cypriot elementary school principals (Pashiardis, 1995) showed that the management of facilities is considered by principals to be the third most important area of effective leadership. According to this area, an effective leader should manage all school facilities effectively as well as efficiently supervise their maintenance to ensure clean, orderly, and safe buildings and grounds. In congruence with these findings, Dinham (2005) found that effective principals place high emphasis on the creation of a pleasant physical environment in the school. The principals relate school cleanliness with the school’s pride and reputation within the community. In a similar manner, students and staff speak very positively with regard to this aspect of their school.

Beyond the physical environment, effective structuring leaders ensure that an orderly environment is created by establishing and following clear rules and procedures. Pashiardis’ (1995) findings indicate that the fifth most important area of leadership effectiveness related to ensuring that school rules are uniformly observed and that consequences of misconduct are applied equitably to all students. Similarly, Dinham’s findings (2005) suggest that effective principals apply policy and guidelines in a consistent manner. Moreover, they initiate clear structures and well-understood responsibilities.

However, this does not imply rigidity on behalf of the principal but it is a way to ensure the enforcement of the simple and standard issues that the school members have to deal with. According to Brauckmann and Pashiardis (2011) effective principals personalize the enforcement of universal rules and regulations or use them creatively depending on the situation and the specific circumstances.

Meta-analyses of school leadership effects are also consistent with the aforementioned findings. Specifically, the study of Marzano et al. (2005) indicates that the leadership responsibility of establishing standard procedures and routines, in order to secure order and discipline is positively associated with an increase in student achievement. In a more recent meta-analysis by Robinson et al. (2008), it was shown that the establishment of an orderly and supportive environment by school principals had a moderate effect on student achievement.

The establishment and execution of a clear school policy is complemented by a move towards enabling restructuring and risk taking. According to Dimmock (1999), the challenges school leaders have to face within the context of restructuring produce deep tensions in their work. Nevertheless, effective principals enable restructuring by utilizing appropriate strategies. To this effect, principals are open to change and seek to adapt to the new requirements. According to Dinham's (2005) findings, effective principals perceive threats as opportunities and find ways to benefit from change. Effective leaders utilize the rules and boundaries of the system in a creative manner and use their available discretion to manage efficiently administrative constraints. They often act as "ground breakers", support new approaches and encourage staff to leave their "comfort zones". In this context, they welcome new ideas, experiment and risk time, money and failure in order to give a try to the proposed initiatives (Dinham, 2005). Other studies also indicated that principals were willing to take risks if they felt that it was for the improvement of their school, the teachers and the students. They all had ideas which differed from those of the Ministry but went ahead and implemented some of them (Brauckmann & Pashiardis, 2011; Pashiardis, 1998). Similarly, Marzano et al.'s (2005) meta-analysis showed that principals affect student achievement by adopting a change agent role, that is, being willing to challenge the status quo.

Recent quantitative studies indicate that structuring leadership as an integrated concept is positively related to student learning. The study of Kythreotis et al. (2010) showed that Greek language achievement is influenced by the interaction between the principal's structural frame and master goal orientation in classroom. Moreover,

Brauckmann and Pashiardis (2011) found that the structuring style predicted to a greater extent than the rest of the leadership styles whether a teacher worked in a high-performing school.

### *Participative Style*

The participative style of school leadership is considered to bear an impact on school processes and outcomes. For this major theme of educational leadership, Pashiardis, Thoddy, Papanoum and Johansson (2003) use the term, “mediated”. This term recognizes that leaders can organize their management activities through others in many different ways according to their own preferences, the types of people with whom they are working and the culture of the organizations in which they work. The term “mediated” includes concepts which can be found in other Education Management texts described as distributed leadership, team leadership, delegation, followership and servant leadership. In the current study, the term *Participative Leadership* is used.

School principals who adopt a participative approach to leadership need to extend their power to involve all members of the staff (Bezzina, 2001; Harris, 2013). A participative style of leadership “implies the relinquishing of some authority and power, which is not an easy task, and a repositioning of the role from exclusive leadership to a form of leadership that is more concerned with brokering, facilitating and supporting others in leading innovation and change. It will require a different conception of the organization, one that moves away from the bureaucratic to the collaborative” (Harris, 2012, p.8). According to Pashiardis (1994), teachers need to feel they have more to offer to the school than just teaching autonomously within their classroom. Principals should be ready to allow room for more initiatives and invite staff to participate in the formulation of educational policy. They should be flexible enough to allow teachers to participate in problem solving and be responsible for widely shared decision-making (Georgiou et al., 2001; Moos, 2010). Similarly, Riley and MacBeath (1998) claim that effective leaders are those who share their leadership and utilize their staff’s specialization and leading skills. In this way, they develop a professional community where all stakeholders take an active part in school life. This domain of leadership behaviours is especially important since, “principals who share leadership responsibilities with others would be less subject to burnout than principal ‘heroes’ who attempt the challenges and complexities of leadership alone” (Hallinger, 2003, p. 345).

Much empirical evidence points to the importance of participative decision making. Specifically, Pashiardis (1995) found that elementary school principals in Cyprus consider their active involvement in decision making and team building as the most important component of leadership effectiveness. Furthermore, Bogler's (2001) study, revealed that the participative style of decision making adopted by school leaders has a positive, indirect effect on the teachers' satisfaction through their occupation perceptions. This has been the result of a quantitative piece of research conducted in Israeli schools with a number of 745 teachers as respondents. Another study in Israel elementary school (Somech, 2005) indicated that participative decision making is positively and directly related to teacher empowerment and school-staff team innovation. Teacher empowerment also functioned as a mediator in the participative decision making-innovation relationship. In a more recent study (Hulpia, Devos, Rossel & Vlerick, 2012; Hulpia, Devos & van Keer, 2011) in 46 large secondary schools in Belgium, multilevel modeling analysis revealed that teachers who believed that they had more opportunities to participate in school decision making reported feeling more committed to the school.

Fostering staff cooperation is also considered as an important aspect of participative leadership behaviour. According to elementary school principals in Cyprus, the most important area of leadership effectiveness is fostering collegiality and team building among staff and encouraging their active involvement in decision making (Pashiardis, 1995). Indeed, in a qualitative study of 49 primary school principals nominated as effective by school inspectors, Pashiardis (1998) found that the principals built collaboration with teachers in planning school activities. Southworth (2002) also found that principals who were in the lead of school success orchestrated teacher and staff collaboration. The improvement of performance heavily relied on the teamwork of teachers who shared common goals and functioned in a climate of professional openness. Moreover, within the context of the International Successful School Principalship Project, collaboration building was found to be an important aspect of successful school leadership. Moos (2010) investigated principals in 6 Danish schools to find that relations between school leaders and the rest of school stakeholders was based on collaboration, participation and dialogue that took place within an intricate web of groups and teams. Pashiardis et al. (2011b) also found that successful leaders in Cyprus elementary rural schools create a positive climate for collaboration by developing meaningful interpersonal relationships with all school members. This inquiry was expanded within the context of Cyprus secondary schools (Pashiardis, Kafas & Marmara, 2012) reaching the conclusion that

successful principals promote the creation of a collaborative learning environment by equally distributing responsibilities as well as fostering team spirit among not only teachers and students but also secretaries and support staff.

Effective school leaders are expected to foster teacher participation and collaboration by developing their commitment towards school improvement. Teacher commitment has been identified as a major aspect of a school's capacity for reform and renewal (Geijsel, Slegers, Leithwood & Jantzi, 2003; Hulpia et al., 2011) In a piece of research utilizing multilevel modelling, in a sample of 22 primary schools in Cyprus, teacher commitment was found to affect academic emphasis in the classroom while both variables were found to be positively associated with student achievement in mathematics and Greek language (Kythreotis et al. 2010). With regard to this aspect of participative leadership, Yu, Leithwood, and Jantzi (2002) inquired about the effects of transformational leadership on teachers' commitment to change using a sample of 107 primary schools in Hong Kong. Linear regression analyses indicated that transformational leadership explains about 11 per cent of the variance in teachers' commitment, with the greatest effect being on teachers' context beliefs. Most of the variation in teacher commitment was explained by the dimensions of developing a widely shared vision for the school, and building consensus about school goals and priorities. Research reported by Geijsel et al. (2003) also investigated the effects of transformational leadership on teachers' commitment and effort towards school reform using two comparable sets of data from samples of Canadian and Dutch teachers. Structural equation modelling was used to test the model of transformational leadership effects. The findings showed modest effects of transformational leadership on teachers' commitment to change, the greatest of which were on teachers' context beliefs. The study conducted by Hulpia et al. (2011; 2012) also indicated the teachers' organizational commitment was related to the quality of leadership support, cooperation within the leadership team and participative decision making.

Further studies also indicate the importance of participative leadership as a holistic construct. For example, Leithwood and Mascall (2008) attempted to identify the impact of collective leadership on student achievement through the mediating effect of key teacher variables, that is teacher motivation, capacity and work setting. Evidence was provided by 2, 570 teachers from 90 elementary and secondary schools while student achievement data in language and maths were averaged over 3 years. The subsequent path analysis showed that collective leadership had modest but significant indirect effect on student achievement through teacher motivation and work setting. Moreover, in a study of 362 academically

improved secondary schools in England (Sammons, Gu, Day & Ko, 2011) distributed leadership was found to have a small but significant indirect effect on change in student outcomes through the mediating effect of staff leadership. A higher effect size of collaborative leadership was found in a four year longitudinal study by Hallinger and Heck (2010). This study revealed that collaborative leadership was positively related to growth in student learning indirectly through building the school's capacity for academic improvement. Hallinger and Heck (2010; 2011) also provided evidence of a reciprocal effects leadership model where the initial student achievement and the school's academic capacity are also related to changes in collaborative leadership. This reciprocity suggests that the aforementioned constructs are part of "a mutually reinforcing relationship" which strengthens the influence of leadership effects over time. Finally, Brauckmann and Pashiardis (2011) research revealed that the participative style of leadership predict in a negative way the odds that a teacher works in a high performing school. A possible interpretation provided was that participative leadership is required to a greater extent in schools where performance is low and needs to be raised.

In conclusion, all these findings suggest that we need to adopt a new content for school leadership, one that will be able to replace hierarchical structures (Camburn, Rowan & Taylor, 2003) and involve more lateral forms of leadership, where teachers and other stakeholders will possess a central part in school management issues (Harris, 2006; 2012). According to Mulford and Silins (2003), "success is more likely where people act rather than always reacting, are empowered, involved in decision making through a transparent, facilitative and supportive structure, and are trusted, respected and encouraged" (p. 186).

### *Entrepreneurial Style*

External changes such as greater competition between schools, privatization and accountability for academic results have widened the expectations of the role of the head (Weindling & Dimmock, 2006). Governments and local stakeholders exert greater pressures upon school leaders. Communities are questioning school programmes, policies and procedures. Parents are demanding greater participation in school programmes and even in school administration and the day to day running of the schools. Legislators are demanding more widespread results and higher student achievement and performance standards. Within this context, it is important that principals incorporate an entrepreneurial dimension to the set of their adopted practices. As Leithwood (2001) points out, "school

leaders implementing market solutions in truly competitive environments need marketing and entrepreneurial skills” (p. 222). According to Hentschke (2010), entrepreneurial leaders utilize financial, material and human resources in new and innovative ways. Brauckmann and Pashiardis (2011) define entrepreneurial leadership as “the creative utilization of external networks and resources in order to aid the implementation of the school mission” (p.16).

The entrepreneurial style of leadership-as defined in the Pashiardis-Brauckmann framework- primarily concerns the involvement of the community and, especially the parents in the school affairs. Taking into account the complex nature of a school’s mission it is an imperative that schools form alliances with external agents to support their work (Hentschke, 2010). According to Sanders (2001), when schools, families and communities work collaboratively as partners, the students reap most of the benefits. These partnerships may create a safe school environment, enhance parenting skills, encourage the provision of welfare services, improve academic achievement as well as contribute to the accomplishment of a number of other school goals (Sanders 1996; Sanders, 2001; Sheldon, Epstein & Galindon, 2010).

A number of studies point to the importance of principals fostering effective partnerships with the external environment of the school. In the study of Pashiardis (1998), effective principals created a positive climate between parents and the school which was conducive to learning. The principals stressed the fact that children improved their behaviour in school once they sensed that their parents had a close interaction with their teachers and the principal. In addition, Harris and Chapman (2002) conclude that schools which have strong ties to the local community are more likely to gain their support in difficult times. In their piece of research, headteachers who had implemented successful school improvement programmes had broken down the barriers between the school and the community and sought to engage parents in school life. Also, Dinham’s (2005) case studies of secondary schools in Australia revealed that one of the components of effective leadership related to the external awareness and engagement of the wider environment of the school. The external environment included other schools and systems, the community, society, business and government. Principals utilized external networks to facilitate change and keep the school improving. A more recent study across the Commonwealth (Australia, Canada and Kenya) showed that principals forged productive partnerships with the community as a strategy to solve problems creatively and support students (Scott, Scott, Dixon, Okoko & Dixon, 2013). This approach required leaders to adopt an entrepreneurial



approach, to think and act innovatively rather than simply managing their school. Within the context of the International Successful School Principalship Project (ISSPP), building external relations and alliances with important community actors has been repeatedly highlighted across a diverse range of educational settings (Leithwood & Day, 2007; Pashiardis et al., 2011b; Pashiardis et al., 2012). These aspects of leadership behaviour led to a trusting learning environment, improved student behaviour and higher student achievement.

Acquiring material and human resources for the improvement of the personnel and student performance constitutes another area of entrepreneurial leadership. Indeed, Dinham's (2005) findings show that effective principals utilize external resources to initiate change and improvement at the school place. In a meta-analysis of 19 studies strategic resourcing was also identified as having a moderate indirect effect on students (Robinson et al., 2008). Strategic resourcing, in this case involved acquiring and allocating material and staff resources in alignment to priority teaching goals. Finally, within the framework of the Cooperative Research Project in Victoria, Australia, Caldwell (1998) reports that the school principals showed concern about the overall levels of resources acquired for their schools. The Cooperative Research Project, which began in 1993 and lasted until 1998, investigated the processes and outcomes of the Schools of the Future reform, including the impact of leadership on the student outcomes. The structural equation modelling analysis which was conducted showed that the expected benefits of better resource management by principals have an indirect effect on curriculum and learning benefits (i.e. improved learning outcomes for students) through personnel and professional benefits and confidence in attainment of the Schools of the Future objectives.

Overall, entrepreneurial leadership as a holistic concept has been quite uncommon in the educational leadership literature. The concept has been operationalised as a comprehensive facet of leadership by Pashiardis and Brauckmann providing a new direction for educational leadership research (Brauckmann & Pashiardis, 2001; Pashiardis, 2014). In their study, it was found that in most of the European countries the entrepreneurial leadership style had acquired the highest score. Moreover, this leadership style was found to be mostly present in low-performing schools suggesting that there is more need to employ entrepreneurial practices in cases where performance needs to be raised.

### *Personnel Development Style*

Developing the school personnel constitutes a major area through which school leaders can influence school performance outcomes. Indeed, according to Harris, Day and Hadfield (2003), effective headteachers develop the school through developing others. Youngs and King (2002) assert that one of the ways “principals shape school conditions and teaching practices is through their beliefs and actions regarding teacher professional development” (p.644). In this effort, they provide intellectual stimulation and individual support to the staff as well as appropriate models of best practice (Leithwood, 1994; Leithwood & Sun, 2012).

A first dimension of this leadership style involves the provision of opportunities for teacher professional development. Researchers point to the above direction based on empirical evidence that their studies have yielded. In a qualitative research in two suburban Flemish elementary schools, one group of teachers maintained that the school leader created a culture of professional development “by passing through relevant information, by allowing teachers to participate in in-service training, by buying relevant professional journals, by discussing interesting innovations at meetings” (Clement & Vandenberghe, 2001, p.47). Personnel development strategies which emerged from other studies included support for external training (Harris et al., 2003), developing coaching relationships among educators and implementing action research (Blase & Blase, 2002), as well as utilizing self-reflection as a tool for professional growth (Notman & Henry, 2011). The interaction between the school leader and teachers was dominated by the creation of learning opportunities and learning space for teachers which foster a collegial climate for the development of learning experiences.

Staff development also entails practices of acknowledging and rewarding exemplary performance. According to Kouzes and Posner (2007), recognition of performance builds “a strong sense of collective identity and community spirit that can carry a group through extraordinarily tough times” (p.69). In the study of Harris et al. (2003), the teachers viewed staff development as “a means of rewarding staff, re-motivating others and at times keeping busy those who need to be occupied” (p.74). Moreover, according to Pashiardis’ findings (1998), effective leaders find innovative ways to reward teachers because they believe that rewards are an important motivator for people to act. This has also been a result of the meta-analysis of Marzano et al. (2005). According to their meta-analysis, the leadership responsibility which related to the acknowledgment and rewarding of individual accomplishments was positively correlated to an increase in student achievement.

School leaders should always take into account the importance of the beliefs of the teachers in any attempt for improvement. According to Bandura (1986; 1997) such system of beliefs is likely to have an impact on the regulation of their thinking, emotions and behaviour. Central to this form of self-regulation is the sense of self-efficacy of teachers. Self-efficacy is defined as “an individual’s overall judgment of his or her perceived capacity for performing a task” (Hoy & Miskel, 2008, p. 157). Teacher efficacy or self-efficacy is positively related to their instructional practice (Harnett, 1995), the use of democratic processes in classroom management (Hoy, Tarter & Bliss, 1990), student achievement in literacy and maths (Schunk, 1991) as well as student efficacy and motivation (Ashton & Webb, 1986; Midgley, Feldlaufer & Eccles, 1989).

In previous studies, the school principal’s behaviour was deemed important in enhancing the self-efficacy of teachers. For example, Hipp (1996) investigated in 10 middle schools, the relationship between the leading behaviour of principals and the teachers’ efficacy, utilizing a mixed-methods approach. The conclusion of the first quantitative phase was that school principals influence teacher efficacy by employing some forms of transformational leadership behaviours (i.e. modelling behaviour, providing contingent rewards, inspiring group purpose). The qualitative phase which followed identified eight additional leadership behaviours which influence teacher efficacy: providing personal and professional support, promoting teacher empowerment and decision making, managing student behaviour, promoting a positive climate for success, fostering teamwork and collaboration, encouraging innovation and continuous growth, believing in staff and students, inspiring caring and respectful relationships. Also, Coladarci and Breton (1997) found that special education teachers who appreciated supervision more highly stated higher levels of self-efficacy. On the other hand, Tschannen-Moran and Hoy (2007), in a survey of 225 teachers found no empirical support of leadership influences on their self efficacy beliefs. Thus, further research still needs to be conducted on the impact of this specific source of self efficacy.

Finally, site-based management approaches require school principals to be in a position to effectively recruit, select and retain teachers. According to Baker and Cooper (2005) principals do matter in selecting high calibre teachers. In particular, they maintain that “the most important actions a principal can take toward improving schooling quality, especially in poor urban schools, are to recruit and retain high-quality teachers” (p. 450). With regard to teacher retention, an analysis of the Schools and Staffing data of the U.S. showed that the most important factor of novice teacher retention was job satisfaction

(Stockard & Lehman, 2004). Nevertheless, school management was among the most important factors in job satisfaction. In addition, Guarino, Santibanez and Daley (2006), conducted a review of the empirical research which focused on information from the Schools and Staffing Surveys. One of their conclusions was that mentoring and induction programs, the level of autonomy granted to teachers, and the degree of administrative support received were positively related to reduced teacher attrition. Despite the findings from these studies, research on the leadership effects on recruitment and retention is still scarce.

Overall, developing people is strongly asserted to form one of the core sets of successful leadership practices (Leithwood et al., 2006; Day et al., 2010). In their work, Leithwood and colleagues use the specific terminology to describe the leadership behaviours of providing individualized support, offering intellectual stimulation, and providing an appropriate model to teachers. Based on previous evidence, they maintain that these aspects of leadership are important in building organizational capacity for improved student achievement. Moreover, Brauckmann and Pashiardis (2011) provide evidence of a positive association between personnel development and high school performance across Europe. The strongest effect of this set of leadership practices was reported in the meta-analysis of Robinson et al. (2008). Specifically, promoting and participating in teacher learning and development was found to be the leadership dimension which was most relevant to high student outcomes.

## **2.4.2 Student Citizenship Outcomes**

### **2.4.2.1 The Concept of Citizenship in Education**

In a world of rapid change and increasing diversity, the need for an active, informed and responsible body of citizens is almost universally acknowledged (Pashiardis et al., 2009). The concept of citizenship, however, is not a novel one. The relationship between the citizen and the state formed a significant issue of debate in ancient Athens. In fact, Aristotle called for citizens to participate actively in public institutions and to be governed by them. Currently, the terms *Politiotita* (from the Greek word *Politeia*: state) and especially *Politotita* (from the word *Polis*= city) appear in the language of the Greek-Cypriot educational system. Both terms are deemed to be the Greek equivalent of the English term “citizenship”.

Although the concept of citizenship can be traced back to Ancient Greece, to date there is no academic nor policy-related consensus on its main constituents (Evans, 2008; Keating, 2009; Schulz, Ainley, Fraillon, Kerr & Losito, 2010). In fact, citizenship may be defined by a number of primary elements such as rights and duties, democracy, culture and identity, and active participation in state affairs. Citizenship may also be seen as multilayered operating both at the local, national and supranational levels (Delanty, 1997; Osler & Starkey, 2006).

Early modern political thought focused on the rights and responsibilities of citizens to the state. The rights model assumes a formal understanding of citizenship and is closely associated with the work of T.H. Marshall. Marshall (1964) distinguished rights into civic rights, political rights and social rights. The civic aspects of citizenship provide citizens with individual rights such as freedom of speech, the right to own property and equality before the law. The political aspect of citizenship provides citizens the opportunity to participate in the political process and thus exercise political power whereas the social aspect provides citizens with the health, education and welfare needed to participate in their communities and civic culture. Those rights have a formal status and are connected to corresponding duties since they result from the citizens' contribution to the state in the form of work, military service and parenting.

The Marshallian understanding of citizenship is related to the concept of the welfare state. Marshall viewed citizenship as an institution that would guarantee the working class a minimum of civilized existence by protecting them from accident, sickness and unemployment. However, one criticism of Marshall's ideas was that he neglected gender, race and ethnicity. Overall, Marshall took the definition of citizenship for granted unlike contemporary theories which contest the citizen's identity (Isin & Turner, 2007). Delanty (1997) also contests that Marshall's model excludes to notion of active citizenship.

A balance between rights and duties is best achieved within a democratic political context. In fact, citizenship remains important as an active domain of democracy (Isin & Turner, 2007). According to Crick (2008, p.13)

“democracy is both a sacred and a promiscuous word. We all love her but we see her differently. She is hard to pin down. Everyone claims her but no one can possess or even name her fully. To give any definition for a class to learn would not be particularly democratic. To have any open-ended discussion about possible meanings could be reasonably democratic”.

Under the light of the aforementioned assumption, a number of conceptions regarding democracy need to be provided.

First of all, democracy can refer to the prevailing of the majority's will. In fact, the word derives from the Greek constituents of *demos* (people) and *cracy* (rule), meaning the rule of the people. It could also refer to the good or just governance through the democratic behavior of certain institutions and authorities (Crick, 2008). In this case, a well-functioning democracy needs to embrace elements such as belief in the rule of law, freedom of the press and fair elections. Democratic behaviour may also allude to the equal treatment and respect of everyone even when they are unequal in talent or status.

Crick (2008) reports four broad usages of the concept of democracy. Firstly, democracy was used in Ancient Greece by Plato and Aristotle. Plato attacked democracy as being the rule of the poor and uneducated over the educated and knowledgeable. Aristotle modified Plato's view to support that good governance can emerge from the rule of the few educated with the consent of the many. The second historical usage is identified in the Roman Republic, in Machiavelli's Discourses, in 17th century English and Dutch republicans and in the early American republic. According to this contextual interpretation of democracy good government is mixed government just as in Aristotle's theory but under constitutional law. The third usage of democracy is identified in the events of the French Revolution and the writings of Jean Jacques Rousseau. Everyone regardless of education or property has a right to express his or her will about state affairs. The fourth usage of democracy is traced in the contemporary American and European constitutions and reflects the notion that all people can be active citizens but should respect the equal rights of other citizens within a regulatory legal order that guarantees those rights.

Citizenship is not only viewed as a legal status or merely a relationship between the citizen and the state. Fraillon and Schulz (2008) define citizenship as "the fact of individuals' participation or lack of participation in their communities" (p.10) The concept of citizenship is also considered to be a competence or lifestyle requiring the capacity to engage in dialogue, respect, solidarity, tolerance, and a sense of responsibility towards the society (Naval, Print & Veldhuis, 2002). However, in order to be in a position to actively participate in society citizens should acquire basic knowledge and understanding about democratic principles and processes. According to Maiello, Oser and Biedermann, (2003) "people must necessarily obtain basic civic knowledge and enough civic skills to correctly understand political information in order to work out suitable political judgments and, consequently, positively contribute to decisions on public issues" (p.385).

More recent theorists view citizenship as a concept in which culture and identity issues are deeply embedded. This aspect of citizenship has resulted mainly from the growing globalization and migration movements. An assimilationist conception of citizenship requires citizens to give up their cultures in order to participate fully in the country's civic society (Banks, 2008; 2012). However, according to cultural democracy, citizens should have the right to maintain important aspects of their identity, as long as these aspects do not clash with the shared democratic ideals of the country while exercising full citizenship rights.

In this vein, Banks (2008) argues that Marshall's conception of citizenship should be expanded to include cultural citizenship and cultural rights. According to Banks (2008) group differences should be taken into account in order to help marginalized groups attain civic equality. Marginalized groups in this case might involve migrants as well as other vulnerable groups such as women or people of colour. Thus, a differentiated conception of citizenship ensures that the principle of equal treatment is strictly applied and that there are no second-class citizens in society.

Despite many efforts that seek to instill acceptance and tolerance towards migrants, they are often seen as a threat to the welfare system and the cohesion of society. In fact, countries are retreating from their commitment to multiculturalism concentrating instead on stability and homogeneity. Some governments might even require applicants of citizenship to pass a test about the host country (Isin & Turner, 2007, 2010). Contrary to this approach, Osler & Starkey (2005, 2006) argue for learning cosmopolitan citizenship which enables young people to perceive themselves as citizens with human rights on a global level. To this effect, countries should enhance their democratic credentials and become more inclusive (Starkey, 2008).

Finally, according to the European Commission (2005, 2012), the concept of citizenship in all European countries embodies issues concerning knowledge and the exercise of civic rights and responsibilities. Moreover, all countries connect the concept to specific values, such as freedom, equality and solidarity. These values are closely associated with the concept of active citizenship and the way it materializes in practice. Countries use terms such as "responsible citizenship", "civic participation", "civic attitudes", "civic awareness", "civic rights and duties". In the current study, "civic" and "citizenship" outcomes will be used interchangeably since no clear distinction seems to appear in the literature so far.

### **2.4.2.2 The Context of Citizenship Education**

During the past few years we have witnessed a growing interest in civic and citizenship education both in Europe and worldwide. This strong impetus for citizenship education may be attributed to a number of phenomena such as globalisation, the rapid movement of populations, an increasing democratic deficit, racism and xenophobia, and rising levels of ethnic and social tension (Isac, Maslowski & van der Werf, 2011; Kerr, & Lopes, 2008; Naval et al., 2002; Osler & Starkey, 2006; Philippou, 2007; Torney-Purta, 2002). All of these complex political and social issues have advanced the role of citizenship on the agendas of many countries rendering this domain a pressing need that cannot be left to chance (Kerr & Lopes, 2008; Naval et al., 2002).

In this context, European countries became much concerned about the nature and measurement of citizenship outcomes (Kerr & Lopes, 2008; Schulz et al., 2010). Currently, European countries seek to develop effective policies and practices which are based on up-to-date evidence in civic and citizenship education. According to Naval et al. (2002) “the European goal has been to encourage autonomous, critical, participatory and responsible citizens who are perceived as the central requirement for any society that respects the principles of democracy, human rights, peace, freedom, and equality” (pp.111-112).

At the Lisbon European Council in March 2000, a strategic goal was set that until 2010 the European Union is “to become the most competitive market and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion”. Active citizenship and social inclusion were also linked to the 2000 Lisbon Objectives for Education and Training (Commission of the European Communities, 2006; Kerr & Lopes, 2008). Lisbon identified social and civic competence as one of the key competences required by Europeans to acquire by 2010 in order to respond to globalization and the knowledge-based economies. Specifically, a broad range of experts developed the document referred to as the “Key Competences for Lifelong Learning - European Reference Framework” where competences were defined as the “combination of knowledge, skills and attitudes appropriate to the context.” According to this document, social and civic competences include

“personal, interpersonal and intercultural competence and cover all forms of behavior that equip individuals to participate in an effective and constructive way in social and working life, and particularly in increasingly diverse societies, and to resolve conflict where necessary. Civic competence equips individuals to participate in civic life,



based on knowledge of social and political concepts and structures and a commitment to active and democratic participation.”

(European Commission, 2007, p.9)

More recently, the Council of the European Union developed a strategic framework for European cooperation in education and training referred to as “Education and Training 2020” (Council of the European Union, 2009). One of the strategic objectives set in this framework was to promote equity, social cohesion and active citizenship. Specifically, it is highlighted that education and training should promote active citizenship, democratic values and intercultural competences.

At the local level, the Ministry of Education and Culture of Cyprus, placed a strong emphasis on the promotion of democratic and justice values. Citizenship Education in middle schools aims at the spiritual, moral and cultural development of students so that they act for the benefit of individuals and the wider society (Ministry of Education and Culture, 2004a; Ministry of Education and Culture, 2008a). The school is a democratic place where all children are accepted with their strengths and weaknesses and are treated as individual personalities with different needs and inclinations. The democratic school emphasizes the rights and obligations of citizens within a democratic environment in which all students participate in curricular and extra-curricular activities such as visits to local authorities and student council elections (Pashiardis et al., 2009).

In lower secondary education, two textbooks are available for use by third grade teachers: “Civic Education”, and “Social and Civic Education”. The former textbook has been produced in Cyprus whereas the latter originates from Greece. However, due to the contextual differences which exist between the two countries, the Greek book is rarely used by teachers. In the introduction of the local textbook, it is stated that the book is intended to introduce students to fundamental civic concepts and institutions and provide them with information about the civic organization of society (Ministry of Education and Culture, 2004a). Moreover, the book aims at rendering students capable of acquiring a critical stance against issues which concern them as active citizens within their natural and social environment.

It is also important to note that most of the attention on civic education is placed in secondary schools, a practice which is ubiquitous across European and other countries. Civic education is underconceptualized at the primary level whereas limited attention is paid to a developmental approach to civic education that extends from lower grades (Chi, Jastrzab & Melchior, 2006). However, even in middle schools in Cyprus, the subject is

taught for only a few months, which is deemed to provide insufficient opportunities for student learning. This practice is also incongruent with the general aims of education emphasizing the importance of acquiring citizenship competences at school.

Recently, education in Cyprus was under comprehensive reform with the curriculum receiving the greatest share of attention. According to the report of the Reform Committee of 2004, special attention should be paid to the upgrading of citizenship education at all levels of education underlining the need to include education for rapprochement with Turkish Cypriots (Ministry of Education and Culture, 2004b). The philosophy of the new curriculum of Citizenship Education stipulates that students should receive democratic and humanistic education that will prepare them to become active citizens in the social, political, cultural and economic life of Cyprus (Ministry of Education and Culture, 2008a, p.2). Special emphasis is also placed on the current condition of an occupied Cyprus and the need for students to keep a high morale. What markedly differentiates between the existing and the newly developed curriculum is the strong focus placed on issues of diversity, multiculturalism and social justice.

#### **2.4.2.3 Major Studies Addressing Student Citizenship Outcomes**

The increasing importance attached to civics is reflected in a number of large-scale, comparative studies which are concerned with students' performance in the specific learning domain. Two of these studies, CIVED (Civic Education Study) and ICCS (International Civic and Citizenship Education Study) were monitored by the International Association for the Evaluation of Student Achievement (IEA) and involve a number of countries across the world. CIVED, adopts a mixed methods approach whereas ICCS is mainly quantitative. However, ICCS employs a similar framework to CIVED since it aims to build on the findings of the formerly conducted study. In addition, INFCIV (Informal Learning of Active Citizenship at School), a comparative study across Europe which was funded by the European Commission, adopted mainly a qualitative case study approach. Next, a brief description of these studies is provided in order to gain a comprehensive picture of how studies with different designs approach the issue of student citizenship outcomes.

#### **2.4.2.3.1 Civic Education Study (CIVED)**

The IEA Civic Education (CIVED) Study intended “to examine in a comparative framework the ways in which young people are prepared to undertake their role as citizens in democracy” (Nikolova & Lehmann, 2003, p.372). The study addressed 14 year old students and consisted of two phases: a qualitative phase with a set of case studies and a quantitative survey administered to about 90,000 students in 28 countries (Torney-Purta, Rischardson & Barber, 2005).

The first phase (conducted in 1996 and 1997) included the development of qualitative case studies which inquired about the context and meaning of civic education in different countries and provided the basis for the development of test instruments (Nikolova & Lehmann, 2003, p.372). In fact, the case studies helped to build a core set of expectations about civic education outcomes.

The second phase (conducted in 1999), consisted of a cognitive test measuring students’ knowledge and skills and a survey which assessed their attitudes and engagement. The content domains which were investigated concerned democracy, democratic institutions and citizenship; national identity and international relations; social cohesion and diversity. In a second round of phase 2 (conducted in 2000/2001), the cognitive test and the survey were administered to upper secondary students in 16 countries in an effort to examine in more detail the dimensionality and quality of the test. Another domain was added in this round pertaining to economic literacy items. In this phase a teacher survey was also conducted in order to collect information about the school background and school environment.

#### **2.4.2.3.2 International Civic and Citizenship Education Study (ICCS)**

New challenges which have emerged in the 21<sup>st</sup> century revived interest in improving policy and practice in civic and citizenship education (Schulz, 2007). Changed contexts of democracy and participation called for new forms of citizenship and as a result a new effort was launched to assess student outcomes in the specific area. The main purpose of the new IEA International Civic and Citizenship Education Study (ICCS) was to investigate the extent to which young people are prepared to undertake their roles as citizens across a range of countries in the 21<sup>st</sup> century.

The assessment framework builds on the previous civic and citizenship IEA study as well as incorporates recent trends in civic and citizenship education assessment (Schulz,

2007; Schulz et al., 2010). The framework “accepts the pivotal assertion of the CIVED model that the individual student exists as the central agent in their civic world, with both an influence on and being influenced by their multiple connections with their civic communities” (Fraillon & Schulz, 2008, p.5). However, active participation of students in their schools and communities as well as expectations for political action as adults are given much more emphasis in this study (Schulz, 2007).

More specifically, the ICCS framework comprises a Civics and Citizenship Framework and a Contextual Framework (Schulz, 2007; Schulz et al., 2010). The former has guided the development of the student outcomes instruments whereas the latter provided a reference point for the development of student background, school and national context questionnaires.

Firstly, the Civics and Citizenship Framework comprises three dimensions: a content dimension addressing the subject matter to be assessed; a cognitive dimension that outlines the thinking processes to be assessed; and the affective-behavioural dimension that describes the types of student perceptions and activities to be measured. With regards to the content dimension, four domains are included: Civic Society and Systems, Civic Principles, Civic Participation and Civic Identities. The cognitive processes to be assessed consist of two domains: knowing, and reasoning and analyzing. Four affective-behavioural domains are also identified in the framework relating to Value Beliefs, Attitudes, Behavioural Intentions, and Behaviours.

The Contextual Framework is based on the understanding that young people’s knowledge, competencies and dispositions are influenced by variables located at different levels in a multilevel structure. For the contextual framework, the following levels are distinguished:

- Context of the wider community. This level consists of the wider context within which schools and home environments operate. This context may be located at the local, regional, national or even supra-national level in some cases (e.g. EU member countries).
- Context of schools and classrooms. This level includes factors relating to student instruction, school culture and the general school environment.
- Context of home environments. This level comprises factors concerning the home background and the social out-of-school activities of students.

- Context of the individual. This level comprises factors related to the individual characteristics of students.

According to the design of the ICCS study, outcomes data would be obtained from eighth grade students and context data from students, teachers and school principals.

A field trial was undertaken between October 2007 and January 2008 where data from about 20,000 students from 32 countries were collected. The main survey instruments were finalized based on the field trial analysis and a review with experts and national centres. The main survey was conducted from the end of 2008 to early 2009. Data compilation and analysis were completed by the end 2009 and reports were drafted during 2010.

#### **2.4.2.3.3 Informal Learning of Active Citizenship at School (INFCIV)**

The general aims of this study, which was funded by the European Commission, were to provide conceptual clarity about citizenship as a concern for schooling and to study informal learning of citizenship at school (Scheerens, 2009). More specifically, the study sought to investigate empirical relationships between school culture and citizenship outcomes, possibly mediated by reflective teaching practices. Relevant constraints and stimulants regarding school composition were also examined.

Seven countries participated in this comparative study, namely Cyprus, Denmark, England, Germany, Italy, Romania and the Netherlands (Scheerens, 2009; 2011). Each country had to complete a conceptual and an empirical part. The conceptual analysis concerned aspects of the national context of citizenship education in each country. The empirical part consisted of case studies conducted in six lower secondary schools in each country. These schools varied in their school composition with respect to the proportion of cultural minority students. Data were collected through site visits and observations, school documents, focus groups, interviews and questionnaires. The sources of information included students, parents, teachers and the principals.

The conceptual framework of the study included three types of factors: a) Citizenship competencies and values b) Informal student activities and experiences and c) the School context (Maslowski, Breit, Eckensberger & Scheerens, 2009; Scheerens, 2011). The dimensions of competencies identified related to Action Competencies, Normative Competencies and Values. Action Competencies were conceptualized in terms of

communicative, and instrumental and strategic actions. The first set of actions entails attempts to “listen to the arguments of others, discuss arguments with others and judge the value of these arguments and the willingness to reach consensus or to reach compromises” (Maslowski et al., 2009, p.15). The second set involves “persuasive and coercive strategies students develop to convince others of their arguments, and the willingness and ability to express their thoughts”(Maslowski et al., 2009, p.14). In addition to these, normative competencies concerned issues of morality, tolerance and trust whereas citizenship values were related to self-efficacy, human dignity and sustainability. With respect to the second factor, student informal learning experiences entailed critical incidents in a) dealing with conflict situations in school, b) dealing with differences between cultures and multiculturalism, and c) dealing with peers and issues of collaboration in student work, or in structural bodies within school. Finally, the school context consisted of the dimensions of school culture, classroom climate, school leadership and structures for student involvement in school.

#### **2.4.2.4 Domains of Student Learning**

In educational effectiveness research, different indicators of student success have been used at different points in time (Creemers & Kyriakides, 2008). Early research used the number of referrals for special education or grade repetition as indicators of effectiveness. Later on, other criteria, such as achievement in school subjects were adopted whereas the majority of current studies collect data from national tests in areas such as mathematics and languages.

However, the immense emphasis placed on literacy and numeracy tends to undermine other important goals of education, such as the ones related to societal and democratic learning (Torney-Purta & Vermeer, 2004). Measuring civic and citizenship outcomes seems to be an effective way to respond to an international plea for broadening the learning domains in which students are assessed (Cranston, Mulford, Keating & Reid, 2010; Mulford, 2008, 2012). Moreover, this area seems to be quite appropriate for measuring a number of dimensions involving cognitive, affective and behavioural outcomes of students.

#### **2.4.2.4.1 Cognitive Outcomes**

According to Creemers and Kyriakides (2008), schools should be primarily concerned with cognitive outcomes since the specific domain is determined less by other actors in society. This does not mean that education should be restricted to the cognitive domain since only a partial relationship between cognitive and non-cognitive achievement exists. What is highlighted here is that schools are in a better position to influence cognitive outcomes which in turn form the basis for non-cognitive ones. Moreover, it is asserted that cognitive outcomes should not be operationalized only in a traditional sense of acquiring basic knowledge. Although taking into account the knowledge dimension, the cognitive domain should also include a deeper understanding of concepts, critical thinking skills and evaluative judgments. This also applies in relation to the area of our interest, that is civic and citizenship outcomes.

More specifically, cognitive outcomes in Citizenship Education involve students' knowledge about social, political and civic institutions, as well as knowledge about human rights and cultural and historical heritage (Scheerens, 2009, 2011). This is often accompanied by knowledge about ongoing social problems and the recognition of the cultural diversity of society (European Commission, 2005). Furthermore, cognitive outcomes involve those cognitive skills that students use in order to interpret political information, understand complex sets of factors influencing civic actions and plan for and evaluate strategic solutions and outcomes (Losito & D' Aspice, 2003; Schulz & Brese, 2008; Schulz et al., 2010). This cognitive component is very similar to the domain of reasoning and analyzing used in the latest IEA study.

Rasch analysis was conducted with the ICCS field trial data in order to define levels of student achievement in the cognitive domain (Schulz et al., 2010). Students at level 1 of the scale were found to engage with the basic principles and broad concepts of civic and citizenship learning. What differentiated level 1 from higher levels of achievement was the degree of specificity of students' knowledge and understanding. Students operating at level 2 demonstrated some specific knowledge and understanding of the most pervasive institutions, systems and concepts related to civic and citizenship learning. Level 2 differed from higher level scales in the degree students utilized their knowledge and understandings for evaluating and justifying policies and practices. Level 3 students demonstrated a comprehensive rather than fragmented knowledge and understanding of civic and citizenship concepts. They were able to make evaluative judgments about

policies as well as justify positions based on their understanding of systems and practices. Moreover, students at level 3 were able to evaluate active citizenship practice in terms of the desired outcomes.

Civic cognitive outcomes are influenced by a number of variables located at various levels of the school structure (e.g. Isac et al., 2013; Torney-Purta, 2002). According to Kyriakides (2006), higher levels provide the conditions for factors at lower levels. This is in line with educational effectiveness research investigating traditional outcomes of students such as literacy and numeracy (Creemers & Kyriakides, 2008).

At the classroom level, the strongest positive predictor of civic knowledge is the development of an open classroom climate (Schulz et al., 2010; Torney-Purta, 2002). An open classroom climate is characterized by dialogue, discussion and exchange of arguments (Fjeldstad & Mikkelsen, 2003). In such an environment, students are active participants explaining their ideas and thoughts rather than just being passive recipients of information (Larson, 2000). Here, we must note that the specific variable was sometimes treated as a school level variable due to the fact that only one classroom was sampled from each school.

Teacher experience and confidence were then found to influence students' civic knowledge outcomes (Torney-Purta, Rischardson & Barber, 2005). The researchers used the CIVED data set to find that teachers' educational experience is positively related to students' civic knowledge both at the between-country level and within the United States. Moreover, in Hungary, teachers' confidence in teaching political topics resulted in higher civic achievement scores.

At the individual level, student background was found to play an important role in the acquisition of cognitive outcomes. Firstly, previous research showed that civic knowledge is influenced by socioeconomic background factors (Schulz et al., 2010; Torney-Purta, 2002). Specifically, students whose parents had a higher status occupation and higher educational attainment performed better in the cognitive domain of Citizenship Education. Moreover, home literacy resources predicted civic knowledge and civic skills equally well (Isac, Maslowski & van der Werf, 2011; Maiello, Oser & Biedermann, 2003; Torney-Purta, 2002). It seems that the more books students have at home the higher their level of civic knowledge and skills in interpreting political messages.

The IEA CIVED data showed that being female is a negative but small predictor of civic knowledge in about a third of the countries (Torney-Purta, 2002). According to Torney-Purta (2002), gender differences were smaller than those observed in the past.



Interestingly, there were higher gender differences in the follow-up study of upper secondary students (Nikolova & Lehmann, 2003). Specifically, male upper secondary students scored higher than girls in the cognitive test with the most pronounced gender differences being related to economic literacy. Contrary to these findings, the ICCS more recent studies showed that girls outperformed boys in their civic knowledge scores (Isac et al., 2011; 2013; Schulz et al., 2010).

The immigrant status and use of another language at home were also strong predictors of civic knowledge in most countries (Isac et al., 2011; Schulz, 2002). Specifically, students who are born abroad or do not speak the test language at home perform lower than other students. These findings are also in congruence with the sociological perspective of educational effectiveness research which indicates that the greatest part of variance in student outcomes is explained by the student background characteristics (Creemers & Kyriakides, 2008; Sirin, 2005).

Finally, the IEA CIVED findings showed that peer interactions such as participation in school councils and parliaments are positively associated with civic knowledge in about half the European countries (Torney-Purta, 2002). Moreover, reported participation in school council had a positive effect on civic skills in a number of countries (Schulz, 2002). The fact that this was not observed in all of the countries may be attributed to the way school bodies are constituted and what role they have in each country. The ICCS study findings also showed that voting for class representative or school parliament results in higher civic knowledge scores (Schulz et al., 2010).

#### **2.4.2.4.2 Affective and Behavioural Outcomes**

An immense emphasis on cognitive outcomes is not adequate to provide appreciation of democracy and engagement (Mulford & Silins, 2011; Torney-Purta, 2002). According to the case studies of the IEA CIVED Study, both experts and teachers recognize that civic education should also be about political participation and value education. Most teachers believe that teaching civic education “makes a difference for students’ political and civic development” whereas only a small proportion believed that “schools are irrelevant for the development of students’ attitudes and opinions about matters of citizenship” (Torney-Purta, 2002). Moreover, research indicates students’ low political interest (Mellor & Kennedy, 2003; Mintrop, 2003), and low trust in the media, the politicians and public institutions (Fjeldstad & Mikkelsen, 2003; Losito & D’Aspice, 2003). These

ascertainments necessitate an increased focus on affective and behavioural citizenship outcomes by incorporating them as indicators of student achievement in various assessment frameworks.

Previous research on student affective and behavioural outcomes revealed that influences are located at multiple levels just as in the case of cognitive outcomes. Firstly, findings from 52 high schools in Chicago showed that students were more likely to exhibit higher levels of commitment to civic participation when they felt attended by their community's adults (Kahne & Sporte, 2008). In addition, Menezes (2003) examined participation experiences of 14 year old and upper secondary students in six European countries: the Czech Republic, Norway, Portugal, Slovenia, Sweden, and Switzerland. Findings showed that students are involved in voluntary activities in civic related organizations (such as the Scouts, religious affiliated and environmental organizations). Overall, there was a positive effect of frequency of participation on civic conceptions, attitudes and engagement. According to Kahne and Sporte (2008) "when young people experience their neighbourhood as one that monitors and responds to their needs and when they engage in discussions with their parents about current events, it seems reasonable to expect that their sense of agency, of social relatedness, and their sense of political and moral understanding would grow" (p.756).

Democratic processes modelled at the school level are also capable of influencing citizenship affective and behavioural outcomes. Firstly, Papanastasiou and Koutselini (2003), found that the school climate of Cyprus schools participating in CIVED had a strong and positive direct effect on home political environment and student political interest and an indirect effect on democratic values and willingness for social participation. Furthermore, Kahne and Sporte (2008) found that participation in extracurricular activities other than sports influenced commitment to civic participation though to a lesser extent than classroom civic learning opportunities. The importance of this kind of activities that offer opportunities for student participation was also highlighted in the INFCIV findings from all of the seven participating countries. Specifically, extended school day activities, environmental programmes, and school celebrations of different cultures were mentioned as a few examples which contributed to student active citizenship at school (Scheerens, 2009). It is worth noting that in Cyprus, minority students were especially involved in sports activities (Pashiardis et al., 2009). According to Pashiardis et al. (2009), through these activities a stronger sense of cohesiveness among students was created than in any other educational activity. Contrary to these findings, Menezes (2003) found that in the

case of Sweden, 14 year old students' greater participation yielded negative effects regarding attitudes towards foreigners. This shows that action itself is not enough but needs to involve meaningful involvement, reflection, and interaction with different others.

Principals have a critical role in determining the school learning environment and the decision making processes (Agrusti & Losito, 2008; Scheerens, 2009). A democratic learning environment is based on elements such as openness, mutual respect and respect for diversity, and the opportunity to provide one's own opinion. Such an environment allows students to enact a democratic lifestyle, exercise their own autonomy and develop a sense of self-efficacy. In the case of the INFCIV project, the Cyprus findings showed that, especially in schools with large numbers of minority students, there was an increased need for cooperation and participatory approaches in decision making which in itself created a culture of democracy and participatory governance structures (Pashiardis et al., 2009). The principals invited all stakeholders to contribute to the establishment of the rules and regulations or even consulted the teachers for decisions that should have been taken only by them. Moreover, the students were asked to participate in the decision making process for issues that involved them directly such as the edition of the school newspaper.

At the classroom level, the strongest influence on student affective and behavioural outcomes seems to be exerted by an open classroom climate, just as was the case with the cognitive dimension of citizenship. More specifically, an open classroom climate was found to be strongly associated in a positive way with student political trust (Syvertsen, Flanagan & Stout, 2007), commitment to civic participation (Kahne & Sporte, 2008; Schulz, Ainley & Fraillon, 2013), political interest and citizenship efficacy (Hahn; 1999; Schulz, Ainley & Fraillon, 2013; Syvertsen, Flanagan & Stout, 2007). In particular, discussion of international issues made students more likely to be concerned about their economic future whereas discussion of controversial issues such as the war in Iraq predicted students' concerns about the unfair treatment of others (Syvertsen, Flanagan & Stout, 2007). Moreover, the Cyprus findings from INFCIV showed that teachers discuss important issues with students and are convinced of an open exchange with cultural minority students (Pashiardis et al., 2009). According to Fjeldstad and Mikkelsen (2003), "if the dialogue between the teacher and the students is characterized by openness and recognition, it stimulates curiosity, wondering, investigation and learning" (p.626).

The influence of student background factors was also consistently examined in relation to attitudinal and behavioural measures of student achievement. These factors related mostly to gender, socioeconomic and immigrant status of students. Initially,

research findings showed that attitudes towards female political rights are more positive on the part of females (Torney-Purta, 2002). Female students were also found to engage themselves with charity activities and the collection of signatures whereas male students were found to prefer to participate in protest marches. More recent research shows that being female is a negative predictor of expected active political participation (Schulz et al., 2010, 2013). In addition, the socioeconomic status of students was found to have inconsistent effects on student engagement and expected participation (Schulz et al., 2010, 2013). Finally, whereas students with an immigrant background were found to have lower civic knowledge they were more likely to report intentions to participate in formal and informal political activities than other students (Friedman, Schulz, Fraillon & Ainley, 2013).

### **2.4.3 Academic Optimism of Schools**

The Coleman report of 1966 concluded that schools have a negligible effect on student achievement and that most of the variance in student learning can be explained by family background factors (Coleman, Campbell, Hobson, McPartland, Mood & Weinfeld, 1966). Policy makers and practitioners were reluctant to accept that schools make no difference to student achievement (Hoy, Tarter & Woolfolk Hoy, 2006). Instead, they committed themselves to identify school characteristics that make a difference in student achievement inspite of SES.

Further research showed that family background is indeed a strong predictor of student achievement. However, certain school characteristics were also found to be associated with student achievement. Edmonds (1979) was one of the first to refute Coleman with a list of effective school characteristics, i.e. strong leadership, high expectations for student achievement, an emphasis on basic skills, an orderly environment and frequent and systematic evaluation of students. Other factors were later added to this list such as opportunity to learn, parental support and involvement, collaboration and interaction among teachers, staff development, provision of sufficient learning resources to teachers and students (Creemers & Kyriakides, 2008; Purkey & Smith, 1983; Scheerens & Bosker, 1997).

Hoy and colleagues also suggest that three school properties make a difference in student achievement even after controlling for socioeconomic factors: the academic emphasis of the school, the collective efficacy of the faculty, and the faculty's trust in

parents and students (e.g. Hoy, 2012; Hoy, Tarter & Woolfolk Hoy, 2006; Smith & Hoy, 2007). These three variables were found to be constituents of a general latent construct labeled as School Academic Optimism. Next, a review is provided with respect to each one of the three aforementioned dimensions as well as School Academic Optimism as a single variable.

#### **2.4.3.1 Academic Emphasis of Schools**

Academic emphasis may be defined as “the extent to which a school is driven by a quest for academic excellence - a press for academic achievement” (Hoy, Tarter & Woolfolk Hoy, 2006, p.427). Academic emphasis is measured at the school level and reflects the extent to which the school as a whole values academic achievement. More specifically, high but achievable academic goals are set for students, the learning environment is orderly and serious, teachers believe in the ability of their students to achieve, students work hard and respect academic achievement (Hoy, 2012; Hoy & Miskel, 2008).

Hoy and colleagues (Hoy & Sabo, 1998; Hoy & Tarter, 1997) described academic emphasis as a constituent of a healthy school climate. The organizational climate of a school was defined as “the set of internal characteristics that distinguishes one school from another” (Hoy & Tarter, 1997). School climate was measured by the Organizational Health Inventory (OHI), an instrument that measures six dimensions of school climate, including academic emphasis. As such, academic emphasis was seen as an organizational level variable that depicts the degree to which an organization is seriously committed to students’ academic success.

Educational researchers have consistently found a strong and positive association between academic emphasis and student achievement. Early research showed that effective schools exhibited high expectations for student achievement and a healthy climate focused on teaching and learning (Edmonds, 1979; Purkey & Smith, 1983). More recent studies also demonstrated that an achievement orientation (Creemers & Kyriakides, 2008; Marzano, 2003; Scheerens & Bosker, 1997) was a common characteristic of effective schools.

Research conducted by Hoy and colleagues contributed significantly to the existing body of knowledge over the relationship between academic emphasis and student achievement. Firstly, Hoy and Sabo (1998) demonstrated that most of the dimensions of a healthy school climate, including academic emphasis were positively associated with

student achievement in middle schools even after controlling for socioeconomic factors. In fact, academic emphasis had the strongest correlation with student achievement in reading, mathematics and writing. Subsequent findings in urban elementary schools also showed that academic emphasis was a strong predictor of both mathematics and reading achievement controlling for SES, school size, student race and gender (Goddard, Sweetland & Hoy, 2000). In a similar vein, Hoy, Sweetland and Smith (2002), examined the relationship between academic emphasis, collective efficacy and student mathematics achievement in high schools. In this study, Hoy et al. (2002) concluded that academic emphasis works mainly through collective efficacy rather than directly influencing student achievement.

The aforementioned findings are consistent irrespective of school levels and methodological approaches (Hoy, 2012; Hoy, Tarter & Woolfolk Hoy, 2006). Whether the level is elementary or secondary, or whether multiple regression, structural equation modeling or hierarchical linear modeling is used, academic emphasis is an important variable in explaining student achievement even after controlling for socioeconomic factors.

With regards to school leadership, Alig-Mielcarek and Hoy (2005) examined the relationship between instructional leadership, academic emphasis and student achievement. Using structural equation modeling, the researchers found that academic emphasis predicted student achievement even controlling for SES. Instructional leadership was only found to have an indirect influence on student achievement through academic emphasis.

#### **2.4.3.2 Collective Efficacy**

The concept of collective efficacy is derived from Bandura's (1986; 1997) social cognitive theory which is concerned with human agency, or the ways people exercise control over their lives through agentic actions. Central to human agency is self-efficacy, a concept which refers to an individual's belief about his or her capacity to perform well. A primary assumption to social cognitive theory is that the exercise of agency is influenced by the strength of efficacy beliefs. When individuals believe that they are capable of reaching given attainments, they are more likely to set higher expectations, exert greater effort and persist in the face of difficulties (Goddard & Skrla, 2006).

According to social cognitive theory, the mechanisms of human agency also extend to collective agency. Analogous to self-efficacy, collective efficacy is associated with the

collective capability of a social system as a whole and as such it may be defined as “a group’s shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainment” (Bandura, 1997, p.477). In the educational context, collective teacher efficacy concerns the shared perception of teachers in a school that their efforts as a whole will have a positive effect on students (Hoy, 2012; Hoy & Miskel, 2008).

Collective efficacy constitutes an organizational rather than an individual property. According to Goddard, Hoy and Woolfolk Hoy (2000), collective efficacy emerges from the dynamics of the group members and as such it is more than the sum of the individual attributes. As in the case of self-efficacy, it is associated with the acceptance of challenging goals, strong organizational effort and persistence to high school performance (Goddard et al., 2000; Goddard & Skrla, 2006). According to Bevel and Mitchell (2012), teachers with high collective efficacy are resilient in the face of difficulties, reach out to students who are struggling academically and seek innovative ways to address complex problems. On the other hand, teachers with low collective efficacy tend to blame students, parents and the community for their lack of success and give up in the face of challenges.

Collective efficacy is believed to arise from four sources of information (Bandura, 1997; Goddard et al., 2000; Goddard & Skrla, 2006). The most important of these sources is mastery experience which refers to the faculty’s direct experience of success or mastery. In his study of urban elementary schools, Goddard (2001) found that mastery experiences arising from past successful experiences explained about two thirds of the variation across schools in collective efficacy outweighing the effects of student prior achievement and SES. A second source of collective efficacy relates to vicarious experience which concerns the modeling of success and achievement either by other colleagues or other schools (Bandura, 1997; Goddard et al., 2000; Goddard & Skrla, 2006). School principals, in this case, may arrange visits to model schools or perform model lessons themselves. Thirdly, social persuasion is another means of enhancing collective efficacy. For example, colleagues or leaders may persuade teachers that they are capable of addressing the challenges they face at school. Finally, the affective state of an organization pertains to the ways teachers react to negative events and cope with the challenges they encounter. An efficacious organization can tolerate pressure and react in a functional way to cope with negative consequences.

Central to the creation of collective efficacy beliefs is the cognitive processing and interpretations of the information associated with the aforementioned sources of efficacy

(Goddard et al., 2000). Teachers give meaning to this information in relation to the two key elements which determine efficacy, that is the analysis of the teaching task and the assessment of the teaching competence. At the school level, the analysis of the teaching task entails inferences about what constitutes successful teaching, what constraints or limitations must be overcome, and what resources are available to succeed. The assessment of the teaching competence entails explicit judgment of the teaching competence of the faculty in light of an analysis of the teaching task in their school. These judgments may include the faculty's teaching skills, methods, training and expertise or even the faculty's positive beliefs in the ability of all students to succeed. Overall, collective efficacy beliefs result "when teachers consider the level of difficulty of the teaching task (in relation) to their perceptions of the group competence" (Goddard et al., 2000, p.485). The analyses of the task and competence occur simultaneously and interact with each other to shape collective efficacy beliefs. Goddard et al. (2000), in an empirical analysis of collective efficacy in urban elementary schools, found that the specific construct forms a single factor consisting of items that assess both the analysis of the task and the group competence.

A number of studies revealed a link between collective teacher efficacy and student achievement. Bandura (1993) was the first to find that the faculty's sense of collective efficacy contributed significantly to the aggregate academic performance of schools even after controlling for socioeconomic and other demographic characteristics. Similarly, Goddard, Hoy and Woolfolk Hoy (2000) demonstrated that collective efficacy of urban elementary schools predicted student achievement in mathematics and reading and outweighed the effects of SES, African-American status and gender. In this line of inquiry, Hoy, Sweetland and Smith (2002), found that collective efficacy of high schools explained student achievement in mathematics and in fact it was more important than either SES or academic emphasis. Goddard, LoGerfo and Hoy (2004) tested a more comprehensive model of collective efficacy and student achievement. They found that collective efficacy predicted student achievement in reading, writing and social studies irrespective of minority student enrollment, urbanicity, SES, school size, or prior achievement.

Like academic emphasis, the findings on collective efficacy seem to hold irrespective of school level and methodological approach (Smith & Hoy, 2007). Whether the level was elementary, middle or secondary, or whether multiple regression, structural equation modeling or hierarchical linear modeling was used collective efficacy was found to be a key variable in explaining student achievement even after controlling for socioeconomic factors.



Researchers also point to the importance of school leadership in influencing collective teacher efficacy. For example, Tschannen-Moran and Barr's (2004) review of evidence suggested that collective efficacy is promoted by principals who are strong instructional leaders, listen to teachers, engage teachers in school improvement decisions, create a positive and supportive school climate, empower teachers and are influential with superiors. Likewise, Ross, Hogaboam-Gray and Gray (2004), in a study of 141 elementary schools, found that empowering leadership had a significant and positive effect on teachers' collective efficacy. Finally, in another study of 218 elementary schools, it was shown that transformational leadership had an indirect effect on student achievement mediated by collective teacher efficacy and teacher commitment to professional values (Ross & Gray, 2006).

#### **2.4.3.3 Faculty Trust in Parents and Students**

Trust may be defined as “one’s vulnerability to another in terms of the belief that the other will act in one’s best interests” (Hoy, Tarter & Woolfolk Hoy, 2006, p.429). Hoy and Tschannen-Moran (2003) conducted a review of the literature on trust and concluded that there are multiple facets of trust – vulnerability, benevolence, reliability, competence, honesty and openness- which vary together to form an integrated construct of faculty trust. Initially, vulnerability stems from interdependence. When we must rely on others for a specific end, we then become vulnerable to them. Benevolence refers to confidence that the trusted party will not harm one’s well-being (Hoy, 2012; Hoy & Tarter, 2004). For example, teachers who trust parents and students believe that neither party will harm the teaching and learning process. In addition, reliability refers to confidence that the other party will act in a consistent way to ensure the benefit of the trustee. Another critical ingredient of trust is competence, that is the ability to perform in accordance to set expectations and standards appropriate to task. Furthermore, honesty alludes to the truthfulness, integrity and authenticity of a person or group whereas openness concerns the extent to which relevant information is shared. Taking into account the aforementioned facets of trust, the specific concept may be redefined as “the group’s willingness to be vulnerable to another party based on the confidence that the latter is benevolent, reliable, competent, honest and open” (Smith & Hoy, 2007, p.559).

The concept of trust is an increasingly vital dimension of well-functioning organizations. Empirical evidence shows that trust is related to a positive school climate,

open communication, participative decision making processes and organizational citizenship behavior (Tschannen-Moran & Hoy, 2000). In fact, trust “functions as a lubricant for cooperative activity among interdependent individuals and groups, facilitating productivity” (Forsyth, Barnes & Adams, 2006, p.128). Nevertheless, according to Tschannen-Moran and Hoy (1998), studying trust is like studying a moving target because it can easily be altered over the course of a relationship as the level of interdependence increases or decreases.

In schools, trust can be viewed in relation to a number of reference groups-students, parents, teachers, principals. In this study, the third school property that academic optimism encompasses is faculty trust in parents and students. Factor analyses demonstrated that faculty trust in parents and students constitutes an integrated dimension of trust (Goddard, Tschannen-Moran, & Hoy, 2001; Hoy & Tschannen-Moran, 1999). In fact, Bryk and Schneider (2002) argued that teacher-student trust works mainly through teacher-parent trust. This means that when teachers trust parents they also trust students. Moreover, both parents and teachers belong to a single category of stakeholders, that is they are both school clients with common interests and expectations from the school.

Research in faculty trust in clients (parents and students) demonstrated a powerful influence on student achievement regardless of SES. Goddard et al. (2001) showed that faculty trust in parents and students explains student math and reading achievement in urban elementary schools. The researchers also concluded that trust depends on the social context with teachers’ trust being greater in schools with a larger proportion of poor students. In a more recent study, Goddard, Salloum and Berebitsky (2009), found that collective trust in clients was a strong, significant predictor of math and reading achievement controlling for SES and proportion of minority students in elementary schools. Similar findings were also reached with regards to high schools (Hoy, 2002). It seems that as in the case of academic emphasis and collective efficacy, faculty trust in parents and students was consistently related to student achievement regardless of SES, school level or methodological approach.

Other studies found that, apart from student outcomes, trust bears effects on important organizational properties and conditions. For example, Bryk and Schneider (2002), in a longitudinal study of 12 elementary schools concluded that trust “fosters a set of organizational conditions, some structural and some socio-psychological, that make it more conducive for individuals to initiate and sustain the kinds of activities necessary to affect productivity improvements” (p.116). Trust was found to encourage cooperative

problem solving, faculty experimentation with new practices, and a positive environment that put students' interests first.

Furthermore, faculty trust in clients was found to be negatively associated with student bullying (Smith & Birney, 2005). The findings of this study in elementary schools, demonstrated that trust in parents and students can make a strong contribution to the explanation of bullying. According to the researchers (Smith & Birney, 2005, p.478):

“faculty trust in clients promotes greater teacher sensitivity and connectedness to school stakeholder issues. Hence, teachers who trust parents and students to engage in behaviours that support the school reciprocate by nurturing a safe and orderly academic environment. Thus, salient school groups (teachers, students and parents) seek to reduce problems such as student bullying that might inhibit the quest for school achievement. In fact, trust in clients may be an integral moderator of student bullying; that is faculty who have dedicated time and effort to developing trusting relationships with school clients are likely to be more aware of student issues and incidents of school aggression.”

It is therefore expected that trust may be indirectly related to student achievement by working towards the establishment of an orderly and safe climate at the school place.

#### **2.4.3.4 Academic Optimism of Schools - A New Construct**

Academic optimism of schools manifests itself through the organizational properties of academic emphasis, collective efficacy and faculty trust in parents and students. These three aspects are mutually dependent and form “a single powerful force explaining school performance” (Hoy et al., 2006, p.4). According to McGuigan and Hoy (2006, p. 204), academic optimism is “a shared belief among faculty that academic achievement is important, that the faculty has the capacity to help students achieve, and that students and parents can be trusted to cooperate with them in this endeavour-in brief a schoolwide confidence that students will succeed academically.”

The construct of academic optimism is grounded on the tradition of the positive psychology movement. Positive psychology evolved as a response to a call for enhancing competence and capacity rather than focusing on the treatment of pathology (Seligman, 2002). This field of psychology acknowledges the wealth of experiences and personal strengths that shape the interpretation of events. In line with positive psychology

assumptions, teacher optimistic beliefs are expected to emphasize school positive traits and enhance student strengths.

The beliefs which constitute school academic optimism are organizational properties representing the shared perceptions of the group rather than the individual (Hoy, 2012; Hoy et al., 2006). The three dimensions work together to shape the normative environment of a school and enforce a strong organizational focus on student achievement. For example, all members of the faculty are expected to be committed to academic performance. In the case that a teacher does not persist in raising student achievement the rest of the faculty will sanction his or her behavior. Likewise, social sanctions will follow for those who lack efficacy and have no trusting relationships with parents and students. According to Hoy et al., (2006), “the power of the school culture and its values and norms sets in large part on the social persuasion exerted on teachers to constrain certain actions and encourage others” (p.431).

These three collective properties work together in a unified manner to enhance student achievement (Hoy, 2012; Hoy et al., 2006; Smith & Hoy, 2007). In fact, they are theorized to have reciprocal causal relationships with each other, that is “a triadic set of interactions with the components functionally dependent on each other” (Hoy, 2012, p. 85). Specifically, faculty trust in clients enhances the sense of collective efficacy, and collective efficacy promotes trust relationships with clients. Further, when teachers trust clients, they set higher academic standards, and in turn high academic standards encourage faculty trust. Similarly, when the faculty is characterized by a strong sense of collective efficacy, academic achievement is emphasized, and in turn academic emphasis enhances the collective efficacy of the faculty.

Academic optimism also provides a rich picture of collective behavior in terms of a cognitive, an affective and a behavioural dimension (Hoy, 2012; Hoy et al., 2006; Smith & Hoy, 2007). Collective efficacy is a group belief or expectations that entail a cognitive process, faculty trust in clients reflects an affective response whereas academic emphasis is the push for achievement-oriented behaviours at school.

A number of studies explored the construct validity of school academic optimism. Confirmatory factor analyses supported the hypothesized structure of the construct in elementary (Smith & Hoy, 2007; Wu, Hoy & Tarter, 2013) as well as high schools (Hoy et al., 2006). Specifically, it was found that school academic optimism is a latent second order factor consisting of the first order factors of academic emphasis, collective teacher efficacy and faculty trust in parents and students.

Research findings also indicated school academic optimism effects on student achievement. For example, Smith and Hoy (2007) utilized multiple regression to study the effectiveness of academic optimism in elementary schools in the USA. According to the findings, the construct explained student achievement in mathematics even after controlling for SES and school size. The study conducted in high schools (Hoy et al., 2006) also indicated, through structural equation modeling, that academic optimism has a positive and direct effect on student achievement even after controlling for SES and other demographic variables. In this case, maths and science constituted one component of achievement whereas the second component consisted of the areas of reading, writing and social studies. A more recent study conducted in Taiwan (Wu et al., 2013), confirmed through a path model that academic optimism can predict maths and Chinese verbal achievement of elementary school students.

The relationship between leadership and school academic optimism has been the subject of a minimal body of research. Specifically, one of these studies examined the influence of enabling school structures on the academic optimism of secondary schools (McGuigan & Hoy, 2006). The findings showed that principals who developed an enabling school structure had cultures of academic optimism embedded in their school. Overall, it was found that enabling school structures enhanced academic optimism which in turn raised levels of achievement even accounting for SES. In the study conducted in Taiwan (Wu et al., 2013), academic optimism of elementary schools was also influenced by enabling school structures.

#### **2.4.4 Instructional Quality**

Early and more recent educational effectiveness research highlights the critical role of teachers in student learning (Creemers, 1996; Creemers & Kyriakides, 2008; Teddlie & Reynolds, 2000; Teodorovic, 2011). In fact, research findings indicate that the effects on student achievement at the classroom level are far greater than those at the school level (Muijs & Reynolds, 2000; Wright, Horn & Sanders, 1997). Creemers (1994) maintains that student learning is more dependent on the learning processes and activities which take place in the classroom rather than any processes which occur at the school level. Although school leaders are responsible for securing the conditions which are necessary for effective teaching, it is the quality of the interactions in the classroom which determines students' progress.

#### **2.4.4.1 The Dynamic Model of Educational Effectiveness - Classroom Level Factors**

The Dynamic Model of Educational Effectiveness (Creemers & Kyriakides, 2008) constitutes an extension of the Comprehensive Model of Educational Effectiveness (Creemers, 1994). It is a complex model which attempts to explain student achievement at different levels (i.e. student level, classroom level, school level and context level). It is based on the assumption that influences on student achievement are multilevel in nature and that higher level factors provide the conditions for lower level factors to occur. An important principle upon which the model rests is that schools are expected to focus on the improvement of student learning, which is the main reason of their existence and functioning. Student learning in this case is defined in a more broad way incorporating the new goals of teaching and learning.

The specific model emphasizes the classroom processes and belongs to the process-product models which investigate teacher behavior in class. According to Creemers and Kyriakides (2008, 2011), the emphasis is on instruction and teacher behavior in class and his or her contribution to student learning. Teachers are the primary agents of learning and therefore it is them that hold the most important role in the learning process. The classroom level factors of the dynamic model emanate from teacher effectiveness research. However, the model uses a number of measurement dimensions unlike many models used in the past. This addition permits the collection of more information on how the factors work and address criticisms of process-product models in relation to weaknesses in describing the complexity of effective teaching and explaining variation in student achievement (Kyriakides & Creemers, 2009).

The model also supports that there are no specific instructional methods which are more effective than others (Creemers & Kyriakides, 2008, 2011). On the contrary, what is important for student outcomes is related to the practices that teachers employ at the classroom level irrespective of method used. For example, the model encompasses skills which are related to direct teaching like structuring and questioning skills but also skills related to new theories of instruction like orientation and modelling. According to Good and Brophy (1997), instructional approaches are only a means and not an end themselves. They also point out that teachers should not overemphasize transmission or constructivist models but focus more on effective teaching practices.

Another assumption of the dynamic model is that the relationship between some effectiveness factors might not be linear (Creemers, Kyriakides & Sammons, 2010).

However, research conducted in Cyprus showed that curvilinear relationships existed only with regards to the Greek language (Creemers & Kyriakides, 2008). This might be attributed to the difficulty of establishing variation in the functioning of the factors since the study was conducted only in one country. That is why there is a need to conduct international studies so as to have greater amount of variation.

As previously mentioned, the dynamic model refers to eight effectiveness factors at the classroom level which are hypothesized to be directly related to student achievement irrespective of the subject taught. These factors describe the instructional role of the teacher and are based on the main findings of teacher effectiveness research (e.g. Brophy & Good, 1986; Campbell, Kyriakides, Muijs & Robinson, 2004; Creemers, 1994; Muijs & Reynolds, 2000). A review of the eight effectiveness factors is provided below.

### *1. Orientation*

Orientation refers to a teacher's behaviour of explicating the reason for which an activity, a lesson or a unit takes place. It also refers to the ability of instigating students to recognize the purpose and utility of the learning activities which are conducted. Creemers and Kyriakides (2006) argue that orientation tasks might encourage students to actively participate in the classroom since these tasks are meaningful to them. Driessen and Sleegers (2000), conducted a secondary analysis of data in 447 primary schools in the Netherlands using a two-level multilevel analysis. Findings showed that instructional orientation produced significant positive effects on both language and mathematics test scores.

### *2. Structuring*

Structuring refers to a teacher's competence of illustrating the connections which exist within the same lesson, between lessons, within a thematic unit or among different units (Creemers & Kyriakides, 2008, 2011). Through structuring, students comprehend the content and the way it is structured. Specifically, this is achieved with the initial statement of the goals and content which are expected to be covered, the clarification of the relationships between the different parts of the lesson or between the different lessons themselves, the emphasis placed on the main points and their review at the end of the lesson. Achievement is maximized, when the teacher makes use of the aforementioned practices.

A number of studies point to the effectiveness of structuring activities. For example, a major school effectiveness study based upon a 4 year cohort study of 50 primary schools reported structured sessions to have significant positive effects on both academic and affective outcomes of schooling (Mortimore et al., 1988). Moreover, Scheerens and Bosker (1997) report in a meta-analysis that structured teaching is one of the variables found to yield significant effects on student outcomes. A more recent study conducted by de Jong, Westerhof and Kruiter (2004) used multilevel analysis to examine classroom level effects on mathematics achievement of students in the first year of secondary education in the Netherlands. The analysis of the data collected from 28 secondary schools indicated that task directness was positively associated with mathematics achievement.

### *3. Questioning techniques*

Questioning is another important factor associated with student achievement. According to Creemers and Kyriakides (2008), there is a need to have frequent questions. The study of Mortimore et al. (1988) showed that frequent questioning was positively associated with both academic and affective outcomes. In the same study, effective teachers were also found to use higher order questions and statements. However, other researchers argue that the cognitive level of the questions should vary in accordance with the skills to be mastered (Creemers & Kyriakides, 2008; 2011; Muijs & Reynolds, 2000). The best strategy would be to use both low-level and higher order questions increasing the latter as the level of the subject matter is raised. In addition, an effective teacher is expected to use both product questions and process questions. Product questions require a single answer whereas process questions require students to explain their way of thinking. When students answer correctly teachers should use praise whereas in the case of an incorrect response they should use a simple negation avoiding criticism. They should also rephrase questions and encourage students to answer them.

### *4. Teaching Modelling*

Teaching Modelling concerns the way a teacher assists students to develop skills which will render them capable of regulating learning on their own. Teaching higher order thinking skills and especially problem solving has gained prominence in the last decade due to the emphasis placed by policy makers on the achievement of the new goals of education (Creemers & Kyriakides, 2006). According to Brophy and Good (1986), modelling should illustrate the cognitive strategies involved as well as demonstrate



metacognitive awareness that should occur during strategy implementation. This is important since teacher effectiveness research has shown that effective teachers are those who teach students how to use strategies or develop strategies that will help them solve various kinds of problems (Creemers & Kyriakides, 2005).

### *5. Application*

Teachers can use seatwork either individually or in small groups, providing in this way, opportunities for practical application and mastery experience. This factor is related to teacher-centred instruction (Rosenshine, 1983), which concerns the direct exercise of the taught content during a lesson. Once students are left to work independently teachers circulate to monitor progress and provide necessary feedback (Brophy & Good, 1986).

### *6. Classroom as a learning environment*

According to a number of research studies (Creemers & Reezigt, 1996; Kyriakides, Campbell & Christofidou, 2002; Muijs & Reynolds, 2000; Pashiardis, 2008; Teodorovic, 2011), classroom climate constitutes an important factor of educational effectiveness. Effective teachers are expected to organize classrooms as effective learning environments in which academic activities run smoothly, transitions are brief and little time is spent on dealing with classroom disorder. The dynamic model provides a definition which attempts to combine elements from various studies researching the classroom learning environment. Specifically, the model refers to the teacher's contribution in creating a learning environment in relation to five individual elements: teacher-student interaction, student-student interaction, students' treatment by the teacher, competition between students, and classroom disorder. The model focuses on the teacher's ability to create the right conditions that will stimulate teacher-student and student-student interactions. Moreover, with regards to the last three elements, the teacher is expected to define rules, convince students to respect and apply these rules so as to create a positive learning environment in class.

### *7. Management of time*

According to the dynamic model, the management of time by teachers constitutes an important indicator of the teacher's competence in managing the classroom in an effective way. Opportunity to learn and time on task are considered important aspects of teachers' management of time. Effective teachers are expected to manage the classroom as an

efficient learning environment and thus maximize student engagement rates. According to Brophy and Good (1986), high task engagement rates are among the most important correlates of student achievement. Also, in a study which examined student progress in mathematics using multilevel modeling, time on task was found to be positively related to the scores of year 1 and year 5 students (Muijs & Reynolds, 2000).

#### *8. Assessment*

Assessment is viewed as an inseparable part of teaching. The specific factor involves those classroom activities that enable teachers to judge progress toward learning goals (Seidel & Shavelson, 2007). The information collected through the assessment of students assist teachers in identifying students' learning needs and appraising their own instructional behavior. Reezigt, Guldemond and Creemers (1999) conducted a reanalysis of a large scale longitudinal dataset containing data on 270 elementary schools. Student achievement in Dutch language, and mathematics was measured for grades 4, 6 and 8. Findings showed that evaluation at the classroom level was positively associated with the dependent outcomes. Similarly, Driessen and Slegers (2000) found that checking students' work to assign a grade produced significant effects on mathematics achievement.

A study conducted by Creemers and Kyriakides (2008) examined whether the aforementioned classroom level factors were associated with student achievement (i.e. knowledge in mathematics, Greek language and religious instruction, and attitudes towards religious education). Specifically, all fifth grade students from 50 Greek Cypriot primary schools participated in the study. Multilevel analysis revealed that all factors of the dynamic model at the classroom level were associated with student achievement on different outcomes of schooling, both cognitive and affective. Another study (Kyriakides & Creemers, 2009) investigated the extent to which the teacher factors can predict achievement in language and mathematics at the end of pre-primary and at the end of primary education. Specifically, 52 primary and 76 pre-primary schools participated in the study. Multilevel analysis showed that almost all effectiveness factors could predict achievement in both domains at both phases of schooling. Teaching modelling and orientation were found to be associated only with achievement of primary students. Overall, it can be argued that the factors of the dynamic model belong to a generic model of educational effectiveness.

The dynamic model also postulates that the aforementioned factors represent multidimensional constructs. This can be explained by the effort to describe in detail the complex nature of educational effectiveness (Creemers & Kyriakides, 2008, 2011). Specifically, it is assumed that each effectiveness factor can be defined and measured using a number of dimensions, namely frequency, focus, stage, quality and differentiation (Creemers & Kyriakides, 2008; Kyriakides & Creemers, 2008).

Frequency is a quantitative way to measure the functioning of each factor, whereas the other four dimensions look at the qualitative characteristics of the functioning of each factor. This is a major contribution to research in that no previous model of educational effectiveness explicitly referred to the measurement of each effectiveness factor. In one study Reezigt, Guldmond and Creemers (1999) found that the frequency of school evaluation policy had both negative and positive effects on student achievement whereas Kyriakides (2005) who was looking at the formative aspect of evaluation found a positive effect. The aforementioned findings point to the importance of including other dimensions to the measurement of each effectiveness factor. Each of the five measurement dimensions is discussed in more detail below.

#### *A. Frequency*

Frequency refers to how often a task associated with a factor is present in the classroom (Kyriakides & Creemers, 2008). This is an easy way to measure the effect of a factor on student achievement and thus most effectiveness studies use this dimension to define effectiveness factors. For example, structuring can be measured in terms of frequency by taking into account the number of structuring tasks that take place in a lesson as well as how long each structuring task lasts. Another example of the measurement of the frequency dimension of student assessment concerns the number of evaluative tasks a teacher initiates. However, the relationship between this dimension and student outcomes may not always be linear. For example, it can be assumed that after an optimal level teacher evaluation activities may have a negative effect on student outcomes.

#### *B. Focus*

The effectiveness factors are also measured by considering the focus of the activities which reveals the function of each factor. Two aspects of the dimension of focus can be measured. The first aspect addresses the purpose for which an activity takes place. An

activity is expected to achieve single or multiple purposes. For example, in the case of orientation, focus is measured by examining the extent to which an activity aims to find a single reason or multiple reasons for doing a task. The second aspect of this dimension concerns the specificity of the activities which can range from specific to general. Orientation, in terms of the specificity aspect, can be measured by considering a part of the lesson or a whole lesson or even a lesson unit.

### *C. Stage*

Activities associated with a factor can also be measured by considering the stage at which they take place. The main assumption here is that the factors need to take place over a long period of time so as to have a continuous effect on student learning. However, activities need not be the same over this period of time. Therefore, using the stage dimension we can identify the extent to which there is constancy and flexibility of the functioning of the factor during the period that the investigation takes place. In the case of orientation, it is expected that orientation tasks may take place in different parts of a lesson or a lesson unit. The importance of this dimension arises from previous research findings which have shown that the impact of a factor on student achievement partly depends on the extent to which relevant activities are provided throughout the school career of the student (Creemers, 1994; Slater & Teddlie, 1992).

### *D. Quality*

The dimension of quality refers to the properties of the specific factor itself. This is important in that the functioning of an effectiveness factor may vary. For example, teacher assessment can be measured by looking at the properties of evaluation instruments such as the validity, the reliability and the practicality of the instruments used. Moreover, we can also examine the extent to which teachers use the formative or summative type of evaluation.

### *E. Differentiation*

Differentiation refers to the extent to which activities associated with a specific factor are implemented in the same way for all the subjects involved with it. This dimension is important in that it takes into account research into differential educational effectiveness (Campbell et al., 2004). Although the factors are generic in nature, it is recognized that their influence on different subjects or groups of subjects may vary. It is expected that

addressing the specific needs of each group of students will maximize their learning outcomes. For example, in the case of orientation, differentiation can be measured by examining the extent to which teachers provide different types of orientation tasks to students in relation to their learning needs or their personal and background characteristics.

Research findings reveal the added value of using different dimensions to measure teacher factors. The study conducted by Creemers and Kyriakides (2008), examined whether each of the aforementioned dimensions at the classroom level were associated with student achievement. Findings from multilevel modeling analysis revealed that variables measuring the five dimensions of the classroom level factors had significant effects on student achievement in all of the four dependent variables. Overall, combining all five dimensions explained most of the variance at the classroom level in student achievement and was found to have a better fit than any alternative model. Similarly, in the study comparing pre-primary and primary education (Kyriakides & Creemers, 2009), all five dimensions could be used to identify effects on student achievement in both language and mathematics and at both phases of schooling. Moreover, by taking into account the combination of the frequency dimension with other dimensions the explained variance in student outcomes was increased. In both studies, there are factors which were found to have no statistically significant effect on student achievement when taking into account the frequency dimension. For example, although the frequency dimension of teaching modelling in primary education was not associated with student achievement the quality dimension was found to have an impact on achievement. This shows that emphasis should also be placed on the qualitative characteristics of the activities associated with each effectiveness factor.

Another main assumption of the dynamic model is that the eight teacher factors and their dimensions are interrelated and therefore can be grouped into various types of teacher behaviour (Creemers & Kyriakides, 2008, 2011). In particular, a longitudinal study revealed that the factors can be grouped into five developmental stages of teaching skills (Kyriakides, Creemers & Antoniou, 2009), which move from relatively easy to more advanced:

Stage 1: Basic elements of direct teaching

Stage 2: Putting aspects of quality in direct teaching and touching on active teaching

Stage 3: Acquiring quality in active/direct teaching

Stage 4: Differentiation of teaching

Stage 5: Achieving quality and differentiation in teaching using different approaches.

Multilevel modeling analysis was also used to examine whether these stages were associated with student achievement. Findings showed that students with better outcomes (both cognitive and affective) had teachers who exhibited more advanced stages of teaching skills. The results of this study demonstrate the added value of searching for groupings of factors and their dimensions and provide support to the attempt of the dynamic model to describe effective teaching in an integrated approach.

#### **2.4.5 Summary**

Extensive research on school leadership has produced multiple findings on those sets of behaviours that effective leaders need to exhibit. The Pashiardis-Brauckmann Leadership Radius Framework captures those behaviours in a comprehensive model which is constituted by five leadership styles: Instructional, Participative, Personnel Development, Entrepreneurial, and Structuring. Moreover, research on school leadership effects on student outcomes has so far yielded inconsistent findings with most of the evidence pointing to the indirect effects model. This means that appropriate mediating variables need to be incorporated in any framework investigating school leadership effects on student outcomes.

The conceptual framework of the current study incorporates mediating variables both at the school and classroom levels. At the school level, Academic Optimism of Schools was found to have a strong influence on student outcomes irrespective of student SES and background characteristics. This construct consists of three variables, namely academic emphasis, faculty trust in parents and students, and collective teacher efficacy. At the classroom level, Instructional Quality as operationalized by the Dynamic Model of Creemers and Kyriakides was found to have significant effects on student outcomes irrespective of the subject taught. This classroom level factor consists of eight variables, namely structuring, orientation, teaching-modeling, questioning, application, classroom as a learning environment, management of time, assessment. Moreover, each of these

variables is measured through five measurement dimensions: frequency, stage, focus, quality, and differentiation.

To date, there is limited evidence that school leadership affects student citizenship outcomes. This evidence mostly derives from a qualitative European study on the Informal Learning of Active Citizenship at School. The conceptual framework of this study tries to build on the existing body of knowledge by investigating both direct and indirect relationships between School Leadership and Student Citizenship Outcomes (cognitive, affective and behavioural). School Academic Optimism and Instructional Quality are hypothesized to have a mediating role in leadership indirect effects.

# CHAPTER III

## METHODOLOGY

In the previous chapters of this study the research topic and objectives were presented whereas the theoretical underpinnings of the research were also discussed. The current chapter is intended to describe the methodology that was used to conduct this research undertaking. Initially, the research design and sampling procedure are presented followed by a description of the data collection instruments and the research implementation procedure. Then, the statistical analysis techniques are discussed and the main assumptions of the study are outlined.

### 3.1 Research Design

The current study adopts a quantitative value-added design (Gustaffson, 2010; OECD, 2008). Firstly, a quantitative design was selected since the purpose of the study is to explore direct and indirect relationships between school leadership and student citizenship outcomes. These relationships need to be established on the basis of quantitative links between independent, mediating, and dependent variables. According to Morrison (2007), quantitative research is seen as a rational, linear process which has been influenced by the scientific method and positivism. Quantitative researchers try to establish relationships between variables which can be generalized beyond the location of the project. Towards this direction, mathematical models and statistical techniques are utilized.

Furthermore, the current study is value-added in that the achievement of a specific panel of students was followed at two time points in a school year. The term is used to refer to “a quantitative measure of the relative progress made by pupils in a school over a particular period of time...in comparison to pupils in other schools in the same sample after adjusting for varying intake achievement and other background information” (Peng, Thomas, Yang & Li, 2006, p.137). It is a more valid and a fairer measure of a school’s performance than raw assessment scores. When students’ prior attainment and background factors are controlled for in the analysis the schools’ value added contribution can be estimated (Thomas, Peng & Gray, 2007).



Value added assessment is more valid in educational effectiveness research since the final test scores reflect partly the attainment of students when they enter the school (Fitz-Gibbon, 1995; Kyriakides, 2002). Therefore, there is a need to identify school and classroom variables which are associated with progress in student achievement rather than with absolute levels of attainment. Moreover, findings from value added analyses may provide policy makers with important information that could be utilized to assess the strengths and weaknesses of the educational system. Nevertheless, it must be pointed out that sample attrition may occur due to failure on the part of respondents to participate in the second wave of data collection.

### **3.2 Sampling Method**

The population of this study consists of all middle schools (gymnasias) which are located in the five cities of the non-occupied part of Cyprus, i.e. Nicosia, Limassol, Larnaca, Paphos, and Famagusta. The total number of middle schools across Cyprus equals to 65 whereas the total number of year three classes and students reaches 378 and 8356 respectively.

Multistage sampling was used to select a three-stage sample which would participate in the main data collection phase. According to this method of sampling, a number of schools are initially selected, then specific classrooms are chosen within each selected school and students are finally chosen within each selected classroom (Creemers & Kyriakides, 2008). Luyten and Sammons (2010) highlight that multistage sampling bears implications for computing appropriate confidence intervals and performing correct statistical significance tests. In this case, the interdependence of observations within the various sampling units is taken into account.

Overall, a multistage sample of 20 middle schools, 114 classes and 1596 students participated in the current study. For practical reasons, schools across all cities of Cyprus apart from Paphos were selected. It must also be noted that a number of principals were reluctant to provide instructional time for the study thus reducing considerably the available number of schools to be included in the sample. In the case of students, relevant permission from their parents was secured in order to participate in the study.

### **3.3 Data Collection Instruments**

The following section presents a description of the instruments which were used in this study along with existing evidence relating to their validity and reliability. Specifically, four such instruments were used concerning School Leadership, Student Citizenship Outcomes, School Academic Optimism and Instructional Quality.

#### **3.3.1 School Leadership Questionnaire**

School Leadership was measured using an adaptation of the instrument developed within the context of the LISA project (Pashiardis, 2014; Pashiardis & Brauckmann, 2008a). The School Leadership Questionnaire was constructed on the basis of previous research findings from the Effective Leadership and School Effectiveness literature. The initial instrument contained 64 items grouped under five leadership styles: the Instructional, the Participative, the Structuring, the Personnel Development and the Entrepreneurial Styles.

The initial School Leadership Questionnaire was pilot tested within three European countries, i.e. Hungary, Germany and the UK with a total of 218 teachers participating in the study. Responses were scored on a numerical scale from 1 to 5, in such a way that a higher score always represented a higher degree of agreement with a statement. Principal axis factor analysis resulted in a five factor solution involving 34 items that explained 62.48% of variance. The five factors represented all of the styles that were assumed to be included in the initial model: a) Instructional Style (with Cronbach alpha equal to 0.78), b) Participative Style (with Cronbach alpha equal to 0.95), c) Personnel Development Style (with Cronbach alpha equal to 0.86), d) Entrepreneurial Style (with Cronbach alpha equal to 0.90), and e) Structuring Style (with Cronbach alpha equal to 0.87). Confirmatory factor analysis with structural equation modelling was also performed indicating that the model had a fairly good fit to the data, where  $\chi^2(499, N = 218) = 843.58, p < 0.001$ ; CFI = 0.92; NNFI = 0.91; RMSEA = 0.056.

A 48 item version of the school leadership questionnaire was also completed by 1287 teachers in seven European countries (Hungary, Germany, UK, Italy, Slovenia, Norway, The Netherlands) within the context of the main data collection phase of the LISA project (Pashiardis, 2014; Brauckmann & Pashiardis, 2011). Principal axis factor analysis resulted in a five factor solution involving 35 items that explained 62.43% of variance. The five factors represented all of the styles that were assumed to be included in the initial model:

a) Instructional Style (with Cronbach alpha equal to 0.85), b) Participative Style (with Cronbach alpha equal to 0.92), c) Personnel Development Style (with Cronbach alpha equal to 0.88), d) Entrepreneurial Style (with Cronbach alpha equal to 0.92), and e) Structuring Style (with Cronbach alpha equal to 0.89). Confirmatory factor analysis with structural equation modelling was also performed indicating that leadership constitutes a second order factor indicated by five first order factors, i.e. the five leadership styles [ $\chi^2(532, N = 1287) = 2121.47, p < 0.001$ ; CFI = 0.94; NNFI = 0.94; RMSEA = 0.049].

Another study provided further support to the validation of the school leadership questionnaire within the context of Cyprus primary and secondary schools (Pashiardis, et al., 2011a). Exploratory factor analysis resulted in a five factor solution involving 29 items. All five leadership styles were represented as follows: a) Instructional Style (Cronbach alpha equal to 0.91), b) Participative Style (Cronbach alpha equal to 0.86) c) Personnel Development Style (Cronbach alpha equal to 0.84) d) Entrepreneurial Style (Cronbach alpha equal to 0.85), and e) Structuring Style (Cronbach alpha equal to 0.82). Confirmatory factor analysis indicated that leadership is a second order factor indicated by the five first order leadership styles [ $\chi^2(370) = 588.6 (p < 0.01)$ , CFI = 0.94, NNFI = 0.94, RMSEA = 0.048].

For the purposes of the current study, a 59 item version of the Pashiardis-Brauckmann instrument was constructed. Specifically, a number of items were added to the 48 item version in order to capture aspects of leadership that were not included in the previous version. For example, a number of items were added representing leadership behaviours which are likely to enhance student active participation in school affairs. Overall, all five leadership styles were represented as follows: Instructional Style (items 1 to 10), Participative Style (items 11 to 24), Personnel Development Style (items 25 to 33), Entrepreneurial Style (items 34 to 45), and Structuring Style (items 46 to 59).

The School Leadership Questionnaire has already been validated in the European and Cypriot context. Nevertheless, since a more elaborate version was adopted in the current study a decision was made to test the validity of the questionnaire through a focus group interview with three middle school teachers. Specifically, the teachers were asked to complete the questionnaire and mention any difficulties that they encountered in responding to the statements.

Overall, the teachers seemed to understand the various facets of school leadership behaviour that the questionnaire was intended to measure. Moreover, they confirmed that these leadership behaviours are enacted by principals in the context of middle schools.

However, they also made some recommendations for improving the content of the instrument. Specifically, they suggested clarifying the meaning of some statements (items 1, 5, 8, 39) by including an explanatory addition next to each of these statements.

Firstly, item 1 asks teachers to indicate the extent to which the school principal “Facilitates and supports programmes and practices which create a positive learning climate”. It was suggested by teachers to also add “(e.g. European projects or other activities beyond those offered by the formal curriculum”. This addition seemed to describe in more detail what “programmes” and “practices” may actually encompass.

With regards to item 5 “Encourages the implementation of instructional methods which facilitate higher order learning”, it was suggested that an explanation should be provided as to the meaning of “higher order learning”. To this effect, a decision was made to add “(that is, the acquisition of skills such as critical thinking and problem solving)”. In this way, it would be clearer that “higher order learning” alludes to more complex cognitive processing on behalf of students that goes beyond just remembering facts and concepts.

The focus group teachers also suggested providing specific examples of what item 8 might entail. This statement referred to what extent the principal “Monitors standards of teaching and learning throughout the school”. The examples attached to this statement relate to whether the principal observes lessons or asks teachers to provide him/her with evidence of their students’ progress.

Finally, it was suggested that item 39 should be amended by including specific examples. Item 39 referred to what extent the principal “Demonstrates the use of appropriate and effective techniques for community and parent involvement.” The examples attached to this statement related to the organisation of parent-teacher meetings or lectures for parents and the wider community. The final version of the questionnaire which was used in the main study appears as Appendix A in Greek and Appendix B in English.

### **3.3.2 School Academic Optimism Questionnaire**

School Academic Optimism was measured using the instrument developed by Hoy and colleagues (Hoy, Tarter & Hoy, 2006; McGuigan & Hoy, 2006; Smith & Hoy, 2007; Wu, Hoy & Tarter, 2013). The specific construct encompasses three variables relating to academic emphasis, collective efficacy, and faculty trust in parents and students. These

variables are collective properties of the school and not merely an aggregate of individual measures. This was also shown using a fully unconditional analysis of variance for the three variables using hierarchical linear modeling (Hoy, Tarter, & Hoy, 2006). The analysis indicated that the intraclass correlation coefficients were 0.23 for collective efficacy, 0.21 for trust in parents and students and 0.24 for academic emphasis. In other words, the variance which existed between schools was 23% for collective efficacy, 21% for trust in parent and students and 24% for academic emphasis. The strong intraclass correlation coefficients suggest a relatively high grouping effect where academic optimism can be conceived as an important latent school property.

Exploratory and confirmatory factor analyses demonstrated that academic optimism constitutes a strong factor consisting of academic emphasis, collective efficacy and faculty trust in parents and students. For example, Smith and Hoy (2007) used principal axis factor analysis to find out that academic optimism explained 89.83 percent of the variance. Moreover, the results showed that collective efficacy loaded on academic optimism at 0.99, faculty trust in clients loaded at 0.94, and academic emphasis loaded at 0.83. Another study by McGuigan and Hoy (2006) also demonstrated through principal axis factor analysis that academic optimism is a latent construct composed of three dimensions. The factor loadings for the construct were 0.96, 0.98 and 0.95 for collective efficacy, academic emphasis and faculty trust in clients, respectively. Confirmatory factor analysis also supported the structure of academic optimism (Hoy, Tarter & Hoy, 2006). Specifically, the chi-square fit statistic was 62.20 ( $p= 0.135$ ), the root mean square residual (RMSER) was 0.04 and the comparative fit index (CFI) was equal to 0.99. These indicators suggested a good fit of the data to the model.

The aforementioned findings indicate that academic optimism is a strong factor which can be measured by three school properties: academic emphasis, collective efficacy, and faculty trust in parents and students. The measurement of each of these three properties will next be addressed. Firstly, academic emphasis of the school was previously assessed using a subscale of the Organizational Health Inventory (Hoy & Tarter, 1997). The measure consists of eight Likert items. The items are directed at the group level beliefs of teachers rather than the individual teacher perceptions. Previous research also demonstrated the construct validity and reliability of the scale. The reliability of the scale has been supported with an alpha coefficient of 0.83 (Hoy, Tarter & Hoy, 2006), 0.94 (McGuigan & Hoy, 2006) and 0.89 (Smith & Hoy, 2007).

Collective efficacy was previously measured using an adaptation of the 12-item short version of the 21 item collective efficacy scale developed by Goddard et al. (2000). Goddard (2002) reexamined the initial 21-item collective efficacy scale in order to construct a more parsimonious version of the scale. Principal axis factor analysis showed that the 12 item scale explained 64.10% of the total item variance which compared favourably to the 21 item scale that explained 58.89% of the variance. In addition, the internal consistency of the 12 item scale ( $\alpha=0.94$ ) was nearly as strong as the 21 item scale ( $\alpha=0.96$ ). The findings from this study showed that the 12 item scale is more parsimonious using 43% fewer items than the original. Despite this, the correlation between the two scales is 0.983 which implies that little has changed from the omission of 43% of the items. Further studies also demonstrate the construct validity and reliability of the short form of the collective efficacy scale. The scores on the Collective Efficacy Scale drawn from 41 K-8 schools were used by Goddard and Skrla (2006) to conduct a principal axis factor analysis. One factor was extracted which explained 59.11% of the total item variance whereas the Cronbach's alpha was 0.94. Other studies also showed an alpha coefficient of 0.91 (Hoy, Tarter & Hoy, 2006), 0.94 (McGuigan & Hoy, 2006) and 0.91 (Smith & Hoy, 2007).

Collective efficacy items are directed at the group level, not the individual level (Goddard, 2002). For example, the collective efficacy item "Teachers in this school have what it takes to get the children to learn" is distinct from "I have what it takes to get my students to learn" in that the former requires a judgment about the whole faculty in contrast to the latter which requires individual-level judgments. The 12 items included in the shortened scale refer to the elements of group-teaching competence and task analysis. Group-teaching competence consists of "judgments about the capabilities that a faculty brings to a given teaching situation" (Goddard, 2002, p.100) whereas task analysis refers to "teachers' beliefs about the level of support provided by the students' home and the community" (Goddard, 2002, p.100). Six items from each dimension are included in the final version of the collective efficacy scale. Three items from each dimension are also negatively worded.

Faculty trust in parents and students was previously measured using a short version of the Omnibus Trust Scale (Hoy & Tschannen-Moran, 2003). The measure consists of ten Likert items scored on a 6-point scale ranging from strongly disagree to strongly agree. Using a sample of 50 elementary and 97 high schools, Hoy and Tschannen-Moran (2003),

found a strong alpha coefficient in both samples, i.e. 0.94. Other studies reconfirmed the reliability of the scale indicating an alpha coefficient of 0.94 (Hoy, Tarter & Hoy, 2006), 0.96 (McGuigan & Hoy, 2006) and 0.97 (Smith & Hoy, 2007).

Overall, the School Academic Optimism questionnaire consisted of 30 items relating to the collective beliefs of teachers about student learning. Teachers were asked to indicate the degree of agreement with the statements provided on a scale of 1 to 5 where 5 represented a higher degree of agreement. The questionnaire items represent all three dimensions of academic optimism: Collective Teacher Efficacy (items 1-12), Trust in Students and Parents (items 13-22), and Academic Emphasis (items 23-30). Here, it must be noted that Item 12 “*Drug and alcohol abuse in the community make learning difficult for students here*” was changed to “*The social problems in the community make learning difficult for students here*” in order to suit Cyprus’ context and societal reality.

The specific instrument was also pilot tested in order to assess its quality and make any likely improvements before using it in the main study. Specifically, the School Academic Optimism Questionnaire was completed by 211 teachers across a sample of 7 middle schools. In order to test the generalizability of the scale, a one-way analysis of variance (one-way ANOVA) was conducted. The results of the ANOVA analysis showed that the data across 29 of the items can be generalized at the school level as for these items of the questionnaire, the between group variance was higher than the within group variance ( $p < 0.001$ ). Findings showed that item 1 { $F(6,200) = 1.885, p = 0.085$ }, was not statistically significant at the 0.05 level. This item could not be generalized at the school level and hence was removed from the Academic Optimism scale.

Exploratory factor analysis was conducted in order to examine the inter-correlations between the academic optimism items. Principal component analysis with a varimax rotation yielded a two-factor solution involving 26 items with factor loadings above 0.50. Items 2, 5 and 7 were removed from the analysis due to low communality values. The two-factor solution (Table 3.1) explained 51.45% of the variance. The first factor comprised 19 items and their Cronbach’s alpha was 0.937 (Table 3.2). The second factor comprised 7 items and the Cronbach’s alpha was 0.875. However, the solution was deemed problematic since the first factor involved all items that were positively worded whereas the second factor involved all items that were negatively worded.

Table 3.1

## Exploratory Factor Analysis of School Academic Optimism Pilot Study Data

Items	FACTOR		Extraction (h <sup>2</sup> )
	I	II	
Q29	0.829	-0.063	0.515
Q28	0.814	-0.089	0.649
Q30	0.745	0.136	0.437
Q20	0.743	-0.253	0.359
Q19	0.722	0.047	0.663
Q18	0.714	-0.218	0.455
Q14	0.693	-0.139	0.713
Q27	0.683	-0.288	0.480
Q16	0.682	-0.138	0.429
Q10	0.659	-0.141	0.500
Q15	0.658	-0.207	0.476
Q13	0.652	-0.065	0.485
Q21	0.636	-0.148	0.557
Q24	0.635	0.061	0.524
Q6	0.608	-0.261	0.617
Q25	0.578	-0.465	0.426
Q26	0.553	0.164	0.420
Q23	0.544	-0.373	0.435
Q11	-0.095	0.839	0.407
Q9	-0.056	0.812	0.551
Q4	-0.055	0.804	0.332
Q3	0.081	0.713	0.549
Q12	-0.096	0.686	0.671
Q22	-0.232	0.605	0.691
Q8	-0.156	0.578	0.573
<b>Eigenvalue</b>	9.715	3.662	
<b>Variance</b>	33.961	17.493	
<b>Cumulative Variance</b>	33.961	51.453	



Table 3.2

## Reliability Analysis of School Academic Optimism Components

<b>Component</b>	<b>Number of Items</b>	<b>Items</b>	<b>Cronbach's Alpha</b>
1	19	6, 10, 13-21, 23-30	0.937
2	7	3,4,8, 9,11,12,22	0.875

The aforementioned findings from the exploratory factor analysis suggest that teachers respond to negative statements in a similar way. It is likely that this negative wording has resulted in a response bias on behalf of the teachers and a failure to identify any components related to academic optimism theory. Taking into account these findings, a decision was made to rephrase these items in a positive way. During this process, it became obvious that item 12 corresponded to item 10 when it was positively reworded and thus it was decided to drop the item from the questionnaire.

In addition, item 1 was removed due to lack of generalizability whereas a decision was made to retain items 2, 5 and 7 in the revised version of the questionnaire. Specifically, items 2, 5 and 7 involved positive statements of Collective Teacher Efficacy which had low communality values. However, since most of the negatively worded items were related to Collective Teacher Efficacy it is likely that they have influenced the communality values of items 2, 5 and 7. Therefore, in the light of a positive rephrasing of all questionnaire items it was assumed that their communality values would be increased. The final version of the questionnaire appears as Appendix C in Greek and as Appendix D in English.

### 3.3.3 Instructional Quality Questionnaire

Instructional Quality was measured using a revised version of the student questionnaire developed by Creemers and Kyriakides (2008). This high-inference instrument consists of 77 items and covers the five dimensions (frequency, stage, focus, quality, differentiation) of all eight factors (structuring, orientation, questioning, application, teaching-modelling, management of time, classroom as a learning environment, assessment) of the dynamic

model at the classroom level. The student questionnaire consists of three parts. Part A consists of 64 items scored on a five point Likert scale. Students are expected to indicate the extent to which their teacher behaves in a certain way in the classroom, where option 1 represents “never” and option 5 represents “almost always”. Part B comprises 5 statements each of which is accompanied by five potential answers. Students in this case are expected to choose the option which best describes what happens in their classroom. Part C comprises eight dichotomous statements with a YES/NO option. Specifically, students are expected to indicate whether a specific situation occurs in their class when their teacher returns their tests.

The specific questionnaire was chosen to be used for the purposes of this study since it covers the five dimensions of all eight factors of the dynamic model unlike the two low-inference instruments also developed by Creemers and Kyriakides (2008) which measure only a number of these factors. Specifically, one of the aforementioned low-inference instruments generates data about classroom interaction patterns whereas the second one refers only to orientation, structuring, teaching-modelling, questioning techniques, and application. Moreover, the student questionnaire would be more practical and less costly to use.

Multi-trait multi-method analyses of the data collected in 50 primary schools in Cyprus supported the use of the student questionnaire as a valid way to measure teacher behavior in the classroom (Creemers & Kyriakides, 2008; Kyriakides & Creemers, 2008). Specifically, each of the eight factors was assumed to be measured by the five dimensions of the dynamic model (traits) and by using four methods of measurement (methods). The methods involved external observation using the two low-inference and one-high inference instruments as well as the use of the student high-inference questionnaire. The findings showed that the proportion of the trait variance was generally high and method variance quite low. This shows that the methods had a weak influence on the measures. Moreover, no consistent method bias across traits or within traits was identified. The aforementioned findings suggest that all measurement methods would be valid and reliable ways to collect data about instructional quality. Similarly, another study in higher education showed that students can reliably rate teaching quality of courses taught at the University of Cyprus and the University of Auckland (Macpherson, Pashiardis & Frielick, 2000).

The validity of the framework used to measure each effectiveness factor of the dynamic model at the classroom level has been demonstrated by a number of studies. In the previously mentioned study of Creemers and Kyriakides (2008), support was provided

for the construct validity of the five measurement dimensions of most effectiveness factors. Only a few exceptions were noted revealing the difficulty of defining the dimensions of quality. In the case of “Questioning”, aspects of quality were found to constitute two separate factors. Also, in the case of “Teaching-Modelling”, the dimensions of quality and differentiation were found to belong to the same factor. In addition, it was found that “Classroom as a learning environment” should be treated as two interrelated overarching factors that concern relations among students and relations between the teacher and students. The measurement framework of the classroom factors was also affirmed in the context of pre-primary schools in Cyprus (Kyriakides & Creemers, 2009). Confirmatory factor analysis with structural equation modelling supported the use of a five factor model for each classroom factor representing the five measurement dimensions. Findings also showed that the criteria fit values for a one-factor model fell outside the accepted guidelines for model fit. This finding indicates that all dimensions of each factor cannot be treated as a single factor.

In relation to the Instructional Quality questionnaire, no pilot study was conducted since it was deemed to have been extensively tested in Cyprus in previous studies and therefore would not need to be subjected to further validation control. However, a number of items were removed so that the instrument would respond better to the context of Civic Education teaching in Cyprus. Specifically, the revised Part A comprised 55 items and Part B comprised 3 items whereas Part 3 was not included at all. The items which were removed were related to the factors of Teaching-Modelling and Assessment. Firstly, all items concerning Teaching-Modelling were not retained since the content of the subject of Citizenship Education – and especially within the short time which is taught – does not offer any opportunities for teaching specific strategies to students. Moreover, items relating to formal aspects of Assessment were not retained since students are generally tested through a single test which is administered towards the end of the term, thus providing no substantial variation to the functioning of these items. The final Instructional Quality questionnaire appears as Appendix E in Greek. The English version of the questionnaire can be found in Creemers and Kyriakides (2012), Appendix 10.1. The Appendix F of this study presents a table which depicts how the items of the Greek version correspond to the English version items found in Creemers and Kyriakides (2012). A translation of the items not found in the previous source is also provided.

### 3.3.4 Student Citizenship Outcomes Test

Student citizenship outcomes were measured through a criterion-reference test which had been specifically constructed for the purposes of this research. According to Kyriakides (2002, p. 811) “criterion-reference tests are more appropriate than norm-referenced tests for relating achievement to what a pupil should know and for testing competence rather than general ability”. In the current section, a description of the test construction is provided followed by the findings from the pilot test of the instrument.

#### *Construction of the Test*

The items included in the test were aligned to the curriculum that is currently operative in Cyprus middle schools. Some of the items included in CIVED were also utilized for the construction of this test. Furthermore, the development of the test was informed by individual interviews with three civic education teachers and the general inspector of the specific subject. During the interviews they were asked to express their views on the meaning of citizenship, the objectives of the specific subject, the content domains emphasized during the actual lessons, and the forms of student assessment used. After the development of the test, another three civic education teachers and four university tutors were asked to comment on the language used as well as on the relevance of the items used. Based on their comments, amendments were made prior to the administration of the test to students during the pilot study.

Overall, the initial test consisted of 44 items which measured cognitive, affective and behavioural dimensions of student achievement across three main content domains: i) fundamental civic concepts and principles, ii) the individual as citizen of the country, and iii) the individual as citizen of the world (see table 3.3). The number of items across each content domain and across each dimension of student learning reflected the emphases placed in the actual practice of teaching Citizenship Education.

The first part of the test consisted of 10 multiple choice questions, 4 completion statements, 5 true/false statements and 17 short answer questions. The second part of the test consists of two sections. The first section asked students to indicate their degree of agreement with 13 statements on a five point Likert scale, where 1 represents “Completely Disagree” and 5 represents “Completely Agree”. The second section asked students to indicate how often they engage in 18 specific situations on a five point Likert scale, where 1 represents “Never” and 5 represents “Almost always”.

Table 3.3

## Initial Student Citizenship Outcomes Assessment Framework

CONTENT DOMAINS	STUDENT CITIZENSHIP OUTCOMES			
	Cognitive	Affective	Behavioural	TOTAL
<b>Fundamental Civic Concepts and Principles</b>	A.1. A.2. A.11.Δ. A.12.(B,Δ) A.13. A.14. A.3. A.5. A.15. A.18.	A.19. A.26. A.27. A.28. B.1.(1,6,9) B.1. (7,8)	A.20. A.22. B.2. (1,2,3,4,5,6) B.2.(9,10,11,12,13,14,15)	<b>20</b>
<b>The Individual as Citizen of the Country</b>	A.9. A.11.(A.,B) A.11.Γ. A.12.A. A.12.Γ. A.4. A.10. A.16. A.17. A.21.	A.23. A.24. A.29. B.1 (2,3,4,5)	B.2. (7,8)	<b>15</b>
<b>The Individual as Citizen of the World</b>	A.6. A.8. A.12.E. A.7.	A.25. B.1. (10,11) B.1. (12,13)	B.2. (16,17) B.2. (18)	<b>9</b>
<b>TOTAL</b>	<b>24</b>	<b>13</b>	<b>7</b>	<b>44</b>

The initial test also consisted of a third part which was intended to collect student background information. This part comprised 13 questions about Student Gender, Immigrant Status (i.e. Student's Place of Birth, Mother's Place of Birth, Father's Place of Birth), Socioeconomic Status (i.e. Mother's Educational Background, Father's Educational Background, Mother's Occupational Background, Father's Occupational Background, Number of Books at Home), Student Council Participation as well as aspects of the students' Home Environment (i.e. Buying Newspaper at Home, Watching TV, Going out at Night) which are likely to have an impact on their achievement. This information is deemed to be important for controlling individual student effects on their final outcomes.

Finally, six alternate test forms (Table 3.4) were created in order to facilitate the administration procedure. Since only 40 minutes were available for the administration of the test it was deemed that this kind of assessment would increase the degree of content coverage. Each of the test forms involved 20 items with a core of items being in common with the rest of the test forms. Specifically, the items were distributed across each of the test forms in such a way so that at each pair of test forms shared at least 10% of the total number of items. Moreover, at least 10% was common in relation to each content domain, open questions, closed questions and Likert scale items.

### *Pilot Study Findings*

A number of methods were employed to assess the practicality and validity of the test. For this purpose, the test was administered to a small sample of year three students followed by an interview on their answers. Specifically, the sample was constituted by six students each one of which was asked to complete a different test form. Apart from students, expert judgment was sought by three Civic Education teachers and the three members of the Steering Committee of the specific study.

Firstly, the pilot administration of the test to students yielded a number of significant findings. Students needed an average time of fifty minutes to complete the test. The issue of time, however, is important in that schools are not very willing to provide instructional periods for research purposes. For the main study, it seemed to be more feasible to secure only an instructional period of 40 minutes for the test administration. In total, schools would be asked for their permission for three instructional periods, two for the pre-test and post-test administration and one for the completion of the Instructional Quality Questionnaire. Thus, the test would have to be adjusted so that the completion time would not exceed a single instructional period.

Table 3.4

## Distribution of Items Across Alternate Test Forms

TEST FORMS					
A	B	C	D	E	F
A.1.	A.2.	A.12.B. A.12.Δ.	A.2.	A.1.	A.12.B. A.12.Δ.
A.3.	A.3.	A.3.	A.5.	A.5.	A.5.
A.9.	A.12.A.	A.12.A.	A.9.	A.12.Γ.	A.12.Γ.
A.4.	A.4.	A.10.	A.10.	A.10.	A.4.
A.12.E.	A.6.	A.12.E.	A.6.	A.8.	A.8.
A.7.	A.7.	A.7.	A.7.	A.7.	A.7.
A.11.Δ.	A.14.	A.13.	A.13.	A.11.Δ.	A.14.
A.15.	A.15.	A.15.	A.18.	A.18.	A.18.
A.19.	A.28.	A.27.	A.19.	A.27.	A.26.
A.20.	A.22.	A.22.	A.22.	A.20.	A.20.
A.11.A. A.11.B.	A.11.Γ.	A.11.A. A.11.B.	A.11.Γ.	A.11.A. A.11.B.	A.11.A. A.11.B.
A.16.	A.21.	A.16.	A.17.	A.21.	A.17.
A.24.	A.24.	A.23.	A.23.	A.29.	A.29.
A.25.	A.25.	A.25.	A.25.	A.25.	A.25.
B.1. (1,6,9)	B.1. (7,8)	B.1. (1,6,9)	B.1. (7,8)	B.1. (7,8)	B.1. (1,6,9)
B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)
B.1. (10,11)	B.1. (10,11)	B.1. (12,13)	B.1. (12,13)	B.1. (10,11)	B.1. (12,13)
B.2. (1,2,3,4,5,6)	B.2. (9,10,11,12,13,14,15)	B.2. (1,2,3,4,5,6)	B.2. (9,10,11,12,13,14,15)	B.2. (1,2,3,4,5,6)	B.2. (9,10,11,12,13,14,15)
B.2. (7,8)	B.2. (7,8)	B.2. (7,8)	B.2. (7,8)	B.2. (7,8)	B.2. (7,8)
B.2. (18)	B.2. (16,17)	B.2. (18)	B.2. (16,17)	B.2. (18)	B.2. (16,17)

The issue of time was resolved by the exclusion of a number of items (items A19, A20, A22, A23-A29) from the final test. Specifically, these items were intended to measure affective and behavioural outcomes. Students seemed to have a difficulty in responding to these items. At first, they skipped the questions providing no answer to most of them. On further encouragement on behalf of the administrator they completed the questions, yet the time taken was relatively long. During the interview, all students mentioned that these items were more difficult to respond to since they include a dilemmatic situation that takes time to read, think about and write down their answer. Taking into account the shortage of the time for the test administration, as well as the difficulty in responding to these scenarios, a decision was made to drop them from the final test. This decision was corroborated by the Civic Education teachers as well as by one of the experts of the Steering Committee. The teachers confirmed that these items would be too challenging for their students whereas the Steering Committee expert supported that the format of the items might risk the unidimensionality of Affective and Behavioural Outcomes during the main study analysis.

Furthermore, items A5 and A15 were both intended to measure the same cognitive criterion however with a different format. Item A5 was a multiple choice question whereas item A15 was an open ended question. The purpose was to retain the item that would function in a better way. With respect to students, they tended to answer only part of the open ended question ignoring the part that asks them to explain their answer. Moreover, expert opinion favoured the multiple choice item in that a more consistent approach would be adopted when grading the tests. On the contrary, the open ended item would yield answers that might make the grading more difficult. As a result, a decision was made to drop item A15 from the final test.

Item A1 was also found to bear specific weaknesses in its function. This item had a multiple choice format which included the following question: “Which of the following articulates accurately what laws are?” Four options were provided however none of them entailed a definition of what laws are. Instead they described the conditions under which laws are made and their functions. This dysfunction was brought up by one of the teachers suggesting that the question could be rephrased as follows: “Which of the following statements is accurate about laws?” This suggestion was incorporated in the final version of the test. Beyond the question, one of the alternative options seemed to have been problematic. Specifically, one of the students who completed this item selected the first



distractor, i.e. “Laws function in favour of the government”. This student explained that the specific option was selected since laws function in support to the work of the President and the Ministers. Whereas this distractor was used in a negative way to imply a democratic deficit in laws, it is very likely that it can be misinterpreted to imply the positive effects of laws on the government functions. The Civic Education teachers also agreed that the specific distractor is misleading suggesting that it should be replaced. A new alternative was thus used as follows: “Laws impede the exercise of critique against the government”.

Furthermore, item A11 seemed to cause some kind of confusion to two students (out of the four students) who completed this question. Specifically, the question asked students to complete the number of Greek Members of the Parliament (A11.A) and the time period of their tenure (A11.B). According to these students, the “Greek” Members of the Parliament were taken to imply citizens who live in Greece. Thus, a distinction needed to be made between Greeks living in Greece and Greeks living in Cyprus replacing the specific word with “Greek Cypriot”.

During the interviews with the teachers, further suggestions were made to improve a number of items. Specifically, item 5 included the phrase “A state is constituted by two smaller states” which could cause confusion to a larger sample of students and was suggested to become “A state is constituted by two smaller regions”. In addition, the first distractor of Item 6 “To secure trade between countries” was deemed to be ambiguous suggesting that it should be made more specific and clear. The aforementioned distractor was thus revised as follows: “To monitor the commercial deals between countries”.

Moreover, one of the members of the Steering Committee suggested that a better distractor should be used for option D of Item 10. Option D, i.e. “The Military Court” seemed to be quite obvious to students that this is not the answer and in fact during the pilot administration no student selected this alternative. As a result, “The Military Court” was replaced by “The Commercial Court”. No commercial court exists in Cyprus nevertheless its label is directly related to the content of the case described in the question.

With respect to Likert scale items, a number of weaknesses were identified in the behavioural part of the test. This part of the test asked students to indicate on a scale of 1 to 5 how often the statement described occurs. Students identified two items that needed to be revised, i.e. items B2 and B16. Initially, two out of the three students who completed B2 made an important comment for its improvement. Item B2 was phrased as follows: “I

follow the news (either on TV or in the newspaper or on the radio).” These students mentioned that they also read the news on various internet sites. Thus, this source of news was added as follows: “I follow the news (either on TV or in the newspaper or on the radio or on the internet).” Thus, more contemporary trends in following the news were taken into account. In addition, one out of three students who completed item B16 (“The European Union is something distant to me”) commented on its ambiguity which led her to a difficulty in providing an accurate answer. More specifically, the meaning of the word “distant” seems to involve a number of different interpretations. As a result, a more specific EU related item was used to replace it as follows: “I keep myself up to date about the developments concerning the European Union”.

Both groups of experts agreed that the aforementioned revisions should be made. Moreover, one of the Steering Committee members suggested that two of the behavioural items, i.e. Items B7 and B8 (“I know the history of my country” and “I would prefer to live permanently in another country”) should be revised since they seem to measure knowledge and attitudes rather than behaviours which is the intended purpose of this part of the test. To this effect, these items were changed as follows: “I seek to learn about the history of my country” and “I make known through conversations the achievements of my country (=what my country has achieved)”.

Based on the findings from the pilot study, the initial specification framework was amended (see table 3.5). Overall, the number of total items was reduced from 44 to 33 whereas improvements were also made to individual items. These items were also distributed to six alternate forms (table 3.6) so that each pair of test forms shares at least 10% of the total items, as well as at least 10% of the items in relation to each content domain, open questions, closed questions and Likert scale items.

Finally, the pilot study yielded a significant input with regards to the collection of student background information. Specifically, one of the members of the Steering Committee suggested making an addition to the final two questions (i.e. 12 and 13). These questions asked students to provide the occupation of their mother and father respectively. The addition concerned a complementary statement inviting students to provide as many details they are aware of about their parents’ occupations so that these occupations could be grouped more accurately into the appropriate categories and therefore aid the analyses that were to follow. The final Citizenship Education test is provided as Appendix G in Greek and as Appendix H in English.

Table 3.5

## Final Student Citizenship Outcomes Assessment Framework

	<b>STUDENT CITIZENSHIP OUTCOMES</b>			
<b>CONTENT DOMAINS</b>	<b>Cognitive</b>	<b>Affective</b>	<b>Behavioural</b>	<b>TOTAL</b>
<b>Fundamental Civic Concepts and Principles</b>	A.1. A.2. A.3. A.5. A.11.Δ. A.12.(B,Δ) A.13. A.14. A.17.	B.1.(1,6,9) B.1. (7,8)	B.2. (1,2,3,4,5,6) B.2. (9,10,11,12,13,14,15)	<b>13</b>
<b>The Individual as Citizen of the Country</b>	A.4. A.9. A.10. A.11.(A.,B) A.11.Γ. A.12.A. A.12.Γ. A.15. A.16. A.18.	B.1 (2,3,4,5)	B.2. (7,8)	<b>12</b>
<b>The Individual as Citizen of the World</b>	A.6. A.7. A.8. A.12.E.	B.1. (10,11) B.1. (12,13)	B.2. (16,17) B.2. (18)	<b>8</b>
<b>TOTAL</b>	<b>23</b>	<b>5</b>	<b>5</b>	<b>33</b>

Table 3.6

## Final Distribution of Items Across Alternate Test Forms

TEST FORMS					
A	B	C	D	E	F
A.1.	A.2.	A.2.	A.1.	A.1.	A.2.
A.12.B. A.12.Δ.	A.12.B. A.12.Δ.	A.12.B. A.12.Δ.	A.12.B. A.12.Δ.	A.12.B. A.12.Δ.	A.12.B. A.12.Δ.
A.3.	A.3.	A.3.	A.5.	A.5.	A.5.
A.9.	A.12.A.	A.12.A.	A.9.	A.12.Γ.	A.12.Γ.
A.4.	A.4.	A.10.	A.10.	A.10.	A.4.
A.12.E.	A.6.	A.12.E.	A.6.	A.8.	A.8.
A.7.	A.7.	A.7.	A.7.	A.7.	A.7.
A.11.Δ.	A.14.	A.13.	A.13.	A.11.Δ.	A.14.
A.17.	A.17.	A.17.	A.17.	A.17.	A.17.
A.11.A. A.11.B.	A.11.Γ.	A.11.A. A.11.B.	A.11.Γ.	A.11.A. A.11.B.	A.11.A. A.11.B.
A.15.	A.18.	A.16.	A.15.	A.18.	A.16.
B.1. (1,6,9)	B.1. (7,8)	B.1. (1,6,9)	B.1. (7,8)	B.1. (7,8)	B.1. (1,6,9)
B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)	B.1 (2,3,4,5)
B.1. (10,11)	B.1. (10,11)	B.1. (12,13)	B.1. (12,13)	B.1. (10,11)	B.1. (12,13)
B.2. (1,2,3,4,5,6)	B.2. (9,10,11,12,13,14,15)	B.2. (1,2,3,4,5,6)	B.2. (9,10,11,12,13,14,15)	B.2. (1,2,3,4,5,6)	B.2. (9,10,11,12,13,14,15)
B.2. (7,8)	B.2. (7,8)	B.2. (7,8)	B.2. (7,8)	B.2. (7,8)	B.2. (7,8)
B.2. (18)	B.2. (16,17)	B.2. (18)	B.2. (16,17)	B.2. (18)	B.2. (16,17)

### 3.4 Data Collection Procedure

The collection of the data of the main study was completed in three phases (table 3.7). In the first phase, the main aim was to collect data on Student Citizenship Outcomes by administering the constructed test to the selected sample of students. The initial measure of student achievement was important in providing a baseline score against which student gains would be estimated. Data relating to Student Background were also collected. The data collection was carried out at the beginning of the second term (i.e. in January 2011) of the school year 2010-2011 since the subject of Citizenship Education is taught during the specific period. A letter was sent to parents prior to the collection of the data so as to obtain their written consent for the participation of their children in the study. Students were provided with an instructional period of forty minutes to complete the test.

Table 3.7

Main Phases of the Data Collection Procedure

<b>PHASE</b>	<b>ACTIVITIES</b>	<b>TIME PERIOD</b>
<b>1</b>	Initial administration of Citizenship Education Test (including the Student Background Information part)	January 2011
<b>2</b>	1. Administration of School Leadership and School Academic Optimism Questionnaires 2. Administration of Instructional Quality Questionnaire 3. Collection of Contextual School Level Data	March 2011
<b>3</b>	Final administration of Citizenship Education Test (including the Student Background Information part)	May 2011

In phase 2, data were collected with respect to the other three main variables that this study was intended to measure, i.e. Instructional Quality, School leadership, and School Academic Optimism. The data collection was carried out in the middle of the second term,

i.e. during March 2011. Specifically, students were administered and asked to complete the Instructional Quality Questionnaire. For this purpose a teaching period of forty minutes was provided by the school administration. Moreover, teachers were asked to complete the School Leadership and School Academic Optimism Questionnaires. At this stage, contextual school level data were also collected during a short meeting with the principal. These data concerned the school size (i.e. number of students), as well as the principals' experience in the specific post and their educational background in school leadership.

In phase 3, Citizenship Education tests were readministered to the initial sample of students. The data collection was conducted at the end of the school year 2010-2011 (i.e. May 2011) in order to measure the final achievement of students in Citizenship Education. The part concerning Student Background Information was also readministered to students in order to assess the reliability of their initial answers as well as acquire information on variables that were missing during the first administration.

### **3.5 Statistical Analysis Techniques**

The analysis of the data which were collected involved a number of statistical techniques that were deemed appropriate to use at various stages. Firstly, a generalizability test was conducted in relation to the individual items of Instructional Quality, School Leadership and School Academic Optimism in order to assess whether item scores can be aggregated at the classroom or school level respectively. To this effect, a one-way analysis of variance (ANOVA) (Field, 2013) was conducted using the statistical package SPSS 18.0. All those items that had a between group variance which was higher than the within group variance and at a statistically significant level ( $p < 0.05$ ) were retained and aggregated at the appropriate level of analysis.

Further analyses involved the conduct of exploratory and confirmatory factor analyses. Exploratory factor analysis is generally conducted in order to uncover the underlying structure of the investigated variables as well as reduce the number of items into a more manageable size while retaining as much of the original information (Field, 2013). The specific technique is conducted in the early stages of research in order to consolidate variables and produce hypotheses about underlying processes (Tabachnick & Fidell, 2013). In the case of the current study, exploratory factor analysis was utilized to identify the inter-correlations between the various items of each of the three scales (i.e. Instructional Quality, School Leadership, and School Academic Optimism scales) and drop

any irrelevant items. It was mainly used to clarify the initial structure of the main variables of the study and assist in the subsequent process of confirming this structure. For the purposes of exploratory factor analysis SPSS 18.0 was used. The Kaiser rule to drop all components with eigenvalues under 1.0 was used. However, the whole process was also driven by the criterion of comprehensibility emerging from existing theory.

Confirmatory factor analysis was then conducted in order to confirm the factor structure which emerged from the exploratory factor analysis. According to Tabachnick and Fidell (2013), confirmatory factor analysis is used in the advanced stages of research in order to test a theory about latent processes. To this effect, Structural Equation Modeling (SEM) was performed using the statistical package EQS 6.1. A number of goodness of fit indices were used to assess the extent to which the data fit the models tested. Specifically, the Scaled and Normed Chi-Square, Bentler's (1990) Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA) (Brown & Mels, 1990; Kline, 2005) were estimated.

The Chi-Square value is an inferential index used to assess the magnitude of discrepancy between the observed and model covariance matrices (Kline, 2005; Marcoulides & Kyriakides, 2010). A good model fit would provide an insignificant result at the 0.05 probability level. This index, however, is sensitive to large sample sizes and there is a tendency to reject the proposed models even though the differences between the observed and predicted models are slight. To reduce this sensitivity of the chi-square to sample size, researchers divide its value by the degrees of freedom (Normed Chi-Square). However, there are no clear guidelines regarding acceptable values of this ratio with values of 2.0, 3.0 or even 5.0 being recommended as indicating reasonable fit (Bollen, 1989). In this study, values less than 2.0 were considered to be acceptable. However, even this ratio does not correct completely for the influence of sample size that is why further fit indices have been described to assess model fit. The CFI is an incremental index which is used to assess the improvement in fit of the researchers's model compared to the baseline model, also called the null model. CFI values greater than 0.90 and close to 1 are considered to indicate a reasonably well-fitting model (Kline, 2005). The RMSEA considers the error of approximation in the population with values less than 0.05 indicating a good model fit. Confidence intervals are also used to assess the precision of the RMSEA estimates. Specifically, a 90% confidence interval is used where the left endpoint should be smaller than 0.05 and with the interval not being excessively wide (Kline, 2005; Marcoulides &

Kyriakides, 2010).

Rasch modelling (Rasch, 1960) was also used to validate the Civic Education test. This is the simplest form of Item Response Theory (IRT) models and it is sometimes referred to as a one-parameter IRT model. Rasch analysis provide estimates of person ability and item difficulty along the same continuum. These estimates are expressed on a common interval scale called the logit scale (Andrich, 1978). According to Andrich (2002, p. 119),

“the model can be used to locate items empirically on a continuum of achievement to produce evidence as to where there might be problems in operating tasks, clues as to where to focus in understanding students’ problems with concepts, and clues for constructing and improving marking key for both dichotomously and polytomously scored items”.

A fundamental assumption underlying Rasch modeling is unidimensionality. This means that a single construct is underlying the items that form a hierarchical continuum (Bond & Fox, 2007). In the current study, it was assumed that cognitive, affective, and behavioural student outcomes constituted three distinct dimensions of citizenship outcomes. Thus, Rasch analysis was used with Quest 2.1 (Adams & Khoo, 1996) to assess the validity of this assumption using item and person fit statistics.

Two types of fit statistics were used to test whether the data fit the model: the infit and outfit mean square and standardized statistics (Linacre, 2002). The infit statistic is an information-weighted sum. It is inlier sensitive in that it is dominated by unexpected inlying patterns among informative, targeted observations. Outfit is outlier sensitive since it is dominated by unexpected outlying, off-target observations. Mean square fit statistics show the amount of distortion of the measurement system with expected values being close to 1.0. Values less than 1.0 indicate that observations are too predictable whereas values more than 1.0 indicate unpredictability. The standardized fit statistics are derived from the conversion of the mean square statistics to the normally distributed z-standardized ones. Their expected values are close to 0. Values less than 0 indicate that observations are too predictable whereas values more than 0 indicate lack of predictability. Generally, outfit problems are less of a threat to the validity of measurement but are easier to manage than infit problems.

The SEM and Rasch analyses enabled the estimation of descriptive statistics for the variables of the study at the student, classroom and school levels. Descriptive statistics involved frequencies, central tendencies, standard deviations and measures of skewness



and kurtosis (Field, 2013). These statistics allow us to acquire a picture of the level and variability of each of the variables as well as assess the degree of normality of the data. The statistical package SPSS 18.0 was used to calculate the aforementioned descriptive statistics.

At a next stage, inferential statistical techniques were used in order to explore the relationships among the study variables. Firstly, the analysis of the data involved the development and assessment of a variety of different models using multilevel modeling techniques (Godlstein, 2010; Luyten & Sammons, 2010; Paterson & Goldstein, 1991). This choice has been based on the acknowledgment of the hierarchical structure of the data observations included in the specific study. In other words, it is recognized that student observations are nested within students, students are nested within classrooms and that classrooms are nested within schools.

According to Creemers and Kyriakides (2008, p.32), “single-level analyses require the researcher to assume incorrectly that individuals within similar subunits share no common characteristics. Such an approach leads to the possibility of biased regression coefficients and associated standard errors.” On the contrary, multilevel modeling enables the partitioning of the outcome variables’ variance into different levels and thus produces more accurate explanations and results. In addition, aggregated data to the group level yield unreliable estimates and high collinearity among predictors (Paterson, & Goldstein, 1991; Goldstein, 2010). On the contrary, if regression relationships are allowed to vary among groups then we can see where effects occur and understand how they occur. On the whole, multilevel modeling “allows statistical analysis to be more flexible in that it can respect the multiple groupings of society-incorporating both explanatory processes and random variation at several levels” (Paterson, & Goldstein, 1991, p. 391).

Beyond multilevel analysis, multiple linear regression (Field, 2013) was used to identify the relationship between school level variables. Specifically, the main purpose was to identify the relationship between a set of explanatory variables (i.e. School Leadership and Contextual School Level variables) and a dependent variable (i.e. School Academic Optimism). The specific analysis is carried out at a single level and therefore it was deemed to be appropriate to use in this case. In fact, both the dependent and explanatory variables lie at the school level. Although not directly related to how school leadership affects student achievement, the analysis was considered to be important in identifying the extent to which leadership influence can spread.

### **3.6 Assumptions**

A number of theoretical and methodological assumptions permeate the design of this study:

- a) School Leadership effects on Student Citizenship Outcomes can be depicted in a tangible, quantifiable manner. This assumption is mainly reflected in the quantitative nature of this study.
- b) School Leadership is an attribute which is dependent on teachers' perceptions. Other measures of school leadership could have been obtained through the perceptions of other school stakeholders, such as students and parents, or even the principals themselves. However, teachers are more likely to have a complete picture of the principal's actions and behaviours in comparison to students and parents whereas self-reports by the principals would probably lead to an overestimation of their ability and thus produce unreliable findings.
- c) Student Citizenship Outcomes represent in this case a measure of school effectiveness. The specific indicator has been chosen due to the growing importance attached to the concept of citizenship at an international level. Even so, it is acknowledged that the subject of Citizenship Education as a separate discipline is still underemphasized when compared to primary subjects such as Language and Mathematics.
- d) Cognitive, Affective, and Behavioural Outcomes represent three distinct, unidimensional components of Student Citizenship Outcomes.
- e) The school is viewed as a place structured in multiple levels. Units within similar levels are considered to share similar characteristics, such as students within a specific classroom or classrooms within specific schools. This assumption has implications on the use of multistage sampling and multilevel analysis for conducting the specific study.

### **3.7 Summary**

The current study seeks to identify direct and indirect relationships between School Leadership and Student Citizenship Outcomes. A quantitative value-added design was deemed to be most appropriate for addressing the main purpose of the study. A quantitative design is founded on the positivist tradition and permits researchers to quantify the relationships between independent, mediating and dependent variables. Moreover, the

value-added dimension enables the assessment of student progress rather than relying on absolute achievement and thus constitutes a more valid and fairer measure of school effectiveness.

The population of the current study is constituted by all middle schools located in the free areas of Cyprus. Multistage sampling was conducted in order to select a three stage sample of 20 middle schools, 114 year three classes and 1596 year three students. Four instruments were used to carry out the collection of the data. Firstly, a revised version of the Pashiardis and Brauckmann (2008a) questionnaire was used to measure School Leadership styles. Furthermore, School Academic Optimism was measured through the instrument developed by Hoy et al. (2006, 2007) whereas Instructional quality was assessed through the student questionnaire developed by Creemers and Kyriakides (2008). Finally, Student Citizenship Outcomes were measured through a test which was specifically developed for the purposes of this study. All instruments were validated through a small scale pilot study apart from the Instructional Quality questionnaire which has been extensively used and validated in the Cypriot context.

The data collection procedure included three main phases. During the first phase, the first wave of student achievement data was collected through the administration of the Citizenship Education test. The second phase involved the collection of the data relating to the other three main variables (i.e. School Leadership, School Academic Optimism, and Instructional Quality) as well as to contextual school level data. The third phase involved the collection of the second wave data on Student Citizenship Outcomes through the readministration of the Civic Education test. The analysis of the data collected was conducted through statistical techniques such as exploratory and confirmatory factor analyses, Rasch analysis, multilevel modeling and multiple linear regression.

## **CHAPTER IV**

### **FINDINGS**

This chapter aims to present the findings of the study and address the research questions that were set. The study sought to identify direct and indirect effects of middle school leadership on student citizenship outcomes (cognitive, affective, behavioural). In the case of indirect effects, the mediating role of instructional quality and school academic optimism was investigated. A series of statistical analyses was conducted in order to provide an answer to the aforementioned research questions.

Firstly, there was a need to proceed with the validation of the main instruments used to collect the data. To this effect, a one-way analysis of variance (ANOVA) was used to determine the generalizability of the items of the questionnaires measuring the independent variables whereas structural equation modeling was used to examine their construct validity. Moreover, the face validity findings for each of these questionnaires are discussed. Rasch measurement models were used to determine the psychometric properties of the Citizenship Education test. The aforementioned analyses enabled the calculation of the descriptive statistics for all variables of the study. Finally, multilevel modeling and single level multiple regression analysis were conducted in order to shed light on the relationships between the variables and thus provide an answer to the research questions that were set. The findings that were derived from the aforementioned analyses are presented in the following sections of this chapter.

#### **4.1 Validation of the Instruments used to Measure the Main Variables of the Study**

##### **4.1.1 Validation of the School Leadership Questionnaire and the Pashiardis-Brauckmann Leadership Radius Framework**

The School Leadership Questionnaire was completed by 455 teachers across the whole sample of the 20 middle schools. Overall, the questionnaire consisted of 59 items regarding the behavior and practices of their principals at school. Teachers were asked to indicate the degree of agreement with the statements provided on a scale of 1 to 5 where 5 represented a higher degree of agreement. The content of the items related to the five leadership styles proposed in the Pashiardis-Brauckmann theoretical framework: the

Instructional (items 1-10), Participative (items 11-24), Personnel Development (items 25-33), Entrepreneurial (items 34-45) and Structuring Styles (items 46-59).

### **Face Validity**

After the pilot study, the School Leadership Questionnaire was revised. The revised form of the questionnaire was reviewed by the three members of the Steering Committee as well as three middle school teachers in order to assess its face validity. Overall, both groups of experts and practitioners showed a satisfactory understanding of what the questionnaire appears to measure.

### **Generalizability Test**

In order to test the generalizability of the Likert scale, a one-way analysis of variance (one-way ANOVA) was conducted. The results of the ANOVA analysis showed that the data can be generalized at the school level as for all the items of the questionnaire, the between group variance was higher than the within group variance ( $p < 0.001$ ). This finding is important in that it allows us to aggregate scores of all items at the school level.

### **Construct Validity**

The construct validity of the School Leadership Questionnaire was examined by conducting exploratory and confirmatory factor analyses. The exploratory factor analysis constituted a first step in determining the factor structure of school leadership. Specifically, the exploratory approach was used to assess which items were inter-correlated and to establish internal reliability. Then, confirmatory factor analysis was used to confirm that the items load as predicted on the expected number of factors.

With regards to the exploratory factor analysis, principal components analysis with a varimax rotation yielded a five-factor solution involving 47 items with factor loadings above 0.45. The five-factor solution explained 73.73% of the variance. The factor solution is presented in table 4.1. The five factors extracted were labelled as: (i) Entrepreneurial Style, (ii) Participative Style, (iii) Instructional Style, (iv) Structuring Style, and (v) Personnel Development Style. The first factor named Entrepreneurial Style comprised 12 items (with Cronbach's alpha equal to 0.97) representing leadership practices that promote the involvement of external actors.

The second factor named Participative Style comprised 10 items (with Cronbach's alpha equal to 0.96) representing leadership practices that promote cooperation and commitment. It must be noted that items 21 to 24 did not load highly on the Participative Style and therefore they were removed from the final analysis. Specifically, item 21 is related to the creation of opportunities for cooperation between teachers. The content of the item may have been perceived in terms of a separate factor related to the promotion of teacher collaboration. Items 22 to 24 seem to involve a participative dimension of leadership mostly related to students.

The third factor named Instructional Style comprised 10 items (with Cronbach's alpha equal to 0.95) representing leadership practices that enable the achievement of instructional objectives. The fourth factor named Structuring Style comprised 7 items (with Cronbach's alpha equal to 0.95) representing leadership practices that promote the establishment and implementation of clear rules. With regards to this factor, items 46-51 and item 59 were removed from the final analysis. Firstly, item 59 had a low communality value which might be related to the specific wording that was used. This item inquired whether the principal takes risks for improvement even against the Ministry's directives. The specific wording seems to have prevented teachers from indicating a true response since a matter of obeying the law or relevant regulations is involved. Then, items 46 to 50 refer to what their principal does to create and implement a vision for the school. These items, however, loaded on the Instructional and Entrepreneurial Styles as well indicating that other aspects of leadership are also involved. Moreover, item 51 seems to involve aspects of Instructional leadership as well. This item relates to the principal's practice of defining the role and responsibilities of the staff, possibly attaching an additional meaning of "instruction-related" roles and responsibilities.

Finally, the fifth factor named Personnel Development Style comprised 8 items (with Cronbach's alpha equal to 0.94) representing leadership practices that promote the training and development of teachers. Here, item 25 loaded on the Instructional and Participative Styles as well. This item is about recognizing exceptional performance of the staff. On the one hand, this aspect might have been perceived by teachers as a behavior aiming at their instructional improvement, hence the relation with the Instructional Style. On the other hand, teachers might have also perceived this aspect as part of a Participative Style targeting teachers' commitment. Table 4.2 presents the reliability of items per factor.

Table 4.1

## Exploratory Factor Analysis of School Leadership

	FACTOR					Extraction (h <sup>2</sup> )
	I	II	III	IV	V	
1	0.218	0.375	<b>0.608</b>	0.349	0.100	0.690
2	0.262	0.386	<b>0.646</b>	0.346	0.080	0.761
3	0.244	0.237	<b>0.706</b>	0.163	0.230	0.694
4	0.181	0.388	<b>0.562</b>	0.310	0.100	0.606
5	0.274	0.264	<b>0.683</b>	0.333	0.257	0.788
6	0.304	0.264	<b>0.686</b>	0.214	0.261	0.747
7	0.357	0.325	<b>0.649</b>	0.187	0.148	0.711
8	0.261	0.236	<b>0.640</b>	0.269	0.282	0.686
9	0.319	0.184	<b>0.656</b>	0.228	0.344	0.737
10	0.306	0.324	<b>0.588</b>	0.145	0.364	0.699
11	0.254	<b>0.663</b>	0.388	0.239	0.192	0.749
12	0.185	<b>0.656</b>	0.215	0.185	0.144	0.566
13	0.324	<b>0.614</b>	0.411	0.283	0.160	0.757
14	0.325	<b>0.618</b>	0.399	0.241	0.213	0.750
15	0.349	<b>0.700</b>	0.271	0.229	0.226	0.789
16	0.292	<b>0.690</b>	0.269	0.195	0.292	0.756
17	0.276	<b>0.702</b>	0.287	0.287	0.263	0.804
18	0.291	<b>0.652</b>	0.311	0.225	0.282	0.736
19	0.289	<b>0.653</b>	0.255	0.303	0.337	0.781
20	0.272	<b>0.625</b>	0.207	0.383	0.235	0.710
26	0.289	0.182	0.446	0.227	<b>0.561</b>	0.681
27	0.280	0.382	0.234	0.301	<b>0.632</b>	0.769
28	0.365	0.357	0.341	0.226	<b>0.570</b>	0.752
29	0.381	0.380	0.318	0.258	<b>0.503</b>	0.711
30	0.355	0.192	0.297	0.190	<b>0.653</b>	0.714
31	0.278	0.411	0.140	0.345	<b>0.596</b>	0.740
32	0.411	0.336	0.365	0.140	<b>0.542</b>	0.728
33	0.431	0.263	0.171	0.180	<b>0.484</b>	0.551
34	<b>0.658</b>	0.389	0.205	0.250	0.269	0.761
35	<b>0.674</b>	0.256	0.335	0.188	0.291	0.752
36	<b>0.694</b>	0.230	0.161	0.275	0.210	0.680
37	<b>0.682</b>	0.332	0.249	0.234	0.227	0.744
38	<b>0.661</b>	0.377	0.273	0.227	0.205	0.748
39	<b>0.660</b>	0.228	0.332	0.323	0.204	0.744
40	<b>0.688</b>	0.259	0.378	0.248	0.220	0.794
41	<b>0.656</b>	0.183	0.299	0.206	0.324	0.701
42	<b>0.713</b>	0.183	0.297	0.230	0.284	0.763

	FACTOR					Extraction (h <sup>2</sup> )
	I	II	III	IV	V	
43	<b>0.559</b>	0.341	0.311	0.435	0.207	0.758
44	<b>0.614</b>	0.396	0.261	0.360	0.198	0.771
45	<b>0.564</b>	0.437	0.299	0.377	0.190	0.776
52	0.335	0.297	0.409	<b>0.585</b>	0.235	0.765
53	0.284	0.203	0.350	<b>0.671</b>	0.223	0.743
54	0.305	0.264	0.317	<b>0.618</b>	0.325	0.751
55	0.352	0.342	0.247	<b>0.685</b>	0.173	0.801
56	0.335	0.344	0.281	<b>0.675</b>	0.166	0.793
57	0.285	0.385	0.255	<b>0.686</b>	0.233	0.819
58	0.333	0.306	0.320	<b>0.676</b>	0.258	0.830
<b>Eigenvalues</b>	29.070	1.719	1.525	1.319	1.021	
<b>Percentage of Variance Explained</b>	61.851	3.658	3.245	2.807	2.171	
<b>Cumulative Percentage of Variance Explained</b>	61.851	65.508	68.753	71.560	73.732	

Table 4.2

Reliability (Cronbach's Alpha) of Items per Factor of School Leadership

FACTOR	ITEMS	CRONBACH'S ALPHA
Entrepreneurial Style	34-45	0.966
Participative Style	11-20	0.960
Instructional Style	1-10	0.949
Structuring Style	52-58	0.952
Personnel Development Style	26-33	0.936

According to the Exploratory Factor Analysis, the first factor (Entrepreneurial Style) seems to explain most of the variance in School Leadership. This highlights the increasing importance of adopting an entrepreneurial dimension in leadership when compared with other aspects of leadership. One could therefore argue that leadership constitutes a



unidimensional construct. However, the other leadership styles could not be neglected since they altogether seem to explain over 10% of the variance. Instead, a decision was made to examine the case of a single leadership factor when conducting the confirmatory factor analysis in the next steps of establishing the construct validity of School Leadership.

Therefore, based on the findings of the Exploratory Factor Analysis, structural equation modeling was used to examine the construct validity of three alternative models. The analyses were conducted using the EQS program (Bentler, 1995) with maximum likelihood methods (ML) being used to estimate each model. Moreover, multiple fit indices were used to assess the extent of data fit to the models tested. Specifically, the scaled and normed chi-square, the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA) were examined.

The first model (Model 1) hypothesized that: 1) the 47 school leadership variables could be explained by five first order factors representing each of the five leadership styles, i.e. the Instructional, Participative, Personnel Development, Entrepreneurial, and Structuring styles 2) each variable would have a nonzero loading on the factor it was supposed to measure and zero loadings on all other factors 3) the five factors would be correlated 4) measurement errors would be uncorrelated.

The findings of the CFA analysis showed that although the scaled chi-square was statistically significant ( $X^2=2211$ ,  $df=991$ ,  $p<0.001$ ) and the  $X^2/df$  ratio was over 2, the RMSEA (0.052) and CFI (0.946) met the criteria for acceptable level of fit. However, it must be noted that pairs of error variances were allowed to covary in order to improve the fit of the model. In addition, the correlations between the five leadership styles were high (over 0.8) suggesting the need to examine a second order factor structure for school leadership or even a simpler one factor model.

According to Model 2, the five first order factors regressed on a second order factor, representing the general construct of School Leadership. The findings of the CFA showed that although the scaled chi-square was statistically significant ( $X^2 =2230$ ,  $df=996$ ,  $p<0.001$ ) and the  $X^2/df$  ratio was over 2, the RMSEA (0.052) and CFI (0.945) met the criteria for acceptable level of fit. However, as in Model 2, a number of error variances were allowed to covary in order to improve the fit of the model.

A simpler, one-factor model (Model 3) was also tested and compared to Models 1 and 2. The model hypothesized that all observed variables could be explained by a single factor representing School Leadership. A number of error variances were also allowed to covary in order to improve the fit of the model. The CFA analysis showed a reasonable

level of fit. In this case, the scaled chi-square was statistically significant ( $X^2 = 3001$ ,  $df=990$ ,  $p<0.001$ ), the  $X^2/df$  ratio reached the value of 3, and the RMSEA (0.067) and CFI (0.911) had a fairly satisfactory level of fit.

Comparing the alternative models (see Table 4.3), a decision was made to drop Model 3 since the fit indices of RMSEA and CFI were less satisfactory than those of Model 1 and Model 2. According to the SEM findings, models 1 and 2 are the models that best fit the data. The fit indices of both models are very similar yet a decision was made to retain model 2. This is mainly due to the fact that model 2 captures more accurately the proposed Pashiardis-Brauckmann model which supports the existence of a School Leadership construct composed of five leadership styles. Moreover, the validation of this model provides support to the use of a more parsimonious measure of school leadership through the use of the respective second order factor.

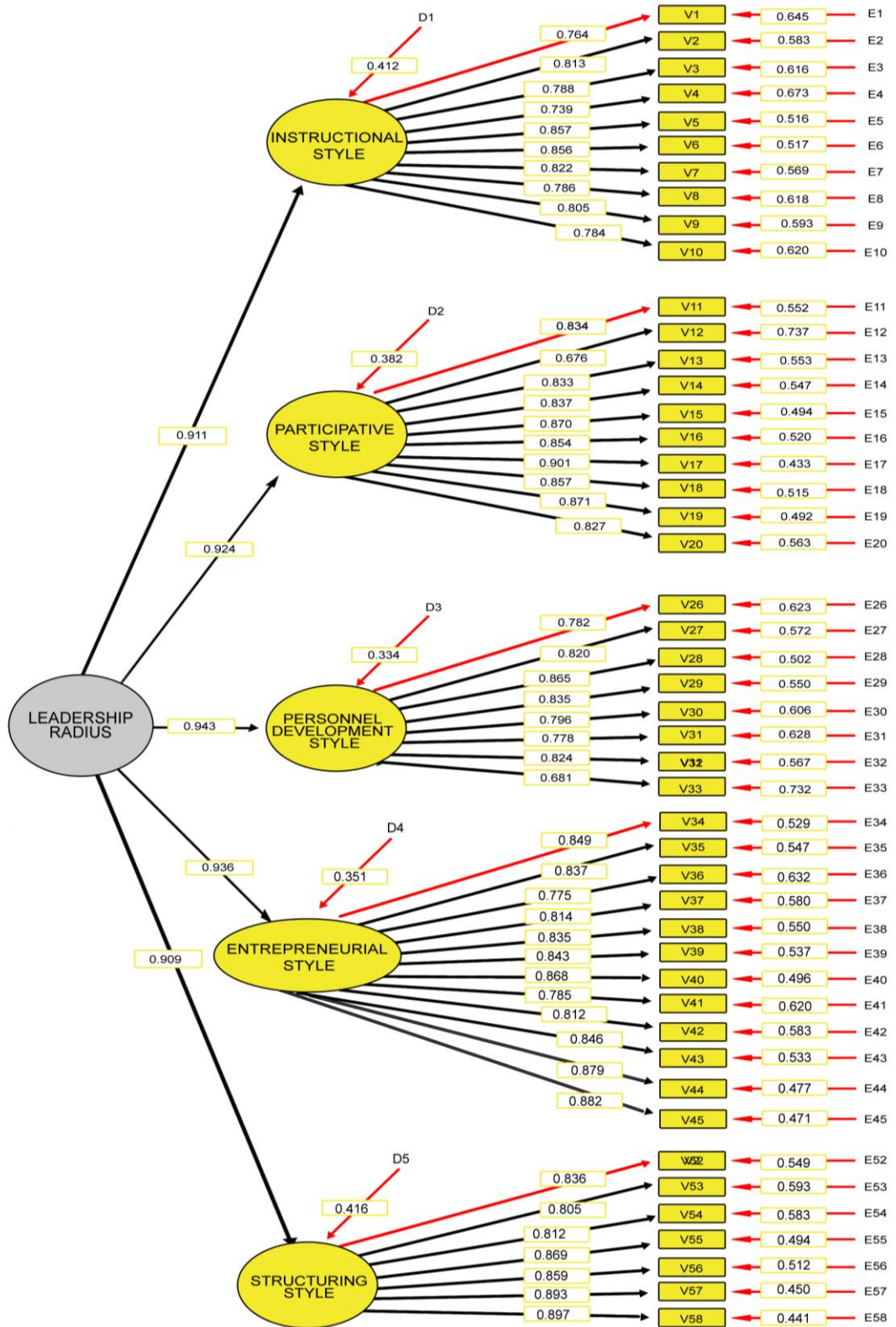
Figure 4.1 depicts the second order factor model and presents the parameter estimates. All parameter estimates were statistically significant ( $p<0.001$ ). Moreover, it is important to note that all standardized factor loadings were positive and high. In fact, all of the standardized values were higher than 0.65. In addition, the factor loadings of all five first order factors were greater than 0.9. Taking into account the standardized loadings, the weighted factor scores were generated for each of the five leadership styles and the Leadership Radius construct. This was done for each school by aggregating at the school level the factor scores that emerged from the teacher responses to the school leadership questionnaire.

Table 4.3

Goodness-of-Fit Indices for School Leadership Structural Equation Models

	$X^2$	df	$X^2/df$	P	CFI	RMSEA	Range RMSEA
Model 1 (five first order factors)	2211	991	2.2	0.001	0.946	0.052	0.049- 0.055
Model 2 (one second order factor, five first order factors)	2230	996	2.2	0.001	0.945	0.052	0.049- 0.055
Model 3 (one first order factor)	3001	990	3	0.001	0.911	0.067	0.064- 0.070

Figure 4.1 Structural Equation Model for Leadership Radius Framework



#### **4.1.2 Validation of the School Academic Optimism Questionnaire and the respective Theoretical Framework**

The School Academic Optimism Questionnaire was completed by 455 teachers across the whole sample of the 20 middle schools. Overall, the questionnaire consisted of 28 items relating to the collective beliefs of teachers about student learning. Teachers were asked to indicate the degree of agreement with the statements provided on a scale of 1 to 5 where 5 represented a higher degree of agreement. The questionnaire items represent three dimensions of academic optimism: Collective Teacher Efficacy (items 1-10), Trust in Students and Parents (items 11-20), and Academic Emphasis (items 21-28).

##### **Face Validity**

After the pilot study, the School Academic Optimism Questionnaire was revised. The revised form of the questionnaire was reviewed by the three members of the Steering Committee as well as three middle school teachers in order to assess its face validity. Overall, both groups of experts and practitioners showed a satisfactory understanding of what the questionnaire appears to measure.

##### **Generalizability Test**

In order to test the generalizability of the Likert scale, a one-way analysis of variance (one-way ANOVA) was conducted. The results of the ANOVA analysis showed that the data across 24 of the items can be generalized at the school level as for these items of the questionnaire, the between group variance was higher than the within group variance ( $p < 0.05$ ). Findings showed that items 16 { $F(19,423)=1.437, p=0.105$ }, 17 { $F(19,421)=1.562, p=0.062$ }, 20 { $F(19,420)=1.543, p=0.067$ } and 21 { $F(19,419)=1.567, p=0.061$ } were not statistically significant at the 0,05 level. The aforementioned items could not be generalized at the school level and hence were removed from the Academic Optimism scale. However, the results allow us to aggregate the scores of the rest of the 24 items at the school level.

##### **Construct Validity**

The construct validity of the School Academic Optimism Questionnaire was examined by

conducting Confirmatory Factor Analysis. However, in order to aid the specific analysis exploratory factor analysis and reliability analysis were carried out at a first stage. The aim was to assess which items are inter-correlated and to establish internal reliability. The aforementioned analyses were carried out for all items constituting each of the hypothesized factor thus treating each factor as a separate scale.

Firstly, with regards to Collective Teacher Efficacy, principal components analysis with a varimax rotation yielded a two-factor solution involving 8 items with factor loadings above 0.70. The two-factor solution explained 64.03% of the variance. The factor solution is presented in table 4.4. The two factors extracted were labelled as: (i) Collective Efficacy 1-Task Analysis and (ii) Collective Efficacy 2 – Group Teaching Competence. The first factor comprised 5 items (with Cronbach alpha equal to 0.84) representing collective beliefs about student commitment and the environmental support to their learning. The second factor comprised 3 items (with Cronbach alpha equal to 0.76) representing collective teacher beliefs about their own capability in bringing about improvement in student learning. With regards to Collective Teacher Efficacy, it must be noted that Items 1 and 8 were removed from the final analysis since they double loaded on both Collective Efficacy 1 and Collective Efficacy 2.

The items relating to Teacher Trust in Students and Parents were next factor analysed using principal components analysis with varimax rotation. The analysis yielded a one-factor solution involving 7 items with loadings over 0.70. The one-factor solution explained 57.89% of the variance. The Cronbach alpha of the items representing Teacher Trust in Students and Parents is equal to 0.88. The factor solution is presented in table 4.5

Next, the Academic Emphasis items were factor analysed using principal components analysis with a varimax rotation. The analysis yielded a one-factor solution involving 5 items with factor loadings over 0.70. Items 23 and 24 were not included in the final analysis since they did not load highly on Academic Emphasis. The one-factor solution explained 63.55% of the variance. The Cronbach alpha of the items representing Academic Emphasis is equal to 0.85. The factor solution is presented in table 4.6. Table 4.7 presents a summary of the reliability of the items for each factor of the Academic Optimism scale.

Table 4.4

## Exploratory Factor Analysis of Collective Teacher Efficacy Scale

	FACTOR		Extraction (h <sup>2</sup> )
	I	II	
2	0.252	0.744	0.617
3	0.109	0.845	0.725
4	0.242	0.793	0.687
5	0.735	0.220	0.588
6	0.795	0.058	0.636
7	0.803	0.166	0.672
9	0.724	0.275	0.600
10	0.715	0.317	0.612
<b>Eigenvalues</b>	3.884	1.238	
<b>Percentage of Variance Explained</b>	48.552	15.474	
<b>Cumulative Percentage of Variance Explained</b>	48.552	64.026	

Table 4.5

## Exploratory Factor Analysis of Trust Scale

	FACTOR	
	I	Extraction (h <sup>2</sup> )
11	0.764	0.583
12	0.820	0.672
13	0.772	0.596
14	0.774	0.598
15	0.745	0.554
18	0.709	0.503
19	0.738	0.545
<b>Eigenvalue</b>	4.052	
<b>Percentage of Variance Explained</b>	57.890	
<b>Cumulative Percentage of Variance Explained</b>	57.890	

Table 4.6

## Exploratory Factor Analysis of Academic Emphasis Scale

	FACTOR	
	I	Extraction (h <sup>2</sup> )
22	0.761	0.579
25	0.704	0.496
26	0.841	0.707
27	0.848	0.719
28	0.823	0.677
<b>Eigenvalue</b>	3.178	
<b>Percentage of Variance Explained</b>	63.550	
<b>Cumulative Percentage of Variance Explained</b>	63.550	

Table 4.7

## Reliability (Cronbach's Alpha) of Items per Factor of School Academic Optimism

FACTOR	ITEMS	CRONBACH'S ALPHA
Collective Efficacy 1 – Task Analysis	5,6,7,9,10	0.840
Collective Efficacy 2- Group Teaching Competence	2,3,4	0.759
Trust in Students and Parents	11,12,13,14,15,18,19	0.878
Academic Emphasis	22,25,26,27,28	0.854

Based on the aforementioned findings, Confirmatory Factor Analysis (CFA) was used to examine the construct validity of three alternative models. Multiple fit indices were used to assess the extent of data fit to the models tested. Specifically, the scaled and normed chi-square, the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA) were examined.

The first model (Model 1) hypothesized that: 1) the 20 School Academic Optimism variables could be explained by three first order factors: i) Collective Teacher Efficacy ii) Trust in Parents and Students iii) Academic Emphasis 2) each variable would have a nonzero loading on the factor it was supposed to measure and zero loadings on all other factors 3) a second order factor (i.e. School Academic Optimism) would explain the three first order factors 4) measurement errors would be uncorrelated. The findings of the CFA analysis showed that although the scaled chi-square was statistically significant ( $X^2=423$ ,  $df=141$ ,  $p<0.001$ ) and the  $X^2/df$  ratio reached the value of 3, the RMSEA (0.066) was fairly satisfactory and the CFI (0.942) had a satisfactory level of fit. However, it must be noted that pairs of error variances were allowed to covary in order to improve the fit of the model.

The second model (Model 2) hypothesized that: 1) the 20 School Academic Optimism variables could be explained by four first order factors: i) Collective Teacher Efficacy 1 ii) Collective Teacher Efficacy 2 iii) Trust in Parents and Students iv) Academic Emphasis 2) each variable would have a nonzero loading on the factor it was supposed to measure and zero loadings on all other factors 3) a second order factor (i.e. School Academic Optimism) would explain the four first order factors 4) measurement errors would be uncorrelated. The difference from Model 1 is that two factors would represent Collective Teacher Efficacy. The findings of the CFA analysis showed that although the scaled chi-square was statistically significant ( $X^2=289$ ,  $df=140$ ,  $p<0.001$ ) and the  $X^2/df$  ratio was 2.1, the RMSEA (0.048) and CFI (0.970) met the criteria for acceptable level of fit. Pairs of error variances were also allowed to covary in order to improve the fit of the model.

A simpler, one-factor model (Model 3) was also tested and compared to Models 1 and 2. The model hypothesized that all observed variables could be explained by a single factor representing School Academic Optimism. A number of error variances were also allowed to covary in order to improve the fit of the model. The CFA analysis showed a reasonable level of fit. Although the scaled chi-square was statistically significant



( $X^2 = 310$ ,  $df = 144$ ,  $p < 0.001$ ) and the  $X^2/df$  ratio was over 2, the RMSEA (0.050) and CFI (0.966) fell within accepted levels of model fit.

Comparing the alternative models (see Table 4.8), a decision was made to drop Model 1 since the value of RMSEA was less satisfactory than that of Model 2 and Model 3. According to the SEM findings, models 2 and 3 are the models that best fit the data. The fit indices of both models are very similar yet a decision was made to retain model 3. This Model is more parsimonious indicating that teachers perceive School Academic Optimism as a unidimensional construct.

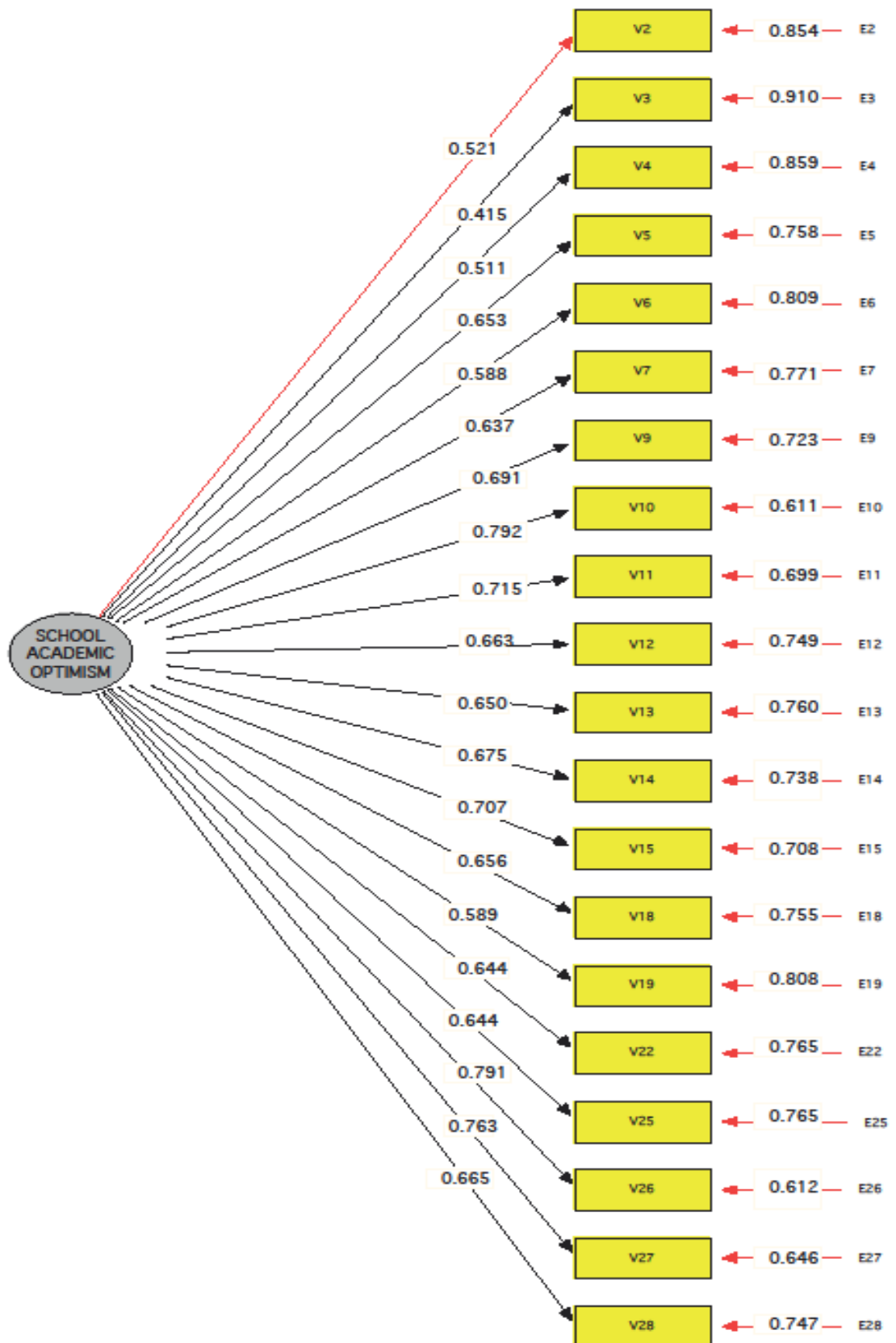
Table 4.8

Goodness-of-Fit Indices for Structural Equation Models concerning Academic Optimism of Schools

	$X^2$	df	$X^2/df$	P	CFI	RMSEA	Range RMSEA
Model 1 (one second order factor, three first order factors)	423	141	3	0.001	0.942	0.066	0.059- 0.074
Model 2 (one second order factor, four first order factors)	289	140	2.1	0.001	0.970	0.048	0.040- 0.056
Model 3 (one first order factor)	310	144	2.2	0.001	0.966	0.050	0.043- 0.058

Figure 4.2 depicts the one factor model of School Academic Optimism and presents the parameter estimates. All parameter estimates were statistically significant ( $p < 0.001$ ). Moreover, it is important to note that all standardized factor loadings were positive and high. In fact, the standardized values ranged between 0.415 and 0.792. Taking into account the standardized loadings, the weighted factor score of School Academic Optimism was generated and aggregated at the school level.

Figure 4.2. Structural Equation Model for School Academic Optimism



### **4.1.3 Validation of the Instructional Quality Questionnaire and the Dynamic Model of Educational Effectiveness at the Classroom Level**

The Instructional Quality Questionnaire was completed by 2151 students across the whole sample of the 20 middle schools. Overall, the questionnaire consisted of 58 items regarding the instructional behavior of their civic education teachers. For items 1-55, students were asked to indicate how often a specific behavior is observed in their classroom on a scale of 1 to 5 where 5 represented the option “almost always”. However, there was a need to recode a number of these items since they were worded in a negative way. For items 56 and 57, students were asked to choose among five options to indicate how often a specific behavior is observed in their classroom. These options were used to create an ordinal scale where option A indicated that a specific behavior occurred “at every lesson” and option E “at no lesson”. These items were also recoded. Finally, for item 58 students had to choose among five options that indicate how their teacher deals with questioning, with option E representing a higher degree of teaching quality.

#### **Face Validity**

The Instructional Quality Questionnaire was reviewed by the three members of the Steering Committee as well as three middle school teachers in order to assess its face validity. Overall, both groups of experts and practitioners showed a satisfactory understanding of what the questionnaire appears to measure.

#### **Generalizability Test**

In order to test the generalizability of the questionnaire items, a one-way analysis of variance (one-way ANOVA) was conducted. The results of the ANOVA analysis showed that the data across 57 of the items can be generalized at the classroom level as for these items of the questionnaire, the between group variance was higher than the within group variance ( $p < 0.001$ ). Findings showed that item 28  $\{F(113,2000) = 1.038, p = 0.378\}$ , was not statistically significant at the 0.05 level. The data from the aforementioned item could not be generalized at the classroom level and hence the item was removed from the questionnaire. These results allow us to aggregate the scores of the rest of the 57 items at the classroom level.

## Construct Validity

The construct validity of the Instructional Quality Questionnaire was examined by conducting Confirmatory Factor Analysis. However, in order to aid the specific analysis, exploratory factor analysis and reliability analysis were carried out at a first stage. The aim was to assess which items are inter-correlated and to establish internal reliability. The aforementioned analyses were carried out for all items constituting each of the hypothesized factors thus treating each factor as a separate scale. Table 4.9 presents the initial specification of the Instructional Quality items across both factors and measurement dimensions.

Table 4.9

Initial Specification Table for Instructional Quality Questionnaire

	<b>Dimensions</b>				
<b>Factors</b>	<b>Frequency</b>	<b>Focus</b>	<b>Stage</b>	<b>Quality</b>	<b>Differentiation</b>
<b>Orientation</b>	B1, B2			1	
<b>Structuring</b>			3, 41 44, 48	2, 4, 5, 8, 9	
<b>Application</b>	10, 13		14	11, 15	16, 17, 18, 19, 29, 42
<b>Management of Time</b>	40, 45				
<b>Questioning Techniques</b>				27, 47, 49, 50, 51, 52, 53, 54,55, B3	
<b>Classroom Learning Environment 1 (Student-Student Interactions)</b>	22, 23			31, 32, 33, 34, 35, 38	
<b>Classroom Learning Environment 2 (Teacher – Student Interactions)</b>	20, 37, 39, 46	36		24, 25, 26, 43	21, 30
<b>Assessment</b>			12	6	7

Firstly, in relation to Orientation, principal components analysis with a varimax rotation yielded a one-factor solution explaining 75.31% of the variance. The factor involved two items with factor loadings over 0.85 (Table 4.10). Item 1 had a low communality and therefore it was removed from the analysis. This might be due to the different format of the answer that item 1 required from students in comparison to items B1 and B2. Since only two items were retained Cronbach alpha could not be calculated. However, the Pearson correlation coefficient between B1 and B2 reached the value of 0.506 ( $p=0.001$ ).

Table 4.10  
Exploratory Factor Analysis of Orientation

	FACTOR	
	I	Extraction ( $h^2$ )
B1	0.868	0.753
B2	0.868	0.753
<b>Eigenvalues</b>	1.506	
<b>Percentage of Variance Explained</b>	75.307	
<b>Cumulative Percentage of Variance Explained</b>	75.307	

Exploratory factor analysis was also carried out for the factors “Structuring-Stage” and “Structuring-Quality”. With respect to the first factor, principal components analysis with a varimax rotation yielded a one-factor solution which explained 50.51% of the variance (Table 4.11). The factor involved all four initial items with factor loadings over 0.5. Reliability analysis showed that the Cronbach alpha of the four items was 0.669. With respect to the second factor, principal components analysis with a varimax rotation yielded a one-factor solution which explained 44.76% of the variance (Table 4.12). The factor involved four items with factor loadings over 0.5. The Cronbach alpha of the four items was 0.577. Item 5 had a lower loading on the specific factor and therefore it was not retained. This might be due to the negative wording of the item.

Table 4.11

## Exploratory Factor Analysis of Structuring – Stage

	FACTOR	
	I	Extraction (h <sup>2</sup> )
3	0.592	0.351
41	0.734	0.538
44	0.733	0.537
48	0.771	0.594
<b>Eigenvalue</b>	2.020	
<b>Percentage of Variance Explained</b>	50.508	

Table 4.12

## Exploratory Factor Analysis of Structuring – Quality

	FACTOR	
	I	Extraction (h <sup>2</sup> )
2	0.747	0.559
4	0.765	0.586
8	0.553	0.305
9	0.583	0.340
<b>Eigenvalue</b>	1.790	
<b>Percentage of Variance Explained</b>	44.760	

In the case of “Application”, exploratory factor analysis was conducted to examine the inter-correlations of the items. The factor solution involved only four items which loaded on one factor labelled Application. The solution explained 50.66% of the variance and the loadings were over 0.60 (Table 4.13). The reliability analysis showed that the items have a Cronbach alpha equal to 0.672.

Here it must be noted that when examining the existence of a Differentiation dimension in Application items 17,18,19 and 42 had low communality values. Therefore, a general Application factor was investigated. Item 10 and 11 also had low communality

values and therefore were dropped from the analysis. These items might also have been perceived in terms of the Structuring dimension of teacher behaviour.

Table 4.13  
Exploratory Factor Analysis of Application

	FACTOR	
	I	Extraction (h <sup>2</sup> )
13	0.698	0.488
14	0.743	0.552
15	0.745	0.555
16	0.657	0.432
<b>Eigenvalue</b>	2.026	
<b>Percentage of Variance Explained</b>	50.657	

With respect to the “Management of Time”, the principal component analysis showed that both items loaded on the same factor with a loading of 0.802. The factor solution explained 64.27% of the variance (Table 4.14). Reliability analysis could not be run for only two items and therefore the Pearson correlation coefficient was calculated. The value of the coefficient was equal to 0.29 at the 0.001 level of significance.

Table. 4.14  
Exploratory Factor Analysis of Management of Time

	FACTOR	
	I	Extraction (h <sup>2</sup> )
40	0.802	0.643
45	0.802	0.643
<b>Eigenvalue</b>	1.285	
<b>Percentage of Variance Explained</b>	64.266	

For the “Questioning Techniques”, two separate factors were examined: i) Questioning Techniques -Positive Aspects and ii) Questioning Techniques-Negative Aspects. The first factor consisted of the items that were positively worded (items 27,47,50,51,53) whereas the second factor consisted of the negatively worded items (items 49,52,54,55,B3). The principal components analysis for the first factor yielded a one-

factor solution involving all five items. The solution explained 55.89% of the variance and the factor loading were over 0.60. The Cronbach alpha of the items reached the value of 0.802. The principal components analysis for the second factor yielded a one factor solution involving four of the items. Item B3 was not retained due to a low communality that might be the result of the item being constructed in a different format. The solution explained 39.38% of the variance and the factor loadings were over 0.45. The Cronbach alpha of the four items was equal to 0.473.

Table 4.15

Exploratory Factor Analysis of Questioning Techniques- Positive Aspects

	FACTOR	
	I	Extraction (h <sup>2</sup> )
27	0.776	0.603
47	0.699	0.489
50	0.783	0.614
51	0.666	0.444
53	0.803	0.645
<b>Eigenvalue</b>	2.794	
<b>Percentage of Variance Explained</b>	55.889	

Table 4.16

Exploratory Factor Analysis of Questioning Techniques- Negative Aspects

	FACTOR	
	I	Extraction (h <sup>2</sup> )
49	0.658	0.433
52	0.474	0.225
54	0.581	0.338
55	0.761	0.579
<b>Eigenvalue</b>	1.575	
<b>Percentage of Variance Explained</b>	39.375	

With regards to the “Classroom as a Learning Environment”, the exploratory factor analysis showed that the items could be grouped into five factors: i) Dealing with Cooperation ii) Dealing with Competition iii) Dealing with Misbehaviour-Positive Aspects iv) Dealing with Misbehaviour – Negative Aspects v) Teacher - Student Relations. Firstly, three items loaded on the factor “Dealing with Cooperation” with factor loadings over 0.70



(Table 4.17). The factor items explained 53.93% of the variance and their Cronbach alpha equals to 0.572. Then, three items also loaded on the factor “Dealing with Competition” with factor loadings over 0.60 (Table 4.18). The factor items explained 48.26% of the variance and their Cronbach alpha reached the value of 0.462.

Table 4.17  
Exploratory Factor Analysis of Classroom Learning Environment – Dealing with Cooperation

	FACTOR	
	I	Extraction (h <sup>2</sup> )
22	0.728	0.530
32	0.706	0.498
34	0.768	0.590
<b>Eigenvalue</b>	1.618	
<b>Percentage of Variance Explained</b>	53.934	

Table 4.18  
Exploratory Factor Analysis of Classroom Learning Environment – Dealing with Competition

	FACTOR	
	I	Extraction (h <sup>2</sup> )
23	0.740	0.381
31	0.721	0.519
33	0.617	0.548
<b>Eigenvalue</b>	1.448	
<b>Percentage of Variance Explained</b>	48.261	

Principal components analysis for the items relating to “Dealing with Misbehaviour” yielded a two factor solution which explained 58.24% of the variance (Table 4.19). Four of the items loaded on the first factor labeled as “Dealing with Misbehaviour – Negative Aspects”. Two of the items loaded on the second factor labeled as “Dealing with Misbehaviour- Positive Aspects”. The positive and negative aspects refer to the positive or negative phrasing of the statements involved. The first factor explained 38.52% of the total variance whereas the second factor explained 19.73% of the variance. The Cronbach alpha of the items comprising the first factor was equal to 0.730 (p=0.001) whereas the Pearson correlation coefficient between the items comprising the second factor was equal to 0.210 (p=0.001).

Table 4.19  
Exploratory Factor Analysis of Classroom Learning Environment – Dealing with  
Misbehaviour

	FACTOR		Extraction (h <sup>2</sup> )
	I	II	
36	0.149	<b>0.833</b>	0.717
39	-0.264	<b>0.688</b>	0.543
35	<b>0.703</b>	-0.189	0.530
37	<b>0.766</b>	0.042	0.589
38	<b>0.753</b>	-0.131	0.584
43	<b>0.728</b>	0.059	0.533
<b>Eigenvalue</b>	2.311	1.183	
<b>Percentage of Variance Explained</b>	38.519	19.725	
<b>Cumulative Percentage of Variance Explained</b>	38.519	58.244	

With respect to “Teacher-Student Relations”, the principal components analysis showed that six items loaded on the factor with loadings over 0.70. Item 21, which was initially included in the analysis, was not retained due to a low communality value. This may be explained by the negative wording of the specific item. Overall, the factor solution explained 59.63% of the variance (Table 4.20). The reliability analysis also showed that items had a Cronbach alpha equal to 0.864.

Table 4.20  
Exploratory Factor Analysis of Classroom Learning Environment – Teacher-Student  
Relations

	FACTOR	
	I	Extraction (h <sup>2</sup> )
20	0.763	0.582
24	0.821	0.675
25	0.799	0.638
26	0.704	0.496
30	0.800	0.640
46	0.740	0.548
<b>Eigenvalue</b>	3.578	
<b>Percentage of Variance Explained</b>	59.632	

Finally, the principal components analysis for “Assessment” showed that only two items could be retained. Item 6 was dropped due to a low communality value. This might be due to the negative wording of the item. The items that were retained explained 61.31% of the variance and their factor loadings reached the value of 0.783 (Table 4.21). Since only two items were retained no reliability analysis could be performed. Instead, the Pearson correlation coefficient between the two items was calculated. The coefficient was equal to 0.23 at the 0.001 level of significance.

Table 4.21  
Exploratory Factor Analysis of Assessment

	FACTOR	
	I	Extraction (h <sup>2</sup> )
7	0.783	0.613
12	0.783	0.613
<b>Eigenvalue</b>	1.226	
<b>Percentage of Variance Explained</b>	61.311	

The aforementioned analyses were mainly used to examine the inter-correlations between the items, assess their internal reliability and group them into factors related to Instructional Quality. Table 4.22 presents the items and factors which emerged after the exploratory factor analyses. Using the findings from these analyses, confirmatory factor analysis was performed to establish the construct validity of the questionnaire.

Table 4.22  
Specification Table for Instructional Quality Questionnaire after conducting Exploratory Factor Analyses

<b>Factors</b>				
<b>Orientation</b>	B1, B2			
<b>Structuring</b>	Stage 3,41,44,48	Quality 2,4,8,9		
<b>Application</b>	Application 13,14,15,16			

<b>Factors</b>				
<b>Management of Time</b>	40, 45			
<b>Questioning</b>	Positive aspects 27, 47, 50, 51, 53	Negative aspects 49,52,54,55		
<b>Classroom learning environment</b>	Dealing with cooperation 22, 32, 34	Dealing with competition 23, 31, 33	Dealing with misbehaviour  Positive aspects 36, 39  Negative aspects 35, 37, 38, 43	Teacher-Student Relations 20, 24, 25, 26, 30, 46
<b>Assessment</b>	7,12			

Structural equation modeling was used to assess the fit of a number of competing models. The first model (Model 1) hypothesized that: 1) the 45 Instructional Quality variables could be explained by thirteen first order factors (i.e. Orientation, Structuring-Stage, Structuring-Quality, Application, Management of Time, Questioning-Positive Aspects, Questioning-Negative Aspects, Dealing with Cooperation, Dealing with Competition, Dealing with Misbehaviour-Positive Aspects, Dealing with Misbehaviour-Negative Aspects, Teacher-Student Relations, and Assessment) 2) each variable would have a nonzero loading on the factor it was supposed to measure and zero loadings on all other factors 3) a second order factor (i.e. Instructional Quality) would explain all thirteen first order factors 4) measurement errors would be uncorrelated.

The findings of the CFA analysis showed that the scaled chi-square was statistically significant ( $X^2 = 4944$ ,  $df=902$ ,  $p<0.001$ ), the  $X^2/df$  ratio was much higher than 2 and the CFI was low (0.869). The RMSEA (0.046) met the criteria for acceptable level of fit. The fit of the model was improved by allowing pairs of error variances to covary. The Model

was not accepted for a number of reasons. Firstly, the CFI was low. Then, the loadings of three items on the factor Questioning-Negative Aspects were low. Finally, the loading of Dealing with Competition on Instructional Quality was less than 0.182. The items related to these factors were not used in the next model.

The second model (Model 2) hypothesized that: 1) the 38 Instructional Quality variables could be explained by ten first order factors (i.e. Orientation, Structuring, Application, Management of Time, Questioning, Dealing with Cooperation, Dealing with Misbehaviour-Positive Aspects, Dealing with Misbehaviour-Negative Aspects, Teacher-Student Relations, and Assessment) 2) each variable would have a nonzero loading on the factor it was supposed to measure and zero loadings on all other factors 3) a second order factor (i.e. Instructional Quality) would explain all ten first order factors 4) measurement errors would be uncorrelated.

The findings of the CFA analysis showed that although the scaled chi-square was statistically significant ( $X^2=2576$ ,  $df=624$ ,  $p<0.001$ ) and the  $X^2/df$  ratio was much higher than 2, the RMSEA (0.038) and CFI (0.928) met the criteria for acceptable level of fit. The fit of the model was improved by allowing pairs of error variances to covary. However, the Model was not accepted because the standardized loading of Dealing with Misbehaviour-Negative Aspects on Instructional Quality was low, i.e. 0.197.

In Model 3, only eight first order factors loaded on the second order factor of Instructional Quality. Dealing with Misbehaviour-Negative Aspects and Management of Time were specified as first order factors that did not load on Instructional Quality. These factors were set to correlate with each other and with Instructional Quality. The findings of the CFA showed that although the scaled chi-square was statistically significant ( $X^2=2485$ ,  $df=624$ ,  $p<0.001$ ) and the  $X^2/df$  ratio was much higher than 2, the RMSEA (0.037) and CFI (0.931) met the criteria for acceptable level of fit. Pairs of error variances were also allowed to covary in order to improve the fit of the model.

A simpler, one-factor model (Model 4) was also tested and compared to Models 1 and 2. The model hypothesized that all observed variables could be explained by a single factor representing Instructional Quality. A number of error variances were also allowed to covary in order to improve the fit of the model. The CFA analysis showed that the scaled chi-square was statistically significant ( $X^2=7049$ ,  $df=1017$ ,  $p<0.001$ ), the  $X^2/df$  ratio was much higher than 2 and the CFI (0.811) was low. The RMSEA (0.053) fell within accepted guidelines of model fit.

Comparing the alternative models (see Table 4.23), a decision was made to drop Models 1, 2 and 4. Firstly, Model 1 had a low CFI, a high  $X^2/df$  ratio whereas the standardized item loadings on Questioning-Negative Aspects and the standardized loading of Dealing with Competition on Instructional Quality were low. Model 2 was dropped since the standardized loading of Dealing with Misbehaviour-Negative Aspects on Instructional Quality was low whereas Model 4 had a much higher  $X^2/df$  ratio and a low value of CFI. The fit indices of Model 3 fit the data best and all standardized loadings were statistically significant ( $p < 0.001$ ), positive and relatively high. Table 4.24 presents the final grouping of the items across the ten first order factors which emerged from the Confirmatory Factor Analysis.

Table 4.23

Goodness-of-Fit Indices for Instructional Quality Structural Equation Models

	$X^2$	df	$X^2/df$	P	CFI	RMSEA	Range RMSEA
Model 1 (one second order factor, 13 first order factors)	4944	902	5.5	0.001	0.869	0.046	0.044- 0.047
Model 2 (one second order factor, 10 first order factors)	2576	624	4.1	0.001	0.928	0.038	0.037- 0.040
Model 3 (one second order factor, two first order factors)	2485	624	4	0.001	0.931	0.037	0.036- 0.039
Model 4 (one factor model)	7049	1017	6.9	0.001	0.811	0.053	0.051- 0.054

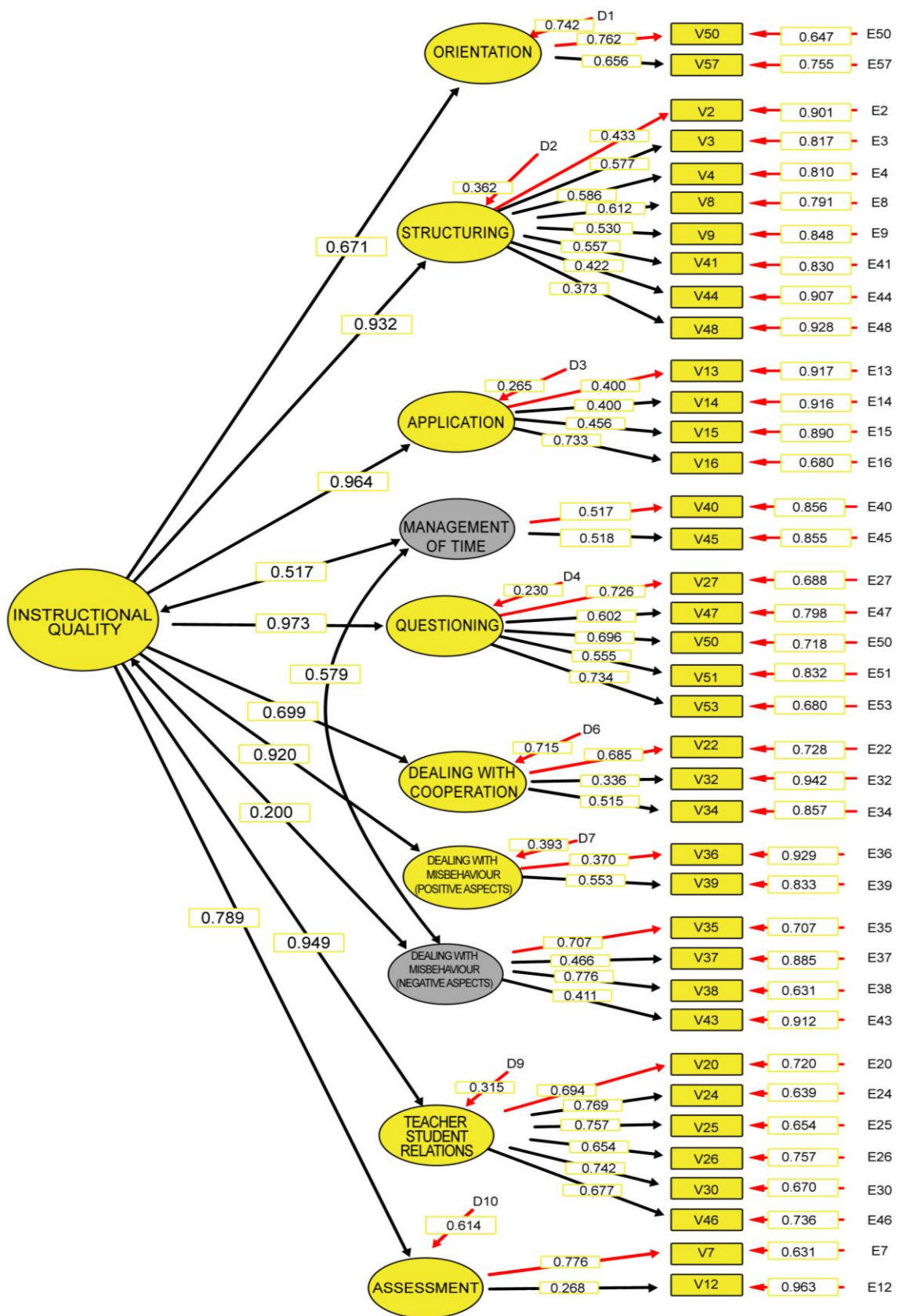
Table 4.24

Specification Table for Instructional Quality Questionnaire after conducting CFA

<b>Factors</b>			
<b>Orientation</b>	B1, B2		
<b>Structuring</b>	3,41,44,48,2,4,8,9		
<b>Application</b>	13,14,15,16		
<b>Management of Time</b>	40, 45		
<b>Questioning Techniques</b>	27, 47, 50, 51, 53		
<b>Classroom as a learning environment</b>	Dealing with cooperation 22, 32, 34	Dealing with misbehavior  Positive aspects 36, 39  Negative aspects 35, 37, 38, 43	Teacher-Student Relations  20, 24, 25, 26, 30, 46
<b>Assessment</b>	7,12		

Figure 4.2 depicts Model 3 and presents the parameter estimates. The standardized values of the loading of the observed variables ranged from 0.268 to 0.776. Moreover, the first order factor loadings on Instructional Quality ranged from 0.671 to 0.973. Taking into account the standardized loadings, the weighted factor scores were generated for each of the ten first order factors and the second order factor of Instructional Quality. This was done for each classroom by aggregating at the classroom level the factor scores that emerged from the student responses to the Instructional Quality questionnaire.

Figure 4.3 Structural Equation Model for Instructional Quality





#### **4.1.4 Psychometric Properties of the Citizenship Outcomes Test**

##### **4.1.4.1 Cognitive Outcomes**

The Dichotomous Rasch Model was used to analyse student responses to the Cognitive Outcomes pre-test and post-test. Firstly, with regards to the pre-test all 26 items were included in the analysis. Then, items 17 and 20 were removed since their individual infit and outfit values were high. Specifically, item 17 had infit t and outfit t values of 6.9 and 5.0 respectively. The high infit t value poses a threat to measurement and denotes that the specific item cannot be used to measure the cognitive dimension of student outcomes. On the other hand, the outfit t value is less of a threat to measurement and it might have resulted from unexpected responses to the item. Yet, it must be noted that the standardized t values might have been inflated as a result of the big sample size of students. Regarding item 20, it had a mean square outfit value of 1.90 and an outfit t value of 4.4, indicating the existence of unpredictable responses. At a second stage, items 5 and 10 were removed. Item 5 had a mean square outfit value of 1.54 and an outfit t value of 3 whereas item 10 had an outfit t value of 3.4. These values also indicate a relative unpredictability of responses. Overall, by removing all four items (5,10,17 and 20) the data fit to the Rasch model was improved.

With regards to the post-test, items 17, 20, 10 and 5 were also removed. Specifically, item 17 had infit t and outfit t values of 5.5 and 4.4 respectively. Moreover, item 20 had an infit t value of 4.2, an outfit mean square value of 1.87 and an outfit t value of 5.6. Item 10 had an infit t value of 3.2 and an outfit t value of 3.4. Although the fit indices of item 10 were found to deviate only slightly from the acceptable range of values there was a need to remove the item in order to have a comparable frame of reference with the pre-test pool of items. This was also the case with item 5 which was found to have satisfactory infit and outfit values. Overall, by removing items 17, 20, 10 and 5, the data fit to the Rasch model was improved.

Figures 4.4 and 4.5 illustrate the item and person distributions for the pre-test and post-test respectively. Both item difficulties and student ability are calibrated on the same logit scale. Items closer to the top are more difficult to perform whereas students closer to the top achieve higher scores. Both figures show that the distributions are well balanced with the items adequately covering the range of person abilities.

Figure 4.4 Item –Person Map for the Cognitive Outcomes Pre-Test

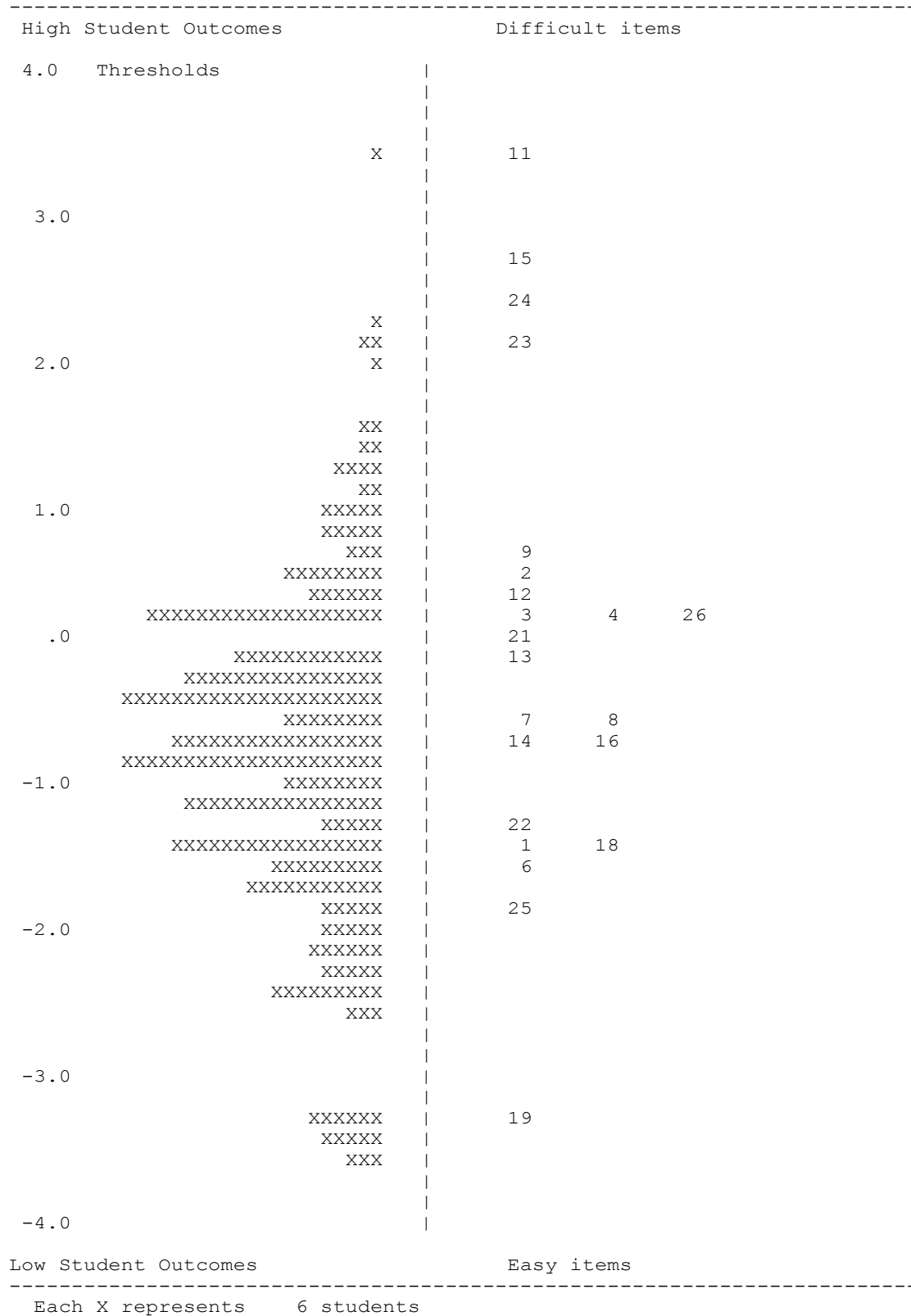


Figure 4.5 Item – Person Map for the Cognitive Outcomes Post-Test

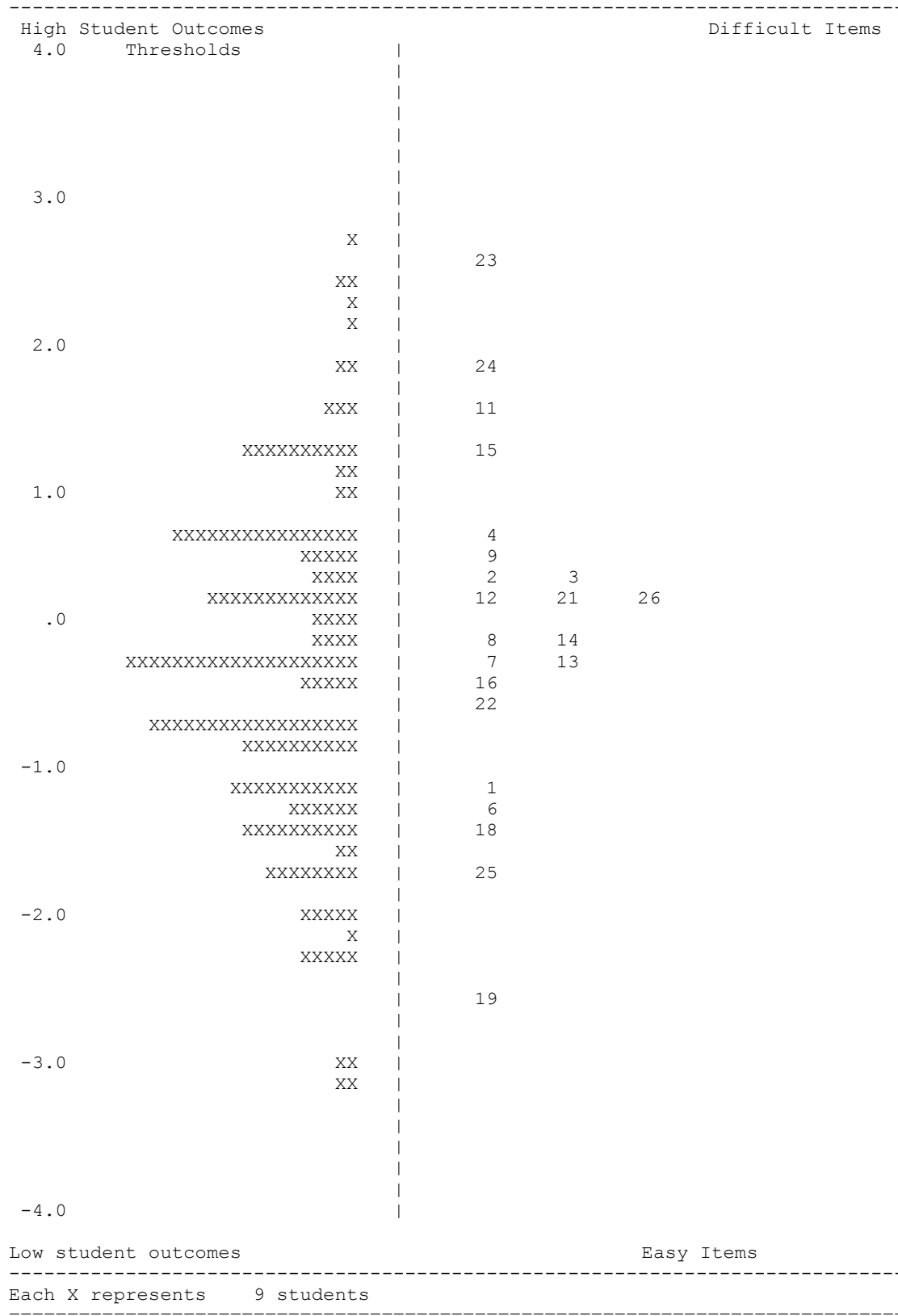


Table 4.25 provides a summary of the scale statistics for both the pre-test and post-test. According to the table, the indices of item separation (i.e. reliability) of both measurement occasions are quite high indicating a quite satisfactory degree of separability. The indices of person separation for both the pre-test and post-test are lower (i.e. 0.52 and 0.54) indicating a moderate level of separability. This means that there is a moderate level of variability of persons across the continuum of the measured trait. Moreover, the infit mean squares and the outfit mean squares for each test are 1 or approximately 1. The values of the infit t scores and the outfit t scores are approximately zero except for the person outfit scores which are slightly higher (i.e. 0.25 and 0.12). Yet, it must be noted that the outfit values do not pose a threat to the validity of the test.

Table 4.25

Statistics relating to the pre-test and post-test of Cognitive Outcomes

Statistic	Cognitive Outcomes	
	Pre-test	Post-test
Mean (items)	0.00	0.00
(persons)	-0.76	-0.33
Standard Deviation (items)	1.58	1.17
(persons)	0.83	0.82
Reliability (items)	0.99	0.99
(persons)	0.52	0.54
Mean Infit mean square (items)	1.00	1.00
(persons)	1.00	1.00
Mean Outfit mean square (items)	0.98	0.98
(persons)	0.99	0.99
Infit t (items)	0.02	-0.05
(persons)	0.03	0.04
Outfit t (items)	0.05	-0.09
(persons)	0.25	0.12

In conclusion, the analyses suggest that the data largely satisfy the Rasch model for unidimensionality. The items seem to be well targeted across the whole range of the person

abilities whereas the overall and individual fit indices fall within accepted range of values. Only items 5, 10, 17 and 20 were removed from the test since they were found to distort the measurement system. These items could be revised and tested in a future administration of the test in order to improve their individual fit values.

#### **4.1.4.2 Affective Outcomes**

The Extended Logistic Model of Rasch was used to analyse student responses to the Affective Outcomes pre-test and post-test scale. Figures 4.6 and 4.7 illustrate the item and person distributions for the pre-test and post-test respectively. Both item difficulties and student ability are calibrated on the same logit scale. As can be seen from both maps, the distribution of item difficulties and person abilities are not adequately balanced since a number of item thresholds exceed the range of person abilities.

Table 4.26 provides a summary of the statistics of both the pre-test and the post-test. According to the table, the indices of item separation (i.e. reliability) of both tests are quite high indicating a quite satisfactory degree of separability. However, the indices of person separation for both the pre-test and post-test are 0.46 and 0.54 respectively indicating a fairly satisfactory separability. Moreover, the infit mean squares and the outfit mean squares for each test are 1 or approximately 1. The values of the infit t scores and the outfit t scores of both the pre-test and post-test are approximately zero.

Looking at each pre-test item, one can observe that the infit t values of seven items (i.e. items 5, 6,7,8, 11,12,13) do not fall within an accepted range of values. This means that the items are unproductive for measuring a single dimension of affective outcomes. Removing any of these items deteriorates the fit values of the rest of the items and generally distorts the overall fit of the data. This might be due to the fact that this part of the test (i.e. measuring affective outcomes) consists only of 13 items. Moreover, items 5,6,7 and 8 have outfit t values which are not satisfactory. These values indicate unexpected responses on behalf of the students.

Also, the infit t values of eight post-test items (i.e. 3,4,5,7,8,9,11,12) were found to have non acceptable infit t values, indicating that they are unproductive for measuring a single dimension of affective outcomes. Removing any of these items deteriorates the fit values of the rest of the items and generally distorts the overall fit of the data. This might also be due to the fact that this part of the test (i.e. measuring affective outcomes) consists only of 13 items. Moreover, six items have an outfit t value (i.e. items 2, 5,7, 9, 11,12)

which was found as non satisfactory. These values indicate unexpected responses on behalf of the students.

Figure 4.6 Item-person map for the Affective Outcomes Pre-Test

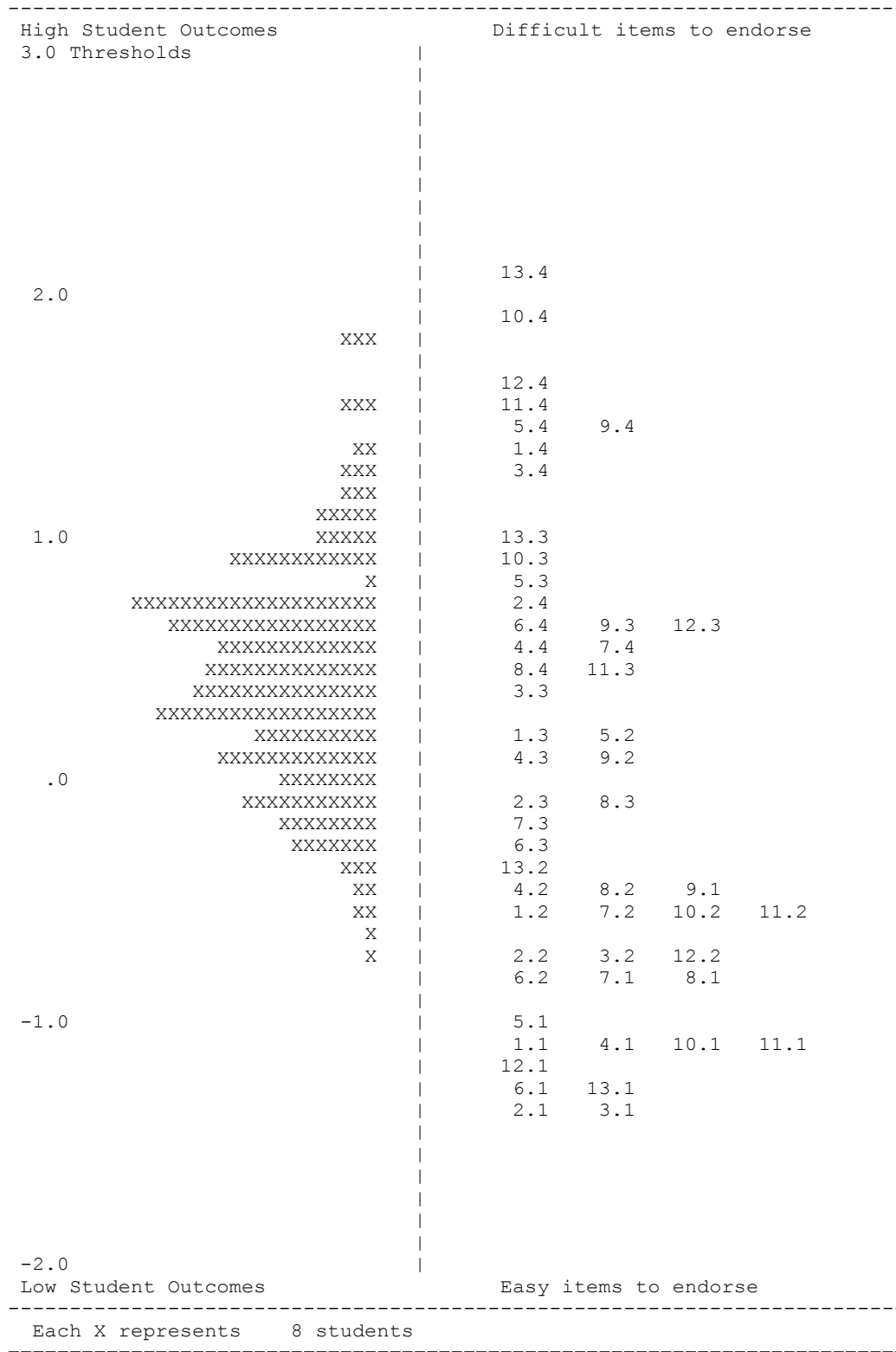


Figure 4.7 Item-person map for the Affective Outcomes Post-Test

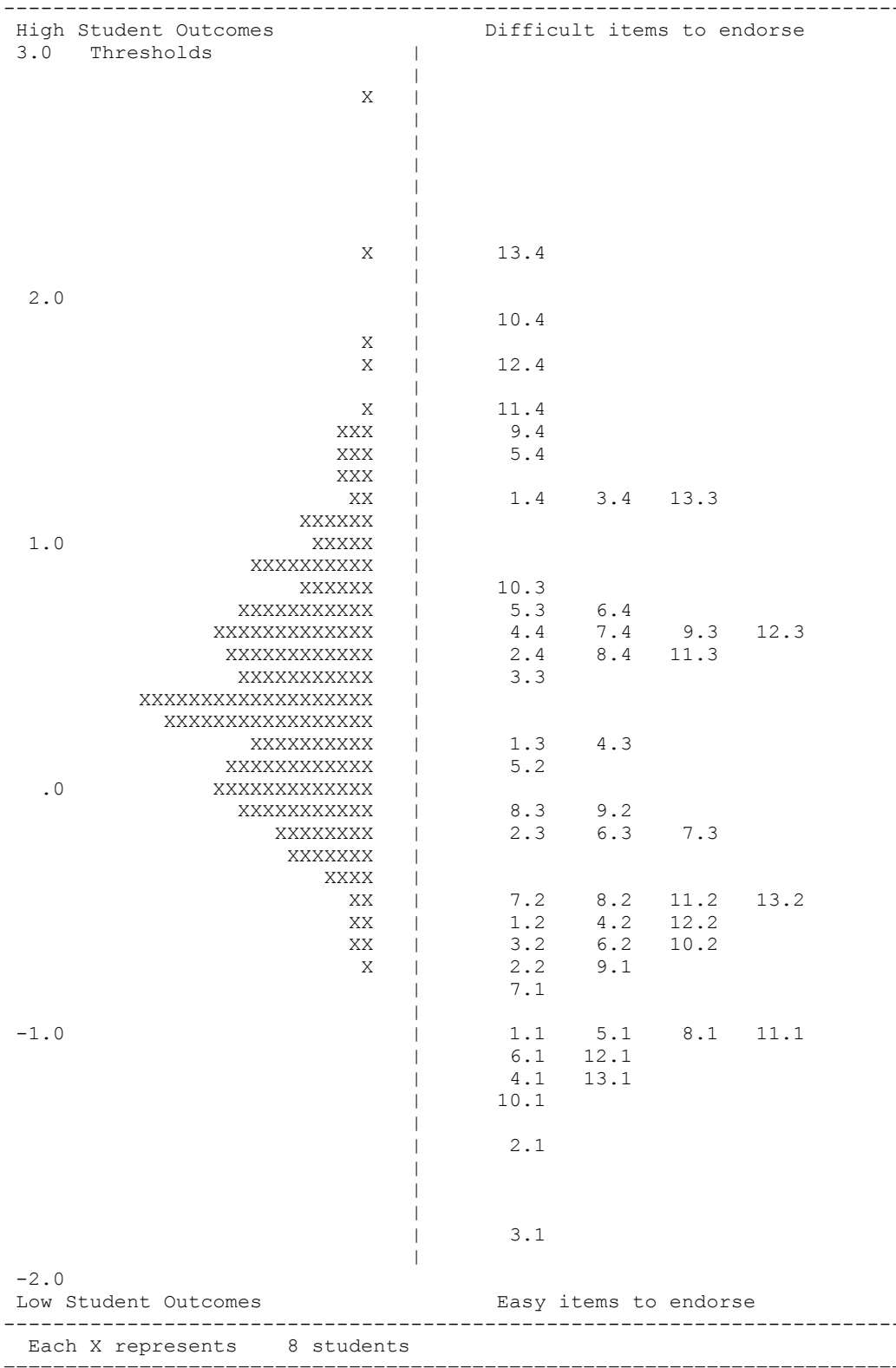


Table 4.26

Statistics relating to the pre-test and post-test of Affective Outcomes

Statistic	Affective Outcomes	
	Pre-test	Post-test
Mean (items)	0.00	0.00
(persons)	0.43	0.40
Standard Deviation (items)	0.26	0.26
(persons)	0.33	0.39
Reliability (items)	0.78	0.79
(persons)	0.46	0.54
Mean Infit mean square (items)	1.00	1.01
(persons)	0.99	1.00
Mean Outfit mean square (items)	0.99	1.01
(persons)	0.99	1.00
Infit t (items)	-0.02	0.06
(persons)	-0.11	-0.16
Outfit (items)	-0.11	0.12
(persons)	-0.02	-0.05

In conclusion, the analyses suggest that the data do not satisfy the Rasch model for unidimensionality. Firstly, the items are not well targeted across the whole range of person abilities. Moreover, a number of individual items deviated to a great extent from the acceptable range of fit values. Removing these items does not improve the data fit to the Rasch model. One could therefore assume that these items do not form a unidimensional construct related to student affective outcomes. It is likely that these items constitute a number of dimensions that could be examined through factor analysis techniques. However, this approach could not be adopted since alternate test forms were completed by students. This means that there was a need to estimate missing values by using the Rasch model. In a future administration of the test items - where only one test form would be completed by students - it is recommended to investigate the possibility of establishing a factor structure for the affective outcomes of students.



#### 4.1.4.3 Behavioural Outcomes

The Extended Logistic Model of Rasch was used to analyse student responses to the Behavioural Outcomes pre-test and post-test scale. Figures 4.8 and 4.9 illustrate the item and person distributions for the pre-test and post-test respectively. Both item difficulties and student ability are calibrated on the same logit scale. As can be seen from both maps, the distributions are not very well balanced since some item thresholds exceed the range of person abilities.

Table 4.27 provides a summary of the statistics of both the pre-test and the post-test. According to the table, the indices of item separation (i.e. reliability) of both tests are quite high indicating a quite satisfactory degree of separability. However, the indices of person separation for both the pre-test and post-test are zero indicating a non satisfactory separability. Moreover, the infit mean squares and the outfit mean squares for each test are 1 or approximately 1. The values of the item infit t scores and the item outfit t scores of both the pre-test and post-test are close to zero. The person outfit t scores are also close to zero. However, the item outfit t scores are slightly greater (0.29 for the pre-test and 0.17 for the post-test).

Looking at the individual fit indices of the pre-test items, we can observe that the infit t values of 10 out of the 18 items (i.e. items 2,7,9,10,11,12,13,14,16 and 17) fall within a non acceptable range of values. This is an indication that the items are unproductive for measuring a single dimension of the behavioural outcomes. Removing any of these items deteriorates the fit values of the rest of the items and generally distorts the overall fit of the data. This might be due to the fact that the aforementioned items comprise more than half of the whole behavioural outcomes scale. Moreover, two items (i.e. items 11 and 13) were found to have a non satisfactory outfit t value denoting unexpected responses on behalf of the students.

Also, we can observe that the infit t values of 10 out of the 18 post-test items (i.e. items 2, 3, 4, 7, 8, 9, 10, 11, 13 and 14) fall within a non acceptable range of values. Therefore, it was deemed that these items are unproductive for measuring a single dimension of the behavioural outcomes. Removing any of these items deteriorates the fit values of the rest of the items and generally distorts the overall fit of the data. This might also be due to the fact that the aforementioned items comprise more than half of the whole behavioural outcomes scale. Moreover, six items (i.e. items 2, 5, 7, 9, 11, 12) were found



Figure 4.9 Item-person map for the Behavioural Outcomes Post-Test

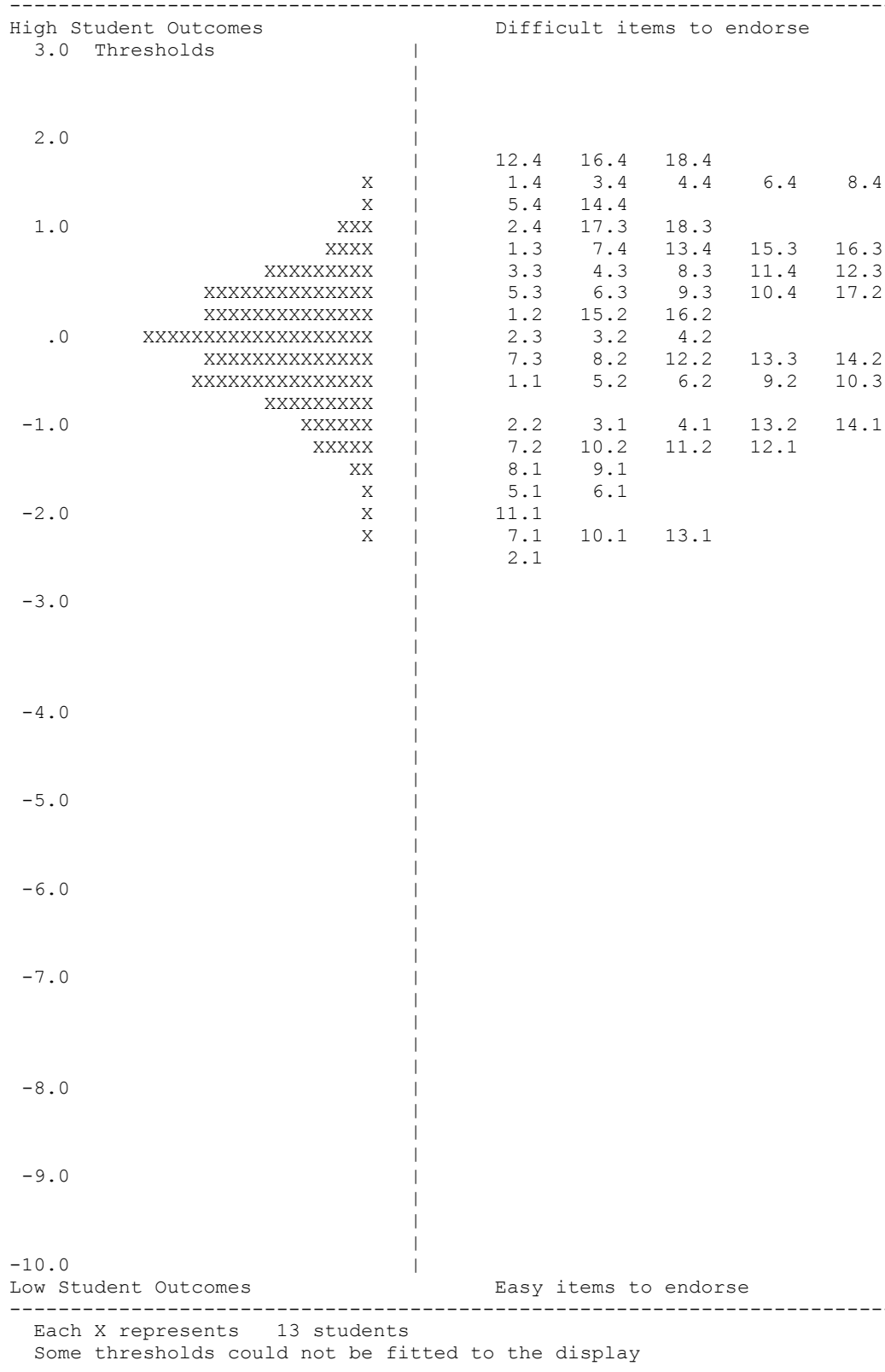


Table 4.27

Statistics relating to the pre-test and post-test of Behavioural Outcomes

Statistic	Behavioural Outcomes	
	Pre-test	Post-test
Mean (items)	0.00	0.00
(persons)	-0.33	-0.27
Standard Deviation (items)	0.68	0.51
(persons)	0.00	0.00
Reliability (items)	0.95	0.92
(persons)	0.00	0.00
Mean Infit mean square (items)	1.01	1.01
(persons)	1.00	1.00
Mean Outfit mean square (items)	1.01	1.00
(persons)	1.01	1.00
Infit t (items)	0.03	0.12
(persons)	-0.08	-0.06
Outfit (items)	0.29	0.17
(persons)	0.06	0.06

In conclusion, the analyses suggest that the data do not satisfy the Rasch model for unidimensionality. Firstly, some item thresholds are not well targeted across the whole range of person abilities. Moreover, the person separation is close to zero, indicating no variability of the person scores. Then, a number of individual items deviated from the acceptable range of fit values. If we consider the items of both the pre-test and the post-test then the majority of the items would have to be removed. Yet, by removing any of these items the data fit to the model became even worse. One could assume that these items do not form a unidimensional construct related to student behavioural outcomes. It is likely, as was the case with the affective outcomes, that these items comprise a number of factors that could be examined through factor analysis techniques. However, this approach could not be adopted since alternate test forms were completed by students and therefore there was a need to estimate missing values by using the Rasch model.

## 4.2 Descriptive Findings

This section of the Findings presents the Descriptive Statistics calculated for all school level, classroom level and student level variables of the study. Table 4.28 shows the results which emerged from the descriptive analysis concerning the functioning of all school level variables: Leadership Radius (second order factor), the Instructional, Participative, Personnel Development, Entrepreneurial and Structuring Styles (first order factors), and School Academic Optimism (first order factor). The scores for these variables were derived from the aggregated teacher responses at the school level, hence the sample of 20 schools (N=20) for all variables. It should be reminded that a higher score represents a higher level of each of the estimated variables (on a scale of 1 to 5).

Table 4.28  
Descriptive Statistics for School Level Variables

	N	Min	Max	Mean	SD	Skewness	Kurtosis
LEADERSHIP RADIUS	20	2.92	4.43	3.74	0.389	0.062	-0.336
INSTRUCTIONAL STYLE	20	2.81	4.22	3.58	0.373	0.112	-0.365
PARTICIPATIVE STYLE	20	3.16	4.52	3.86	0.438	0.041	-10.097
PERSONNEL DEVELOPMENT STYLE	20	3.01	4.35	3.67	0.359	0.124	-0.570
ENTREPRENEURIAL STYLE	20	2.71	4.54	3.77	0.446	-0.299	0.257
STRUCTURING STYLE	20	2.89	4.71	3.82	0.440	-0.036	-0.063
SCHOOL ACADEMIC OPTIMISM	20	2.71	3.65	3.12	0.230	0.552	0.197

According to the findings, the mean score of School Leadership as well as for the individual leadership styles is much greater than average (i.e. the mid-point of the Likert scale). This finding indicates that the School Principals of the sample are perceived by teachers to exhibit a relatively high level of leadership. With respect to the individual leadership styles, it can be seen that the Participative Style received the highest mean score (M=3.86) whereas the Instructional Style received the lowest mean score (M=3.58). Moreover, the mean score of School Academic Optimism was slightly higher than average (M=3.12).

Another observation that results from the table concerns the low variability in teacher responses. This is evident from the relatively low standard deviations of all school factors, and especially of School Academic Optimism, as well as from the maximum and minimum values which show that there is a low range among the schools in relation to the functioning of each school factor. Finally, the values of skewness and kurtosis fall within the range of  $\pm 2$  which is considered to be acceptable for normal distributions.

Statistics for a number of contextual variables at the school level were also estimated. Table 4.29 presents the descriptive statistics for the following continuous variables: School Size, Educational Background of Principal in Leadership, Experience as a Principal. Moreover, tables 4.30 and 4.31 present the frequencies and respective percentages of the following categorical variables: School Location and Principal Gender. According to the descriptive findings, the average School Size reaches approximately 396 students. The smallest and largest schools had student numbers of 222 and 590 respectively. Moreover, 65% of the schools were located in urban areas and 35% of the schools were located in rural areas.

Table 4.29

Descriptive Statistics for Contextual School Level Variables

	N	Min	Max	Mean	SD	Skewness	Kurtosis
SCHOOL SIZE	20	222.00	590.00	395.75	103.29	0.01	-0.67
EXPERIENCE AS A PRINCIPAL ( in years)	20	1.00	4.00	1.70	0.92	1.12	0.35

	N	Min	Max	Mean	SD	Skewness	Kurtosis
EDUCATIONAL BACKGROUND OF PRINCIPAL IN LEADERSHIP (1=No qualification, 2= Postgraduate Certificate, 3=Master's, 4=PhD)	19	1.00	3.00	1.47	0.61	0.92	0.03
Valid N (listwise)	19						

With respect to the Principal's contextual variables, one can observe that 40% of the principals are male and 60% female. Moreover, the average experience in post is 1.7 years. One can also observe that the range of principalship experience is small. When it comes to the educational background of principals in leadership the average score is approximately 1.5 on a scale of 1 to 4. In this case, it is evident from the maximum value that no principal holds a relevant degree at the doctoral level.

Table 4.30  
Frequencies for School Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	URBAN	13	65.0	65.0	65.0
	RURAL	7	35.0	35.0	100.0
	Total	20	100.0	100.0	

Table 4.31  
Frequencies for Principal Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	8	40.0	40.0	40.0
	FEMALE	12	60.0	60.0	100.0
	Total	20	100.0	100.0	

Table 4.32 refers to the main results which emerged from the descriptive analysis concerning the functioning of all classroom level variables: the second order factor of Instructional Quality, as well as the first order factors of Orientation, Structuring, Application, Management of Time, Questioning Techniques, Dealing with Cooperation, Dealing with Misbehaviour (Positive Aspects), Dealing with Misbehaviour (Negative Aspects), Teacher - Student Relations, and Assessment. The scores for these variables were derived from the aggregated student responses at the classroom level, hence the sample of 114 classrooms (N=114) for all variables. It should be reminded that a higher score represents a higher level of each of the estimated variables (on a scale of 1 to 5).

Table 4.32

Descriptive Statistics for Classroom Level Variables

	N	Min	Max	Mean	SD	Skewness	Kurtosis
INSTRUCTIONAL QUALITY	114	1.92	3.92	3.2079	0.3578	-0.681	0.874
ORIENTATION	114	2.00	4.20	3.3552	0.4319	-0.513	0.055
STRUCTURING	114	1.97	3.99	3.3174	0.3634	-0.778	1.036
APPLICATION	114	1.85	4.13	3.0763	0.3792	-0.156	0.362
MANAGEMENT OF TIME	114	2.00	4.09	3.2488	0.3917	-0.461	0.261
QUESTIONING TECHNIQUES	114	1.95	4.23	3.4620	0.4403	-0.865	1.085
DEALING WITH COOPERATION	114	1.80	3.47	2.5964	0.3945	0.049	-0.679
DEALING WITH MISBEHAVIOUR (POSITIVE ASPECTS)	114	2.15	4.30	3.4235	0.4176	-0.568	0.897
DEALING WITH MISBEHAVIOUR (NEGATIVE ASPECTS)	114	1.49	3.81	2.7515	0.3759	-0.021	0.674



	N	Min	Max	Mean	SD	Skewness	Kurtosis
TEACHER STUDENT RELATIONS	114	1.79	4.64	3.5397	0.5152	-0.460	0.276
ASSESSMENT	114	1.29	3.62	2.8929	0.4163	-0.780	0.905

According to the classroom level findings, the mean score of Instructional Quality is slightly higher than average (M=3.21). This finding indicates a moderate level of teaching quality in year three Citizenship Education as perceived by students. With respect to the first order factors, the findings show that their mean scores are close to average. In fact, Teacher–Student Relations (M=3.54) and Questioning Techniques (M=3.46) had the highest mean scores whereas Dealing with Cooperation (M=2.60) and Dealing with Misbehaviour (Negative Aspects) (M=2.75) had the lowest mean scores. It is also noteworthy that all classroom variables had a relatively low variability. This can be seen from the low standard deviations as well as from the minimum and maximum values which show that there is a low range among classrooms in relation to the functioning of each factor. Finally, the values of skewness and kurtosis fall within the range of  $\pm 2$  which is considered to be acceptable for normal distributions.

Tables 4.33 to 4.38 refer to the main results which emerged from the descriptive analysis concerning all student level variables. These variables concern both the pre-test and post-test Cognitive Outcomes, as well as a number of contextual student level variables that are likely to have a moderating effect on their achievement. Statistics for continuous variables are shown in Table 4.33 whereas Tables 4.34 to 4.38 present the frequencies and respective percentages of the categorical variables (i.e. Student Gender, Student’s Place of Birth, Mother’s Place of Birth, Father’s Place of Birth, and Student Council Participation). The descriptive statistics for the Cognitive Outcomes have been derived from the Rasch person estimates whereas the statistics for the contextual variables resulted from the analysis of student responses to the third part of the test which was administered to them (N=1596).

According to the findings, students’ both pre-test and post-test outcomes were relatively low (see Table 4.33). This is evident from the negative mean scores which indicate that the specific test was relatively difficult for the sample of students who participated in the study. Moreover, the gains in student achievement were estimated to be

only 0.43. This is a relatively small increase in student achievement that may be explained by the fact that Citizenship Education is taught for only a few months during the school year. One can also observe that the range of Post-test Outcomes is lower than the respective range of Pre-test Outcomes.

Table 4.33  
Descriptive Statistics for Student Level Variables

	N	Min	Max	Mean	SD	Skewness	Kurtosis
PRE TEST COGNITIVE OUTCOMES	1579	-3.57	3.44	-0.759	1.1541	-0.054	0.521
POST TEST COGNITIVE OUTCOMES	1577	-3.19	3.13	-0.328	1.1163	0.079	-0.039
MOTHER'S EDUCATIONAL BACKGROUND	1506	1	7	5.38	1.214	-0.417	-0.120
FATHER'S EDUCATIONAL BACKGROUND	1472	1	7	5.22	1.266	-0.381	0.063
MOTHER'S OCCUPATIONAL BACKGROUND	1541	18	65	37.55	16.396	0.534	-1.025
FATHER'S OCCUPATIONAL BACKGROUND	1526	18	65	43.01	13.721	0.346	-1.004
NUMBER OF BOOKS AT HOME	1588	1	6	3.99	1.368	-.022	-0.908
BUYING NEWSPAPER AT HOME	1469	0	7	1.96	2.122	1.449	0.990
GOING OUT WITH FRIENDS	1592	1	4	2.83	0.841	-0.249	-0.602
WATCHING TV	1591	1	5	3.44	0.976	-0.112	-0.332

With respect to the contextual student variables, we can derive a general description of the students' background. Firstly, 54.2% of the student sample were girls and 45.8% were boys (see Table 4.34). Then, approximately 92% of the students were born in Cyprus whereas only 8% were born abroad (Table 4.35). Moreover, about 89% of students reported that their father was born in Cyprus whereas 11% reported that their father was born abroad (Table 4.36). Around 86% of the students also reported that their mother was born in Cyprus whereas a 14% reported that she was born abroad (Table 4.37). The aforementioned statistics show that the majority of students who participated in the study were locals.

Table 4.34  
Frequencies for Student Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 (Girls)	864	54.1	54.2	54.2
	1 (Boys)	730	45.7	45.8	100.0
	Total	1594	99.9	100.0	
Missing	9	2	0.1		
Total		1596	100.0		

Table 4.35  
Frequencies for Students' Place of Birth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 (Born in Cyprus)	1466	91.9	91.9	91.9
	1 (Born abroad)	129	8.1	8.1	100.0
	Total	1595	99.9	100.0	
Missing	9	1	0.1		
Total		1596	100.0		

A number of observations also arise from student variables which reflect their socioeconomic status (Table 4.33). Firstly, we can observe that the mean scores of Mother's and Father's Educational Background are higher than 5 indicating that the students' parents have on average finished High School. Moreover, the mean scores of Mother's and Father's Occupational Background are approximately 40, also indicating an average level of occupational status. Another proxy variable of socioeconomic status concerns the Number of Books at Home. In this case, the mean score is approximately 4 indicating a number of around 50 books. Overall, we can observe that the socioeconomic status of the students of the specific sample reaches a moderate level.

Table 4.36

Frequencies for Father's Place of Birth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 (Born in Cyprus)	1419	88.9	89.1	89,1
	1 (Born abroad)	174	10.9	10.9	100,0
	Total	1593	99.8	100.0	
Missing	9	3	0.2		
Total		1596	100.0		

Table 4.37

Frequencies for Mother's Place of Birth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 (Born in Cyprus)	1375	86.2	86.3	86,3
	1 (Born abroad)	218	13.7	13.7	100,0
	Total	1593	99.8	100.0	
Missing	9	3	0.2		
Total		1596	100.0		

Further student variables were also investigated, specifically *Buying Newspaper at Home, Going Out at Night, Watching TV* and *Student Council Participation*. With regards to the former "Newspaper" variable, a mean score of 2 was found indicating that on average twice a week a newspaper is bought at home. Students' mean score for Going Out

at Night is around 2.8 indicating that they generally go out more often than “some nights a month” but less than “once per week”. The mean score of Watching TV is 3.44 indicating that students watch TV between 2 and 3 hours per day during school weekdays. Finally, around 57% students reported that they participated in a Council (either a class or a school Council) whereas 43% reported that they never participated in any Student Council (Table 4.38).

Table 4.38  
Frequencies for Student Council Participation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 (No Participation)	671	42.0	42.6	42.6
	1 (Participation )	904	56.6	57.4	100.0
	Total	1575	98.7	100.0	
Missing	9	21	1.3		
Total		1596	100.0		

Overall, it can be seen that for the contextual student variables which are continuous the values of standard deviations are relatively high. This finding indicates that there is high variability in the functioning of the particular variables. Moreover, the values of skewness and kurtosis fall within the range of  $\pm 2$  which is considered to be acceptable for normal distributions. Finally, it must be noted that the percentage of missing values for each student variable is negligible.

### 4.3 Searching for Direct and Indirect Effects of School Leadership on Student Citizenship Outcomes

Based on the scores of the main and contextual variables of the study, a number of statistical analyses were conducted in order to identify direct and/or indirect effects of School Leadership on Student Citizenship Outcomes. The inquiry into the indirect effects of School Leadership was performed through the intermediate Instructional Quality variables and School Academic Optimism. The next two sections present the findings from the relevant analyses that were conducted.

### 4.3.1. Direct Effects on Student Citizenship Outcomes

Multilevel modelling was used to identify the effects of the independent variables upon Citizenship Cognitive Outcomes. The first step was to compare the empty models derived from a number of level combinations. After selecting the most appropriate model, explanatory variables at different levels were added. Categorical variables were entered as dummies with one of the groups as baseline (e.g. girls=0). In order to identify a significant change between two succeeding models, the reduction in the deviance between these models was used. The difference in deviance has a chi-squared distribution with degrees of freedom equal to the reduction in the degrees of freedom between the two models.

The first step was to identify which levels had to be taken into account to reflect the hierarchical structure of the data. Empty models with all combinations of the levels of analysis were specified and the likelihood statistics of each model were compared (Table 4.39). Initially, it was found that the likelihood statistics lent support to an empty model consisting of student, classroom and school levels. However, the variance component at the school level was not statistically significant. As a result, the two level empty model consisting of student and classroom levels represented the best solution. This finding implies that classroom effects are more important than school effects in relation to the Cognitive Outcomes of students in Citizenship Education.

Table 4.39  
Comparison of Empty Models

	Empty Model 1 (Student-School)	Empty Model 2 (Student-Classroom)	Empty Model 3 (Student- Classroom- School)
$X^2$	4775.486	4768.968	4758.584
Reduction		6.518	10.384
Degrees of freedom			1
p value		0.05	0.001

Table 4.40 presents the parameter estimates and standard errors derived from the multi-level analysis of student Cognitive Outcomes in Citizenship Education. The empty model

(or model 0) presents the variance at the student and classroom level without any explanatory variables. The variance at each level reached statistical significance ( $p < 0.05$ ), revealing that MLwin could be used to identify the explanatory variables, which are associated with student scores. We can observe that approximately 9% of the variance in student achievement is at the classroom level whereas around 91% is at the individual level.

In the next step of the analysis, Model 1 was specified by adding all student level variables to the empty model. The likelihood statistic ( $X^2$ ) shows a significant change between the empty model and model 1 ( $p < 0.001$ ). In Model 1, 27.8% of the variance in student achievement was explained. We can also observe that the prior measure of student cognitive outcomes had the highest statistically significant effect on the final measure of student outcomes.

A number of other contextual variables at the student level were also found to have a statistically significant effect on student outcomes. Firstly, it was found that girls tend to have a higher achievement than boys. Then, students whose mother was born in Cyprus scored higher than students whose mother was born abroad. On the other hand, the individual student's place of birth and their father's place of birth did not have any statistically significant effect. SES indicators, apart from Mother's and Father's Occupational Background, were also found to have a statistically significant effect on student outcomes. Specifically, the higher the level of education of either the mother or father the higher the scores of students. Moreover, the number of books at home was positively associated with student achievement. Buying newspaper at home and participating in a Student Council are also positive indicators of student achievement whereas Going Out at Night is negatively associated with achievement. Watching TV was not found to have any statistically significant effect.

In Model 2, contextual and instructional variables at the classroom level were added. The likelihood statistic ( $X^2$ ) shows a significant change between the Model 1 and Model 2 ( $p < 0.05$ ). Overall, Model 2, explains 29.9% of the total variance of student achievement. According to Model 2, only one classroom level factor had a statistically significant effect on student achievement, i.e. Dealing with Misbehaviour (Positive Aspects). This finding shows that in classrooms where teachers manage to deal with the positive aspects of misbehaviour, students tend to have higher scores in the cognitive domain of Citizenship Education.

Table 4.40

Parameter estimates and (standard errors) for the analyses of Citizenship Cognitive Outcomes

Factors	Citizenship Cognitive Outcomes		
	Model 0	Model 1	Model 2
<b>Fixed Part (Intercept)</b>	-0.447 (0.042)	-0.288 (0.038)	-0.289 (0.037)
<b>Student Level</b>			
Prior measure of Cognitive Outcomes		0.358 (0.024)	0.358 (0.024)
Gender (girls=0, boys =1)		-0.136 (0.052)	-0.139 (0.052)
Place of birth (0=Cyprus,1=Abroad)		N.S.S.	N.S.S.
Father's Place of birth (0=Cyprus, 1=Abroad)		N.S.S.	N.S.S.
Mother's Place of birth (0=Cyprus, 1=Abroad)		-0.199 (0.077)	-0.194 (0.077)
Buying Newspaper at Home		0.044 (0.013)	0.044 (0.013)
Number of Books at Home		0.045 (0.021)	0.045 (0.021)
Going Out at Night		-0.154 (0.032)	-0.151 (0.032)
Watching TV		N.S.S.	N.S.S.
Student Council Participation		0.111 (0.054)	0.112 (0.053)
Mother's Educational Background		0.054 (0.027)	0.057 (0.027)
Father's Educational Background		0.092 (0.025)	0.092 (0.025)
Mother's Occupational Background		N.S.S.	N.S.S.
Father's Occupational Background		N.S.S.	N.S.S.
<b>Classroom level</b>			N.S.S.
Average prior achievement			N.S.S.
Percentage of boys			N.S.S.
Average Number of Books			N.S.S.
Average Mothers' Educational Background			N.S.S.
Average Fathers' Educational Background			N.S.S.
Average Mothers' Occupational Background			N.S.S.
Average Fathers' Occupational Background			N.S.S.
Orientation			N.S.S.
Structuring			N.S.S.
Application			N.S.S.
Management of Time			N.S.S.
Questioning			N.S.S.
Dealing with Cooperation			N.S.S.
Dealing with Misbehaviour (Positive Aspects)			0.461 (0.185)
Dealing with Misbehaviour (Negative Aspects)			N.S.S.
Teacher – Student Relations			N.S.S.
Assessment			N.S.S.
<b>Variance Components</b>			
Classroom	9.1 %	8.4%	6.3%
Student	90.9%	63.8%	63.8%
Explained		27.8%	29.9%
<b>Significance test</b>			
X <sup>2</sup>	4768.968	3456.173	3450.138
Reduction		1312.795	6.035
Degrees of freedom		9	1
p value		0.001	0.05

N.S.S. = No statistically significant effect



### 4.3.2 Indirect Effects on Student Citizenship Outcomes

Indirect effects of School Leadership on Student Citizenship Outcomes can be identified through the use of multilevel structural equation modelling. It was assumed that any indirect effects would occur through the main variable of “Dealing with Misbehaviour (Positive Aspects)” which was found to have a direct effect on student outcomes. Therefore, prior to the specification of a structural equation model, a preliminary multilevel analysis was conducted in order to identify the variables which had a direct effect on “Dealing with Misbehaviour (Positive Aspects)”.

A two-level empty model was specified consisting of classroom and school levels. The variance at each level reached statistical significance revealing that MLwin could be used to identify the explanatory variables associated with the dependent variable of “Dealing with Misbehaviour (Positive Aspects).” However, by adding variables at the classroom and then at the school level, the likelihood statistic ( $X^2$ ) increased rather than being reduced towards the value of zero. Thus, no meaningful results could be produced by running the specific multilevel model. This finding did not enable any further attempts to search for indirect effects through the use of structural equation modelling techniques.

Despite the fact that no indirect effects of school leadership were found through the intermediate variable of “Dealing with Misbehaviour (Positive Aspects)”, a decision was made to inquire into the likely effects of School Leadership on the rest of the Instructional Quality variables as well as School Academic Optimism. The specific decision was made in order to identify important variables which could act as mediators in future indirect leadership effects studies.

Firstly, a number of two-level models (consisting of classroom and school levels) were specified in order to identify leadership effects on the Instructional Quality variables. Specifically, all first-order classroom factors as well as the second-order factor of Instructional Quality were entered as the dependent variable in separate multilevel models. Further variables were added at the classroom and school level yet no statistically significant effects of School Leadership nor School Academic Optimism were found.

Beyond Instructional Quality variables, a decision was made to test for School Leadership effects on School Academic Optimism. In this case, School Academic Optimism was the dependent variable whereas School Leadership formed the main independent variable. Further leadership and school contextual variables were also added as independent variables: Gender, Educational Background in Leadership, Experience as a

Principal, School Location, and School Size. Stepwise multiple regression analysis at a single level was used to test for the relationships between the aforementioned independent variables and School Academic Optimism. A single level regression analysis was used in this case since all variables are located at the school level.

The regression analysis produced a number of statistically significant regression models the summary of which is presented in Table 4.41. Specifically, for each model additional predictors of School Academic Optimism are entered and the significance of the change is assessed. According to the findings, there are statistically significant changes at each stage of the analysis with Model 5 representing the best fitting model (F change=5.871, p-value<0.01). Specifically, the predictors of Model 5 explain 21.7% of the variance in School Academic Optimism.

The parameters of the regression model are presented in Table 4.42. According to the findings, most of the independent variables have made a statistically significant contribution to predicting the outcome (p-value<0.01). The standardised beta values indicate the importance of each individual predictor. Firstly, the most important predictor was the main independent variable of School Leadership with a beta value of 0.439. This means that for an increase of one standard deviation in School Leadership the outcome variable of Academic Optimism increases by 0.439 of a standard deviation.

Table 4.41

Regression Model Summary with School Academic Optimism as the Dependent Variable

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	Change Statistics				
					R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change
1	0.428(a)	0.183	0.182	0.1467	0.183	340.76	1	1522	0.001
2	0.445(b)	0.198	0.197	0.1454	0.015	29.13	1	1521	0.001
3	0.455(c)	0.207	0.206	0.1446	0.009	17.09	1	1520	0.001
4	0.466(d)	0.217	0.215	0.1438	0.010	18.70	1	1519	0.001
5	0.469(e)	0.220	0.217	0.1435	0.003	5.87	1	1518	0.016

a. Predictors: (Constant), SCHOOL LEADERSHIP

b. Predictors: (Constant), SCHOOL LEADERSHIP, SCHOOL LOCATION

- c. Predictors: (Constant), SCHOOL LEADERSHIP, SCHOOL LOCATION, EXPERIENCE AS A PRINCIPAL
- d. Predictors: (Constant), SCHOOL LEADERSHIP, SCHOOL LOCATION, EXPERIENCE AS A PRINCIPAL, GENDER
- e. Predictors: (Constant), SCHOOL LEADERSHIP, SCHOOL LOCATION, EXPERIENCE AS A PRINCIPAL, GENDER, EDUCATIONAL BACKGROUND IN SCHOOL LEADERSHIP

Further important variables are School Location and Experience as a Principal. Firstly, the beta value for School Location is 0.138. This means that in rural schools, academic optimism is greater by 0.138 of a standard deviation when compared to urban schools. Furthermore, an increase of one unit in Principals Experience is associated with an increase of 0.108 of a standard deviation in school academic optimism.

Table 4.42  
Regression Coefficients with School Academic Optimism as the Dependent Variable

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
5	(Constant)	1.167	0.045		26.075	0.001
	SCHOOL LEADERSHIP	0.243	0.013	0.439	18.439	0.001
	SCHOOL LOCATION	0.045	0.009	0.138	5.008	0.001
	EXPERIENCE AS A PRINCIPAL	0.022	0.005	0.108	4.697	0.001
	GENDER	0.032	0.008	0.094	4.011	0.001
	EDUCATIONAL BACKGROUND IN SCHOOL LEADERSHIP	0.020	0.008	0.068	2.423	0.016

The rest of the contextual variables seem to predict Academic Optimism to a lesser extent. The findings showed a small but statistically significant effect of the principal's gender ( $b=0.094$ ). Specifically, the academic optimism was greater in schools where the principal was female rather than male. Furthermore, the Educational Background in Leadership was found to be a statistically significant predictor. Specifically, the schools with principals that hold higher qualifications in leadership have a greater level of academic optimism. That is, a one standard deviation increase in their Educational Background in School Leadership is associated with a 0.068 of a standard deviation in academic optimism.

#### **4.4 Summary**

This part of the study sought to present and describe in detail the findings which emerged from the main field research. In doing so, the main research questions that were initially set are addressed. Specifically, the study aimed at identifying direct and indirect relationships between middle school leadership and student citizenship outcomes. Indirect relationships were examined through the intermediate variables of school academic optimism and instructional quality.

Firstly, there was a need to investigate the validity of the instruments used for data collection. With regards to the School Leadership Questionnaire, Confirmatory Factor Analysis showed that the best fitting model comprises of a second order factor (i.e. Leadership Radius) on which five first order factors are regressed (i.e. Instructional, Participative, Structuring, Entrepreneurial, Personnel Development Leadership Styles). The CFA for School Academic Optimism showed that the one factor model fits best the data. A similar analysis for Instructional Quality showed that the best fitting model consists of a second order factor and ten first order factors. The second order factor was labelled Instructional Quality and eight first order factors regressed on it. These factors concern Orientation, Structuring, Application, Questioning, Dealing with Cooperation, Dealing with Misbehaviour-Positive Aspects, Teacher- Student Relations and Assessment. Two first order factors (i.e. Management of Time and Dealing with Misbehaviour-Negative Aspects) only correlated with Instructional Quality. Rasch analyses were also conducted in order to examine the psychometric properties of the Civic Education test. The findings showed that the data satisfied the Rasch model for unidimensionality only in the case of the cognitive dimension.

According to the descriptive findings, the mean score of School Leadership was much higher than average whereas the mean scores of School Academic Optimism and Instructional Quality reached a moderate level. However, the variability of the responses in all three cases was relatively low. Then, the descriptive statistics for the citizenship cognitive outcomes showed that the test was relatively difficult for the specific sample and that the achievement gains acquired were small. Descriptive statistics were also calculated for contextual school and student level variables.

Multilevel modelling was used to identify direct effects on student cognitive outcomes. A comparison of empty models showed that a two level model consisting of classroom and student levels was the best solution. The analysis showed that a number of contextual student variables and one classroom variable (i.e. Dealing with Misbehaviour-Positive Aspects) had a direct effect on student cognitive outcomes. Overall, the model explained around 30% of the variance. A further multilevel analysis was conducted in order to examine whether School Leadership or Academic Optimism had any direct effect on the variable of Dealing with Misbehaviour-Positive Aspects. This was a first step in identifying any indirect effects of School Leadership on Student Outcomes through the mediating variable of Dealing with Misbehaviour-Positive Aspects. The analysis did not provide evidence of any such effects.

Additional multilevel analyses showed that neither School Leadership nor School Academic Optimism had any direct effect on Instructional Quality variables. However, single level regression analysis showed that School Leadership has significant direct effects on School Academic Optimism. Academic Optimism was also found to be influenced by a number of contextual school and principal variables. These findings are important for further research into indirect leadership effects on student outcomes.

## **CHAPTER V**

### **DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter aims to discuss the main findings of the study as well as draw conclusions and implications relevant to these findings. Firstly, an overview of the previous chapters is provided with a focus on the main findings which resulted from this study. A discussion of the findings follows in the light of theory and previous research along with relevant interpretations and conclusions. Finally, the implications for educational theory, policy and practice are discussed whereas recommendations for further research are provided.

#### **5.1 Overview of Previous Chapters**

##### **5.1.1 The Research Topic, Purpose and Research Questions**

Current trends in the globalized world we live in require school principals to adopt a broader and more demanding set of tasks, roles and functions so as to cope with the multifaceted character of schooling. Most importantly, there is a mandate for principals to demonstrate their effectiveness by showing results in student achievement. However, this demand needs to be based on robust empirical evidence indicating that school leadership does make a difference in student outcomes. So far, no previous study attempted to explore the association between school leadership and student citizenship outcomes in quantitative terms. Although case studies provide evidence of the contribution of the principal to informal active citizenship of students there is still a need to establish a quantitative linkage between leadership and student citizenship outcomes.

To this effect, the main purpose of the current piece of research was to explore the relationship between school leadership in Cyprus middle schools and gains in student citizenship outcomes. The more specific research questions were as follows:

1. Is there a direct relationship between middle school leadership and improvement in student citizenship outcomes (cognitive, affective, behavioural)?
2. Is there an indirect relationship between middle school leadership and improvement in student citizenship outcomes mediated by School Academic Optimism and/or Instructional Quality?

3. What is the relative strength of the direct and indirect models of school leadership effects upon gains in student citizenship outcomes (cognitive, affective, behavioural)?
4. What is the total effect of the combined direct and indirect leadership models?

### **5.1.2 Review of the Literature**

A review of the current state of the art was conducted in relation to the main variables of the study, i.e. School Leadership, Student Citizenship Outcomes, Academic Optimism of Schools, and Instructional Quality. This part of the study indicated that School Leadership is important for Student Outcomes yet very little evidence was found in relation to Student Citizenship Achievement in particular. The literature also indicated that School Academic Optimism and Instructional Quality have strong effects on student achievement and could therefore act as potential mediators in the chain of leadership effects.

### **5.1.3 Methodology**

The specific study adopted a value-added quantitative design. Specifically, students were administered a test both at the beginning and end of the term during which Citizenship Education was taught (i.e. January 2011 and May 2011). Students also provided data about the quality of instruction whereas teachers provided data about school leadership and school academic optimism. Multistage sampling was used to select twenty middle schools, then all year three classes from each selected school and all year three students from each class. Structural equation modelling techniques were used to validate the questionnaires measuring the independent variables whereas Rasch analysis was used to validate the student outcomes test. Multilevel modeling and single level regression techniques were used to identify the relationships between the main variables of this study.

### **5.1.4 Findings**

The analysis of the data that were collected during the field research yielded a series of findings that address the research questions of the study. The main findings of the study are outlined below:

- 1) Firstly, the analysis lent support to the Pashiardis-Brauckmann Leadership Radius Framework and the Dynamic Model of Educational Effectiveness at the Classroom Level.
- 2) The findings indicated that School Academic Optimism is perceived to be a unidimensional construct.
- 4) The Rasch analysis provided validation to the cognitive dimension of the Citizenship Outcomes test. No such evidence was provided in relation to the affective and behavioural components.
- 5) The multilevel analysis showed that a number of contextual student variables and one classroom variable (i.e. Dealing with Misbehaviour-Positive Aspects) had a direct effect on Student Cognitive Outcomes.
- 6) Neither School Leadership nor School Academic Optimism were found to have a direct or indirect effect on Student Citizenship Outcomes, at least in the context of this study and taking into account the relative limitations arising from a multilevel modelling approach.
- 7) School Academic Optimism was found to be positively influenced by School Leadership. Further contextual school and leadership variables were also associated with School Academic Optimism.

A summary of the main relationships found in the context of this study is presented in Figure 5.1.

## **5.2 Discussion of Research Findings**

### **5.2.1 Validation of the Pashiardis-Brauckmann Leadership Radius Framework**

The analyses that were carried out provided support to the Pashiardis-Brauckmann Leadership Radius Framework (Pashiardis & Brauckmann, 2008a). More specifically, the initial five factors (*Instructional Style, Participative Style, Personnel Development Style, Entrepreneurial Style, Structuring Style*) were retained in the exploratory factor analysis. The reliability of the items measuring each factor was especially high, with 0.936 being the lowest value. The confirmatory factor analysis showed an acceptable fit of this model to the data thus establishing the validity of the Pashiardis-Brauckmann Leadership Framework.



The aforementioned findings are in congruence with previous studies which utilized the Pashiardis-Brauckmann Framework to operationalize school leadership behaviour. Specifically, in a comparative study within seven European countries (UK, Norway, Germany, Slovenia, Hungary, Italy, The Netherlands), evidence was provided that secondary school leadership is a second order factor indicated by five first order factors, i.e. the leadership styles proposed in the framework (Brauckmann & Pashiardis, 2011; Pashiardis, 2014). Moreover, another study in Cyprus validated the specific framework both in the primary and secondary levels of education (Pashiardis, 2014; Pashiardis et al., 2011). The findings of the current study provide further evidence in relation to the robustness of the specific framework in the context of Cyprus middle schools.

The validation of the Pashiardis-Brauckmann framework is important for a number of reasons. Firstly, the specific framework belongs to integrated models (Scheerens, 2012) that seem to have been researched to a lesser extent in comparison to other models such as instructional and transformational leadership. Integrated models seem to provide a more comprehensive approach to leadership effects research in that the entirety of leadership behaviours and practices is taken into account. According to Bruggencate et al. (2012), integrated leadership models provide more insight into the effectiveness of school leaders. Scheerens (2012) also stresses the importance of an integral orientation of school leaders within their schools. Specifically, he points out that school leaders should develop a strategic perspective by integrating all domains of their activity.

Furthermore, the validation of the Pashiardis- Brauckmann Framework both within Europe in general and Cyprus in particular constitutes a significant reference base for conceptualising the construct of school leadership. In fact, one of the main methodological weaknesses in leadership studies is considered to be the lack of a common definition of leadership and a common framework through which it can be operationalized (Brauckmann & Pashiardis, 2011; Hallinger & Heck, 1998; Pashiardis & Brauckmann, 2008a; Witziers et. al, 2003). Thus, a robust framework such as the Pashiardis-Brauckmann Framework can be used to provide widespread conceptual agreement about the meaning and measurement of school leadership.

### **5.2.2 Validation of School Academic Optimism**

With regards to School Academic Optimism, the exploratory factor analyses showed that four factors can be retained, i.e. Collective Efficacy 1 (Task Analysis), Collective Efficacy

2 (Group Teaching Competence), Teacher Trust in Students and Parents and Academic Emphasis. The difference between this solution and the initial model of Hoy et al. (2006) was that Collective Efficacy comprised two separate factors rather than one. The first factor represented teacher beliefs about student commitment and environmental support to their learning whereas the second factor represented teacher beliefs about their own capability to improve student learning. When considering Collective Efficacy as a separate scale, it seems that middle school teachers in the context of Cyprus differentiate between the requirements of the teaching task and their collective capability in improving learning. These findings are more in line with the initial model developed by Goddard (2002) which distinguished between the aforementioned dimensions of collective teacher efficacy.

The Confirmatory Factor Analysis showed an acceptable fit of the data to the model when School Academic Optimism constituted a second order factor indicated by the aforementioned four factors. In fact, this model had a better fit than the model where a single Collective Efficacy factor was considered. However, a simpler model where Academic Optimism constituted a single first order factor also had a similar fit as the former model. Thus, this simpler and more parsimonious model was selected as the best fitting model in this case.

The aforementioned findings indicate that School Academic Optimism may be considered to be a single construct which cannot be clearly distinguished into further constituents. On the one hand, Hoy et al. (2006) assert that School Academic Optimism is a single powerful force with three constituents which work in a unified and mutually dependent manner to improve student learning. The claim of a strong dependency between the three factors of Academic Optimism (i.e. Collective Efficacy, Trust in Students and Parents and Academic Emphasis) may partly explain the unidimensionality of the construct. On the other hand, previous findings (e.g. Hoy et al., 2006; McGuigan & Hoy, 2006; Smith & Hoy, 2007; Wu, Hoy & Tarter, 2013) are contradictory to the findings of this study in the sense that Academic Optimism was found to be a second order factor indicated by the aforementioned three dimensions. Thus, the single construct of Academic Optimism was found to clearly comprise of the separate factors of Collective Efficacy, Trust in Students and Parents and Academic Emphasis.

The findings related to the validation of School Academic Optimism may be further explained by the contextual differences in responding to the measurement instrument. Specifically, the instrument statements were worded in a general manner asking for the opinion of the teachers in relation to what they themselves, parents and students do on a

collective level. It is likely that middle school teachers in Cyprus may not be in a position to accurately assess the collective behaviours of those key stakeholders of their school. Thus, a question may be raised as to whether the specific instrument can “travel” across various cultural contexts.

### **5.2.3 Validation of the Dynamic Model of Educational Effectiveness at the Classroom Level**

According to the Dynamic Model of Educational Effectiveness (Creemers & Kyriakides, 2008, 2011) eight teacher factors can explain student achievement: Orientation, Structuring, Application, Management of Time, Questioning Techniques, Classroom as a learning environment, Assessment, and Teaching Modelling. These factors can also be measured across five dimensions, i.e. Frequency, Stage, Focus, Quality and Differentiation. In the case of Civic Education, the factor of Modelling was not included in the questionnaire administered to students since the specific subject did not require any teaching of specific strategies to students, especially within the limited time that it was taught. Moreover, the Assessment items that inquired about the formal testing of students were not included in the questionnaire since only a single test is administered to students at the end of the term.

The findings from the exploratory and confirmatory factor analysis provided evidence as to the validity of the model at the classroom level. Specifically, ten first order factors were derived: Orientation, Structuring, Application, Management of Time, Questioning Techniques, Classroom as a learning environment- Dealing with Cooperation, Classroom as a learning environment-Dealing with Misbehaviour (Positive Aspects), Classroom as a learning environment- Dealing with Misbehaviour (Negative Aspects), Teacher-Student Relations, and Assessment. All of the aforementioned factors, apart from Management of Time and Dealing with Misbehaviour (Negative Aspects), regressed on the second order factor of Instructional Quality. Management of Time and Dealing with Misbehaviour (Negative Aspects) did not regress on Instructional Quality probably because they were perceived to measure an aspect of teaching related to quantity. However, they still did not regress on a second order factor of Instructional Quantity most probably due to the negative wording of the items related to Dealing with Misbehaviour.

An important issue that needs to be discussed relates to the five measurement dimensions that the dynamic model entails. These dimensions provide alternative ways of

defining and measuring each effectiveness factor and aim at capturing the complex nature of effective teaching (Kyriakides & Creemers, 2009). Previous studies inquiring into the dynamic model showed that these dimensions can effectively be used to identify teacher effects on student achievement (Creemers & Kyriakides, 2008; Kyriakides & Creemers, 2008; Kyriakides & Creemers, 2009). In the current study there was no evidence to support the added value of using the different measurement dimensions. This finding needs to be interpreted under the light of the Civic Education reality in Cyprus. Specifically, the instruction of Civic Education is generally underestimated with teachers being more focused on a plain delivery of the lesson rather than engaging themselves in more complex instructional behaviour. Thus, no dimensions would be needed to describe the simplified functioning of the teacher effectiveness factors.

#### **5.2.4 Validation of the Citizenship Outcomes Test**

The analysis of the student responses to the Citizenship Outcomes test lent support to the validity only of the cognitive dimension. Specifically, the data deriving from the responses to the cognitive items largely satisfied the Rasch model assumption for unidimensionality (Bond & Fox, 2007). However, there was a need to remove four items due to their high infit and outfit values. All the rest of the items could be used to produce a single score for measuring student achievement.

On the contrary, the data deriving from the affective and behavioural items did not satisfy the Rasch model for unidimensionality. When considering the analysis of the affective items, it was found that both the targeting and the individual fit indices of most of the items were not satisfactory. Removing any items from the scale did not improve the data fit to the model and therefore they were deemed to be unproductive for measurement. The same holds true when considering the behavioural items. Moreover, in the case of the behavioural items, the person separation was close to zero indicating no discrimination between the person scores of the specific sample.

The aforementioned findings related to the affective and behavioural dimensions of the student outcomes imply that we cannot use a single score for measuring affective or behavioural outcomes. It is likely that these items represent more than a single factor yet this assumption could not be confirmed within the context of this study since alternate test forms were used. These potential factors could be related to specific content domains such as attitudes towards immigrants, active citizenship in the community, active citizenship at school.

Beyond this explanation, it is also likely that the emphasis placed on the affective and behavioural outcomes of students is little to none. Teachers, under the pressure of time, probably pay less attention to the explicit instruction of the wider goals of Citizenship Education and as a result students are not in a position to respond in a consistent manner to the items measuring the achievement of these goals. Isac et al. (2013) also underline that schools place most emphasis on civic knowledge and understanding and less on other domains, such as attitudes. Similarly, Torney-Purta et al. (2001) found that Civic Education teachers tend to focus their instruction on the transmission of factual knowledge.

The importance of assessing affective and behavioural outcomes, however, cannot be overlooked. Longitudinal research shows that non-cognitive outcomes are more important in improving students' relative life chances than cognitive outcomes alone (e.g. Carneiro, Crawford & Goodman, 2006). Mulford and Silins (2011) also provide evidence which indicates that the emphasis on non-cognitive goals is "the most direct and successful route to achieving cognitive goals" (p.79). Specifically, they found that schools promoting students' social development are the most likely to succeed in fostering student cognitive outcomes.

#### **5.2.5 School Leadership Level**

According to the findings, the mean score of School Leadership is much greater than average, i.e. 3.74. One can therefore argue that the general level of Leadership provided by middle school principals is quite satisfactory. The same holds when considering the constituent styles of leadership with the mean scores ranging from 3.58 (Instructional Style) to 3.86 (Participative Style). These scores are very similar to the average scores estimated for all seven European countries which participated in the LISA project (Brauckmann & Pashiardis, 2011; Pashiardis & Brauckmann, 2008a).

The relatively high scores in both School Leadership and the separate Leadership Styles can be explained by the fact that in recent years an increased emphasis has been placed on the importance of leadership in school effectiveness and improvement. This is evident mostly through the design and proliferation of provision of Educational Leadership university courses both at the Master's and Doctoral levels in Cyprus. These courses are offered by both state and private universities and are continually upgraded with new content arising from relevant research into the field. Moreover, the Cyprus Pedagogical Institute incorporates important leadership concepts into the development programmes for in-service school principals. Through time, there has been an increase in the time allocated

to school leadership topics whereas the trainers have been asked to place a greater focus on the leadership component of the training programme (Michaelidou & Pashiardis, 2009).

Comparing the scores of the individual leadership styles, it can be seen that the Instructional Style received the lowest score. An explanation for this finding relates to the fact that principals in middle schools are not engaged at a deeper level in instructional issues due to the existence of a number of teacher specializations (Hallinger, 2005; Robinson et al., 2008). Then, the large size of middle schools requires principals to devote more time to other domains of activity (such as communicating with parents and coordinating school activities) rather than engaging themselves in the technical core of teaching and learning. Moreover though, school principals may be implementing this style in subtle ways and thus it is not perceived as such by teachers.

On the other hand, we can conclude that principals become more Participative (hence the highest score received) in order to address the diversity and complexity of needs within large schools. Towards this direction, school leaders organize their management activities through teachers and facilitate team work and cooperation. Moreover, school principals may become more Participative in order to satisfy the requirements of an already established school culture in Cyprus which is people-focused (Pashiardis et. Al., 2011b; Pashiardis et al., 2012). To this effect, school leaders promote an atmosphere of open communication with teachers as well as their active participation in decision making. In fact, this emphasis on human relations may partly explain the higher score of the Participative Style among Cyprus principals when compared to the respective European average found in the LISA Project (Pashiardis, 2014).

### **5.2.6 School Academic Optimism Level**

The descriptive analysis of the data showed that the mean score of School Academic Optimism is very close to average ( $M=3.12$ ). This score indicates an average level in the school confidence that students will succeed academically. More specifically, it seems to reflect a moderate level of teacher collective efficacy, trust in students and parents and academic emphasis. Although the overall mean score reached a satisfying level, yet schools would need a much greater level of optimism to enhance student achievement. This is especially important when considering the low variability in the scores which ranged from 2,71 to 3,65.

The average score of School Academic Optimism and the associated low variability might also have resulted from the way the construct was measured. Specifically, the

instrument that was used asked teachers to indicate their agreement to statements that express the collective behaviour of school stakeholders, i.e. teachers, students and parents. For example, teachers were asked to indicate their degree of agreement with the following statement: “Teachers in this school believe that every child can learn”. On the one hand, this statement is intended to grasp the shared beliefs of teachers and identify the cultural forces to student success on a collective level. On the other hand, it might have created an uncertainty to teachers as to how they should respond. That is, teachers might think that “some of us believe that every child can learn and some don’t”. As a result, it is likely that a great number of them selected the mid-point of the Likert scale so as to resolve the aforementioned uncertainty. One could, therefore, argue that in the case of School Academic Optimism, an even point scale should be used as was done in the original study of Hoy et al. (2006).

### **5.2.7 Instructional Quality Level**

The descriptive analysis of the data showed that the mean score of Instructional Quality is close to average ( $M=3.21$ ). This means that those teacher behaviours that are hypothesized to influence student learning are exhibited at a moderate level in general. When considering the first order factors, one can observe that three factors had the highest scores: Teacher Student Relations, Dealing with Misbehaviour (Positive Aspects), and Questioning Techniques. The first two factors seem to be enacted by teachers to a great extent in an effort to create a positive learning environment for students. These aspects of the learning environment are mainly directed at fostering positive teacher student interactions in class and form in a way the preconditions for effective instruction to take place. These practices are especially important for a subject which is underestimated by students and would need extra effort to attract their attention. The use of Questioning Techniques also seems to be broadly adopted by teachers probably due to the potential of engaging students in critical thinking in a theoretical subject such as Civic Education.

On the other hand, teachers had the lowest mean scores in the following factors: Dealing with Cooperation, Dealing with Misbehaviour (Negative Aspects), and Assessment. The first two factors are also aspects of the Classroom Learning Environment. Yet, it seems that teachers adopt them to the least extent. Firstly, in relation to the first factor, it seems that teachers do not engage students in activities that create opportunities for cooperation. This might be due to the increased time required to complete such activities especially when taking into account the diminished time provided to the

instruction of Citizenship Education. Then, with regards to the second factor, the teachers might have difficulty in dealing with more specific aspects of misbehavior such as bullying in the classroom. Beyond the Classroom Learning Environment, low scores were also noted in relation to Assessment. This finding derives most probably from the fact that Citizenship Education is not formally examined at the end of the academic year. This system-wide practice seems to bear negative implications on the individual teacher behavior in relation to the proper assessment of student learning.

### **5.2.8 Gains in Student Cognitive Outcomes**

The Rasch analysis showed that the gains in Student Cognitive Outcomes were relatively low. Specifically, there was an increase of the size of 0.43 in terms of Rasch estimates. Firstly, this finding can be explained by the level of difficulty of the specific test that was administered to students. The mean scores of both the pre-test and post-test outcomes were negatively signed which means that the test items were generally difficult for the specific sample of students (Bond & Fox, 2007).

In addition, the low status of Citizenship Education in the curriculum (e.g. Isac et al., 2011, 2013) seems to have minimized improvement in student learning. Firstly, the subject is taught across schools for a limited time period and students do not have any real opportunity to embed the taught content. Moreover, the absence of a formal examination lowers both teacher and student expectations for teaching and learning. According to Karagiorgi (2011) the insufficiency of internal and external monitoring systems allows “laissez-fire” approaches in Cyprus schools. In this spirit, teachers might even use a Citizenship Education period to teach a main subject such as Greek Language or Maths in case they have fallen behind the syllabus. At other times, they might teach a theme which is relevant to Civics but not in alignment with the assigned curriculum and textbooks. This practice creates a gap between the intended and taught curriculum and seems to minimize the opportunity for student success in a Civic Education test.

The low emphasis placed on Citizenship Education is also reflected in the recent ICCS findings which showed that Cyprus civic knowledge scores were significantly lower than the ICCS average (Schulz et al., 2010). This is even more worrying if one considers that in the CIVED study of 1999, Cyprus scores were found to be significantly higher than the international average (Torney-Purta et al., 2001). Moreover, Schulz et al. (2010), comparing the average civic knowledge scores of 15 countries which participated in the CIVED and ICCS study concluded that there has been an overall decrease of one fifth of a



standard deviation in their performance. These findings indicate that, both at the national and international levels, no radical measures have been taken to increase the status of Citizenship Education during the first decade of 2010.

### **5.2.9 Direct Effects on Student Citizenship Outcomes**

The findings of the current study showed that the student and classroom levels are the most important in explaining the variance in Citizenship Cognitive Outcomes when searching for direct effects on student achievement. In fact, most of the explained variance was attributed to student level factors, a finding which is in line with previous educational effectiveness studies (Creemers & Kyriakides, 2008). Moreover, the total variance explained was approximately 30% which is similar to the findings of secondary analyses of the CIVED and ICCS data (Isac et al. 2011, 2013). Yet, other effectiveness studies which used Language and Maths as their effectiveness criteria managed to explain over 50% of the variance in student achievement (Creemers & Kyriakides, 2008). This discrepancy between the variance explained suggests that the explanatory power of educational effectiveness models may be differentiated according to the subject used as the criterion for effectiveness.

With respect to the student level, nine factors were found to have a direct effect on student cognitive outcomes. The most important predictor was the prior achievement of students. This finding is also consistent with previous value-added studies which use the initial achievement of students as a control variable to their final achievement (Creemers & Kyriakides, 2008). Yet, it should be noted that in the case of the current study, the effect size of the students' initial achievement reached a moderate level, thus indicating a moderate level of predictive validity of the test.

The next most important predictor related to the Mother's Place of Birth. Specifically, the achievement of those students whose mother was born in Cyprus was higher than those students whose mother was born abroad. It seems that mothers born in Cyprus are in a better position to help their children in their study. The following interpretation can be deduced here. Firstly, Greek is their mother language and therefore they can clearly understand their children's tasks for school. In fact, previous studies showed that speaking the language of the test at home is a significant predictor of student civic knowledge (Schulz, 2002; Isac et al., 2011). In addition, it is likely that mothers born in Cyprus can dedicate more time to their children when compared to mothers born abroad. Specifically, the latter represent to a great extent a vulnerable group of people (European

Commission, 2013; OECD, 2012) who come to Cyprus as immigrant workers. Thus, they have to work for long hours in order to provide for their family.

The findings also showed that students who go out with their friends at night more often have a lower achievement in Citizenship Education. With regards to this variable, it was initially assumed that these students would have a higher achievement most probably due to discussions they would have with their friends about civic issues (Isac et al., 2013). However, no such evidence was provided. It seems that middle school students do not have any interest in discussing civic or political issues when meeting their friends. Moreover, it is likely that these students devote less time for studying at home thus leading them to lower levels of achievement.

Another student level factor that influences citizenship outcomes is gender. Specifically, girls seem to outperform boys in their cognitive achievement. This finding is consistent with the recent ICCS Study findings which show that the average civic knowledge scores of female students were higher than those of male students both overall and in nearly all countries (Isac et al., 2013; Schulz et al., 2010). Contrary to these findings, the previous IEA Study which was conducted in 1999 showed that males obtained higher scores than females (Torney-Purta et al., 2001). It seems that the upgraded role of women in today's society influences in a way female students in acquiring better outcomes in Citizenship Education.

Furthermore, those students who had the opportunity to participate either in a school or classroom council had a higher achievement than those who did not. It seems that their participation in such kind of school institutions exposes them to civic-related issues that broaden their knowledge and enhance their thinking skills. In fact, student councils may be considered as a mechanism for preparing students for active citizenship in society. Previous findings also showed that student participation in a school council or parliament had a positive association with civic knowledge and skills (Torney-Purta, 2002; Schulz, 2002).

Both Mother's and Father's Educational Background were then found to affect student outcomes. Specifically, the higher their educational background, the higher the achievement of their children in Citizenship Education. The educational background of parents constitutes an important indicator of the socioeconomic status of students and its influence on student learning has been evident throughout the lengthy course of school effectiveness research (Creemers & Kyriakides, 2008; Schulz et al., 2010). However, the effect size was smaller than previous school effectiveness studies most probably due to the

fact that the source of the data was students themselves and not formal school records. It is likely that some students could not be in a position to assess their parents' level of education in an accurate way. This is probably the reason for not identifying any effects of the parents' occupational status as well.

At the student level, another two variables were found to influence student outcomes: Buying Newspaper at Home and Number of Books at Home. Specifically, the more frequently newspapers are bought at home the higher the children's achievement in Citizenship Education. Similarly, the greater the number of books at home the higher the children's score in Citizenship Education. Both of these variables can be considered to reflect the educational and cultural capital of the family. Through this capital, students have the opportunity to read about civic issues and deepen their knowledge about main civic principles, concepts and institutions. Moreover, they might be exposed to critical approaches against various civic issues which in turn influence their own cognitive skills in Citizenship Education. Previous research also reveals the positive effect of a supportive home educational environment on student outcomes (e.g. Isac et al., 2011; Mulford & Silins, 2011; Schulz et al., 2010). In fact, more current thinking on home cultural capital entails access to different kinds of media, such as the internet. Overall, Mulford and Silins (2011) state that "to the extent that a principal and his or her staff can develop strategies to improve a student's home educational environment, so too will they improve student outcomes at school" (p.76).

Moving on to the classroom level, it was found that "Dealing with Misbehaviour (Positive Aspects)" had a positive and significant effect on student achievement. This is mainly an aspect of teacher behaviour that seeks to establish and maintain a classroom environment conducive to learning (Pashiardis, 2008). Specifically, teachers establish and implement rules for student behaviour and are able to end in an effective way any possible disorder. Thus, in classrooms where teachers exhibit the aforementioned behaviours students tend to achieve higher scores in Citizenship Education.

Similarly, other studies provide consistent evidence of a positive association between the creation of an orderly classroom climate and student achievement (Mortimore et al., 1988; Opdenakker et al., 2002; Teodorovic, 2011). Within the context of the Dynamic Model of Educational Effectiveness, Creemers and Kyriakides (2008) found that the teacher's role in managing classroom disorder belonged to a first-order factor labeled "Teacher-Student Relations". This factor was found to explain achievement in Greek Language, Mathematics and Religious Education in Cyprus primary schools.

The factor of “Dealing with Misbehaviour (Positive Aspects)” seems to have been the only one at the classroom level to influence student learning. This finding seems to highlight once more the low status of the subject of Citizenship Education as well as the importance of establishing an orderly environment for conducting the lessons. It seems that students have low expectations from the subject and probably seek ways to avoid their active engagement through inappropriate behaviour. Teachers who manage to deal with this kind of behaviour are more likely to drive the attention of students to academic tasks and are therefore the most effective in raising their cognitive outcomes.

Other international studies also found that the classroom learning environment is a significant positive predictor of Student Citizenship Outcomes (Schulz et al., 2010; Torney-Purta, 2002). However, the meaning attached to the learning environment in these studies relates more to the creation of an open climate where students can freely express their opinion and engage in challenging discussions. The aspect of “Dealing with Misbehaviour” is far from the one conceptualized in these studies yet it can be a first step in creating the conditions upon which an open classroom climate can be built.

#### **5.2.10 School Leadership Effects on Student Citizenship Outcomes**

The findings of the study showed no direct or indirect effects of School Leadership on Student Citizenship Outcomes in the cognitive domain, at least in the context of the multilevel modelling approach adopted in this study. Firstly, no variance in student achievement was situated at the school level when searching for direct effects. As a result, the specified multilevel model included only the student and classroom levels which in this case seemed to be more important for citizenship outcomes. Then, when searching for indirect effects, School Leadership was not found to influence the potential intermediate classroom variable of “Dealing with Misbehaviour (Positive Aspects)”.

The aforementioned findings should not be mistakenly taken to imply that School Leadership is not important for student learning but they should be interpreted under the light of previous leadership effects research and within the context of the current study limitations. Firstly, previous research showed inconsistent findings regarding the direct effects of leadership on student outcomes. Some studies found no effects at all whereas other studies found small to moderate effects (e.g. Hallinger 1996, 1998; Witziers et al., 2003; Robinson et al., 2008). This divergence in findings can be explained by moderating factors such as the conceptual framework, the statistical analysis, the country of the study

and the school level. For example, studies conducted in the Netherlands show no effects of school leadership whereas the greatest effects are identified in the USA (Witziers et al., 2003).

In this study, a number of factors might explain the failure to validate the direct effects model. The most important of these factors relates to the low status of Citizenship Education in Cyprus middle schools. Specifically, there are no formal accountability mechanisms for schools to raise student citizenship outcomes and as a result they shift their attention to subjects which are deemed more critical for judging school performance levels. Although recently, there has been a revived interest worldwide in promoting civics at school (Isac et al., 2011, 2013), yet the subject's position in the curriculum has not been adequately reformed. The current state of the subject seems to pose a constraint on the development of practices that could enhance student citizenship outcomes.

Added to that, the great size and complexity of middle schools does not enable any frequent interactions between principals and students. Previous meta-analyses also showed that principals exercise a lower effect in secondary than in primary schools (Scheerens & Bosker, 1997) or even a zero effect (Witziers et al., 2003). These findings suggest that secondary school principals may have less opportunity to directly affect student achievement than primary school principals. According to Siskin and Little (1995), the degree of principal influence may be attenuated due to the greater size of secondary schools, more differentiated structures and more specialized teaching cultures. Hallinger (2005) also highlights that the practice of leadership "requires substantial adaptation in secondary schools, which are often larger and more complex organisations" (p. 231). Such adaptation may be related to distributing leadership to the Senior Management Team or the Subject Coordinators. The Senior Management Team has the responsibility of supporting the principal in managing and leading a wide array of organizational operations. Senior Management Teams have an important part in the formal leadership of school organizations and are critical in decision making and implementation at the school level. However, as compared to the principal, they are more likely to interact more frequently with teachers and students and are in a better position to influence their teaching and learning respectively. In addition, Subject Coordinators (or Heads of Departments) have the overall responsibility for promoting the curricular aims of the subjects and thus they collaborate with departmental staff to set a common framework of action towards this direction. The leader role therefore seems to reside with the person whose duties are more closely linked to the designated effectiveness criterion, which in our case is Citizenship

Education. Both the Senior Management Teams and especially the Subject Coordinators have been formed to effectively respond to the managerial complexity of secondary schools and an expanded set of leadership tasks for the school principal. Thus, contemporary trends seem to replace the singular, heroic model of leadership with a distributed perspective which acknowledges that multiple stakeholders can contribute to leadership practice (Harris, 2013; Spillane, 2012).

Furthermore, the current study may have not detected any direct influence of school leadership on student outcomes due to its statistical power. Although the sample size of 20 schools was considered to be adequate for conducting a multilevel study, one may argue that effects can be more effectively manifested through a larger sample of schools. Given that a smaller sample size increases the possibility of a Type II error (Creemers, Kyriakides & Sammons, 2010), it is likely that the sample of 20 schools included in the study might not have been sufficient to demonstrate any statistically significant effects at the school level. Increasing the power of the study would probably tap more variance and lead to more certainty as to the potential effects at the school level.

In the case of indirect effects, previous findings were more consistent in identifying significant leadership effects on student outcomes (Hallinger & Heck, 1998; Jacobson & Bezzina, 2008; Mulford & Silins, 2011). Specifically, school leadership was found to produce an effect through other school and class processes, such as school climate and teaching quality. Under the light of this evidence, researchers have suggested that the indirect effects model is more promising in building a theoretical understanding of effective school leadership.

With regards to the current study, leadership could influence student learning through School Academic Optimism and the Instructional Quality factor of “Dealing with Misbehaviour (Positive Aspects)”. However, neither leadership nor academic optimism effects were identified on the aforementioned instructional quality factor. The absence of indirect leadership effects is not in congruence with previous findings which indicated the critical role of the principals on teaching and learning (Leithwood & Day, 2007; Sebastian & Allensworth, 2012).

The failure to validate the indirect effects model can also be explained by the low emphasis placed on the subject. It seems that middle school principals are not seriously engaged in creating the instructional conditions for improving student citizenship outcomes. This is especially true if we consider the complex organisation of middle schools. Specifically, due to the great size of the schools, the heads of departments and the

curriculum coordinators bear the responsibility of carrying out much of the leadership (Robinson et al., 2008). Considering the overload of principal responsibilities and the lack of time to oversee the whole of the school activities, it is likely that principals focus their efforts on the primary subjects and leave secondary subjects, such as Citizenship Education, to the discretion of the senior managers and subject leaders.

In addition, it is likely that the conceptual framework adopted has influenced the indirect effects findings. Specifically, the mediating variables selected, i.e. Instructional Quality and School Academic Optimism, may have underestimated the role and influence of school leadership. Although previous studies (Creemers & Kyriakides, 2008; McGuigan & Hoy, 2006) indicated the value of incorporating these variables in the initial framework, it is likely that school leadership seeps through to Citizenship Outcomes through other pathways. This assumption also raises the issue of the differential effectiveness of factors across various subjects. Specifically, school and teacher factors can be effective in relation to one subject and ineffective for another. This interpretation is in line with the Dynamic Model of Educational Effectiveness which sustains that we should look at the functioning of effectiveness factors through a dynamic rather than a static, instrumental perspective (Creemers et al., 2010). To date, researchers have not been able to monitor the functioning of effectiveness factors across the full range of the school curriculum. A challenge, therefore, emerges to identify those factors-either at the classroom or school level- which are more strongly associated with Citizenship Outcomes in particular and could act as possible mediators in the study of school leadership effects.

Issues of statistical power may also explain the absence of any indirect effects of school leadership. Specifically, there was an uneven distribution of classrooms in each school. In fact, the number of classrooms per school ranged from 2 to 8. The fact that some schools included a lower number of classrooms might have led to a restriction of the variance at the classroom level and a failure to identify any statistically significant effects of school level factors on the instructional variable of “Dealing with Misbehaviour (Positive Aspects)”. Thus, the possibility of a Type II error (Creemers, Kyriakides & Sammons, 2010) should also be considered in this case as well.

The current study findings do not diminish the role of the school principal but seem to give rise to a serious leadership tension, that is, how a school leader can manage and resolve conflicting educational priorities. Specifically, an educational paradox can be identified in the case of Citizenship Education. On the one hand, curriculum guidelines clearly emphasize the role of schooling in preparing active and democratic citizens in

society. On the other hand, the subject (i.e. Citizenship Education) which primarily seeks to address this purpose of education is underemphasized. It is taught for a short period of time, it is not examined and overall there is a tacit assumption that it is a “lower class” subject that should bear no real concern to teachers or students. This assumption emerges mainly from the system level and infiltrates both teacher and student expectations and practices. Therefore, whereas the general purpose of democratic citizenship is considered a priority the main strategy to achieve this purpose is clearly undermined.

Mulford (2012) also identifies such a paradox in relation to the purposes of education. Specifically, he highlights the fact that while there are many educational purposes pronounced as important in policy documents only a limited number are given priority and support. The emphasis is generally placed on the enactment of the private purposes of education to the detriment of the public purposes of forming active and democratic citizens. In fact, in a recent study in Australian primary schools, it was found that while principals considered public purposes as highly important they were not able to translate those into practice in the same degree (Cranston et al., 2010).

The challenge, therefore, for school leaders rests with the successful management of the tension between stated educational priorities and enactment strategies. Towards this direction, they need to act as change agents who challenge the bureaucratic system requirements and develop their own vision for school improvement - a vision which encompasses the wider goals of schooling and focuses on all available enactment strategies. In this way, principals can create the conditions that will enable teachers and students to embrace Citizenship Education.

#### **5.2.11 School Leadership Effects on Instructional Quality and School Academic Optimism**

Although no leadership effects on student citizenship outcomes were found, it was deemed a necessity to inquire into the possible leadership effects on other important school and classroom variables that were included in this study. In this way, we could define the potential span of leadership effects as well as identify any mediating variables that could be incorporated in future indirect effects studies.

Firstly, all first-order classroom factors as well as the second-order factor of Instructional Quality were entered as the dependent variable in separate multilevel models. However, school leadership was not found to influence any of these variables. Moreover, no claim could be made of an indirect effect through School Academic Optimism since the



latter variable was not found to have any effect on Instructional Quality variables either. These findings also suggest that the school focus on improving teaching quality does not really embrace Citizenship Education.

Secondly, School Academic Optimism was found to be influenced by School Leadership as well as a number of contextual variables. Specifically, School Leadership had a moderate to high effect on School Academic Optimism indicating the critical role of principals in shaping a culture of optimism in relation to student learning. Other studies also found that school leaders are in a position to increase academic optimism through their practices. For example, McGuigan and Hoy's (2006) study showed that academic optimism is greater in schools where principals create enabling structures to facilitate teacher work. Moreover, Mascall et al. (2008) found that high levels of academic optimism were associated with planned approaches to leadership distribution.

The influence of a number of contextual variables was examined in the current piece of research. The variables which had a statistically significant effect on School Academic Optimism were School Location, the Principal's Experience in Post, the Principal's Gender and the Principal's Educational Background in School Leadership. With regards to School Location the findings showed that the academic optimism in rural schools is greater than in urban schools. This is in agreement to a study in secondary schools in Cyprus which showed that students in rural schools feel more satisfied with their school climate (Pashiardis, 2008). It seems that in rural schools there is a greater need to cultivate a positive atmosphere for learning than in urban schools. This might be related to a general ascertainment that rural schools in Cyprus are more disadvantaged than urban schools in terms of their socioeconomic status.

Furthermore, it seems that as principals acquire more experience in the specific post they also acquire more experience into how they should create a positive school environment which is conducive to student learning. Experience of principals in post was also found in a longitudinal survey in the UK to be related to the effectiveness status of both primary and secondary schools (Day et al., 2009). Specifically, less experienced principals were more likely to be in the lead of more disadvantaged schools. This finding raises implications as to the appointment of more experienced principals in schools where the instructional conditions are more disadvantaged. Although this would be an effective practice to minimise unequal opportunities between schools it would probably raise opposition on behalf of the teacher union and the principals themselves. In fact, experienced principals hold a greater number of transfer units and would probably not be

willing to move to a school under challenging conditions. The teacher union would in this case support their likely resistance.

Academic Optimism was also higher in schools where the principal was female rather than male. Although the effect size was small, we can conclude that teachers perceive female principals to be in a better position to provide the conditions for a positive learning environment. The specific finding may also indicate that teachers perceive effective principals to exhibit what are often and wrongly described as “female” qualities (such as caring and sharing) or what Pashiardis (1998, 2009) labelled as Management By Feelings and Emotions (MBFE). The identified relationship is particularly important in encouraging women to move to leadership positions and challenge the masculine dominance in the exercise of leadership (Coleman & Fitzgerald, 2008).

Finally, the level of the principal’s educational background in leadership was found to affect School Academic Optimism in a positive way. This finding highlights the importance of the professional development of school principals in the area of school leadership in particular (Michaelidou & Pashiardis, 2009). The specific specialization field has been rapidly growing in recent years and more and more teachers and principals seem to attend formal courses at university in order to enhance their capability to lead schools. These courses seem to provide the necessary knowledge to principals in order to be in a position to elevate their school’s academic optimism.

### **5.3 Implications for Educational Theory**

The findings of the current study bear important implications for educational theory in various respects. Firstly, the validation of the Pashiardis-Brauckmann Leadership Radius Framework corroborates previous evidence that School Leadership is constituted by five leadership styles: the Instructional, Participative, Personnel Development, Entrepreneurial, and Structuring Styles (Brauckmann & Pashiardis, 2011; Pashiardis, 2014; Pashiardis & Brauckmann, 2008a; Pashiardis et al., 2011a). These styles seem to be important for principals when leading their schools. Taking into account this evidence we can claim that the specific framework forms a sound and robust tool for investigating school leadership behaviour and practices. Moreover, this framework contributes to the creation of a strong theoretical base in relation to integrated leadership models (Bruggencate et al., 2012; Scheerens, 2012). These models are not only focused on a specific style or form of leadership, such as transformational or instructional, but entail a comprehensive range of leadership behaviours and practices that school principals use.

Nevertheless, no evidence was provided in support to either the direct or the indirect models of school leadership effects. These findings seem to challenge the existing theoretical propositions in relation to leadership effects on student learning. The aforementioned ascertainment especially concerns the case of the indirect effects model, which is even more favoured by recent studies. In fact, a great number of theoretical models of indirect effects have been empirically supported thus strengthening the foundations upon which we can comprehend the role of school leadership in improving student learning (e.g. Hallinger & Heck, 2010; Kythreotis et al., 2010; Mulford & Silins, 2011; Sammons et al., 2011; Sebastian & Allensworth, 2012).

The current study adds to existing theory by highlighting the importance of the student learning domain when researching school leadership effects. In fact, previous studies tended to focus on existing measures of academic achievement in literacy and numeracy (Leithwood & Levin, 2008). Nevertheless, the size and significance of leadership effects on other outcomes of schooling cannot be assumed or extrapolated without a direct investigation. The findings of this study have broadened the scope of school leadership effects through the use of a different criterion of educational effectiveness, that is Citizenship Education Outcomes. Thus, the development of theory should take into account the full range of the school curriculum and search for consistency of school leadership effects across various effectiveness criteria (Creemers, Kyriakides & Sammons, 2010). In this way, subjects can be classified into different clusters according to the effectiveness of school leaders for different outcomes.

Here we must note that important implications can also be drawn in relation to the nature and measurement of Citizenship Education outcomes. According to the findings of this study, only the cognitive dimension of learning could be treated as a unidimensional construct. On the other hand, there was no such evidence in relation to the affective and behavioural aspects of civic learning. Thus, one could conclude that more complex theoretical frameworks might be needed in the case of the latter learning domains. Indeed, values, attitudes and behaviours are more difficult for students to embed and often embrace conflicting and dilemmatic situations. Moreover, there are aspects of learning within each dimension that students might respond to in a different way. For example, students might be positive towards gender equality but not towards immigrant equality or they might exhibit active citizenship at the school but not in the wider society. These ascertainments point to the multiperspective nature of Citizenship Education theory (Evans, 2008; Starkey, 2008) that educational measurement needs to take into account. Being in a position to

validate affective and behavioural measures of citizenship outcomes could also prove critical in identifying principal effects on student civic learning.

School Leadership was, nevertheless, found to have a positive influence on School Academic Optimism, suggesting that school principals have a critical role in shaping a culture focused on student learning. Although the principal's contribution to establishing a learning culture has been evidenced by previous studies (Hallinger, 1998; Pashiardis et al., 2011b, 2012; Scheerens, 2012) yet the evidence in relation to the specific construct of academic optimism is still scarce. Thus, a major contribution of this study relates to the expansion of the theoretical framework of academic optimism to encompass school leadership as an explanatory variable as well. Moreover, the study findings highlight the importance of modelling the impact of antecedent variables on academic optimism since they represent critical aspects of the context in which schools function (Wu, Hoy & Tarter, 2013).

Although the positive relationship between School Leadership and School Academic Optimism was consistent with previous conceptual frameworks, the theoretical assumptions regarding the construct of Academic Optimism per se were challenged. Specifically, the current study did not support the assumption that School Academic Optimism is constituted by three distinct school properties: Teacher Collective Efficacy, Trust in Students and Parents, and Academic Emphasis (McGuigan & Hoy, 2006; Hoy et al., 2006). Instead, School Academic Optimism was found to form a unidimensional construct represented by items from all three aforementioned features. This finding does not imply that the construct is not valid or that it should be rejected altogether. Instead, one should seek to measure this school aspect in a different way so as to cater for the cultural context of Cyprus middle schools.

The study also provided further support to the Dynamic Model of Educational Effectiveness at the classroom level (Creemers & Kyriakides, 2008). To date, no previous study attempted to use the specific model to examine the Instructional Quality in the subject of Citizenship Education. The current study identified ten first order factors and one second order factor that can describe teacher behaviour in Citizenship Education. These factors are consistent with the theoretical framework of the Dynamic Model at the classroom level. The validation of the model is important in that the effectiveness factors can consistently describe teacher behaviour across various subjects, even in a secondary subject such as Citizenship Education.

Despite the validation of the Dynamic Model, only one of the classroom level factors, i.e. Dealing with Misbehaviour (Positive Aspects), was found to explain Student Cognitive Outcomes. This finding is nonetheless important in contributing to the identification of classroom level factors that can impact on Citizenship Outcomes. To date, less research has been conducted in the specific domain and as a result there is dearth of evidence as to how teachers can affect student learning. In fact, the main variable that seemed to affect citizenship outcomes was an open learning environment (Isac et al, 2011, 2013). The current study comes to add another important dimension of teacher behaviour that theory should take into account. In fact, Citizenship Education theory has to date focused on various approaches to teaching such as cosmopolitan citizenship (Osler & Starkey, 2006) with less attention being paid to individual teacher practices and actions. The specific finding of this study contributes to building a stronger theoretical basis for describing the actual teacher behaviours which enhance civic learning.

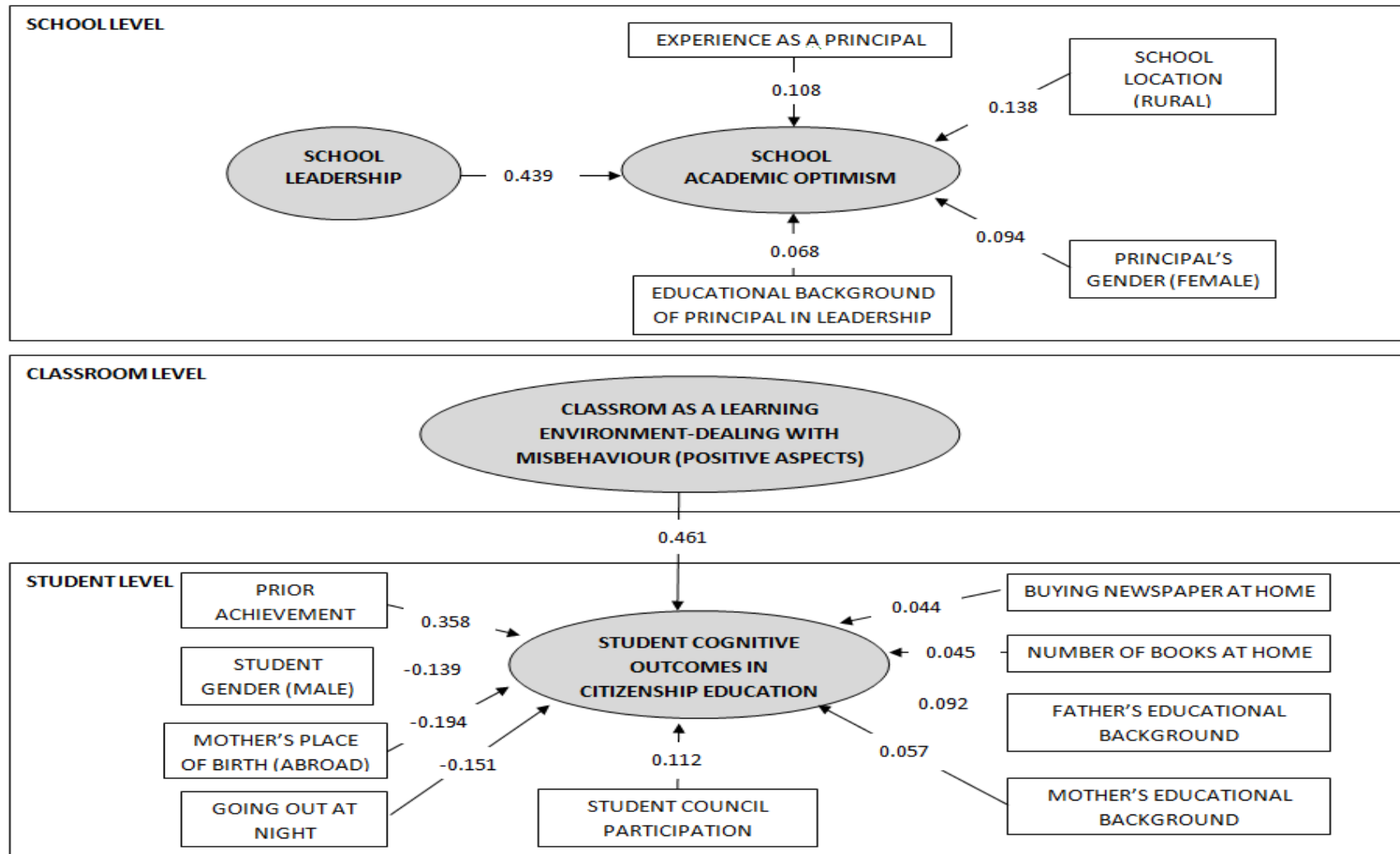
Furthermore, a number of student level background factors were found to influence their Cognitive Outcomes. This finding suggests that Citizenship Education is not a domain that can only take place in class. In fact, students seem to encounter informally various aspects of Citizenship both at school and their home. Any theory that seeks to establish a relationship between School Leadership and Student Citizenship Outcomes should therefore take into account the individual and contextual factors that seem to shape student understanding of citizenship issues.

Finally, figure 5.1 presents an overview of the main relationships between the variables of this study. Overall, a number of student background variables and the classroom level factor of “Dealing with Misbehaviour (Positive Aspects)” appear to have a positive effect on Student Outcomes. Moreover, School Leadership as well as a number contextual school and principal level variables seem to have a positive effect on School Academic Optimism. Clearly, there are missing links between School Leadership and Student Citizenship Outcomes. However, this model can provide the basis on which a comprehensive theory of leadership effects on student citizenship can be constructed by taking into account the existing relationships found.

#### **5.4 Implications for Educational Policy and Practice**

The current study findings provide a number of implications for improving educational policy and practice. At the system level, there is a need to upgrade the subject of

Figure 5.1 Summary of the relationships between the variables of the study



Citizenship Education in middle schools. It is important to increase the instructional time of the subject so that it is taught not only for four months but for the whole academic year. In this way, students will be given the opportunity to acquire a deeper understanding of the purposes of Citizenship Education and embed the taught content. Moreover, the subject should become examinable at the end of the academic year. In this way, policy makers will attach a higher degree of accountability to school principals and teachers with regards to student Citizenship Outcomes. Indeed, the school effectiveness literature supports that student achievement is higher in schools and systems where evaluation and accountability mechanisms are in place (Creemers & Kyriakides, 2008; Scheerens, Glas & Thomas, 2003).

Within the context of the Curriculum Reform in Cyprus schools, the Ministry of Education intends to adopt a cross-curricular approach to teaching Citizenship Education in middle schools. In other words, the goals of the subject will be integrated in social study subjects such as history and geography. Although a cross-curricular approach will enable students to make connections of civic issues with other aspects of learning it is very likely that civic goals will be undermined or overshadowed by the main subject goals. A cross-curricular approach could be employed in conjunction with teaching Citizenship Education as a separate subject with increased instructional time. The combination of these two approaches is more likely to produce the desired outcomes for students.

With regards to School Leadership, there is a need to adopt a more systematic approach to how school principals are supported and developed. Towards this direction, it is critical that an Academy for School Leadership is established similar to the National College for School Leadership (NCSL) in the UK. This Academy should aim at the improvement of leadership standards in Cyprus schools through the provision of appropriate professional development opportunities. A professional map could in this case be adopted as a guide to the Academy's work. This map should include a set of behavioural standards that would set the benchmark for school leadership excellence.

The above mentioned standards could be informed by the validated Pashiardis-Brauckmann Leadership Radius Framework. According to the study findings, school principals in middle schools make use of five leadership styles, each of which is associated with a number of behaviours and practices. These behaviours and practices capture a comprehensive range of what school leaders should do or how they should act and therefore comprise a valuable source of input to the formulation of appropriate leadership standards. The significance of utilizing the Pashiardis-Brauckmann Framework to this

purpose is further corroborated by theorists contending that leadership development needs to be governed by specific models and frameworks that address the question of what leadership is about (Huber, 2011).

Furthermore, principals need to enact the aforementioned leadership styles in a more focused way so as to bear specific effects on Civic Education teaching and learning. For example, the provision of opportunities for teacher professional development or the protection of their instructional time should also encompass the subject of Civic Education. In this way, principals would emphasize the importance of the subject as well as direct their influence on the relevant outcomes in a more targeted manner. Towards this direction, principals need to be able to adapt the Pashiardis-Brauckmann Framework so as to establish a citizenship-oriented form of leadership at their school.

The role of principals in promoting civic learning may also be supported through distributed leadership forms (Harris, 2013; Spillane, 2012). Today, it is widely acknowledged that the principal is overloaded with a range of responsibilities and tasks that a single individual cannot handle all alone. This is especially true for secondary schools where the number of students and teachers are increased and therefore the principal interactions entail mostly a limited number of key people. Subject Coordinators are among these people whom the principal most frequently interacts with. The principal could utilize Subject Coordinators in order to improve Civic Education instructional quality. Subject Coordinators interact more frequently with Civic Education teachers and are therefore in a better position to influence their instructional behavior.

Civic Education Coordinators and teachers should also be educated on how they can improve the quality of teaching in class. To date, training related to the specific domain is mostly restricted to issues of multiculturalism and diversity. Moreover, there is no emphasis on the instructional practices that can maximize student learning based on evidence from relevant studies. It is therefore important to design training programmes that incorporate elements of effective teaching behavior. For example, evidence from the international studies of CIVED and ICCS indicate that the creation of an open classroom climate is associated with increased student outcomes. Similarly, Dealing with Misbehavior was also found to be related to improved cognitive achievement.

Teachers should therefore seek to apply in class what research shows to be effective instructional practice. Moreover, they should expand their narrow understanding of Citizenship Education in order to encompass not only knowledge but also values, attitudes and behaviours. Evans (2008) very succinctly notes that “there is less attention on those



practices in which beliefs, values, and notions of social justice and/or participating in civic life are emphasized” (p.527). Thus, the multifaceted curriculum orientations need to receive broad application in classrooms as well. Teachers need to address the emerging sophisticated conceptions of democratic citizenship by developing more sophisticated and multidimensional pedagogical practices themselves.

Principals and teachers can also proceed to actions that can advance the sociocultural capital of students. Specifically, they can attempt to influence those aspects of student background which were found to be associated with their outcomes and which can be altered. For example, buying newspaper at home or the number of books at home constitute some effectiveness factors which schools can intentionally choose to work on for the benefit of students. This can be done either through their interaction with students or through their interaction with parents.

In conclusion, it seems that school leadership may contribute to citizenship teaching and learning mainly through a systemic change in the various components which drive school improvement. Training school principals to adopt an effective repertoire of behaviours and practices is vital but not sufficient in a centralized educational system such as the one in Cyprus. It is also important for the Ministry to give Citizenship Education a prominent place in the curriculum as well as support the quality of teaching through the provision of relevant professional development opportunities. In this way, school leaders will be encouraged to promote civics at school whereas teachers will attach a higher level of importance to instruction and learning outcomes. As Mulford (2012) strongly asserts there is a need to consider the quality of schooling in relation to all aspects of its activity and principals must be supported to fulfill their role to the full.

### **5.5 Recommendations for Future Research**

Future research on the relationship between School Leadership and Student Citizenship Outcomes can be significantly informed by the current study findings. Firstly, it is important to note that the Pashiardis-Brauckmann Leadership Radius Framework has been validated in the context of this study building on previous evidence both in Cyprus and Europe (Brauckmann & Pashiardis, 2011; Pashiardis et al., 2011a). Thus, it is a useful tool that can be utilized in future leadership effects studies. Nevertheless, it can be further adapted to reflect the influence of the principal on specific learning outcomes of students, such as civic learning. More specifically, the generic statements on leadership behaviour should become more focused or explicit on what a principal does to influence Civic

Education teaching and learning. The specific adaptation seems to be important in addressing the limitations produced when researching leadership effects on non-traditional effectiveness criteria, such as civic learning.

Furthermore, the Pashiardis-Brauckmann framework should also be validated for Civic Education Coordinators. Since the findings of the study showed a lack of connection between the school and classroom level, it is likely that the Subject Leaders could form the link between the principal and teacher behaviour. Thus, Subject Leadership should be included in future studies as a mediating variable that could impact instructional quality and student learning. This suggestion is in line with recent findings on the importance of distributed leadership forms for organizational effectiveness (Heck & Hallinger, 2010). It also seems to be especially important in secondary schools where principals may not be in a position to communicate frequently or directly with teachers.

The Pashiardis-Brauckmann framework - either for principal or distributed leadership - could further be expanded with a sixth style related to “Student Empowerment”. Although a number of relevant items were included in the Participative Style these had to be dropped from the final model. However, with the addition of further items we can investigate the existence of such a distinct component of leadership behaviour. The content of these items encompasses school leadership behaviour that seeks to instigate student leadership behaviour as well as to provide opportunities for active citizenship at the school and community. The value of validating a sixth style related to Student Empowerment emerges from the need to inquire deeper into the direct relationship between leadership and student learning (Kythreotis et al., 2010; Nettles & Herrington, 2007). Moreover, it is in line with the previous suggestion of developing a more civic-focused measure of leadership practice.

With regards to Student Citizenship Outcomes, there is a need to improve the test that was used for the purposes of this study. Although the cognitive part of the test had a satisfactory fit to the Rasch model, there is still room for improvement through the addition of further questions. Most importantly, there is a need to revise the affective and behavioural parts of the test which did not have a satisfactory fit to the Rasch model. To this effect, there should be further investigation of the content of the existing items through a cognitive interview with students. This process should also include new items which are likely to contribute better to the measurement of the affective and behavioural dimensions. The revised pool of items can be administered to a greater number of students in order to examine the data fit to the Rasch model. However, we should also take into account that

the unidimensionality assumption of the Rasch model may be a limiting factor in capturing the complexity of the affective and behavioural outcomes. Thus, no alternate test forms should be administered to students but a single test so as to be able to examine the possibility of multidimensionality as well through factor analysis techniques.

Furthermore, School Academic Optimism was found in this study to form a unidimensional construct in contrast to previous studies (e.g. McGuigan & Hoy, 2006). This finding is likely to have resulted from a relative insufficiency of teachers to respond with precision to collective behaviour items. Future studies should attempt to measure the hypothesized components of School Academic Optimism through other ways. For example, collective teacher efficacy could be assessed through vignettes that would provide a specific case for teachers to consider. The same can also be conducted for academic emphasis and trust in students and parents. Also, students can form an alternative source of information when it comes to measuring the specific school level variable.

Future research can be further broadened to incorporate aspects that were not included in the current study. Specifically, indirect effects of School Leadership could be examined through the use of further intermediate variables that are likely to impact civic learning. At the school level, such variables may include Subject Leadership, a Democratic Learning Environment, and Opportunities for Informal Citizenship Learning. The last two variables could function as classroom level variables as well. At the classroom level, it would also be interesting to examine the role of Teacher Attitudes towards Civic Education. At the student level, it is important to incorporate further family background variables as well as Student Attitudes towards the specific subject. Thus, there is a need to create a more complex framework which will incorporate a range of potential influences on student learning.

Future studies should also seek to increase their statistical power by including more schools and classrooms. In the current study, the sample included 20 schools out of a total population of 65 schools, which is quite satisfactory. However, it is worth trying to expand the number of schools participating in a similar study since it is likely to tap more variance in the dependent and explanatory variables with a view to identify further classroom or school factors which influence student civic outcomes. Specifically, future research should aim at securing the participation of at least 25 middle schools.

Another important limitation of the current study which lends itself for future research concerns the short term during which the achievement data were collected. More

specifically, the period during which students were taught the subject of Citizenship Education was very short to observe any remarkable gains in their learning outcomes. The specific restriction may have concealed leadership effects accumulating over time. Future research should focus on longitudinal designs so as to identify whether school capacity for improving Citizenship Education Outcomes is fostered over a longer period of time. According to Thoonen et al. (2011), this approach assumes that the development of organisational conditions and their subsequent effects are dynamic and changing rather than static. Creemers et al. (2010) suggest that there is a need to model the growth in student achievement over at least three years in order to measure the long-term effect of schools and teachers as well as identify how changes in the functioning of factors are linked to changes in educational effectiveness. Findings from longitudinal studies could also shed more light on the causal relationships among leadership behaviour, organisational and classroom conditions and student learning (Bruggencate et al., 2012) or enable the investigation of reciprocal relations among them (Creemers et al., 2010).

International comparative studies, such as CIVED and the ICCS, should also incorporate aspects of leadership behaviour in their design. These studies can establish a higher level of variation in student outcomes and the explanatory variables (Creemers & Kyriakides, 2008) and therefore it is more likely to identify school leadership effects on civic learning. Moreover, international studies provide an opportunity to investigate the impact of system level variables on school leadership. According to Jacobson and Bezzina (2008), we should try to understand how national policies and practices as well as cultural expectations shape school leadership behaviour. This is an extremely important aspect that needs to be investigated since it is very likely that the current study failed to identify any leadership effects due to constraints imposed by the centralised educational system of Cyprus.

Finally, the current study adopted a quantitative design in investigating the relationship between school leadership and student citizenship outcomes. A quantitative approach, however, does not provide any detailed description of how effectiveness factors function and therefore restrict our understanding of the findings. Thus, future research should adopt qualitative research methods in an effort to illuminate the findings of the current study. For example, we could examine, through interviews with various school stakeholders (i.e. principals, teachers, students), the attitudes of principals towards Citizenship Education and the actions they utilize in order to promote civic learning in their school.

## 5.6 Summary

The main purpose of the current study was to explore direct and indirect relationships between School Leadership and Student Citizenship Outcomes in Cyprus middle schools. In the case of indirect effects, School Academic Optimism and Instructional Quality were used as likely mediating variables. The analyses that were carried out provided a series of findings that need to be discussed and interpreted in the light of previous research. These findings also provide implications for educational theory, policy and practice along with recommendations for future research studies.

An important finding of this study relates to the validation of the Pashiardis-Brauckmann Leadership Radius Framework supporting that school leadership is constituted by five dimensions, i.e. the Instructional, Participative, Personnel Development, Structuring and Entrepreneurial Styles. The study corroborates previous evidence in relation to the robustness of the specific framework in the European and Cyprus context. This framework constitutes a comprehensive reference base for conceptualising the construct of school leadership and contributes to the development of integrated models that were up to date investigated to a lesser degree.

In relation to Student Citizenship Outcomes, the analysis validated only the cognitive dimension of the test. The affective and behavioural parts were not validated either due to the lack of any explicit instruction by teachers or due to multidimensionality. Furthermore, School Academic Optimism was found to be a unidimensional construct contrary to previous study findings. This could be attributed to contextual and cultural factors that seem to affect teacher responses to collective behaviour items. The Dynamic Model of Educational Effectiveness was also supported through the validation of the effectiveness factors functioning at the classroom level. The five measurement dimensions were not found to have an added value most probably because Civic Education teachers do not seem to engage themselves in complex instructional behaviour.

The level of School Leadership was found to be at a relatively high level. This might be partly explained by the emphasis placed on leadership development both by Cyprus universities and the Cyprus Pedagogical Institute. With regards to School Academic Optimism and Instructional Quality, the scores were slightly greater than average indicating that there is room for improvement, especially if one considers the low deviation from the mean. Gains in the Citizenship Cognitive Outcomes of students were relatively low. The low gains might be due to the difficulty of the test as well as due to the low emphasis placed on the subject of Citizenship Education.

School leadership was not found to have direct or indirect effects on Student Citizenship Outcomes. Previous studies showed that although the direct effects model was not consistently validated, the indirect effects model proved to be more promising in identifying school leadership effects on student learning. Nevertheless, the current study provided no evidence in support to any of these models. The most important reason for these findings relates to the low status of Citizenship Education in the curriculum which poses constraints on the development of practices that could enhance student citizenship outcomes. Further explanations for not identifying any school leadership effects relate to the complex organisation of secondary schools, sample power issues and the mediating variables included in the conceptual framework of the study. Overall, an educational paradox was identified in this study, i.e. whereas the general purpose of cultivating democratic citizenship is pronounced as a priority, the main subject contributing to this purpose is underemphasized in practice.

A number of variables at the student and classroom level were found to explain variance in Cognitive Citizenship Outcomes. Most of the variance explained lied at the student level, a finding which is in agreement with previous school effectiveness studies. At the classroom level, only “Dealing with Misbehaviour (Positive Aspects)” was found to influence student learning. This could be again explained by the low expectations attached to the subject. It seems that students engage in inappropriate behaviour and teachers who manage this kind of behaviour are more likely to drive student attention to academic tasks and raise their achievement.

School Academic Optimism was found to be influenced by School Leadership and a number of contextual variables. Other studies also showed that principals are in a position to create a culture of optimism for improving student outcomes, either through enabling school structures or planned distribution of leadership. The current study findings build on previous evidence on the critical role of school leadership in improving organizational conditions. Nevertheless, no evidence was provided in relation to leadership or academic optimism effects on Instructional Quality variables. This indicates that any efforts made at the school level to improve the quality of teaching at the classroom level do not encompass Citizenship Education.

Implications for educational theory, policy and practice can also be drawn from the current study findings. Overall, the theoretical model of leadership effects derived from this study indicated that there is a missing link between school level variables and civic-related variables at the classroom and student level. This model highlights the importance

of the learning domain when searching for effectiveness factors at the classroom and school level. Principals are likely to be in a position to influence Citizenship Outcomes only through a systemic change in the various components which drive school improvement. This change should unequivocally give Citizenship Education a prominent place in the curriculum. Future research into leadership effects should increase the sample power and utilize longitudinal and comparative data on an international level. Further mediating variables, such as Subject Leadership and Teacher Attitudes towards the Subject, should also be added in future frameworks so as to identify the complex chain of variables that principals follow to influence student civic learning.

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## Appendix A: School Leadership Questionnaire – Greek Version

### ΕΡΩΤΗΜΑΤΟΛΟΓΙΟ ΓΙΑ ΕΚΠΑΙΔΕΥΤΙΚΟΥΣ

Το συγκεκριμένο ερωτηματολόγιο αποτελείται από δύο μέρη. Το Α' Μέρος αφορά στην εκπαιδευτική ηγεσία του σχολείου σας ενώ το Β' Μέρος στις ακαδημαϊκές προσδοκίες του σχολείου σας. Παρακαλώ διαβάστε προσεκτικά τις πιο κάτω οδηγίες και συμπληρώστε το ερωτηματολόγιο.

#### ΜΕΡΟΣ Α:

#### ΕΚΠΑΙΔΕΥΤΙΚΗ ΗΓΕΣΙΑ

Σε αυτό το μέρος παρατίθενται δηλώσεις που αφορούν σε πτυχές συμπεριφορών εκπαιδευτικής ηγεσίας του διευθυντή σας. Παρακαλώ υποδείξτε το βαθμό συμφωνίας σας με τις συγκεκριμένες δηλώσεις.

Οι αριθμοί αντιστοιχούν στα παρακάτω:

1 = καθόλου

2 = λίγο

3 = αρκετά

4 = πολύ

5 = πάρα πολύ

Παρακαλώ όπως γράψετε τις πραγματικές σας απόψεις για κάθε δήλωση. Τονίζεται ότι θα τηρηθεί η ανωνυμία των συμμετεχόντων στην έρευνα.

*Το συγκεκριμένο ερωτηματολόγιο (Μέρος Α') αποτελεί μετάφραση και προσαρμογή του αρχικού ερωτηματολογίου των Pashiardis & Brauckmann (2008a).*



Σε ποιο βαθμό ο Διευθυντής του σχολείου:	καθόλου	λίγο	αρκετά	πολύ	πέρα πολύ
1. Διευκολύνει και υποστηρίζει προγράμματα και πρακτικές που δημιουργούν θετικό κλίμα για μάθηση (π.χ. Ευρωπαϊκά προγράμματα ή άλλες δραστηριότητες πέραν αυτών που προσφέρει το επίσημο Αναλυτικό Πρόγραμμα).	1	2	3	4	5
2. Διασφαλίζει την εναρμόνιση της εργασίας των εκπαιδευτικών με τους εκπαιδευτικούς στόχους του σχολείου.	1	2	3	4	5
3. Παρέχει εκπαιδευτικό υλικό και πόρους για να στηρίζει το διδακτικό προσωπικό στην εκπλήρωση των εκπαιδευτικών στόχων.	1	2	3	4	5
4. Προστατεύει το διδακτικό χρόνο και τους εκπαιδευτικούς από εξωτερικές και αχρείαστες ενοχλήσεις.	1	2	3	4	5
5. Ενθαρρύνει την εφαρμογή τέτοιων διδακτικών μεθόδων οι οποίες διευκολύνουν την «υψηλού επιπέδου μάθηση» (δηλαδή, την κατάκτηση δεξιοτήτων όπως η κριτική σκέψη και η επίλυση προβλημάτων).	1	2	3	4	5
6. Προωθεί πρακτικές οι οποίες συντείνουν στην εφαρμογή και χρήση της γνώσης σε ποικίλες μορφές.	1	2	3	4	5
7. Προωθεί τη σύνδεση των εμπειριών μάθησης στο σχολείο με πρακτικές οι οποίες λαμβάνουν χώρα εκτός σχολείου.	1	2	3	4	5

<b>Σε ποιο βαθμό ο Διευθυντής του σχολείου:</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πέρα πολύ</b>
8. Επιβλέπει τα επίπεδα διδασκαλίας και μάθησης σε όλο το σχολείο (π.χ. παρακολουθεί μαθήματα εκπαιδευτικών, ζητά να του δίνουν στοιχεία για την πρόοδο των μαθητών τους).	1	2	3	4	5
9. Παρέχει συγκεκριμένη ανατροφοδότηση στο προσωπικό του σχολείου για τα επίπεδα διδασκαλίας και μάθησης.	1	2	3	4	5
10. Χρησιμοποιεί πληροφορίες οι οποίες απορρέουν από επιθεωρήσεις του σχολείου και εκτιμήσεις των εκπαιδευτικών προς βελτίωση του προσωπικού.	1	2	3	4	5
11. Προωθεί την ανοικτή επικοινωνία και ευελιξία στις σχέσεις του με τα μέλη του προσωπικού.	1	2	3	4	5
12. Επιτρέπει αρκετή αυτονομία στους εκπαιδευτικούς για να οργανώνουν και να προγραμματίζουν τη διδασκαλία τους.	1	2	3	4	5
13. Δημιουργεί ένα κοινό όραμα για βελτίωση του σχολείου με τη συνεργασία του προσωπικού.	1	2	3	4	5
14. Ενθαρρύνει την ενεργό εμπλοκή των μελών του προσωπικού στην υλοποίηση του εν λόγω οράματος.	1	2	3	4	5
15. Επιλύει προβλήματα σε συνεργασία με τους εκπαιδευτικούς.	1	2	3	4	5

<b>Σε ποιο βαθμό ο Διευθυντής του σχολείου:</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πάρα πολύ</b>
16. Εφαρμόζει συμμετοχικές διαδικασίες στη λήψη αποφάσεων.	1	2	3	4	5
17. Ακούει προσεκτικά τις ιδέες και τις εισηγήσεις των εκπαιδευτικών.	1	2	3	4	5
18. Διευκολύνει την ομοφωνία ανάμεσα στο προσωπικό κατά τη λήψη αποφάσεων.	1	2	3	4	5
19. Αντιμετωπίζει με επιτυχία τις συγκρούσεις μεταξύ των εκπαιδευτικών.	1	2	3	4	5
20. Συζητά θέματα που αφορούν το σχολείο με τους εκπαιδευτικούς.	1	2	3	4	5
21. Δημιουργεί ευκαιρίες συνάντησης και συνεργασίας για τους εκπαιδευτικούς.	1	2	3	4	5
22. Διασφαλίζει ότι οι μαθητές έχουν ευκαιρίες για να ασκήσουν ηγετικό ρόλο αναλαμβάνοντας υπευθυνότητες.	1	2	3	4	5
23. Υλοποιεί εισηγήσεις που γίνονται από το μαθητικό συμβούλιο σε σχέση με τη βελτίωση του μαθησιακού περιβάλλοντος.	1	2	3	4	5
24. Ζητά όπως όλοι οι μαθητές, ανεξάρτητα από την επίδοσή τους, λαμβάνουν ενεργά μέρος σε εκδηλώσεις ή άλλα προγράμματα του σχολείου πέραν αυτών που προσφέρει το επίσημο Αναλυτικό Πρόγραμμα.	1	2	3	4	5

<b>Σε ποιο βαθμό ο Διευθυντής του σχολείου:</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πέρα πολύ</b>
25. Αναγνωρίζει την εξαιρετική απόδοση και τα επιτεύγματα του εκπαιδευτικού προσωπικού.	1	2	3	4	5
26. Φροντίζει για την κατάρτιση του εκπαιδευτικού προσωπικού.	1	2	3	4	5
27. Επιβραβεύει τους εκπαιδευτικούς για τις ξεχωριστές συνεισφορές τους στο σχολείο.	1	2	3	4	5
28. Ενθαρρύνει την επαγγελματική ανάπτυξη των εκπαιδευτικών.	1	2	3	4	5
29. Κατατοπίζει το καινούργιο προσωπικό του σχολείου.	1	2	3	4	5
30. Δίνει προτεραιότητα στην επιμόρφωση των εκπαιδευτικών που έχουν λιγότερα χρόνια εμπειρίας.	1	2	3	4	5
31. Επαινεί εκπαιδευτικούς οι οποίοι συνεισφέρουν εξάίρετα στις σχολικές δραστηριότητες.	1	2	3	4	5
32. Πληροφορεί τους εκπαιδευτικούς για ευκαιρίες επικαιροποίησης των γνώσεων και των δεξιοτήτων τους.	1	2	3	4	5
33. Καλεί τους εκπαιδευτικούς να ενημερώνουν τους συναδέλφους τους σχετικά με τις γνώσεις και εμπειρίες που αποκτούν κατά την παρακολούθηση επιμορφωτικών προγραμμάτων ή συνεδρίων.	1	2	3	4	5

<b>Σε ποιο βαθμό ο Διευθυντής του σχολείου:</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πέρα πολύ</b>
34. Ενθαρρύνει τη συνεργασία του σχολείου με την κοινότητα και τους γονείς.	1	2	3	4	5
35. Προωθεί τη συνεργασία με άλλους οργανισμούς και επιχειρήσεις της κοινότητας για να εξυπηρετήσει τις ανάγκες των μαθητών.	1	2	3	4	5
36. Εξασφαλίζει την οικονομική υποστήριξη του συνδέσμου γονέων και της κοινότητας.	1	2	3	4	5
37. Συζητά τους στόχους του σχολείου με τους εμπλεκόμενους φορείς (σχολική εφορεία, γονείς, δημοτικό ή κοινοτικό συμβούλιο κτλ).	1	2	3	4	5
38. Αναγνωρίζει τις ανάγκες σχολείου - κοινότητας και προτείνει δραστηριότητες που ικανοποιούν τις ανάγκες αυτές.	1	2	3	4	5
39. Επιδεικνύει χρήση κατάλληλων και αποτελεσματικών τεχνικών που ενισχύουν την εμπλοκή της κοινότητας και των γονέων (π.χ. διοργανώνει συναντήσεις εκπαιδευτικών-γονέων ή διαλέξεις για τους γονείς και την ευρύτερη κοινότητα).	1	2	3	4	5
40. Δίδει έμφαση και καλλιεργεί την αμφίδρομη επικοινωνία ανάμεσα στο σχολείο και την κοινότητα.	1	2	3	4	5

<b>Σε ποιο βαθμό ο Διευθυντής του σχολείου:</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πέρα πολύ</b>
41. Εμπλέκει του γονείς σε δραστηριότητες που αφορούν τη μάθηση των παιδιών τους.	1	2	3	4	5
42. Παρέχει πληροφόρηση στους γονείς για ευκαιρίες συμμετοχής των παιδιών τους σε δραστηριότητες που οργανώνονται από την τοπική κοινότητα.	1	2	3	4	5
43. Συνεργάζεται στενά με τους γονείς για επίλυση προβλημάτων που αφορούν τη συμπεριφορά των παιδιών τους.	1	2	3	4	5
44. Προβάλλει μια θετική εικόνα του σχολείου προς την κοινότητα.	1	2	3	4	5
45. Εμπνέει εμπιστοσύνη στην τοπική κοινότητα.	1	2	3	4	5
46. Παραθέτει, συζητά και μεταδίδει το όραμα του σχολείου σε όλα τα μέλη του σχολείου.	1	2	3	4	5
47. Παραθέτει, συζητά και μεταδίδει το όραμα του σχολείου σε όλους τους φορείς της τοπικής κοινότητας.	1	2	3	4	5
48. Φανερώνει ξεκάθαρα το όραμα και τις αξίες του σχολείου μέσα από τα πράγματα που κάνει, από τον τρόπο που περνά το χρόνο του και από τα πράγματα που θεωρεί σημαντικά.	1	2	3	4	5

<b>Σε ποιο βαθμό ο Διευθυντής του σχολείου:</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πέρα πολύ</b>
49. Διατηρεί ένα όραμα για το σχολείο το οποίο δημιουργεί νέες ευκαιρίες για πρόοδο.	1	2	3	4	5
50. Αξιολογεί το βαθμό υλοποίησης του οράματος του σχολείου.	1	2	3	4	5
51. Θέτει με σαφήνεια τους ρόλους και τις κύριες δραστηριότητες του προσωπικού.	1	2	3	4	5
52. Θέτει με σαφήνεια τις προτεραιότητες εργασίας.	1	2	3	4	5
53. Θέτει συγκεκριμένα χρονοδιαγράμματα για την υλοποίηση των διαφόρων εργασιών που αναλαμβάνουν οι εκπαιδευτικοί.	1	2	3	4	5
54. Επεξηγεί τη σημασία υλοποίησης συγκεκριμένων εργασιών που αναλαμβάνουν οι εκπαιδευτικοί.	1	2	3	4	5
55. Θέτει με σαφήνεια τους κανόνες συμπεριφοράς των μαθητών.	1	2	3	4	5
56. Διασφαλίζει την ομαλή εφαρμογή των κανόνων του σχολείου όπως και την ισότιμη εφαρμογή των επιπτώσεων παράβασης των κανόνων αυτών για όλους τους μαθητές.	1	2	3	4	5

Σε ποιο βαθμό ο Διευθυντής του σχολείου:	καθόλου	λίγο	αρκετά	πολύ	πέρα πολύ
57. Εργάζεται για τη δημιουργία μιας ατμόσφαιρας ευταξίας στο σχολείο.	1	2	3	4	5
58. Θέτει με σαφήνεια τις πολιτικές και τις διαδικασίες προς εφαρμογή.	1	2	3	4	5
59. Παίρνει ρίσκα για τη βελτίωση του σχολείου ακόμα και αντίθετα με τις οδηγίες του Υπουργείου.	1	2	3	4	5



## Appendix B: School Leadership Questionnaire – English Version

### TEACHER QUESTIONNAIRE

This questionnaire consists of **two** parts. Part A asks about the educational leadership of your schools whereas Part B deals with the academic optimism of your school. Please read carefully the following instructions and complete the questionnaire.

## PART A: EDUCATIONAL LEADERSHIP

In this part, you can find statements about aspects of your principal's leadership behavior. Please indicate the extent to which you agree with each of the statements.

The numbers correspond to the following:

1 = not at all

2 = to a little extent

3 = to a moderate extent

4 = to a high extent

5 = to a very high extent

Please indicate your real views for each statement. Note that the participants' responses will be kept anonymous.

*The specific questionnaire (Part A) is a translation and adaptation of the initial questionnaire by Pashiardis & Brauckmann (2008a).*

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
1. Facilitates and supports programmes and practices which create a positive learning climate (e.g. European programmes or other extra-curricular activities).	1	2	3	4	5
2. Ensures that teachers' work is aligned with the school's educational goals.	1	2	3	4	5
3. Provides instructional resources and materials to support teaching staff in accomplishing instructional goals.	1	2	3	4	5
4. Protects learning time and teachers from outside and unnecessary interruptions.	1	2	3	4	5
5. Encourages the implementation of instructional methods which facilitate "higher order learning" (that is, the acquisition of skills such as critical thinking and problem- solving).	1	2	3	4	5
6. Promotes such practices so as to help implement and use knowledge in a variety of forms.	1	2	3	4	5
7. Promotes the interconnection of learning experiences in the school with practices which are followed outside the school.	1	2	3	4	5

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
8. Monitors standards of teaching and learning throughout the school (e.g. observes teachers' lessons, asks them to provide evidence about their students' progress).	1	2	3	4	5
9. Provides concrete feedback to staff on teaching and learning.	1	2	3	4	5
10. Uses information which accrues from school inspections and teacher appraisal in order to improve personnel.	1	2	3	4	5
11. Promotes open communication and flexibility in relations with the staff.	1	2	3	4	5
12. Leaves enough autonomy to teachers in order to organize and schedule their teaching.	1	2	3	4	5
13. Creates a common vision for school improvement with the staff's cooperation.	1	2	3	4	5
14. Encourages staff to be actively involved in the planning and implementation of this vision.	1	2	3	4	5
15. Solves problems in a cooperation with teachers.	1	2	3	4	5

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
16. Implements participative decision-making processes	1	2	3	4	5
17. Listens carefully to the ideas and suggestions of the teachers.	1	2	3	4	5
18. Facilitates decision-making by consensus among staff.	1	2	3	4	5
19. Facilitates the effective resolution of conflicts between teachers.	1	2	3	4	5
20. Discusses school affairs with teachers.	1	2	3	4	5
21. Creates possibilities for teachers to meet and collaborate.	1	2	3	4	5
22. Ensures that students have opportunities to enact a leading role by assuming responsibilities.	1	2	3	4	5
23. Implements suggestions made by the student council in relation to the improvement of the learning environment.	1	2	3	4	5
24. Requires that all students, irrespective of their achievement, undertake an active part in events or other school extra-curricular programmes.	1	2	3	4	5

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
25. Provides recognition for teacher excellence and achievement.	1	2	3	4	5
26. Provides opportunities for staff training.	1	2	3	4	5
27. Rewards teachers for their special contributions to the school.	1	2	3	4	5
28. Encourages teachers to develop themselves professionally.	1	2	3	4	5
29. Provides orientation to new staff at the school.	1	2	3	4	5
30. Gives priority to the training of less experienced teachers.	1	2	3	4	5
31. Compliments teachers who contribute exceptionally to school activities.	1	2	3	4	5
32. Informs teachers about possibilities for updating their knowledge and skills.	1	2	3	4	5
33. Calls upon teachers to inform their colleagues about knowledge and experiences they acquire during their participation in training programmes or conferences.	1	2	3	4	5
34. Encourages relations between the school on one hand and the community and parents on the other.	1	2	3	4	5

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
35. Promotes cooperation with other organizations and businesses from the community so that students' needs are addressed.	1	2	3	4	5
36. Secures the financial support of the parents' association and the community.	1	2	3	4	5
37. Discusses school goals with relevant stakeholders (school board, parents, municipality, community council etc.).	1	2	3	4	5
38. Demonstrates awareness of school-community needs and initiate activities to meet those identified needs.	1	2	3	4	5
39. Demonstrates the use of appropriate and effective techniques for community and parent involvement (e.g. organizes parent-teacher meetings or lectures for the parents and the wider community).	1	2	3	4	5
40. Emphasizes and nurtures two-way communication between the school and community.	1	2	3	4	5
41. Involves parents in activities related to their children's learning.	1	2	3	4	5

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
42. Provides information to parents about opportunities for their children to participate in activities organized by the local community.	1	2	3	4	5
43. Collaborates closely with parents in order to resolve problems regarding their children's behaviour.	1	2	3	4	5
44. Projects a positive image of the school to the community.	1	2	3	4	5
45. Builds trust within the local community.	1	2	3	4	5
46. Articulates, discusses and communicates the school vision to all members of the school.	1	2	3	4	5
47. Articulates, discusses and communicates the school vision to all in the external community.	1	2	3	4	5
48. Communicates clearly the vision and values of the school through what he/she does, how he/she spends his/her time and what he/she considers important.	1	2	3	4	5
49. Holds a vision for the school that creates new opportunities for progress.	1	2	3	4	5

<b>The School Principal:</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
50. Assesses the extent of implementation of the school vision.	1	2	3	4	5
51. Ensures that there is clarity about the roles and core activities of the staff.	1	2	3	4	5
52. Ensures that there is clarity about work priorities.	1	2	3	4	5
53. Sets specific timelines for the implementation of the various tasks undertaken by teachers.	1	2	3	4	5
54. Explains the importance of implementing specific tasks undertaken by teachers.	1	2	3	4	5
55. Provides clarity in relation to student behavior rules.	1	2	3	4	5
56. Ensures that school rules are uniformly observed and that consequences of misconduct are applied equitably to all students.	1	2	3	4	5
57. Works on creating an orderly atmosphere.	1	2	3	4	5
58. Takes care of the fact that there is clarity regarding policies and procedures to be implemented.	1	2	3	4	5
59. Takes risks for school improvement even against the Ministry's directives.	1	2	3	4	5



**ΜΕΡΟΣ Β:**  
**ΑΚΑΔΗΜΑΪΚΕΣ ΠΡΟΣΔΟΚΙΕΣ**  
**ΣΧΟΛΕΙΟΥ**

Ο σκοπός του Β' μέρους του ερωτηματολογίου είναι να εξετάσει τις ακαδημαϊκές προσδοκίες του σχολείου σας (school academic optimism), οι οποίες αφορούν στις συλλογικές πεποιθήσεις των εκπαιδευτικών ότι οι μαθητές θα επιτύχουν τα αναμενόμενα αποτελέσματα.

Παρακαλώ να σημειώσετε το βαθμό στον οποίο ισχύει η κάθε δήλωση στο σχολείο που εργάζεστε.

Οι αριθμοί αντιστοιχούν στα παρακάτω:

- 1 = καθόλου
- 2 = λίγο
- 3 = αρκετά
- 4 = πολύ
- 5 = πάρα πολύ

Παρακαλώ όπως γράψετε τις πραγματικές σας απόψεις σε κάθε δήλωση. Τονίζεται ότι θα τηρηθεί η ανωνυμία των συμμετεχόντων.

Το συγκεκριμένο ερωτηματολόγιο (Μέρος Β') αποτελεί μετάφραση και προσαρμογή του αρχικού ερωτηματολογίου των Hoy et al. (2006).

<b>ΔΗΛΩΣΕΙΣ</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πάρα πολύ</b>
1. Οι εκπαιδευτικοί αισθάνονται ότι μπορούν να παρακινήσουν με επιτυχία τους μαθητές τους.	1	2	3	4	5
2. Αν ένα παιδί δεν ενδιαφέρεται να μάθει οι εκπαιδευτικοί επιμένουν να ενδιαφέρονται για την πρόοδό του.	1	2	3	4	5
3. Οι εκπαιδευτικοί έχουν τις απαραίτητες δεξιότητες για να επιφέρουν σημαντικά μαθησιακά αποτελέσματα.	1	2	3	4	5
4. Οι εκπαιδευτικοί σε αυτό το σχολείο πιστεύουν ότι το κάθε παιδί μπορεί να μάθει.	1	2	3	4	5
5. Οι μαθητές έρχονται στο σχολείο με ετοιμότητα να μάθουν.	1	2	3	4	5
6. Η ζωή των μαθητών στο σπίτι παρέχει τόσα πολλά πλεονεκτήματα που ενισχύει τα μαθησιακά τους αποτελέσματα.	1	2	3	4	5
7. Οι μαθητές έχουν κίνητρα για μάθηση.	1	2	3	4	5
8. Οι εκπαιδευτικοί σε αυτό το σχολείο έχουν τις δεξιότητες για να αντιμετωπίσουν τα προβλήματα πειθαρχίας των μαθητών.	1	2	3	4	5
9. Οι ευκαιρίες σε αυτή την κοινότητα ενισχύουν τη μάθηση των παιδιών.	1	2	3	4	5
10. Η μάθηση είναι πιο εύκολη σε αυτό το σχολείο διότι οι μαθητές αισθάνονται ασφαλείς.	1	2	3	4	5
11. Οι εκπαιδευτικοί σε αυτό το σχολείο εμπιστεύονται τους μαθητές τους.	1	2	3	4	5

<b>ΔΗΛΩΣΕΙΣ</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πάρα πολύ</b>
12. Οι εκπαιδευτικοί σε αυτό το σχολείο εμπιστεύονται τους γονείς.	1	2	3	4	5
13. Οι μαθητές σε αυτό το σχολείο ενδιαφέρονται ο ένας για τον άλλο.	1	2	3	4	5
14. Οι γονείς σε αυτό το σχολείο είναι αξιόπιστοι στις δεσμεύσεις που αναλαμβάνουν.	1	2	3	4	5
15. Οι εκπαιδευτικοί σε αυτό το σχολείο μπορούν να βασιστούν στους μαθητές ότι θα διεκπεραιώσουν τις εργασίες τους.	1	2	3	4	5
16. Οι εκπαιδευτικοί μπορούν να βασιστούν στην υποστήριξη των γονιών.	1	2	3	4	5
17. Οι εκπαιδευτικοί πιστεύουν στην ικανότητα των παιδιών να μαθαίνουν.	1	2	3	4	5
18. Οι εκπαιδευτικοί θεωρούν ότι οι περισσότεροι γονείς κάνουν καλή δουλειά με τα παιδιά τους.	1	2	3	4	5
19. Οι εκπαιδευτικοί πιστεύουν αυτά που τους λένε οι γονείς.	1	2	3	4	5
20. Οι μαθητές είναι ανοιχτοί και ειλικρινείς (δηλαδή, εκφράζουν ελεύθερα αυτά που σκέφτονται, αισθάνονται και πράττουν).	1	2	3	4	5
21. Οι μαθητές σέβονται όσους παίρνουν καλούς βαθμούς.	1	2	3	4	5
22. Το σχολείο θέτει υψηλούς στόχους απόδοσης για όλους τους μαθητές.	1	2	3	4	5

<b>ΔΗΛΩΣΕΙΣ</b>	<b>καθόλου</b>	<b>λίγο</b>	<b>αρκετά</b>	<b>πολύ</b>	<b>πέρα πολύ</b>
23. Οι μαθητές ζητούν επιπρόσθετη εργασία για να βελτιώσουν τους βαθμούς τους.	1	2	3	4	5
24. Η ακαδημαϊκή επίδοση αναγνωρίζεται και επιβραβεύεται από τους εκπαιδευτικούς.	1	2	3	4	5
25. Οι μαθητές προσπαθούν σκληρά να βελτιώσουν την προηγούμενη δουλειά τους.	1	2	3	4	5
26. Το μαθησιακό περιβάλλον είναι σοβαρό και πειθαρχημένο.	1	2	3	4	5
27. Οι μαθητές σε αυτό το σχολείο μπορούν να επιτύχουν τους στόχους που έχουν τεθεί για αυτούς.	1	2	3	4	5
28. Οι εκπαιδευτικοί σε αυτό το σχολείο πιστεύουν ότι οι μαθητές τους έχουν την ικανότητα να αποκτήσουν με επιτυχία τις βασικές γνώσεις και δεξιότητες του αναλυτικού προγράμματος.	1	2	3	4	5

**Παρακαλούμε να βεβαιωθείτε ότι έχετε απαντήσει όλες τις ερωτήσεις.**

**Σας ευχαριστούμε πολύ για τη συνεργασία σας και για το χρόνο που αφιερώσατε για τη συμπλήρωση του ερωτηματολογίου.**

## Appendix D: School Academic Optimism Questionnaire – English Version

### **PART B:** **SCHOOL ACADEMIC OPTIMISM**

The purpose of Part B of this questionnaire is to inquire about the academic optimism of your school, that is the collective beliefs of teachers that students will achieve the expected outcomes.

Please indicate the extent to which each statement is true about the school you work for.

The numbers correspond to the following:

1 = not at all

2 = to a little extent

3 = to a moderate extent

4 = to a high extent

5 = to a very high extent

Please indicate your real views for each statement. Note that the participants' responses will be kept anonymous.

The specific questionnaire (Part B) is a translation and adaptation of the initial questionnaire by Hoy et al. (2006).

<b>STATEMENTS</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
1. Teachers are confident they will be able to motivate their students.	1	2	3	4	5
2. If a child doesn't want to learn teachers insist on being concerned about his/her progress.	1	2	3	4	5
3. Teachers have the skills needed to produce meaningful results.	1	2	3	4	5
4. Teachers in this school believe that every child can learn.	1	2	3	4	5
5. These students come to school ready to learn.	1	2	3	4	5
6. Home life provides so many advantages that students are bound to learn.	1	2	3	4	5
7. Students are motivated to learn.	1	2	3	4	5
8. Teachers in this school have the skills to deal with student disciplinary problems.	1	2	3	4	5
9. The opportunities in this community help ensure that these students will learn.	1	2	3	4	5
10. Learning in this school is easier because students feel safe.	1	2	3	4	5
11. Teachers in this school trust their students.	1	2	3	4	5

STATEMENTS	Not at all	To a little extent	To a moderate extent	To a high extent	To a very high extent
12. Teachers in this school trust the parents.	1	2	3	4	5
13. Students in this school care about each other.	1	2	3	4	5
14. Parents in this school are reliable in their commitments.	1	2	3	4	5
15. Students in this school can be counted upon to do their work.	1	2	3	4	5
16. Teachers can count upon parental support.	1	2	3	4	5
17. Teachers here believe that students are competent learners.	1	2	3	4	5
18. Teachers think that most of the parents do a good job with their children.	1	2	3	4	5
19. Teachers can believe what parents tell them.	1	2	3	4	5
20. Students are open and honest (that is, they express freely what they think, feel and do).	1	2	3	4	5
21. Students respect others who get good grades.	1	2	3	4	5
22. The school sets high standards for performance for all students.	1	2	3	4	5

<b>STATEMENTS</b>	<b>Not at all</b>	<b>To a little extent</b>	<b>To a moderate extent</b>	<b>To a high extent</b>	<b>To a very high extent</b>
23. Students seek extra work so they can improve their grades.	1	2	3	4	5
24. Academic achievement is recognized and acknowledged by the teachers.	1	2	3	4	5
25. Students try hard to improve on previous work	1	2	3	4	5
26. The learning environment is orderly and serious.	1	2	3	4	5
27. The students in this school can achieve the goals that have been set for them.	1	2	3	4	5
28. Teachers in this school believe that their students are competent in acquiring the basic knowledge and skills of the curriculum.	1	2	3	4	5

**Please make sure that you have responded to all statements.**

**Thank you very much**

**for your cooperation and the time you have spent for completing the questionnaire.**



## Appendix E: Instructional Quality Questionnaire – Greek Version

### ΕΡΩΤΗΜΑΤΟΛΟΓΙΟ ΓΙΑ ΜΑΘΗΤΕΣ

Αγαπητέ μαθητή/ αγαπητή μαθήτρια,

Διεξάγουμε μια έρευνα και θα θέλαμε να μάθουμε την άποψή σου για τη διδασκαλία του μαθήματος της Πολιτικής Αγωγής. Μη γράψεις πουθενά το όνομά σου. Σε παρακαλούμε να απαντήσεις σε όλες τις ερωτήσεις.

#### ΜΕΡΟΣ Α

Οι πιο κάτω προτάσεις αφορούν το μάθημα της Πολιτικής Αγωγής. Αφού διαβάσεις προσεκτικά την κάθε πρόταση, βάλε σε κύκλο τον αριθμό:

1 : αν η κατάσταση που περιγράφεται δε συμβαίνει **ποτέ** στην τάξη σας

2 : αν η κατάσταση που περιγράφεται συμβαίνει **σπάνια** στην τάξη σας

3 : αν η κατάσταση που περιγράφεται συμβαίνει **μερικές** φορές στην τάξη σας

4 : αν η κατάσταση που περιγράφεται συμβαίνει **συχνά** στην τάξη σας

5 : αν η κατάσταση που περιγράφεται συμβαίνει **σχεδόν πάντα** στην τάξη σας

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
1.	Όταν εκτελώ μια δραστηριότητα, γνωρίζω τι προσπαθώ να πετύχω.	1	2	3	4	5
2.	Ο/Η καθηγητής/τρια βρίσκει τρόπο να μας εξηγήσει πώς συνδέονται τα καινούρια πράγματα που μαθαίνουμε με αυτά που ήδη γνωρίζουμε.	1	2	3	4	5
3.	Στην αρχή του μαθήματος της Πολιτικής Αγωγής, ο/η καθηγητής/τρια συνδέει το μάθημα με προηγούμενα μαθήματα.	1	2	3	4	5

Το παρόν ερωτηματολόγιο αποτελεί προσαρμογή του αρχικού ερωτηματολογίου των Creemers και Kyriakides (2008)

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
4.	Ο/Η καθηγητής/τρια της Πολιτικής Αγωγής μας βοηθά να καταλάβουμε πώς οι δραστηριότητες που κάνουμε σε ένα μάθημα συνδέονται μεταξύ τους.	1	2	3	4	5
5.	Υπάρχουν στιγμές που δεν καταλαβαίνω ποια σχέση έχει μια εργασία που κάνω με την προηγούμενη εργασία που έκανα.	1	2	3	4	5
6.	Όταν οι γονείς μου επισκέπτονται τον/την καθηγητή/τρια μου, τους λέει πόσο καλός/καλή είμαι, σε σχέση με τους άλλους συμμαθητές μου.	1	2	3	4	5
7.	Όταν ελέγχουμε την κατ' οίκον εργασία μας, ο/η καθηγητής/τρια μας εντοπίζει (βρίσκει) τα σημεία που δυσκολευόμαστε και μας βοηθά να ξεπεράσουμε τις δυσκολίες μας.	1	2	3	4	5
8.	Γνωρίζω κάθε φορά σε ποιο μέρος του μαθήματος (αρχή, μέση και τέλος) βρισκόμαστε.	1	2	3	4	5
9.	Ξεκινάμε το μάθημα της Πολιτικής Αγωγής με πιο απλές δραστηριότητες και όσο προχωράμε γίνονται πιο δύσκολες.	1	2	3	4	5
10.	Κατά τη διάρκεια του μαθήματος της Πολιτικής Αγωγής αφιερώνουμε, συνήθως, αρκετό χρόνο για τις δραστηριότητες του καινούριου μαθήματος.	1	2	3	4	5
11.	Για να κάνουμε τις εργασίες που μας βάζει ο/η καθηγητής/τρια μας πρέπει να θυμηθούμε πράγματα που διδαχθήκαμε σε προηγούμενα μαθήματα.	1	2	3	4	5

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
12.	Ο/Η καθηγητής/τρια μας βάζει εργασίες στην αρχή του μαθήματος για να ελέγξει αν έχουμε μάθει το προηγούμενο μάθημα.	1	2	3	4	5
13.	Για κάθε νέο πράγμα που ο/η καθηγητής/τρια μας διδάσκει, μας δίνει εργασίες που έχουν σχέση με αυτό το πράγμα που μας είπε.	1	2	3	4	5
14.	Στο τέλος του μαθήματος της Πολιτικής Αγωγής, κάνουμε εργασίες στην τάξη που αφορούν το μάθημα της ημέρας που κάναμε.	1	2	3	4	5
15.	Με τις εργασίες που μας δίνει ο/η καθηγητής/τρια να κάνουμε στην τάξη επαναλαμβάνουμε αυτό που έχουμε προηγουμένως διδαχθεί.	1	2	3	4	5
16.	Όταν ασχολούμαι με μια δραστηριότητα και δυσκολεύομαι, ο καθηγητής/τρια έρχεται αμέσως να με βοηθήσει.	1	2	3	4	5
17.	Βρίσκω πολύ εύκολες τις δραστηριότητες που μου ζητά ο/η καθηγητής/τρια της Πολιτικής Αγωγής να κάνω.	1	2	3	4	5
18.	Ο/Η καθηγητής/τρια δίνει σε κάποιους μαθητές περισσότερες εργασίες, από αυτές που δίνει στους υπόλοιπους.	1	2	3	4	5
19.	Ο/Η καθηγητής/τρια της Πολιτικής Αγωγής βάζει σε κάποιους μαθητές διαφορετικές εργασίες, από αυτές που δίνει στους υπόλοιπους.	1	2	3	4	5
20.	Ο/Η καθηγητής/τρια μας δίνει την ευκαιρία σε όλους τους μαθητές να συμμετέχουν στο μάθημα.	1	2	3	4	5

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
21.	Ο/Η καθηγητής/τρια όταν κάνει το μάθημα της Πολιτικής Αγωγής, αφήνει να συμμετέχουν περισσότερο κάποιοι μαθητές.	1	2	3	4	5
22.	Κατά τη διάρκεια του μαθήματος της Πολιτικής Αγωγής, ο/η καθηγητής/τρια μας παροτρύνει να συνεργαζόμαστε με τους συμμαθητές μας.	1	2	3	4	5
23.	Στην τάξη μου συνεργάζονται μεταξύ τους μόνο κάποιοι μαθητές, ενώ κάποιοι άλλοι όχι.	1	2	3	4	5
24.	Ο/Η καθηγητής/τρια της Πολιτικής Αγωγής μας κάνει να νιώθουμε άνετα στην τάξη για να ζητήσουμε τη βοήθεια ή τη συμβουλή του/της.	1	2	3	4	5
25.	Κατά τη διάρκεια του μαθήματος, ο/η καθηγητής/τρια μας ενθαρρύνει να κάνουμε ερωτήσεις για ό,τι δεν καταλαβαίνουμε.	1	2	3	4	5
26.	Ο/Η καθηγητής/τρια συγκαίρει τους μαθητές, όταν προσπαθούν να κάνουν μια δραστηριότητα (π.χ. μας λει «μπράβο»).	1	2	3	4	5
27.	Όταν κάποιος μαθητής δώσει μια λανθασμένη απάντηση, ο/η καθηγητής/τρια μας τον βοηθά να καταλάβει το λάθος του και να βρει τη σωστή απάντηση.	1	2	3	4	5
28.	Οι περισσότερες ερωτήσεις που υποβάλλει ο/η καθηγητής/τρια της Πολιτικής Αγωγής μας ζητούν να δώσουμε μια απάντηση και όχι να εξηγήσουμε τον τρόπο που βρήκαμε αυτή την απάντηση.	1	2	3	4	5

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
29.	Σε περίπτωση που οι μαθητές συναντούν δυσκολίες όταν ασχολούνται με κάτι, ο/η καθηγητής/τρια μας πάει αμέσως να τους βοηθήσει.	1	2	3	4	5
30.	Ο/Η καθηγητής/τρια μας είναι δίκαιος/η με όλους τους μαθητές.	1	2	3	4	5
31.	Στο μάθημα της Πολιτικής Αγωγής προσπαθούμε να ξεπεράσουμε ο κάθε μαθητής τον άλλο.	1	2	3	4	5
32.	Όταν εργαζόμαστε σε ομάδες στο μάθημα της Πολιτικής Αγωγής, ο/η καθηγητής/τρια μας ενθαρρύνει να συναγωνιζόμαστε η μια ομάδα την άλλη.	1	2	3	4	5
33.	Στην τάξη μου, κάποιοι μαθητές κρύβουν τις εργασίες και τις απαντήσεις τους για να τις ξέρουν μόνο αυτοί.	1	2	3	4	5
34.	Στο μάθημα της Πολιτικής Αγωγής ο/η καθηγητής/τρια βαθμολογεί τη συνεργασία μας.	1	2	3	4	5
35.	Κατά τη διάρκεια του μαθήματος της Πολιτικής Αγωγής υπάρχουν παιδιά που κοροϊδεύουν άλλους συμμαθητές τους.	1	2	3	4	5
36.	Γνωρίζω πως εάν παραβιάσω κάποιο από τους κανονισμούς της τάξης μου θα τιμωρηθώ.	1	2	3	4	5
37.	Στην τάξη μας το μάθημα διακόπτεται από διάφορες αταξίες που κάνουν κάποιοι μαθητές.	1	2	3	4	5
38.	Όταν κάποιος μαθητής κάνει λάθος ορισμένα παιδιά βρίσκουν την ευκαιρία να τον κοροϊδέψουν.	1	2	3	4	5

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
39.	Ο/Η καθηγητής/τρια καταφέρνει να σταματήσει τις αταξίες που γίνονται στην τάξη.	1	2	3	4	5
40.	Υπάρχουν φορές που δεν έχουμε τα κατάλληλα υλικά για να γίνει το μάθημα της Πολιτικής Αγωγής.	1	2	3	4	5
41.	Κατά τη διάρκεια του μαθήματος της Πολιτικής Αγωγής αφιερώνουμε, συνήθως, λίγο χρόνο στην αρχή, για την εισαγωγή του μαθήματος.	1	2	3	4	5
42.	Όταν τελειώσω μια εργασία πιο νωρίς από τους συμμαθητές μου, ο/η καθηγητής/τρια μου αναθέτει αμέσως κάτι άλλο.	1	2	3	4	5
43.	Όταν ο/η καθηγητής/τρια κάνει κάποια παρατήρηση σε κάποιους, αυτοί μπορεί σε λίγο να ξανακάνουν αταξία.	1	2	3	4	5
44.	Κατά τη διάρκεια του μαθήματος της Πολιτικής Αγωγής αφιερώνουμε χρόνο στο τέλος για την ανακεφαλαίωση.	1	2	3	4	5
45.	Υπάρχουν στιγμές κατά τη διάρκεια του μαθήματος της Πολιτικής Αγωγής που δεν έχω κάτι συγκεκριμένο να κάνω.	1	2	3	4	5
46.	Ο/Η καθηγητής/τρια μου δίνει την ευκαιρία να συμμετέχω στο μάθημα.	1	2	3	4	5
47.	Ο/Η καθηγητής/τρια της Πολιτικής Αγωγής μας κάνει ερωτήσεις, στις οποίες πρέπει να πούμε τη γνώμη μας για ένα θέμα.	1	2	3	4	5
48.	Στην αρχή του μαθήματος της Πολιτικής Αγωγής, ο/η καθηγητής/τρια μας ρωτά ερωτήσεις, για να θυμηθούμε αυτά που μελετήσαμε στο προηγούμενο μάθημα.	1	2	3	4	5

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
49.	Όταν ο/η καθηγητής/τρια μας κάνει ερωτήσεις, χρησιμοποιεί εκφράσεις που είναι δύσκολες και δεν τις καταλαβαίνω.	1	2	3	4	5
50.	Αν δεν καταλαβαίνουμε μια ερώτηση, ο/η καθηγητής/τρια μας τη λέει με άλλο τρόπο ώστε να την κατανοήσουμε.	1	2	3	4	5
51.	Όταν ο/η καθηγητής/τρια μας ρωτά μια ερώτηση, μας δίνει <b>αρκετό</b> χρόνο για να σκεφτούμε.	1	2	3	4	5
52.	Όταν ένας μαθητής απαντήσει λάθος σε μια ερώτηση, ο/η καθηγητής/τρια μας βάζει άλλο μαθητή να απαντήσει την ερώτηση.	1	2	3	4	5
53.	Όταν δώσω μια λανθασμένη απάντηση, ο/η καθηγητής/τρια με βοηθά να καταλάβω το λάθος μου και να βρω τη σωστή απάντηση.	1	2	3	4	5
54.	Ο/Η καθηγητής/τρια μας επαινεί το ίδιο όλους τους μαθητές, όταν απαντούν μια ερώτηση σωστά.	1	2	3	4	5
55.	Ο χρόνος που δίνει ο/η καθηγητής/τρια μου για να απαντήσουμε μια ερώτηση είναι πολύ λίγος και μόνο οι καλοί μαθητές προλαβαίνουν να σκεφτούν, για να βρουν την απάντηση.	1	2	3	4	5

## ΜΕΡΟΣ Β

Στο μέρος αυτό περιλαμβάνονται κάποιες δηλώσεις. Για κάθε δήλωση **κύκλωσε** την απάντηση που αντιπροσωπεύει το τι γίνεται στην τάξη σου στο μάθημα της Πολιτικής Αγωγής.

1. Ο/Η καθηγητής/τρια μας εξηγεί τι αναμένει να μάθουμε από το μάθημα της Πολιτικής Αγωγής που θα μας διδάξει. Αυτό γίνεται:	
A.	σε κάθε μάθημα
B.	στα περισσότερα μαθήματα
Γ.	κάποιες μόνο φορές
Δ.	πολύ σπάνια
E.	σε κανένα μάθημα.
2. Ο/Η καθηγητής/τρια μας ζητά να σκεφτούμε τι μας βοήθησε να μάθουμε το μάθημα της Πολιτικής Αγωγής που κάναμε. Αυτό γίνεται:	
A.	σε κάθε μάθημα
B.	στα περισσότερα μαθήματα
Γ.	κάποιες μόνο φορές
Δ.	πολύ σπάνια
E.	σε κανένα μάθημα.



3. Όταν κανένας μαθητής δεν σηκώνει χέρι να απαντήσει μια ερώτηση στο μάθημα, ο /η καθηγητής/τρια:	
A.	απαντά την ερώτηση και προχωρά πιο κάτω
B.	λέει ξανά την ερώτηση με τα ίδια λόγια
Γ.	λέει την ίδια ερώτηση με πιο απλά λόγια
Δ.	λέει μια πιο απλή - εύκολη ερώτηση
E.	δίνει ενδείξεις - κλειδιά για να απαντήσουμε την ερώτηση.

**Ευχαριστούμε πολύ για τη συνεργασία σας**

**Appendix F: Instructional Quality Questionnaire - Greek to English  
Version Item Mapping**

<b>Greek Version Item</b>	<b>English Version Item</b>
1	Q8
2	Q10
3	Q3
4	Q4
5	There are times at which I don't understand how an activity I am doing is related to the previous one.
6	Q6
7	Q9
8	Q7
9	Q1
10	During Citizenship Education, we usually spend much time on the activities of the new lesson.
11	In order to do the exercises assigned by our teacher we have to remember what we were taught during previous lessons.
12	Q2
13	Our teacher gives us relevant exercises for everything new we are taught.
14	Q11
15	Q12
16	Q13
17	I find Citizenship Education activities assigned by our teacher too easy.
18	Q14
19	Q15
20	Q16
21	Our Citizenship Education teacher allows some students to participate in the lesson more than others.
22	Q17
23	Q18
24	Q19
25	Q20
26	Q21
27	Q24
28	Q25
29	Q26
30	Our teacher is fair to all students.
31	During Citizenship Education, each student tries to be better than the others.
32	Q22
33	Q23

<b>Greek Version Item</b>	<b>English Version Item</b>
34	During Citizenship Education, the teacher assesses our cooperation.
35	Q27
36	Q28
37	Q29
38	Q30
39	The teacher manages to end classroom disruptions.
40	Q35
41	We usually spend some time at the beginning of Citizenship Education for the lesson introduction.
42	Q32
43	Q33
44	Q34
45	Q36
46	The teacher gives me the opportunity to participate in the lesson.
47	Q37
48	Q38
49	Q39
50	Q40
51	When our teacher asks a question, we are given sufficient time to think.
52	Q41
53	Q42
54	Q43
55	The time given by our teacher to answer a question is too little and only the good students manage to find an answer within that time.
B1	B3
B2	<p>The teacher asks us to think what helped us to learn the Citizenship Education lesson we have been taught. This happens:</p> <p>A. In every lesson  B. In most of the lessons  C. Only sometimes  D. Very rarely  E. Never</p>
B3	B4

## Appendix G: Citizenship Education Test- Greek Version

### ΔΟΚΙΜΙΟ ΣΤΗΝ ΠΟΛΙΤΙΚΗ ΑΓΩΓΗ

**ΟΝΟΜΑΤΕΠΩΝΥΜΟ:**

**ΤΑΞΗ/ΤΜΗΜΑ:**

**ΣΧΟΛΕΙΟ:**

**ΗΜΕΡΟΜΗΝΙΑ:**

**Οδηγίες:** Πιο κάτω θα βρεις ορισμένες ασκήσεις που σχετίζονται με το μάθημα της Πολιτικής Αγωγής. Θα εργαστείς για 40 λεπτά για να τις απαντήσεις. Στο χρόνο αυτό, φρόντισε να απαντήσεις όλες τις ασκήσεις. Είμαστε σίγουροι ότι θα τα καταφέρεις.

#### ΜΕΡΟΣ Α΄

**Βάλε σε κύκλο το γράμμα που αντιστοιχεί στη σωστή απάντηση στις πιο κάτω ερωτήσεις.**

1. Ποια από τις παρακάτω δηλώσεις ισχύει με ακρίβεια για τους «νόμους»;
  - A) Οι νόμοι εμποδίζουν την άσκηση κριτικής εναντίον της κυβέρνησης.
  - B) Οι νόμοι καθορίζουν τα δικαιώματα και τις υποχρεώσεις του πολίτη.
  - Γ) Οι νόμοι έχουν ισχύ μόνο όταν όλοι οι πολίτες έχουν ψηφίσει ότι τους δέχονται.
  - Δ) Οι νόμοι περιγράφουν τις ηθικές αξίες που πρέπει να εφαρμόζουμε στην καθημερινότητά μας

2. Ποιο από τα παρακάτω αποτελεί πολιτικό δικαίωμα; Το δικαίωμα
- A) των μαθητών να μαθαίνουν για την πολιτική στο σχολείο
  - B) των πολιτών να εκλέγουν ευρωβουλευτές
  - Γ) των εργαζομένων να διεκδικούν τα συμφέροντά τους
  - Δ) των πολιτικών να μετέχουν στην πολιτιστική ζωή της χώρας
3. Δύο άτομα έχουν την ίδια εργασία αλλά το ένα από αυτά πληρώνεται λιγότερα από το άλλο. Η αρχή της ισότητας παραβιάζεται όταν το άτομο που πληρώνεται λιγότερα
- A) έχει λιγότερα προσόντα
  - B) έχει λιγότερη εργασιακή εμπειρία
  - Γ) εργάζεται λιγότερες ώρες
  - Δ) είναι γυναίκα
4. Σύμφωνα με τον Πίνδαρο, ο Νόμος είναι «πάντων βασιλεύς». Σε ένα σύγχρονο κράτος, αυτό σημαίνει ότι
- A) Το σύνταγμα συγκεντρώνει όλους τους κανόνες που καθορίζουν τη λειτουργία ενός κράτους.
  - B) Η εκτελεστική εξουσία υποβάλλει νομοσχέδια για έγκριση στη Βουλή.
  - Γ) Ο Γενικός Εισαγγελέας είναι η ανώτατη αρχή του κράτους.
  - Δ) Όλες οι πράξεις και αποφάσεις της κυβέρνησης και των βουλευτών ελέγχονται από το Σύνταγμα.

5. Ένα κράτος αποτελείται από δύο μικρότερες περιοχές, η κάθε μία από τις οποίες καθορίζει τους δικούς της νόμους για την οικονομία και έχει ξεχωριστές σχέσεις με άλλα κράτη στον κόσμο. Πώς θα χαρακτηρίζατε το συγκεκριμένο κράτος;
- A) Ενιαίο
  - B) Ομοσπονδιακό
  - Γ) Δικαιοκοινωνικό
  - Δ) Συνομοσπονδιακό
6. Ποιος είναι ο κυριότερος σκοπός του Οργανισμού Ηνωμένων Εθνών;
- A) Να επιβλέπει τις εμπορικές συναλλαγές μεταξύ των χωρών.
  - B) Να διατηρεί την ειρήνη και την ασφάλεια ανάμεσα στις χώρες.
  - Γ) Να αποφασίζει για τα σύνορα των χωρών.
  - Δ) Να παρεμποδίζει του εγκληματίες να δραστηρεύουν σε άλλες χώρες.
7. Τα ψηφίσματα του Οργανισμού Ηνωμένων Εθνών (ΟΗΕ) για την Κύπρο είναι σημαντικά γιατί
- A) Η Γενική Συνέλευση του ΟΗΕ είναι πολύ ισχυρός στρατιωτικός οργανισμός
  - B) Ο ΟΗΕ είναι ο μόνος διεθνής οργανισμός στον οποίο συμμετέχει η Κύπρος
  - Γ) Δημιουργούν το νομικό πλαίσιο μέσα στο οποίο διασφαλίζονται τα ανθρώπινα δικαιώματα στην Κύπρο
  - Δ) Δημιουργούν συνθήκες για συμφωνία ανάμεσα στα πολιτικά κόμματα.

8. Ποιο από τα πιο κάτω δεν αποτελεί κριτήριο για ένταξη μιας χώρας στην Ευρωπαϊκή Ένωση;
- A) Να έχει δημοκρατικούς θεσμούς.
  - B) Να έχει προοπτικές για οικονομική ανάπτυξη.
  - Γ) Να σέβεται τα ανθρώπινα δικαιώματα.
  - Δ) Να έχει αποκεντρωμένο σύστημα τοπικής αυτοδιοίκησης.
9. Ποιο από τα παρακάτω αποτελεί αρμοδιότητα του Προέδρου της Δημοκρατίας;
- A) Η ψήφιση νομοσχεδίων που υποβάλλονται στη Βουλή.
  - B) Η εγγραφή θεμάτων για συζήτηση στη Βουλή.
  - Γ) Η άσκηση δίωξης εναντίον προσώπων που απειλούν το δημόσιο συμφέρον.
  - Δ) Η έκδοση νόμων που ψηφίστηκαν στη Βουλή.
10. Ο κύριος Γιάννης είναι έμπορος και προμηθεύει με είδη ένδυσης το κατάστημα του κύριου Θωμά. Ο κύριος Γιάννης ισχυρίζεται ότι ο κύριος Θωμάς χρωστά σε αυτόν 2000 ευρώ. Ο κύριος Θωμάς ισχυρίζεται ότι δεν υπάρχει κάποιο υπόλοιπο το οποίο πρέπει να πληρώσει στον κύριο Γιάννη. Ποιο είναι το αρμόδιο δικαστήριο για να επιλύσει τη συγκεκριμένη διαφορά που έχουν ο κύριος Γιάννης και ο κύριος Θωμάς;
- A) Το Ανώτατο Δικαστήριο
  - B) Το Κακουργιοδικείο
  - Γ) Το Επαρχιακό Δικαστήριο
  - Δ) Το Εμπορικό Δικαστήριο

11. Να συμπληρώσετε τα κενά στις πιο κάτω προτάσεις.

A) Στην Κύπρο, η Βουλή των Αντιπροσώπων απαρτίζεται σήμερα από .....  
Ελληνοκύπριους βουλευτές που εκλέγονται για περίοδο ..... χρόνων.

B) Ο Πρόεδρος της Κυπριακής Βουλής σήμερα είναι ο .....

Γ) Ένας νόμος μπορεί να κηρυχθεί αντισυνταγματικός από το ..... δικαστήριο.

Δ) Το πολίτευμα της Κύπρου είναι η ..... δημοκρατία.

12. Να σημειώσετε Σ (Σωστό) ή Λ (Λάθος) δίπλα από κάθε πρόταση

A) Η νομοθετική εξουσία στην Κύπρο ασκείται από τους υπουργούς.....

B) Οι Τουρκοκύπριοι έχουν τουρκική υπηκοότητα.....

Γ) Ο Γενικός Εισαγγελέας της Δημοκρατίας διορίζεται από τον Πρόεδρο της  
Κυπριακής Δημοκρατίας.....

Δ) Οι αλλοδαποί μπορούν να ψηφίσουν στις Προεδρικές εκλογές της  
Κύπρου.....

E) Το Ευρωπαϊκό Κοινοβούλιο είναι το όργανο στο οποίο εκπροσωπούνται οι  
κυβερνήσεις των κρατών μελών.....

13. Να γράψετε δύο είδη πολιτευμάτων που μπορούμε να διακρίνουμε με βάση τον αριθμό  
των ατόμων που ασκούν την εξουσία.

1).....

2).....

14. Να γράψετε δύο ανθρώπινα δικαιώματα που καταπατήθηκαν στην Κύπρο όταν έγινε  
η τουρκική εισβολή το 1974.

1).....

2).....



15. Να αναφέρετε δύο τρόπους με τους οποίους η παραχώρηση αρμοδιοτήτων στην τοπική αυτοδιοίκηση ενδυναμώνει τη δημοκρατία στη χώρα μας.

1).....

.....

2).....

.....

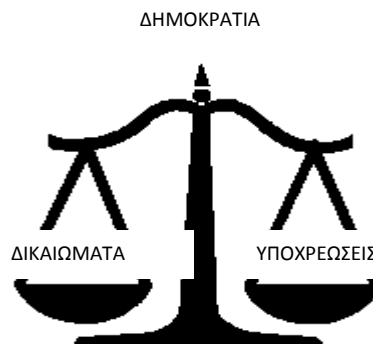
16. Γιατί κατά την άποψή σου ένα Υπουργός στην Κύπρο δεν μπορεί να είναι και βουλευτής;

.....

.....

.....

17. Ποιο είναι το κύριο νόημα της πιο κάτω εικόνας;



.....

.....

.....

.....

18. «Οι κακοί πολιτικοί εκλέγονται από τους πολίτες που δεν ψηφίζουν». Ποιο είναι το μήνυμα που θέλει να μας μεταφέρει η συγκεκριμένη φράση;

.....

.....

.....

.....

## ΜΕΡΟΣ Β'

1. Σε ποιο βαθμό συμφωνείς με καθεμιά από τις πιο κάτω προτάσεις; Αφού διαβάσεις προσεκτικά την κάθε πρόταση, βάλε σε κύκλο τον αριθμό που αντιστοιχεί στην άποψή σου, όπου: 1= Διαφωνώ απόλυτα, 2= Διαφωνώ, 3 =Δεν είμαι βέβαιος/η, 4= Συμφωνώ, 5= Συμφωνώ απόλυτα.

		Διαφωνώ απόλυτα	Διαφωνώ	Δεν είμαι βέβαιος/η	Συμφωνώ	Συμφωνώ απόλυτα
1.	Όλες οι μειονότητες στην Κύπρο πρέπει να έχουν τις ίδιες ευκαιρίες να βρουν μια καλή δουλειά.	1	2	3	4	5
2.	Θα πρέπει να απαγορεύεται στους πολίτες να ασκούν κριτική στην κυβέρνηση.	1	2	3	4	5
3.	Η κυβέρνηση πρέπει να επηρεάζει τις αποφάσεις των δικαστηρίων.	1	2	3	4	5
4.	Είναι αποδεκτό οι πολιτικοί ηγέτες που βρίσκονται στην εξουσία να δίνουν θέσεις στη δημόσια υπηρεσία σε μέλη της οικογένειάς τους.	1	2	3	4	5
5.	Η κυβέρνηση πρέπει να ελέγχει τι γράφουν οι εφημερίδες.	1	2	3	4	5
6.	Όλες οι μειονότητες στη χώρα μας πρέπει να έχουν ίσες ευκαιρίες καλής εκπαίδευσης.	1	2	3	4	5

		Διαφωνώ απόλυτα	Διαφωνώ	Δεν είμαι βέβαιος/η	Συμφωνώ	Συμφωνώ απόλυτα
7.	Οι γυναίκες πρέπει να εμπλέκονται στην πολιτική.	1	2	3	4	5
8.	Οι γυναίκες έχουν τα ίδια προσόντα για να γίνουν πολιτικοί αρχηγοί με τους άντρες.	1	2	3	4	5
9.	Με ενοχλεί που υπάρχουν μετανάστες (μετανάστες είναι αυτοί που εγκαταλείπουν τη χώρα τους για να ζήσουν σε μια ξένη χώρα) στην Κύπρο.	1	2	3	4	5
10.	Η Ευρωπαϊκή Ένωση προσφέρει περισσότερο πλεονεκτήματα παρά μειονεκτήματα στην Κύπρο.	1	2	3	4	5
11.	Η Ευρωπαϊκή Ένωση μπορεί να βοηθήσει σημαντικά στην επίλυση του κυπριακού προβλήματος.	1	2	3	4	5
12.	Ο Οργανισμός Ηνωμένων Εθνών μπορεί να βοηθήσει σημαντικά στην επίλυση του κυπριακού προβλήματος.	1	2	3	4	5
13.	Ο Οργανισμός Ηνωμένων Εθνών δεν μπορεί να επιλύσει ουσιαστικά τα προβλήματα της ανθρωπότητας.	1	2	3	4	5

**2. Αφού διαβάσεις προσεκτικά την κάθε πρόταση, βάλε σε κύκλο τον αριθμό:**

**1** : αν η κατάσταση που περιγράφεται δε συμβαίνει **ποτέ**

**2** : αν η κατάσταση που περιγράφεται συμβαίνει **σπάνια**

**3** : αν η κατάσταση που περιγράφεται συμβαίνει **μερικές φορές**

**4** : αν η κατάσταση που περιγράφεται συμβαίνει **συχνά**

**5** : αν η κατάσταση που περιγράφεται συμβαίνει **σχεδόν πάντα**

		<b>Ποτέ</b>	<b>Σπάνια</b>	<b>Μερικές φορές</b>	<b>Συχνά</b>	<b>Σχεδόν πάντα</b>
1.	Συμμετέχω σε πολιτικές συζητήσεις.	1	2	3	4	5
2.	Παρακολουθώ τις ειδήσεις (είτε στην τηλεόραση είτε στην εφημερίδα είτε στο ραδιόφωνο είτε στο διαδίκτυο).	1	2	3	4	5
3.	Συμμετέχω σε ειρηνικές διαδηλώσεις για κάτι που θεωρώ ότι είναι άδικο.	1	2	3	4	5
4.	Συμμετέχω σε δραστηριότητες που προωθούν την προστασία των ανθρωπίνων δικαιωμάτων (π.χ. δημιουργία αφίσας για την προστασία των ανθρωπίνων δικαιωμάτων, αποστολή επιστολής για τα δικαιώματα του παιδιού στα Ηνωμένα Έθνη).	1	2	3	4	5
5.	Συμμετέχω σε φιλανθρωπικές δραστηριότητες.	1	2	3	4	5
6.	Συμμετέχω σε δραστηριότητες για την προστασία του περιβάλλοντος.	1	2	3	4	5
7.	Φροντίζω να μαθαίνω για την ιστορία της χώρας μου.	1	2	3	4	5

		Ποτέ	Σπάνια	Μερικές φορές	Συχνά	Σχεδόν πάντα
8.	Προβάλλω μέσα από συζητήσεις τα επιτεύγματά (=αυτά που έχει πετύχει) της χώρας μου.	1	2	3	4	5
9.	Λαμβάνω μέρος σε συζητήσεις που αφορούν προβλήματα του σχολείου.	1	2	3	4	5
10.	Εκφράζω την άποψή μου έστω κι αν αυτή διαφέρει από τη γνώμη των περισσότερων συμμαθητών μου.	1	2	3	4	5
11.	Κατανοώ τα άτομα που έχουν διαφορετικές αντιλήψεις από τις δικές μου.	1	2	3	4	5
12.	Λαμβάνω μέρος στη λήψη αποφάσεων που αφορούν το σχολείο.	1	2	3	4	5
13.	Συμπεριφέρομαι σύμφωνα με τους κανόνες και κανονισμούς του σχολείου και της τάξης μου.	1	2	3	4	5
14.	Συμμετέχω ενεργά στη διοργάνωση εκδηλώσεων του σχολείου μου.	1	2	3	4	5
15.	Συμμετέχω ενεργά στην έκδοση περιοδικών ή εφημερίδων του σχολείου μου.	1	2	3	4	5
16.	Ενημερώνομαι για τις εξελίξεις που αφορούν την Ευρωπαϊκή Ένωση.	1	2	3	4	5
17.	Συμμετέχω σε συζητήσεις που αφορούν την Ευρωπαϊκή Ένωση.	1	2	3	4	5
18.	Παρακολουθώ το έργο το οποίο επιτελεί ο Οργανισμός Ηνωμένων Εθνών.	1	2	3	4	5

## ΜΕΡΟΣ Γ'

Να απαντήσεις στις πιο κάτω ερωτήσεις βάζοντας σε κύκλο τον αριθμό της απάντησης που ισχύει για σένα και δίνοντας τις πληροφορίες που ζητούνται.

1. Είσαι κορίτσι ή αγόρι;

Κορίτσι	1
Αγόρι	2

2. Γεννήθηκες στην Κύπρο;

Όχι	1
Ναι	2

3. Πού έχει γεννηθεί ο πατέρας σου;

Στην Κύπρο	1
Στο εξωτερικό	2

4. Πού έχει γεννηθεί η μητέρα σου;

Στην Κύπρο	1
Στο εξωτερικό	2

5. Στο σπίτι, πόσες μέρες τη βδομάδα αγοράζετε εφημερίδα;.....

6. Περίπου πόσα βιβλία υπάρχουν στο σπίτι σου; Μη λογαριάσεις εφημερίδες, περιοδικά ή σχολικά βιβλία.

Κανένα	1
1-10	2
11-50	3
51-100	4
101-200	5
Περισσότερα από 200	6

7. Πόσο συχνά βρίσκεσαι με τους φίλους σου τα βράδια (μετά το φαγητό) εκτός του σπιτιού σου;

Σχεδόν καθημερινά (4 ή περισσότερες φορές τη βδομάδα)	1
1-3 φορές τη βδομάδα	2
Μερικές φορές το μήνα	3
Ποτέ ή σχεδόν ποτέ	4

8. Πόσο συχνά βλέπεις τηλεόραση ή βίντεο τις καθημερινές που έχεις σχολείο;

Καθόλου	1
Λιγότερο από 1 ώρα	2
1-2 ώρες	3
3-5 ώρες	4
Περισσότερο από 5 ώρες	5

9. Έχεις συμμετάσχει σε Μαθητικό Συμβούλιο (της τάξης ή του σχολείου σου);

Όχι	1
Ναι	2



**10. Ποια είναι η μόρφωση της μητέρας σου;**

Δεν πήγε καθόλου σχολείο	1
Δεν τέλειωσε το Δημοτικό σχολείο	2
Τέλειωσε το Δημοτικό σχολείο	3
Τέλειωσε το Γυμνάσιο	4
Τέλειωσε το Λύκειο/Τεχνική	5
Φοίτησε μερικά χρόνια σε Κολλέγιο ή σε Πανεπιστήμιο	6
Είναι κάτοχος πτυχίου Πανεπιστημίου	7
Δεν ξέρω	0

**11. Ποια είναι η μόρφωση του πατέρα σου;**

Δεν πήγε καθόλου σχολείο	1
Δεν τέλειωσε το Δημοτικό σχολείο	2
Τέλειωσε το Δημοτικό σχολείο	3
Τέλειωσε το Γυμνάσιο	4
Τέλειωσε το Λύκειο/Τεχνική	5
Φοίτησε μερικά χρόνια σε Κολλέγιο ή σε Πανεπιστήμιο	6
Είναι κάτοχος πτυχίου Πανεπιστημίου	7
Δεν ξέρω	0

**12. Ποιο είναι το επάγγελμα της μητέρας σου; Δώσε όσες παραπάνω λεπτομέρειες γνωρίζεις.**

.....  
.....

**13. Ποιο είναι το επάγγελμα του πατέρα σου; Δώσε όσες παραπάνω λεπτομέρειες γνωρίζεις.**

.....  
.....

**Ευχαριστούμε πολύ για την προσπάθειά σας!**

## Appendix H: Citizenship Education Test – English Version

### CITIZENSHIP EDUCATION TEST

**NAME AND SURNAME:**

**CLASSROOM:**

**SCHOOL:**

**DATE:**

**Instructions:** Below you can find some questions related to the subject of Citizenship Education. You will work for 40 minutes to answer them. During this time, make sure that you have answered all questions. We are sure that you can make it.

#### Part A'

**Circle the letter which corresponds to the right answer in the following questions.**

1. Which of the following statements is accurate about «laws»?
  - A) Laws impede the exercise of critique against the government.
  - B) Laws determine the rights and duties of citizens.
  - C) Laws are enforced only when all citizens have voted for their acceptance.
  - D) Laws describe the ethical values that we should apply in our daily lives.

2. Which of the following is a political right? The right
- A) of students to learn about politics at school
  - B) of citizens to elect Members of the European Parliament
  - C) of the employees to claim their interests
  - D) of the politicians to participate in the cultural life of the country
3. Two people have the same work to do but one of them is paid less than the other. The principle of equality is violated when the person who gets paid less
- A) has lower qualifications
  - B) has less working experience
  - C) works for less hours
  - C) is a woman
4. According to Pindar, the Law is “the king of all”. In a modern state, this means that
- A) The Constitution assembles all rules which determine the functioning of a state.
  - B) The executive power submits bills for approval at the parliament.
  - C) The General Attorney is the highest authority of the state.
  - D) All actions and decisions of the government and the parliament are checked by the Constitution.

5. A state is constituted by two smaller regions, each of which determines its own laws about the economy and has separate relations with other states in the world. How would you describe the specific state?
- A) Unitary
  - B) Federal
  - C) Bicomunal
  - D) Co-federal
6. Which is the most important aim of the United Nations?
- A) To monitor the commercial deals between countries
  - B) To maintain peace and security among countries
  - C) To decide on the countries' borders
  - D) To prevent criminals from escaping to other countries
7. The United Nations (UN) resolutions about Cyprus are important because
- A) The General Assembly of the UN is a very strong military organization
  - B) The UN constitute the only international organization in which Cyprus participates
  - C) They create the legal framework through which human rights in Cyprus are secured
  - D) They create the conditions for agreement between the political parties

8. Which of the following is not a criterion for a country to access the European Union?
- A) To have democratic institutions
  - B) To have prospects for economic growth
  - C) To respect human rights
  - D) To have a decentralized local government system
9. Which of the following is a responsibility of the President of the Republic?
- A) The voting of bills submitted at the Parliament
  - B) The inclusion of issues for discussion at the Parliament
  - C) The persecution of people who threaten the public interest
  - D) The adoption of laws voted at the Parliament
10. Mr John is a merchant who supplies Mr. Thomas' store with clothes. Mr. John claims that Mr. Thomas owes him 200 euros. Mr. Thomas claims that there is no balance to be paid to Mr. John. Which court is responsible for resolving the specific issue faced by Mr. John and Mr. Thomas?
- A) The Supreme Court
  - B) The Criminal Court
  - C) The District Court
  - D) The Commercial Court

11. Complete the gaps in the following statements.

- A) The Parliament in Cyprus is currently constituted by ..... Greek Cypriot Members who are elected for a period of ..... years.
- B) The President of the Cyprus Parliament today is .....
- C) A law can be declared unconstitutional by the..... Court.
- D) The form of government in Cyprus is the .....Democracy.

12. Indicate T (True) or F (False) next to each statement.

- A) The legislative power in Cyprus is exercised by the Ministers.....
- B) The Turkish Cypriots have Turkish citizenship.....
- C) The General Attorney of the Republic is appointed by the President of the Republic of Cyprus.....
- D) Foreigners can vote at the Presidential elections of Cyprus.....
- E) The European Parliament is the body in which member state governments are represented.....

13. Write down two forms of government that we can discern on the basis of the number of people who are in power.

- 1).....
- 2).....

14. Write down two human rights which were violated in Cyprus when the Turkish invasion took place in 1974.

- 1).....
- 2).....

15. Mention two ways through which the delegation of responsibilities to the local self-government strengthens democracy in our country.

1).....

.....

2).....

.....

16. In your opinion, why a Minister in Cyprus, cannot be a Member of the Parliament as well?

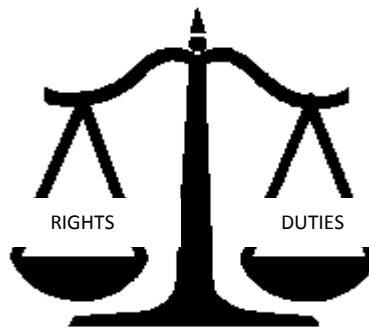
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.....

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17. What is the main meaning of the following picture?

DEMOCRACY



.....

.....

.....

.....



18. «Bad politicians are elected by those citizens who do not vote». What is the message that this statement aims to convey?

.....

.....

.....

.....

## PART B'

**1. To what extent do you agree with each of the following statements? Read carefully each statement and circle the number which corresponds to your opinion, where: 1= Completely Disagree, 2= Disagree, 3=Not sure, 4= Agree, 5= Completely Agree.**

		Completely Disagree	Disagree	Not sure	Agree	Completely Agree
1.	All minorities in Cyprus should have the same opportunities to find a good job.	1	2	3	4	5
2.	Citizens should not be allowed to criticize the government.	1	2	3	4	5
3.	The government must influence the decisions of courts.	1	2	3	4	5
4.	It is acceptable for political leaders who are in power to provide their family members with positions in the civil service.	1	2	3	4	5
5.	The government must control the content of newspapers.	1	2	3	4	5
6.	All minorities in our country should have equal opportunity of good education.	1	2	3	4	5

		<b>Completely Disagree</b>	<b>Disagree</b>	<b>Not sure</b>	<b>Agree</b>	<b>Completely Agree</b>
7.	Women should be involved in politics.	1	2	3	4	5
8.	Women have equal qualifications to become political leaders as men.	1	2	3	4	5
9.	I am disturbed by the presence of immigrants (immigrants are those who leave their country to live in a foreign country) in Cyprus.	1	2	3	4	5
10.	The European Union offers more advantages than disadvantages to Cyprus.	1	2	3	4	5
11.	The European Union can contribute substantially to the solution of the Cyprus' problem.	1	2	3	4	5
12.	The United Nations Organization can contribute substantially to the solution of the Cyprus' problem.	1	2	3	4	5
13.	The United Nations Organization cannot solve humankind problems in a substantial way.	1	2	3	4	5

**2. Read carefully each statement and circle number:**

**1** : if the situation described **never** happens

**2** : if the situation described happens **rarely**

**3** : if the situation described happens **sometimes**

**4** : if the situation described happens **often**

**5** : if the situation described happens **almost always**

		<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Almost always</b>
1.	I participate in political discussions.	1	2	3	4	5
2.	I follow the news (either on TV or in the newspaper or on the radio or on the internet).	1	2	3	4	5
3.	I participate in peaceful demonstrations for something I deem to be unjust.	1	2	3	4	5
4.	I participate in activities which promote the protection of human rights (e.g. the creation of a poster for the protection of human rights, sending a letter for the children's rights to the United Nations).	1	2	3	4	5
5.	I participate in charity activities.	1	2	3	4	5
6.	I participate in activities for the protection of the environment.	1	2	3	4	5
7.	I seek to learn about the history of my country.	1	2	3	4	5

		<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Almost always</b>
8.	I make known through conversations the achievements of my country (=what my country has achieved).	1	2	3	4	5
9.	I take part in discussions about school problems.	1	2	3	4	5
10.	I express my view even if it is different from the view of most of my peers.	1	2	3	4	5
11.	I understand people who have different views than mine.	1	2	3	4	5
12.	I take part in school decision making.	1	2	3	4	5
13.	I behave according to the rules and regulations of my school and classroom.	1	2	3	4	5
14.	I participate actively in the organization of school events.	1	2	3	4	5
15.	I participate actively in the publication of school magazines or newspapers.	1	2	3	4	5
16.	I keep myself up to date about the developments concerning the European Union.	1	2	3	4	5
17.	I participate in discussions about the European Union.	1	2	3	4	5
18.	I keep myself updated about the work of the United Nations.	1	2	3	4	5

## PART C'

Answer the following questions by circling the number which is true about you and by providing the required information.

1. Are you a girl or a boy?

Girl	1
Boy	2

2. Were you born in Cyprus?

No	1
Yes	2

3. Where was your father born?

In Cyprus	1
Abroad	2

4. Where was your mother born?

In Cyprus	1
Abroad	2

5. At home, how many days a week do you buy a newspaper?.....

- 6. Approximately, how many books are there in your home? Do not take into account newspapers, magazines or school textbooks.**

None	1
1-10	2
11-50	3
51-100	4
101-200	5
More than 200	6

- 7. How often do you get together with your friends at night (after dinner) outdoors?**

Almost daily (4 or more times a week)	1
1-3 times a week	2
Sometimes a month	3
Never or almost never	4

- 8. How long do you watch TV or video during school weekdays?**

Not at all	1
Less than 1 hour	2
1-2 hours	3
3-5 hours	4
More than 5 hours	5

- 9. Have you participated in a Student Council (of your classroom or your school)?**

No	1
Yes	2

**10. What is the educational background of your mother?**

Did not go to school at all	1
Did not finish Primary School	2
Finished Primary School	3
Finished Middle School (Gymnasium)	4
Finished Lyceum/Vocational School	5
Studied a few years at College or University	6
Has a University Degree	7
I don't know	0

**11. What is the educational background of your father?**

Did not go to school at all	1
Did not finish Primary School	2
Finished Primary School	3
Finished Middle School (Gymnasium)	4
Finished Lyceum/Vocational School	5
Studied a few years at College or University	6
Has a University Degree	7
I don't know	0



**12. What is the occupation of your mother? Give as much detail as you know.**

.....  
.....

**13. What is the occupation of your father? Give as much detail as you know.**

.....  
.....

**Thank you very much for your effort!**