

**The School House System: Effects on Engagement, Connectedness and Staff–
Student Relationships in Secondary Schools**

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Abstract

While there are a number of varying definitions of pastoral care, a common thread is a focus on student wellbeing, and a facilitation of the holistic development of the student. In order to provide effective pastoral care and a sense of individualised attention for students, schools have utilised a range of pastoral-care systems. The house system is one such system and is the focus of the present study. Previous studies examining the outcomes of house-system implementation revealed three emerging themes: students' school engagement; sense of school connectedness; and, staff–student relationships. The present study has sought to empirically evaluate the role of the house system in shaping these constructs for secondary students. This includes the development and distribution of a quantitative questionnaire designed to assess the degree to which students experience these three constructs within their house context and within the broader school context. A second objective is to examine any differences in house-system outcomes between school sectors, specifically the Catholic and private school sectors. Thirdly, the present study has collected qualitative data from staff to explain trends observed in the student data and to shed light on the perceived benefits, caveats and house staff role responsibilities as suggested by those who work within the house system on a daily basis.

The development of the student questionnaire, titled the House System Assessment Survey (HSAS), was informed from literature and other surveys concerning the three constructs that were distilled from prior house-system research. The HSAS was then trialled in a pilot study consisting of 574 secondary students across two Catholic schools in south-east Melbourne, Victoria, Australia. Following a range of statistical analyses, refinements were made to improve its reliability and validity. The revised HSAS was then administered to 291 students from two secondary schools—one Catholic and one private—also located in south-east

Melbourne. Fifteen staff from these two participant schools completed an anonymous qualitative survey that asked open-ended questions centred around both the house-system structure in their school (e.g. its perceived goals, effectiveness and areas for improvement) and their role within it as a head of house or tutor (e.g. key responsibilities, highlights, hurdles and initiatives).

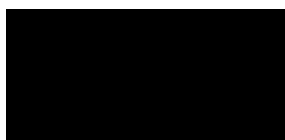
Statistical techniques—including reliability testing, exploratory factor analysis and confirmatory factor analysis—support the effectiveness of the HSAS as a measurement tool for assessing students' engagement, connectedness and staff–student relationships within house and whole-school contexts. Multiple regression analyses and hierarchical models involving the student data primarily focus on whole-school-related constructs as dependent variables, with house-related constructs and other factors such as demographic variables and the school sector as independent variables. These analyses have found that house connectedness and house staff–student relationships were significant predictors of students' overall sense of school community. Additionally, house engagement was found to significantly predict school engagement. No differences were found between the two school sectors; however, significant differences between genders and, in relation to degree of student leadership, are identified and discussed. The qualitative staff data complements the quantitative findings by providing clear insight into how the house system, and specifically the roles of the head of house and tutor, build and maintain engagement, connectedness and positive staff–student relationships within the house. The findings of the present study have significant implications not only for further research into school pastoral care, but also in secondary educational practice.

Certification

I certify that the substance of this thesis has not already been submitted for any degree and is not currently being submitted for any other degree or qualification.

I certify that any help received in preparing this thesis, and all sources used, have been acknowledged in this thesis.

Signature:

A solid black rectangular box used to redact the signature of the author.

Todd Zadow

June 2021

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Chapter 1 : Introduction

Background

Pastoral care in school contexts can be defined simply as an expression of concern for the wellbeing of students and staff (Bouchard, 1992). Cross, Lester and Barnes (2014) expanded the concept to include a broader system of educating and empowering students to make responsible decisions and develop resiliency, self-efficacy and self-awareness. Pastoral care is increasingly being weaved into the fabric of secondary schools rather than being a standalone entity, tying in with the academic curriculum and the structural organisation of the school (Cross, Lester & Barnes, 2014; De Jong & Kerr-Roubicek, 2007; Richardson, 2014). The present study focused predominantly on the latter: *how larger schools can utilise their organisational structure of students in order to most effectively facilitate pastoral care.*

Studies have consistently shown that students in schools with smaller populations (Cotton, 1996; Cushman, 1999) experience better attendance and retention, increased personalisation of education, increased sense of community, enhanced academic achievement and greater efficiency in solving miscellaneous administrative problems (Raywid, 1996; Stewart, 2009). For larger schools, research has found that dividing the whole student population into smaller subunits leads to positive effects similar to those found in small schools. It enhances students' sense of community (Brennan, 2012; Evan et al., 2006; Richardson, 2014), increases student individualisation (Cushman, 1999), increases the efficiency of student administration (Raywid, 1995) and enhances student–staff relationships (Anderson & Van Dyke, 1963; Oxley, 1990). It is therefore not only a priority, but a necessity for larger schools to effectively organise their student cohort—and staff to some degree—into smaller cohorts. Different methods for doing so may include, for example, the

development of *small learning communities* (David, 2008; Oxley, 2001, 2007), *horizontal year-level systems* (Fincham, 1991) and *house systems* (Anderson & Van Dyke, 1963; Oxley, 1990; Raywid, 1995).

Small learning communities (SLCs) organise students into small cohorts based around the school and each may be assigned a particular area of curriculum within which specialised teachers of those subjects can tailor specific programs to cater for students' academic preferences (Cotton, 2001; David, 2008; Oxley, 2008). Alternatively, the horizontal year-level system manages students by stratifying them into separate groups according to year level, which are then managed by year-level coordinators (Anderson & Van Dyke, 1963; Fincham, 1991). Rather than grouping students by year level, a house system organises students into groups known as *houses* that integrate multiple year levels, and these houses typically compete in sporting or extracurricular activities (Green, 2006; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1989; 1990). Houses are often run by a staff member known as a head of house, also known as a house coordinator or housemaster/mistress, and houses can be run fairly autonomously in terms of facilitating discipline, allocation of resources, staff involvement in decision-making and pastoral care (Chittenden, 2010; Dierenfied, 1976; Fincham, 1991; Kyriacou, 2014; Oxley, 1990). The head of house organises house activities and services within the house (Oxley, 1989) and oversees pastoral care of the students within their house (Dierenfied, 1976; Fincham, 1991). Additionally, houses typically consist of several teachers who are each assigned a small cluster of students to manage within the house. These teachers, known as tutors, tutor group teachers or care group teachers, may perform tasks such as marking attendance, facilitating activities and content aligned with a pastoral curriculum, and tracking academic and social development (Chittenden, 2010; Fincham, 1991).

Since the present study is broadly concerned with investigating the impact of the house system on school culture, it is important to note other factors that may play a role. One such factor is the sector that a school sits within: public, private or Catholic. These sectors, particularly the proportion of enrolments in the private sector and the prominence of the Catholic sector, set Australia's education system apart from those of several other English-speaking countries (Andersen, 1992). Attitudes, priorities and values vary between parents in different school sectors (Andersen, 1992), as well as a small difference in academic achievement (Goss et al., 2018).

My School Experience

I thoroughly enjoyed my time as a high school student and attribute a lot of my sense of connectedness to school with the strong sense of camaraderie that was established from being part of a competitive and supportive house community. The heads of house at my school were very competitive and so were the students. This friendly rivalry between houses made school life a very enjoyable personal experience. It is possible that this explains why so many alumni of this school that I attended have not only gone on to become teachers themselves, but also returned to this particular school for their teaching career. I am one of those alumni who have become a teacher and I currently work in another school that places strong value on the house system. Essentially, the house system facilitates most practices within my school, including discipline, chapel services, pastoral care and sports carnivals. The house system does not have a great deal of overlap with the academic side of the school. In my current school, as well as other schools I have worked with, staff leadership is predominantly grouped into two main branches: pastoral care (e.g. building school connectedness and monitoring student wellbeing) and student learning (e.g. monitoring students' academic progress and achievement, and overseeing the

delivery of the curriculum). As a head of house myself, I am personally executing responsibilities concerned with the pastoral care side of the school on a daily basis and constantly working to promote a sense of house spirit for the students and staff within my house. Therefore, my interest in the house system as a means of organising students, and in shedding light on its capabilities, stems from a combination of my personal experiences as a student and now as a teacher and head of house within a secondary school.

The Present Study: A Focus on the House System

The literature surrounding the use of the house system in enhancing students' experience at school centers around 3 main constructs: (1) *school connectedness* (Brennan, 2012; Coughlan, 2004); (2) *school engagement* (Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1989); and (3) the development of positive *staff–student relationships* (Fincham, 1991; Oxley, 1990). The primary aims of the present study are to empirically explore the link between the house system and these 3 major constructs in more detail, and also to provide more contemporary research relating to the significance of key staff involved in the system: the head of house and the tutor. In doing so, the research has tested my hypothesis—from my experience in schools—that the house system does indeed have a positive impact on students' sense of school connectedness, school engagement and quality of staff–student relationships.

There have been a number of qualitative case studies exploring how the house system connects with these constructs. However, a common issue among them is that the stated benefits were primarily based on observation (Coughlan, 2004; Nixon, Launay-Fallasse & Watts, 2010) or were simply derived from statements from staff and students (Green, 2006; Logan, 2011) without quantifiable evidence. Additionally, a number of the case studies that suggested benefits of the house system have not been

specific in terms of identifying what particular aspects of the house system lead to such benefits (Wehlage, Smith & Lipman, 1992). Through the development and administration of a student questionnaire, the present study collected data that allowed a thorough and substantive analysis of the relationship between the house system and the 3 constructs (connectedness, engagement and staff–student relationships) that have been distilled from previous house system–related research (Brennan, 2012; Coughlan, 2004; Fincham, 1991; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1989, 1990). In doing so, I have endeavoured to highlight specific aspects of the house-system structure that play a key role in enhancing school experience. Importantly, the questionnaire provided more contemporary research regarding the relationship between students and their house staff: namely, their head of house and tutor. In theory, the role of the head of house is a critical component of the house system (Chittenden, 2010; Dierenfied, 1976; Fincham, 1991; Kyriacou, 2014; Oxley, 1990). However, aside from Dierenfied’s (1976) study, which in fact uncovered a breakdown in the relationship between students and their heads of house, the role of the head of house in practice has seldom been explored. Similarly, little investigation has been done into the role and significance of house tutors. Previous research suggested that, in addition to the head of house, tutors are a point of contact for parents (Cross, Lester & Barnes, 2014; Fincham, 1991), are a trusted adult for their students to turn to for wellbeing issues (Jones, 2006) and oversee the social, personal and academic progress of their students (Chittenden, 2010). However, the present study takes a significant step forward by examining specific responsibilities, positives and negatives of the tutor role from their own perspective, their perspective on the house system itself, and the strategies they employ to build connections with/between their students.

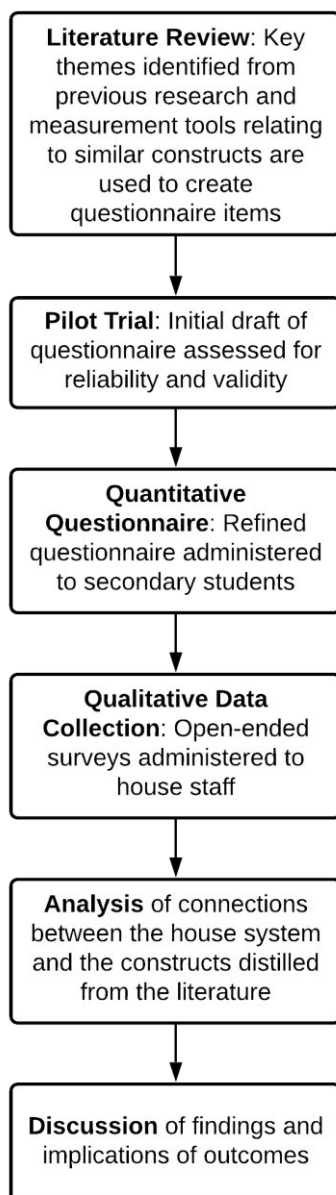
This has been achieved following completion of the quantitative data collection whereby qualitative data was then collected from staff via open-ended questions in a separate questionnaire. These questions not only investigated staff perceptions of the role of the house system within their school, but were also designed as an opportunity to shed more light on some of the issues raised by previous studies. Such issues included the potential breakdown of the relationship between heads of house and students (Dierenfied, 1976), not all staff wanting to be part of pastoral care (Chittenden, 2010) and staff not understanding the role that the tutor group system plays within the school (Chittenden, 2010). This qualitative data also provided an opportunity to uncover additional benefits or issues concerning the house system that may otherwise have been unidentified in previous literature or the quantitative phase of the present study.

Methodology: A Mixed-methods Design

The present study has used a mixed-methods approach (Tashakkori & Teddlie, 2003) to explore the impact of the house system on students' engagement, their perceptions of their relationships with staff and their sense of school connectedness. A sequential explanatory design (Figure 1.1), in this case, was implemented which involved the collection of data through two main phases: (1) the development of a closed-ended questionnaire in order to obtain quantitative data from secondary students; and (2) the use of open-ended surveys with key staff (e.g. heads of house and tutors) to examine their interpretations of the purpose and outcomes of the house system, and ultimately to advance understanding of these staff members' roles within the system. A breakdown of the order of stages and processes involved in the present study is illustrated in Figure 1.1.

Figure 1.1

An overview of the sequential explanatory design utilised in the present study



For the quantitative component of the study, a cohort ($N = 291$) of secondary students from years 7–12 from two secondary schools was administered a questionnaire. The questionnaire drew inspiration from other inventories used in previous quantitative studies. These previous inventories specifically related to staff–student relationships (Crouch, Keys & McMahon, 2014; Parker, Lee & Lohmeier, 2008), school engagement (Li & Lerner, 2013) and school connectedness (Brew, Beattie & Watt, 2004; Parker, Lee & Lohmeier, 2008). The questions were divided into two main categories: (1) relationships, connectedness and engagement within the whole school; and (2) relationships, connectedness and engagement within the house. The aim therefore was that this would allow me to assess the degree to which elements of the house system correlate with elements within the whole-school context. The initial draft of the questionnaire underwent a trial phase where it was trialled with participants ($N = 524$) across two secondary schools. Following the trial, the questionnaire was refined based on a number of analyses that assessed its validity and reliability, including exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Schreiber et al., 2006). This refinement included minor rewording of items and deletion of items with high covariances. Further investigation of the relationship between our main constructs—relationships, engagement and connectedness—was conducted through a latent variables approach.

For the qualitative component of the study, all key house staff—heads of house and tutors—within the participating schools were invited to participate. Fifteen staff (3 heads of house and 12 tutors) completed the survey. Their responses to open-ended questions related to their perceptions of the role of the house system within their school and their responsibilities within it as a key staff member. The responses were analysed using thematic and content analysis (Creswell, 2014) and are discussed in light of the quantitative component of the study.

Chapter Overview

The present study concerns the school house system and lends itself to a conceptual framework regarding how the house system influences a number of key constructs for students. A mixed-methods design was used to test this framework. The present study is therefore organised into chapters based on these significant stages of the study. My personal background and motivation for the present research are outlined in Chapter 2. Chapter 3 provides a thorough literature review concerning different methods of organising students to enhance pastoral care (e.g. the house system), describing the key constructs that emerge as well as caveats on the house system and other factors to consider such as school sector. Chapter 4 draws upon the gaps in the literature to generate the conceptual framework, aims and research design underpinning the present study. This chapter also includes a hypothesised model for explaining how the house system—in addition to demographics and other school variables—may influence school engagement, connectedness and staff–student relationships. Chapter 5 describes the methodology and processes involved in collecting both the quantitative and qualitative data. Initial development, testing and revision of the questionnaire that I developed—the House System Assessment Survey (HSAS)—are discussed. Chapter 6 presents a detailed analysis of the quantitative student data, including further fine-tuning of the HSAS using statistical techniques such as factor analysis. Between-groups analyses were conducted using multivariate analyses of variance and relationships between variables investigated via multiple regression and hierarchical regression techniques. Chapter 7 features an analysis of the qualitative staff data, describing house staff suggestions on a range of house-related areas (e.g. positives and responsibilities of their role, obstacles they faced and initiatives they utilised to facilitate house engagement, house connectedness and positive relationships with their students). Chapter 8 discusses the findings that have

emerged from both the quantitative and qualitative components in light of previous research. These findings are framed within the 3 main constructs examined within the present study—engagement, connectedness and staff–student relationships—and link the findings back to the hypothesised model. Chapter 9 details the significance of the findings and the study’s contribution at theoretical, methodological and practical levels. Also discussed are the main caveats of the study and implications for further research.

Significance of the Study

The present study, based on the use of a mixed-methods design, is significant for its focus on the potential impact of house systems on secondary students’ engagement in school and perceived sense of school connectedness and relationships with staff. On a broader scale, it reinforces the importance of pastoral care within the school environment and how large schools can effectively facilitate this. The house system has, for a long time, been associated with pastoral care (Dierenfied, 1976). Even governments (e.g. Victorian Government Department of Education and Training, 2006) have cited the house system as being a common thread in schools that has a positive effect on student wellbeing. However, apart from anecdotal evidence (Coughlan, 2004; Green, 2006), there is very little contemporary empirical research that clearly posits any specific benefits of the house system. Therefore firstly, from a theoretical point of view, the present study not only addresses this gap but also highlights the roles of key staff associated with the house system: heads of house and tutors.

Secondly, from a practical perspective, there are no guidelines or rulebooks regarding how a house system should run, let alone clarifying the roles of the heads of house and tutors. Further, there has been no previous investigation into any explicit

differences between systems of pastoral care, specifically the house system, within different school sectors. By synthesising existing literature and implementing an empirical methodological approach, the present study provides evidence that can serve as a practical guide for school leaders. Highlighting specific components and strategies within the house system that influence positive student school experience could enable the development of effective systems of pastoral care for new or developing schools and/or the refining of existing school systems in established schools. Examples of strategies mentioned by participating house staff include using a cross-age buddy system, community/team-building activities and inter-house competitions. More generally, a particularly prominent finding of the present study is the close relationship between two key house variables—house connectedness and house staff–student relationships—and students’ sense of school community. The significant gender difference in how the house system affects overall school engagement and sense of community is also a notable finding for schools to consider.

Lastly, the mixed-methods design of the present study—incorporating quantitative student data and qualitative student data—constitutes a significant methodological step forward for house-system research. Integrating feedback from both students and staff in relation to a pre-existing house system has helped to paint a more detailed picture of how house systems function in a school setting—both overtly and behind the scenes.

The findings from the present study may inspire further research into the house system that would be crucial for ensuring optimal student school experience. The questionnaire produced through the present study could subsequently be used by secondary school leaders as a barometer for their own house systems, while also measuring important school-wide constructs that influence students’ overall school experience.

Chapter 2 : Context

Motivation to Become a Teacher

My interest in examining ways to enhance students' school experience stems from my own background as both a secondary school student and now a teacher. In recent years, I have reflected on the reasons behind my gravitation towards becoming a teacher and I largely attribute it to the strong connection I had with my school and the love of learning which consequently developed through that connection. Many of the students from my particular secondary school have gone on to become teachers and I hypothesise that one main reason for this is that they too felt a strong sense of school connectedness with the school system and wish to maintain this connection. While the motivation for my research somewhat draws upon my experiences as a teacher, it is also predominantly linked to my experience as a student within what I believe is a school that excels at building a positive learning culture.

In my teaching experience, I have observed that many schools do not use the house system to the best of its capacity. Firstly, often the houses are overpopulated (e.g. approximately 300 students), making it impossible to form a tight-knit community and develop a sense of individualised attention for each student. Secondly, there are very few opportunities for students to build a sense of house teamwork and camaraderie aside from only annual swimming and athletics carnivals. I found a lack of enthusiasm and school enjoyment from students within these schools, which in turn has led to negative behaviours such as truancy, disrespect towards peers and staff, and a blasé attitude to learning. Given these student behaviours and house systems are in stark contrast to those of the school that I attended as a student, I feel compelled to investigate the significance of the relationship between the house system and students' school experience. My personal experience, as well as my literature review, identifies

3 main constructs that emerge in relation to the effects of a house system: school engagement, positive staff–student relationships and school connectedness.

Personal Background: School Engagement

Being heavily involved in extracurricular activities as a student in high school—from drumming in the jazz band to playing inter-school soccer—helped me develop a sense of belonging and connectedness within the school, as well as expanding my circle of friends. I am an advocate for the value of such activities in fostering students’ perceived sense of belonging and their ability to make a significant contribution to the life of the school. For myself, these activities enhanced my senses of self-worth and self-efficacy within the school community, which coincided with a positive attitude towards my schooling and greater engagement in the classroom and overall academic endeavour. The house system facilitated a number of these extracurricular activities. Most of these activities were competitive and inter-house in nature, including a swimming day, athletics day, cross-country running, debating and a performing arts day where each house had to prepare and perform a small play that was judged by a panel of teachers. Every second Wednesday afternoon was dedicated to participating in inter-house sports—typically soccer or volleyball—and every student involved would be wearing a polo shirt of their house colour. The purpose of these activities was not only to build a sense of camaraderie among the students, but also the houses were competing for house points that contributed towards potentially winning an award: a very coveted house cup awarded to the winning house at the end of the year. Winning this trophy was indeed an honour and this was emphasised by the heads of house and tutors of the houses. Without their enthusiasm and perceived competitiveness (even if, in hindsight, it was mainly just for show), it would have been easy for students to become apathetic towards such a reward.

One potential outcome of having inter-house competition, however, is that in both the school that I attended as a student and the school at which I currently teach, one particular house consistently wins (e.g. 8 of the last 10 years). This phenomenon should be very unlikely since there are 8 houses in total and the students are more or less randomly allocated (with the exception of siblings). It is a phenomenon nonetheless and I have found that the effect of it can go one of two ways: it can motivate other houses to unite and work harder to surpass this leading house, or it can demotivate students and generate a perceived sense of helplessness and a toxic ‘why bother?’ attitude. Of particular concern, too, is the fact and risk that one or two houses consistently lose and, on this basis, they can become marginalised and stigmatised. I have found that this scenario is not as frequent, but these issues do highlight the importance of having a diverse range of competitions for all students to become involved in. This diversity, in effect, would recognise the students’ talents and the importance of staff being seen as beacons of optimism and enthusiasm. At the same time, these competitions provide many opportunities for house staff to emphasise and convey the message of valuing the process of being engaged within and contributing to a team, rather than focusing on the outcome alone.

Personal Background: Staff–student Relationships

I have had a longstanding fascination with psychology that traces back to my early secondary school years. Prior to deciding to become a teacher, I completed my science degree with a major in psychology and a particular interest in neuropsychology. Upon completing this qualification, I was faced with a crossroad and struggled to choose a single career path from several different options (e.g. continuing with neuropsychology or studying postgraduate medicine). During this period of uncertainty, I reflected on what had initially motivated me to really pursue

psychology in high school and then at a tertiary level. I came to the conclusion that a significant proportion of it was due to an energetic, friendly and enthusiastic psychology teacher who we can call 'Mr Smith'. Mr Smith had a great rapport with his students and his passion for the field resonated with his students. As a consequence, and through word of mouth among the students about his positive attitude and engaging pedagogy, psychology was the most popular elective subject at the school. This positive staff–student relationship had a motivating effect on myself and my peers not only to study psychology, but to generally do well in our studies. At the same time, Mr Smith's positive attitude made us appreciate and enjoy learning, and enjoy attending school. Mr Smith then went on to become a head of house for many years, which I believe was a very appropriate role for him in that it enabled him to use his talents to benefit a larger population of students beyond those he taught in the classroom.

Fond memories of my own head of house in high school, 'Mr Jones', also affirm my belief that staff can play a positive role in motivating students. My personal experience has led me to consider an important hypothesis, namely, the fact that positive relationships at school may be aided by having a house system. Mr Jones was approachable and showed genuine concern for the 100 or so students within his house. On parent–teacher interview nights and in our annual house church services, he would always be at the entrance greeting families as they entered, demonstrating sincerity and care on behalf of the school. Mr Jones also had a keen sense of competitiveness and had a friendly rivalry with one of the other heads of house in particular. He was gifted in instilling in us enthusiasm and competitiveness in the leadup to inter-house events such as sports carnivals or performing arts competitions. This ultimately helped our house to bask in a winning streak that spanned the better part of a decade. Furthermore, seeing this personal rivalry between two teachers was very entertaining

to us as students and motivated us to work as a team to better the opposing house in support of our head of house.

As a classroom teacher, one of my main priorities is not to simply impart knowledge of subject content, but to employ the same rapport and energy that Mr Smith and Mr Jones showed in order to instill enjoyment and fun into the schooling process. I firmly believe that the first step to educating students, particularly at a secondary level, is to create a school environment in which they experience positive emotions. In a manner similar to Maslow's (1970) Hierarchy of Needs, it is only until these basic needs are met that effective learning can take place. Fortunately, I have two main ways in which I can establish positive rapport and relationships with students: through being a classroom teacher and through being a head of house. Through the current timetable structure at the school in which I teach, I am able to visit the 5 smaller groups of students—tutor groups—4 out of 5 mornings per week, allowing me to create a strong sense of familiarity and to be completely up to date on any pastoral issues that they may have. The informal nature of this time together—given that no content aside from that of our wellbeing curriculum is explicitly taught—allows for informal interactions and conversations. This organic rapport further lends itself to creating a comfortable atmosphere and a trusting relationship between students, their designated tutor and their head of house. I also run occasional house assemblies and other designated times when the students and staff within the house can come together to interact and celebrate achievements. As a teacher I can certainly vouch for the fact that positive staff–student relationships not only serve to motivate students and teachers, but also ensure that schooling is an enjoyable experience overall. The distillate of all of my above experiences is the overwhelming importance of teachers building a positive rapport and sense of trust with their

students. Several aspects of this can be facilitated through heads of house and tutors of the house system.

Personal Background: School Connectedness

The high school I attended had a population of approximately 1000 students and it could have been easy for a student to feel like a ‘small fish in a big pond’. I believe one of the key strengths of the school house system is that it has the ability and resources to break a large school population into smaller ‘communities of students’. Smaller individual communities of students, likewise, assist in the development of closeness between students in and outside of classroom settings. Being part of a smaller community also made me feel like a part of a team with students from other year levels and together we were able to collectively achieve different goals such as winning the house trophy at the end of the year. This sense of teamwork was enhanced by having an enthusiastic head of house who promoted a friendly rivalry between us and the other houses, and through competing as a house at annual inter-house events, which included athletics, swimming, performing arts and cross-country running. Students wearing their house colours on their ties, wearing house badges on their blazers and wearing polo shirts of their house colour while competing in fortnightly inter-house sports further enriched a sense of identity and belonging within their house. The strong sense of connectedness I had to my house had a parallel effect on my sense of connectedness to the school itself, which in turn enhanced my perception of learning in general.

Now as a teacher, I am conscious of developing a sense of school connectedness with the students I interact with. This includes my roles as a head of house and as a classroom teacher. As previously mentioned, I am conscious of establishing a sense of community and camaraderie in my house by running

communal events such as house assemblies and other house gatherings (e.g. designated time in an afternoon to play intra-house games). My approach includes an emphasis on supporting and respecting each other, and providing opportunities for older students to be mentor figures for younger students. For example, we place an emphasis on our student leaders being role models and helpers for incoming students. If we see a year 7 student struggling with forming friendships, we may also tap some older students who are in their tutor group on the shoulder and ask them to introduce themselves to that student. Additionally, I publicly reward students who have made positive contributions to the house (e.g. by representing the house in inter-house sports events) and those who have eminently demonstrated our house qualities of ‘*doing your best*’ (e.g. winning a sports competition, achieving high academic results, putting in a lot of effort) and ‘*being your best*’ (e.g. showing kindness to others, respecting peers and staff).

Currently in Victorian secondary schools, there is a rise in awareness and implementation of wellbeing programs with a designated curriculum. House systems, therefore, provide a basis on which teachers and staff can facilitate and implement such a curriculum. For example, at my school where I currently teach, we use tutor group time and whole-house assemblies and activities. This curriculum varies from school to school, but generally consists of familiarising students with psychological concepts such as mindfulness, character strengths, gratitude and helping others (a ‘benefit mindset’). As such, then, there is increasing attention being placed on the true meaning and value of intra-house activities, and on making the most of designated time spent between house staff and students. Alternatively, tutor group, house assemblies and any other allocated time spent together as a house can consist of various initiatives and/or games to promote a sense of community and to develop positive relationships between students and between house staff and students. As a

student, I very much looked forward to house activities because they provided a break between typical classes and allowed me to build on my friendships with students from other classes and from other year levels—a distinct benefit that is provided, in this case, by the house-system structure. As a teacher, I find this time to be invaluable in getting to know students who I do not currently teach, as well as being an opportunity for house staff to promote a sense of house spirit and community.

Summary

I generally enjoyed my time as a high school student and was engaged in many aspects of the school community, engaged in my studies and had a wide network of friends across year levels. Now as a teacher and leader within a secondary school, I am always on the lookout for ways that I can ensure the next generations of students can have as positive and productive an experience at their school as I did. When I reflect on what features of my school possibly had the most positive influence on my experience, I am drawn towards aspects of its house system. Even now, when meeting other alumni of my school, the conversation occasionally gravitates towards which houses we were in and who our teachers were, particularly our heads of house and tutors. A key strength of this house system was its ability to engage students outside of the classroom. This included inter-house performing arts concerts, debating, fortnightly team sport and other sports carnivals such as swimming and athletics. There was something for everyone to get involved in and this provided a hook for students—particularly those who were not academically engaged in the school. Another key element that stands out for me was how effective the school was at making students feel connected and included as part of a tight-knit house community. This was achieved through the wearing of house-coloured polo shirts during house sports, house colours on the winter uniform ties and house badges worn on the

blazers. Feeling part of a community, in turn, led to a sense of connectedness to the school itself and provided a sense of belonging.

Lastly, the climate within the houses is largely dictated by the staff allocated to them. The head of house plays the most significant part in this within the school I attended as a student and within the school in which I teach. Their level of enthusiasm and competitiveness, as well as their approachability for wellbeing concerns, provide the foundation upon which the sense of community is built. These examples are just a selection of the wide range of initiatives that the house system can offer and, in doing so, in my experience and as outlined in the following literature review, they have the capacity to benefit students' school engagement, relationships with staff and sense of school connectedness. However, specific initiatives that I have mentioned and the extent to which the house system may lead to such benefits have seldom been researched. Through the present study I endeavour to raise awareness of the purpose and potential benefits of this system, and more broadly of what schools can do to enhance students' holistic school experience.

Chapter 3 : Literature Review

What is Pastoral Care?

The concept of pastoral care was adopted by Australia from the United Kingdom during the 19th century and featured predominantly in Christian schools with a focus on moral guidance (De Jong & Kerr-Roubicek, 2007). Pastoral care has been defined simply as an expression of concern for the wellbeing of students and staff (Bouchard, 1992). A more contemporary definition by Cross, Lester and Barnes (2014) expanded the concept to include a broader system of educating and empowering students to make responsible decisions while developing resiliency and self-efficacy. Historically, pastoral care has been viewed as a separate entity parallel to the academic side of the school, comprising additional support staff (Cross, Lester & Barnes; 2014) and specific curricula relating to personal and social development (Richardson, 2014).

However, there is growing interest in the whole-school approach to pastoral care, providing more holistic child development as it is interwoven with academic curriculum and the structural organisation of the school (Cross, Lester & Barnes, 2014; De Jong & Kerr-Roubicek, 2007; Richardson, 2014). Furthermore, schools are turning to frameworks such as Martin Seligman's Positive Psychology (Norrish, 2015) to inform their pastoral care foci, practices and curricula. This essentially shifts the position of pastoral care from a *reactive* nature to more of a *pro-active* and preventative position. Designed with the intention of equipping young adults with the capacity to thrive in modern society with contemporary issues, 'Positive Education' (derived from Positive Psychology) introduces students to a range of concepts including mindfulness, character strengths, positive relationships and resilience (Norrish, 2015). Butler (1981) foreshadowed this by positing that the growth in

schools' focus on pastoral care is a product of a growing awareness of the non-academic needs of students and in the safeguarding against issues that may arise with increasing school sizes. Presumably, this refers to the 'small fish in a big pond' scenario that plagues large schools, along with a lack of a sense of community and less individualised student attention (Anderson & Van Dyke, 1963; Oxley, 1989; Richardson, 2014). De Jong and Kerr-Roubicek (2007) suggested that student cognitive development stems from this increasingly holistic approach, particularly the synthesis of intellectual, social and emotional development. Schools face increasing pressure to foster the development of students' social and emotional growth, and provide a sense of community that encompasses all students (Tucker, 2013). One source of this pressure extends from state government level. The Victorian Government Department of Education and Training (1999), for example, stated that schools should indeed address the holistic development of the child and recognise the interconnectedness between positive health, wellbeing and learning outcomes.

Kyriacou (2014) suggested that it is not only the responsibility of the school, but also the collective responsibility of all adult members of society to ensure effective welfare is provided to the children whom they interact with. The Victorian Government Department of Education and Training (2018) established minimum standards for student welfare policies in an effort to ensure that such welfare is adequately provided by schools. According to these standards, student welfare in schools specifically relates to the maintenance of a safe environment for students. These standards include policies that address bullying and harassment, mandatory reporting and access to services. While student welfare incorporates the basic needs of providing safety and care for students, the concept of pastoral care is broader than this and addresses students' level of connectedness and social development (Cross, Lester & Barnes, 2014; Richardson, 2014). For the purposes of the present study, pastoral

care is therefore not only concerned with the welfare of students, but also focuses on a holistic development of students' psychological, emotional and social wellbeing.

A common thread that runs within pastoral care literature is the presence of a designated staff member in the school who is tasked with the responsibilities of providing advice and keeping track of student progress. This designated staff member may be the head of a year level (Richardson, 2014), the head of a small learning community (SLC) (Jones, 2006) or a head of house in the house system (Kyriacou, 2014). Although this key figure within the school has been suggested to play a key role in facilitating pastoral care, there has been limited empirical research examining the levels of trust and confidence that students have in these personnel. Dierenfied (1976) produced the most seminal piece of research into this question. Using quantitative and qualitative methods to collect data across 10 English schools, Dierenfied found that there were in fact trust and confidence issues perceived by students in relation to their heads of house. Although this study is dated, it does indicate that there may be some degree of dissonance between what those responsible for facilitating pastoral care aim to achieve and how successful they actually are. This finding warrants more contemporary investigation to examine the significance of this issue in presentday schools and what systems should be put in place to minimise this dissonance and establish a satisfactory level of trust and confidence between staff and students. Additionally, it raises the question of how significant the role of the head of house is in the overall effectiveness of the house system, and whether a breakdown of their relationship with students undermines any intended benefit of the system in facilitating student pastoral care. The present study endeavours to build upon Dierenfied's (1976) research on students' relationships with their heads of house by utilising various statistical techniques (e.g. regression analyses) and examining the head of house role in a contemporary context. This includes investigating the quality

of the relationships between students and their head of house, and whether this relationship has any bearing on other aspects of students' schooling such as their level of school engagement or sense of school community.

Methods of Student Organisation

Studies have consistently shown that students in schools with smaller populations (approximately 400–800 students; Cotton, 1996; Cushman, 1999) experience better attendance and retention (Raywid, 1996), increased personalisation of education (Cushman, 1999), greater engagement in extracurricular activities (Cotton, 1996; 2001), enhanced academic achievement and greater problem-solving efficiency (Stewart, 2009). As compensation for larger schools, research has found that dividing the whole student population into smaller subpopulations leads to effects similar to those found in small schools. It enhances students' sense of community and personalisation (Brennan, 2012; Evan, 2006; Richardson, 2014), facilitates the efficiency of student administration and discipline (Chittenden, 2010; Cushman, 1999; Raywid, 1996) and enhances student–staff relationships (Oxley, 1990; Wehlage, Smith & Lipman, 1992). It is therefore not only a priority, but also a necessity, for larger schools to effectively organise their student cohort (and staff to some degree) into smaller sub-cohorts. The most common methods for doing so involve dividing the school population into (1) SLCs; (2) individually managed year levels; or (3) individual houses each comprising a range of year levels.

Small Learning Communities

Oxley (2007) suggested that SLCs have become a popular alternative to a traditional school house system. Although there is limited literature outlining the specific structure and organisation of SLCs, Oxley (2007) provided one of the most detailed accounts. She stated that this method of organisation involves a large school

being divided into individual learning communities, each of which has a team of teachers that instruct about a few hundred students. In some cases, each SLC may be assigned a particular area of curriculum within which specialised teachers of those subjects can tailor specific programs to cater for students' academic preferences (Cotton, 2001; Oxley, 2007). In doing so, subject-specific learning communities can theoretically enhance the level of relevance and rigour of the coursework for those particular students who have chosen that pathway (David, 2008). The staff within each community continue to teach the same students as they progress through their school years (Cotton, 2001; Oxley, 2007). Oxley (2007) suggested that this regular contact between students and the same group of staff is a key advantage of SLCs as it provides increased flexibility and the ability to cater for student needs. However, it is not mentioned what the solution could be if there is a breakdown in relationships between particular staff and students, and personal conflicts may intensify if the same staff and students continue to interact with each other throughout the students' schooling. Solutions to remedy this scenario have not been discussed, but one of which could include the efficacy of moving a student into a different SLC. In terms of between-staff relationships, the model emphasises working collaboratively as a team and regularly monitoring student assessment data and liaising with parents (Oxley, 2007), which are positive attributes one would expect within a productive and effective staff cohort.

The advantages associated with learning communities that are smaller in size are further reflected in the data collected through the Bill and Melinda Gates Foundation in the United States (Evan et al., 2006). As part of a 5-year project to redesign schools so that they are better placed to prepare low-income ethnic minority students for tertiary education and the workplace, the Foundation compared a range of data between conventional schools and schools that were newly established or had

undergone restructuring with funding from the Foundation. The funding included not only financial assistance, but also strategic advice including the establishment of smaller schools (no more than 100 students per grade) or the subdivision of large schools into SLCs. The study compared conventional schools to hundreds of high schools assisted by the Foundation. The findings indicated that large schools which adopted an SLC approach experienced significant positive changes in the levels of personalisation and sense of community. However, Evan et al. (2006) found that this effect was not as significant when compared to schools that had the system from the beginning.

Evan et al. (2006) also found that schools that underwent restructuring to an SLC system experienced difficulties in changing the physical structure of the school. This included the difficulty of defining distinct curricular programs for the learning communities and of assigning staff and students equitably to each community. This difficulty experienced by existing schools when they transition to an SLC structure was reiterated by Oxley (2007), who reported that in schools that are already inadequately resourced, the implementation of SLCs may present a significant burden on staff numbers, materials and space required to effectively function. Additionally, while SLC teachers within a large-school scenario would develop intimate knowledge of students, they are still limited in the decision-making and assistance that the whole-school support staff can provide. Studies such as that of Brennan (2012) found that some staff felt being assigned to a house within a house-system structure restricted their interaction with the whole school. This presents a further concern with SLCs in that—compared to the house system—a feeling of isolation within the school may occur to a greater degree due to SLCs being even more segregated and having classes and teachers more explicitly confined to their own learning community (David, 2008). Additionally, some specific difficulties encountered by teachers working in SLC

teams include: (1) teachers in interdisciplinary SLC teams lacking common planning time to collaborate; (2) the courses offered in each SLC being limited in number; and (3) the SLC failing to admit a significant variety of students (Oxley, 2007).

In summary, while there are benefits associated with the SLC system of student and staff organisation, particularly in terms of increasing personalisation and catering for students' academic needs (Cotton, 2001; Evan et al., 2006; Oxley, 2007), there are significant issues with implementing an SLC structure within an existing school. An additional concern is the question of whether this distinct segregation of the larger school into individual communities impacts on the students' overall participation in—and sense of belonging to—the whole school community.

Horizontal Year-Level System

Another method of organising students into sub-units is known as the horizontal year-level system, which is so named due to the nature of students being organised across year-level groups managed by year-level coordinators. Although now dated, Anderson and Van Dyke (1963) provided one of the more explicit descriptions of a typical horizontal structure. Based on their seminal book *Secondary School Administration*, a horizontal year-level system involves all teachers of a particular year level working together as a working team, which in theory encourages them to become specialists in working with that age group and year level curricula. The authors stated that this system on its own does not efficiently facilitate communication between year levels, but suggested that the horizontal system may in fact be useful as a supplementary system for addressing problems unique to the culture of particular year levels. Unfortunately, Anderson and Van Dyke (1963) did not elaborate on how the horizontal year-level system could best be used in conjunction with another system and also the delivery of curriculum. It appears that they overlooked the possibility of year-level coordinators or key teaching staff from

Figure 3.1

The diagram illustrates the flow of information or resources from the 'Whole School Community' to individual years (Year 7 through Year 12). Each year is represented by a colored box, and each year has two corresponding 'Form' boxes. Arrows indicate the flow from the 'Whole School Community' to each year, and then from each year to its respective 'Form' boxes.

Whole School Community	Year 7	Form	Form
		Form	Form
		Form	Form
	Year 8	Form	Form
		Form	Form
		Form	Form
	Year 9	Form	Form
		Form	Form
		Form	Form
	Year 10	Form	Form
		Form	Form
		Form	Form
	Year 11	Form	Form
		Form	Form
		Form	Form
	Year 12	Form	Form
		Form	Form
		Form	Form

Fincham (1991) investigated a newly established school that opted to implement a house system despite the fact that the surrounding schools implemented the horizontal system. It was stated that a benefit of organising a pastoral system around year levels is that the program can be tailored to suit the specific needs or stage that the students' age determines, as posited much earlier by Anderson and Van Dyke (1963). However, the analysis also noted that in contrast to this horizontal year-level system, a vertical (house) style of system has significant advantages that include:

- staff more likely to view students as individuals rather than homogenous groups
- opportunities for interactions and collegiality between students of mixed year levels and ages, creating richer and more complex relationships
- heads of house being provided with a more holistic approach to the care of students, factoring in their past and future rather than simply passing them to the next year-level leader
- in some schools with horizontal structure, the year-level leader moves up to the next level with the same cohort of students, thus maintaining and developing a stronger connection with the same students; this approach implies continuity and stability, and facilitates a long-term relationship with the students—this effect is hypothesised to be the same, if not stronger, in a house system since the tutor group teachers have the same group of only 20–30 students over the course of their secondary schooling
- allowing for siblings of the same family to be overseen by the one staff member, since siblings are always assigned to the same house together

Although Fincham's (1991) comparison between horizontal and vertical organisational structures shed light on some benefits of the house system, it should be noted that these benefits came from an investigation of a single Catholic school situated in London. Not only does this limit its generalisability due to the population being from just one school, but school sector (government, private or Catholic) has been suggested to play a role in determining the school climate (Bryk & Thum, 1989; Waters, Cross & Shaw, 2010). Therefore, it is possible that schools in other sectors may experience different degrees of impact. The differences between sectors are discussed further in Chapter 3 in the section, *School Sectors and the House System*. Overall, Fincham's study suggested that house systems may allow for closer and more positive relationships between staff and students, increased student extracurricular engagement due to house activities, and closer relationships between the parents and the school. Their findings are particularly remarkable given that they emerged after only 12 months of the house system being implemented.

An insight into the backgrounds of the students who attended the school Fincham (2011) investigated was provided; however, it appears to be largely based on their own perceptions and not on any explicit data from the school itself. This is in contrast to the dated but very thorough descriptions of schools that can be found in other educational case studies such as those used in Rutter et al.'s book *Fifteen Thousand Hours* (1979), which sets a high benchmark in providing readers with an in-depth understanding of the school context. In their book, Rutter et al. (1979) described a case study where they examined the particular features of a school that contributed to success. The detail included in their methodology, particularly in describing the context of the participants, stands out from case studies typically featured in house-system literature. This contextual information included:

- The area served by the schools (history, quality of housing, traffic and immigration).
- Families of students (convictions and disorders, employment).
- The children themselves (intelligence and behavioural/emotional difficulties).
- The schools (number in area, authority, year levels, common assessments, buildings/layouts and funding).
- Curricula and examinations (subjects, playing fields, streaming, support, certificate of completion, average grades and dropout rates).
- Similarities and differences between the schools (single gender/co-educational, uniform, formality between students and teachers, gender of teachers, time taught at school, number of pupils, space available per child, care and maintenance of buildings, decorations, basis of student admission e.g. religion or ability level, style of leadership, pastoral care, educational aims/ethos/motto, popularity measured by questioning parents of students and examining enrolment preferences, and period of change in the school at the time of study).

The study revealed a number of factors that appeared to be consistent within ‘effective’ schools and many of these are interwoven throughout this review in relevant areas. The thorough and broad school and student context provided by Rutter et al. contrasts with the more succinct background information provided by Fincham (1991), for example, who provided the age range of students (11–18), the number of students in the school and listed some suburbs within the general catchment area. The only other information provided was that the students were culturally diverse, there were some students with learning needs and there was a suggestion about the socio-economic status (SES) of the parents based on the nature of their employment. Other case studies examining the effects of house systems (Coughlan, 2004; Green, 2006; Logan, 2011) were also very brief in their descriptions of the participants. More

detailed descriptions would be ideal for the purposes of a case study (Zucker, 2009). Such features could include administrative organisation, number of students and staff per house, and more information about the frequency and variety of house activities.

Further, research concerning the year-level-based method of organisation described by Fincham (1991) is very limited, and Chittenden (2010) suggested that large schools may in fact benefit from adopting a mixed structure whereby the school has staff overseeing each year level and also a house system facilitating socialisation between the levels. This mixed system reflects the aforementioned suggestion by Anderson and Van Dyke (1963) that the horizontal system may benefit large schools as a supplementary system, and the concept warrants further exploration to potentially achieve a balance of the benefits of both horizontal and vertical systems.

The horizontal year-level system is a system that divides students into subunits purely based on their year level and there are a number of benefits to this approach. It has key benefits in enabling staff who teach a particular year level to work closely as a team (Anderson & Van Dyke, 1963) and to develop a more age-specific learning program (Fincham, 1991). However, the house system has several advantages over the horizontal system. These advantages include opportunities for students to develop relationships across year levels and having a head of house who oversees students' progress continually throughout their schooling, rather than handing them over to the coordinator of their next year level (Fincham, 1991). As previously mentioned in relation to Fincham's (1991) study, heads of house also become more familiar with the parents and families of their students since siblings are assigned to the same house (Barry & Tye, 1972; Fincham, 1991; Oxley, 1989).

House System

The house system is a longstanding method of organising students into smaller cohorts and facilitating pastoral care in schools (Dierenfied, 1976). House systems

exist in both primary and secondary schools; however, the bulk of the research concerning house systems is set in a secondary school context (Chittenden, 2010; Coughlan, 2004; Fincham, 1991; Green, 2006; Oxley, 1990; Shepherd, 2009). Given that the house system appears to play a larger role in the secondary context, the present study focuses on that sector.

One of the clearest definitions of a house system was provided by Oxley (1990), who stipulated that students are divided into groups of no more than 500, each with a core group of staff who may or may not teach those students exclusively. Other studies further supported the number of students per house as 150–500 students (Anderson & Van Dyke, 1963; Green, 2006; Wehlage, Smith & Lipman, 1992). Although not explained, it is hypothesised that those numbers reflect a population size large enough for a student to feel a part of a community but small enough to avoid the feelings of isolation and insignificance. Research has suggested that the number of relationships we are able to manage is in fact governed by biological limitations. Specifically, Dunbar (1992) posited that the degree to which our brains are developed correlates with our capacity to process information and, consequently, our ability to effectively manage interactions with others. The ideal size of a community that allows for effective relationships has been suggested to be 150 individuals, a concept known as Dunbar's number (Harari, 2014; Hernando et al., 2010). Although there are studies that support Dunbar's number (Hernando et al., 2010), it has also been subject to criticism. While de Ruiter, Weston and Lyon (2011) accepted that it may be valid for non-human primate species (e.g. chimpanzees), they argued that Dunbar's (1992) neocortical basis is an oversimplification of humans' capacity to form relationships and does not factor in variables such as culture, age, gender and occupation. They suggested that humans are capable of maintaining more than 150 relationships, particularly with the advent of technology and social media. Dunbar's number is

nonetheless an interesting concept to consider given that my study is concerned with examining small communities within a school context, and the student population of houses and other forms of clustering within a school has been reported as being a similar number (Dierenfied, 1976; Wehlage, Smith & Lipman, 1992). The ideal population size of a house, let alone whether it is the crucial population size of 150 as Dunbar's number would suggest, has not previously been examined. From anecdotal experience, 150 is approximately the typical student population size for houses in secondary schools, including the two main participating schools in the present study.

Various sporting or extracurricular activities can be run within the house or they can be used to pit houses against each other in friendly inter-house competition (Green, 2006; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1989, 1990). Houses may also provide opportunities for student leadership, which has been identified as a key factor in contributing to positive behaviour and academic success (Green, 2006; Oxley, 1989; Sammons, Hillman & Mortimore, 1995; Rutter et al., 1979). Oxley's (1990) study is a particularly seminal piece to draw from as it encompassed 4 different secondary schools and featured a large sample size (approximately 8700 students). Although the study was based in the United States, Oxley's description draws parallels with house systems in Australia (Chittenden, 2010).

Houses are often run by a staff member known as a head of house, also known as a house coordinator or housemaster/mistress, and houses can be run fairly autonomously in terms of facilitating discipline, allocation of resources, staff involvement in decision-making and pastoral care (Chittenden, 2010; Dierenfied, 1976; Fincham, 1991; Kyriacou, 2014; Oxley, 1990). In order to deal with student discipline and wellbeing matters, as well as parental communication, heads of house have a distinct allocation of time enabling them to perform these duties, as well as financial remuneration (Barry & Tye, 1972; Dierenfied, 1976; Fincham, 1991). That

said, De Jong and Kerr-Roubicek (2007) stated that a weakness in pastoral care within Australian schools is a work overload associated with implementing pastoral care policy, thus highlighting the need for staff associated with pastoral care in a school to be provided with sufficient time and resources to carry out their responsibilities. There is, however, limited contemporary research examining the direct influence of the head of house on student wellbeing and engagement, and additional research is needed to examine their role within the school community. The role of head of house is discussed further in Chapter 3 in the section, *Staff–Student Relationships*.

The limited literature relating to systems of school organisation reveals two main factors that justify the present study's specific focus on the house system. Firstly, compared to the SLC structure, house systems allow students to feel a part of a whole school and to interact with more teachers and other students outside of their peer groups (Brennan, 2012; Green, 2006; Oxley, 2007). SLCs also tend to require significant physical space and facilities to function within a school, which can make it difficult to implement in smaller sized schools (Evan et al., 2006; Oxley, 2007). House systems, on the other hand, do not necessarily require specific house-designated buildings and can be implemented across a wider range of school sizes. This advantage is due to the school's ability to decide how many houses to have, so long as each house has ideally less than 500 students (Oxley, 1989). In comparison to horizontal year-level systems, house systems provide more extracurricular activities that allow opportunities for relationships to form between peers and adults outside of their classes (Fincham, 1991; Mahoney, Cairns & Farmer, 2003). In turn, these relationships can reduce cross-age group bullying and enhance the culture of the school (Victorian Government Department of Education and Training, 2006). House systems also offer a more holistic and consistent approach to individual student care, since the heads of house and tutors care for the same students each successive year

and facilitate group care of siblings (Fincham, 1991; Logan, 2011; Raywid, 1995; Summerland Review, 2006).

The second key advantage of the house system structure is its uniqueness in providing opportunities for friendly competition and activities, teamwork, behaviour reinforcement and superordinate goals (Coughlan, 2004; Green, 2006; Oxley, 1990; Raywid, 1995; Summerland Review, 2006). This is facilitated through the concept of each house being a multi-year-level ‘team’ within the school and through the allocation of points for extracurricular achievements and good behaviour which can be redeemed for awards or trophies (Coughlan, 2004; Green, 2006; Logan, 2011; Nixon, Launay-Fallasse & Watts, 2010). Consequently, this healthy competition provided through the house system may lead to greater student engagement, connectedness and academic achievement (since points can be achieved through academic achievements and to reinforce positive classroom/study behaviours). The system can also provide opportunities for more positive staff–student interactions as staff, too, are often assigned to houses (Coughlan, 2006; Finn, 1989; Green, 2006; Juvonen, 2007; Oxley, 1989, 1990; Rowe & Stewart, 2009).

Potential Benefits of the House System

A review of previous literature and case studies relating to the house system reveals that its suggested benefits appear to align with 3 main constructs: student engagement, student–staff relationships and school connectedness.

Student Engagement

Fredricks, Blumenfeld and Paris (2004) provided one of the most succinct attempts at defining student engagement as a broad concept, presenting it as 3 distinct components: behavioural (i.e. participation in academic as well as social or extracurricular activities), emotional (i.e. positive and negative feelings and reactions

to academics, teachers, classmates and school) and cognitive (i.e. thoughtfulness and willingness to invest in mastering of difficult skills and comprehension of complex ideas). Finn's (1989) dated but still relevant taxonomy of school engagement provided a useful 3-level guide to the extent to which students demonstrate engagement:

Level 1: The student is noncompliant in the classroom, displays disruptive behaviour and inattentiveness, and refuses to complete assigned work. The student may also be complacent in relation to punctuality, preparedness for class and responsiveness to teachers.

Level 2: The student shows some initiative by asking questions if experiencing difficulty and opening dialogue with the teacher. The student may go beyond expectations by studying at school for longer (before or after school) or doing more coursework than required.

Level 3: The student is actively involved in social, extracurricular and athletic aspects of school life, in addition to extensive participation in academic work.

Finn's (1989) taxonomy has since been supported by further research indicating that increasing student engagement is integral to developing students' sense of connectedness to school, as well as leading to gains in academic achievement and forming higher levels of educational aspirations and greater rates of retention (Bryk & Thum, 1989; Fullarton, 2002; Juvonen, 2007; Klem & Connell, 2004; Lamb et al., 2004). The present study therefore utilises a definition of school engagement that encompasses elements of Fredricks, Blumenfeld and Paris's (2004) concept in addition to behaviours and attitudes identified in Finn's taxonomy.

Bryk and Thum (1989) stated that student engagement and commitment do not stem from one single factor, but rather from a number of factors that combine to create an environment which facilitates a social life that is meaningful to both students and staff. The literature suggests several ways in which the house system may be able

to provide such factors to enhance student engagement. Examples include the use of a points system to reinforce participation, contribution and achievement (Coughlan, 2004; Green, 2006; Logan, 2011; Nixon, Launay-Fallasse & Watts, 2010) and running house-related extracurricular activities (Brennan, 2012; Butterfield, 2008; Coughlan, 2004; Green, 2006; Logan, 2011; Nixon, Launay-Fallasse, & Watts, 2010; Oxley, 1990). Extracurricular activities in the school community play a key role in moderating the quality of a student's connection with their schooling (Fredricks et al., 2004; Skinner et al., 2009) and have been associated with promoting student engagement, particularly in relation to those challenged by low SES backgrounds, students who struggle academically and those who face other adversities (Finn, 1989; Fullarton, 2002; Oxley, 1990). In conjunction with an effective academic program, extracurricular house activities can multiply students' opportunities to participate actively in developing important skills, along with self-esteem, that contribute to a well-rounded education (Oxley, 1989, 1990).

There have been a number of qualitative case studies illustrating the use of the house system as a successful means to help students become unified and engaged in the school community, particularly those students who may otherwise view the school as an enemy and display antisocial behaviour (Coughlan, 2004; Green, 2006; Nixon, Launay-Fallasse & Watts, 2010; Logan, 2011; Oxley, 1990). A common issue among these case studies, however, is that the stated benefits from implementing a house system are primarily based on observation (Coughlan, 2004; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1990) or simply derived from statements from staff and students (Green, 2006; Logan, 2011) without referencing any empirical data. An example of such a case study is provided by Coughlan (2004), who examined a school in England that introduced a house system which utilised a points system for student achievements and contributions, and hosted 'mini Olympics' events where the houses

competed against each other. The school's head teacher described the house system as a means of encouraging students to invest in the life of the school, rather than treating the school as an enemy (Coughlan, 2004). Since the implementation of the house system, a follow-up study on the school's progress by Jones (2009) reported improvements in student behaviour and academic achievement.

Although based on anecdotal evidence and with no knowledge of the previous system to compare to, the improvement reported at the school in Coughlan's (2004) study may indicate that the house system provided the pupils with school-related goals to work towards in the form of athletics days and the provision of house points for accomplishments. This increased focus on involvement within the school is hypothesised to have led to an increased sense of student connectedness to the school. As pointed out by the head teacher, there was a perceptual shift from seeing the school as an 'enemy' to seeing it as providing opportunities to compete and develop students' sense of self-esteem. At this stage, however, we can only speculate since the researchers did not follow through with any quantitative research methods to substantiate their findings. Nor did they identify what specific elements of the new house system structure actually led to the results that students and staff reported. While not a peer-reviewed journal article, the findings nonetheless provide some support for the notion of a house system being used as a means of promoting engagement through positive reinforcement. In their review of 11 Victorian government schools that had been identified as having good practice in relation to student wellbeing, the Victorian Government Department of Education and Training (2006) identified the facilitation of extracurricular activities as being a beneficial factor in house systems. Without further discussion within the Department's review, it is hypothesised that this was likely due to the activities positively impacting on students' engagement, aligning with Coughlan's (2004) observations.

A published case study by Green (2006) investigated a school in California, United States, that introduced a house system in order to combat rising suspension rates, student unrest, declining academic performance and bullying. The students and staff were divided into 4 houses and the houses competed for points. The house that earned the most points each year would earn a trophy and points could be accumulated through acts of achievement by individual students, participation in group competitions and house contributions to the local community. During lunchtimes, students were given opportunities to earn points for their house by competing in a range of group activities. Green (2006) reported that this was not only fun and engaging for the students, but it also gave them opportunities to make connections and build friendships with people outside of their normal peer groups. Said one student, 'I used to hate lunch until the house activities started. Now I can participate in fun events, get points for my house, and make new friends instead of being bored' (Green, 2006). For this student, the house activities provided them with a newfound reason to attend and enjoy school, and in turn this may have led to a greater sense of self-esteem and prompted them to engage in other elements of the school community. Since the system's introduction, the school observed a drop in suspensions by almost 50 per cent, as well as an overall improvement of the school climate, allowing students to focus on social and academic achievement. Again, while this evidence is anecdotal and does not include any substantial qualitative or quantitative data collection methods, it does add further support for the capacity of house systems to be utilised as a means of enhancing student engagement.

Both Coughlan's (2004) and Green's (2006) case studies warrant the need for a more quantitative approach in order to explore whether any statistical significance exists to support their claimed benefits. Furthermore, these past studies only focused on a limited number of aspects such as extracurricular activities and provision of

points. More expansive research is required on how engagement could be influenced by other aspects of the house system such as the number of students per house, number of leadership opportunities and degree of emphasis and enthusiasm for house competition from staff. The house systems within the schools involved in the present study were quite similar in structure based on these variables; however, we have included detailed descriptions which can allow future studies to examine the impact—if any—of structural variations across other schools. Researching more aspects of the school may lead to a more effective and detailed house system model for schools to consider.

The definition of student engagement in the present study is informed by suggestions from previous literature. That is, it concerns students' behavioural, emotional and cognitive engagement at school (Fredricks, Blumenfeld & Paris, 2004). More specifically, this includes completing assigned work, punctuality, preparedness for class, engaging in dialogue with the teacher and participating in other extracurricular aspects of school life (Finn, 1989). High engagement has been linked to several benefits including increased school connectedness (Rowe & Stewart, 2009) and academic achievement (Klem & Connell, 2004) and therefore it is important for school to consider initiatives that build this engagement in their students. One such initiative is the facilitation of extracurricular activities, which are often implemented as part of a house system in the form of inter-house competitions (Butterfield, 2008, Green, 2006; Oxley, 1990). Participation in extracurricular activities has been associated with contributing to students' sense of identity and belonging in their school (Finn, 1989), building self-esteem and confidence (Oxley, 1989) and more positive relationships with peers across a broader age range (Victorian Government Department of Education and Training, 2006). However, there has seldom been any examination of any direct link between student engagement in house-related activities

specifically and overall school engagement. The present study endeavours to investigate any such connection more directly and empirically than previous studies (Coughlan, 2004; Green, 2006).

Staff–Student Relationships

In addition to supporting student engagement, extracurricular activities have been shown to increase students’ face-to-face contact with staff facilitating the activities and therefore provide opportunities to build positive staff–student relationships (Anderson & Van Dyke, 1963; Green, 2006; Rowe & Stewart, 2009). Through an action research study of a school that implemented a house system, Brennan (2012) found that such house-related competitions and activities provided a range of benefits. Such benefits included establishing connectedness between students outside of their own classes, providing a sense of teamwork among staff and allowing students to maintain relationships with their previous teachers or new teachers. That said, Brennan’s (2012) research only focused on one school and data was collected only 3 months into the study rather than over a longitudinal time frame. A longer time frame would control for any ‘novelty’ effect of introducing a new house system during the first few months of its implementation.

For effective pastoral care, a school must have a clear understanding of what delivering pastoral care means for the school and relevant staff need to have a clear understanding of their roles and responsibilities (Cross, Lester & Barnes, 2014; Oxley, 1989). Cross, Lester and Barnes (2014) suggested that a model where all staff are trained to some degree to handle pastoral issues (rather than simply passing them up the line of responsibility) is an effective model of pastoral care. In practice, one way that schools attempt this distribution of responsibility is by having a tutorial system (also known as homeroom or care groups) where teaching staff are assigned a small group of students within their house and therefore the responsibility for pastoral care

is shared between a number of staff, rather than just the head of house (Barry & Tye, 1972). In schools with a house system, the students of each house are usually divided into these smaller tutor groups with a staff member of that house being their tutor (Barry & Tye, 1972; Chittenden, 2010; Fincham, 1991; Cross, Lester & Barnes, 2014). An added benefit of this smaller tutor group system is that it can also incorporate its own curriculum. The staff member guides students through discussions ranging from conflict resolution to communicating with others, planning for higher education and interpersonal skills. Its main attribute, however, according to Butterfield (2008), is that tutor groups provide students with a trusted adult with whom they can feel safe. It is hypothesised that this staff member may therefore act as a contingent route for communication and consolation if there is a breakdown of the relationship between the student and their head of house, an unfortunate phenomenon which was previously observed in house-system case studies by Dierenfied (1976).

The specific link between students' perception of/relationship with their head of house and their sense of connectedness and engagement has not been extensively investigated. Dierenfied's (1976) review of house systems across 10 secondary schools (455 student respondents) revealed significant breakdowns in the relationships between students and their heads of house, including students' perceived lack of understanding and genuine care from their head. However, Dierenfied (1976) neglected to explore the causes and potential resolutions of this issue. The study also found that, with the exception of sports, the students seldom participated in extracurricular activities due to lack of interest (Dierenfied, 1976). Although the research is dated, the findings remain a notable suggestion as to the potential degree of interplay between students' relationship and/or perception of their head of house and their level of engagement in school activities. The age of the article also reinforces the need for more contemporary research in this area. As aforementioned, a student's

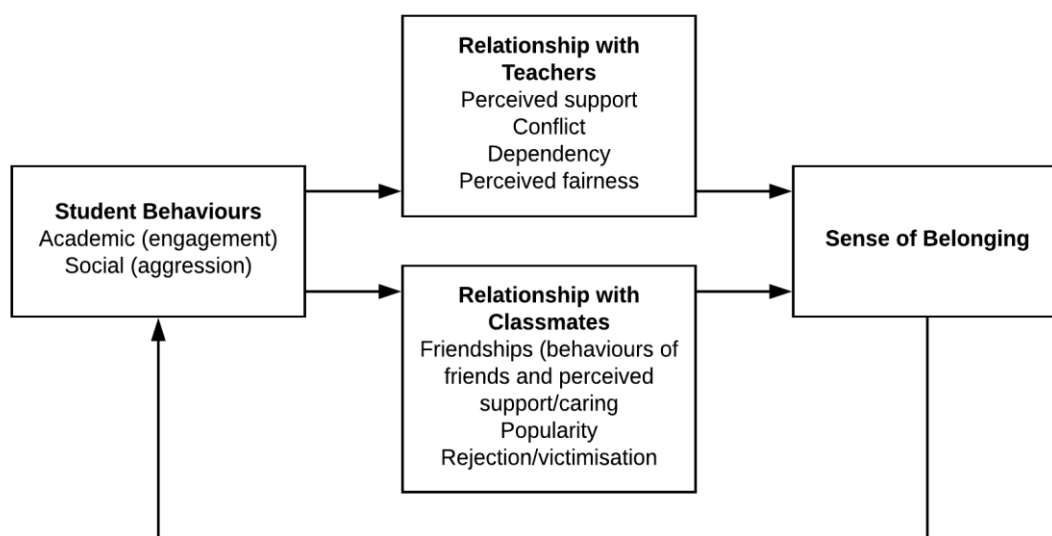
tutor group teacher may play an equal or even greater role in facilitating the student's sense of connectedness and belonging through a positive staff–student relationship, since the student is likely to have more frequent interactions with this individual. The nature of the relationship between a student and their tutor compared with their head of house is yet to be investigated, but both staff members are key components within a house-system structure and provide opportunities for the development of positive relationships with staff (Barry & Tye, 1972; Butterfield, 2008; Fincham, 1991; Rutter et al., 1994).

In theory, clustering or dividing teachers into houses with students appears to enhance opportunities for positive relationships to develop (Barry & Tye, 1972; Chittenden, 2010; Fincham, 1991; Wehlage, Smith & Lipman, 1992). However, Chittenden's (2010) case study of a Queensland high school revealed that not all staff desired to be part of the school's pastoral process. Some staff viewed it as an extra demand and, due to a lack of understanding about the tutorial system's function, half of the staff disagreed that tutorials provided opportunities for developing staff–student relationships and most staff believed that they were insufficiently trained to fulfil their pastoral responsibilities. Thus, while in theory having tutors and tutorial time enhances staff–student relationships through increased interaction with a designated staff member (Barry & Tye, 1972; Cross, Lester & Barnes, 2014; Fincham, 1991), in practice it relies heavily on the awareness and training of the tutors themselves (Chittenden, 2010). Further research is required to resolve the issues identified by Chittenden (2010), as well as other issues including the outcomes of potential personality conflicts between students and tutors. Although the present study has not focused on this issue explicitly, there was potential for it to arise during the qualitative surveying of house staff.

While some teachers may believe that pastoral care is beyond their level of responsibility, the development of positive staff–student relationships is a crucial component of overall student wellbeing, as positive staff–student relationships have been linked with increasing students’ level of belonging and connectedness with the school (Juvonen, 2006; Rowe & Stewart, 2009). Furthermore, it has been suggested that such relationships improve students’ perception of school (Roeser & Urdan, 1996), stimulate learning behaviour and support students’ ability to cope with school demands (Roorda et al., 2011) and play a key role in facilitating the learning of young people (Cross, Lester & Barnes, 2014). Juvonen (2006) highlighted the building of staff–student relationships as a key factor in their model of school connectedness formation. Their cyclical model posited that students’ behaviour influences their relationships with teachers and peers, and these relationships shape students’ sense of connectedness, which in turn affects their behaviour (as illustrated in Figure 3.2 below). The model, particularly the key role that the formation of relationships with teachers plays in building students’ sense of belonging, is supported by the work of Roeser and Urdan (1996) and Klem and Connel (2004).

Figure 3.2

Juvonen’s (2006) proposed model depicting the associations between student behaviours, school-based relationships and sense of belonging



Anderman (2002) extended the concept of belonging by describing it as a basic psychological need that can lead to enhanced motivation, achievement and attitudes towards school. While a sense of belonging and identity within the school can be increased through developing relationships with teachers, it can also be developed simply by perceiving oneself as part of a team as a result of being assigned, and contributing to, an organisational subunit such as a house (Nixon, Launay-Fallasse & Watts 2010; Oxley, 1989). Positive staff–student relationships within a house may be mediated through initiatives such as the tutor group system and facilitation of extracurricular activities. This potential warrants further investigation; thus the perceived involvement of staff in house-related activities and students’ relationships with their tutors are elements that were examined in the quantitative phase of the present study. The benefits of building such relationships are plentiful and play a crucial role in the student’s time at school. Hence, identifying the ways in which these relationships can be established may be particularly beneficial for schools undergoing reform in order to combat problems such as truancy and behavioural issues. Having a designated staff member such as a head of house to discuss students’ pastoral issues can also improve students’ perceptions of their relationships and trust with staff (Rutter et al., 1994). The feeling of being cared for has been associated with higher emotional wellbeing and reduced likelihood of using illicit substances, engaging in violence or initiating sexual activity at an early age (McNeely, Nonnemaker & Blum, 2002; Rutter et al., 1994).

Cross, Lester and Barnes (2014) stated that student learning is more effective if students like their teacher and if their teacher is perceived to like and respect them. Therefore, pastoral care must be addressed through a whole-school approach in order to meet students’ personal, social and academic needs. Reinforcing Butterfield’s (2008) description of the tutor group providing an additional trusted adult for students,

Barry and Tye (1972) and Fincham (1991) also provided support for the tutor group structure offering opportunities to establish and foster relationships between staff and students. These relationships may consequently help students develop caring and supportive interpersonal relationships with teachers, leading to more positive academic attitudes and values, greater satisfaction with school and increased engagement (Klem & Connell, 2004).

A larger scale study by Wehlage, Smith and Lipman (1992) added further weight to the hypothesis of school houses enhancing staff–student relationships. As part of the Annie E. Casey Foundation’s New Futures Initiative (Wehlage, Smith & Lipman, 1992), the study involved implementing a number of different strategies in a range of different secondary schools across the United States. The primary goal was to restructure these schools in order to improve the outcomes for students, particularly those who fell into the category of being at-risk youth. The researchers argued that school restructuring must go beyond school organisation and extend to the school culture itself. Finding a solution to this problem incorporated a restructuring process centred predominantly on a number of key reforms: creating more flexibility around grouping students of similar abilities; being more responsive and providing more individualised attention to students’ learning needs; and supporting teachers with their at-risk students through adequate professional development.

The Foundation issued strategic guides to the participating schools. These guides outlined the aforementioned reform elements and then reviewed their progress by collecting qualitative and quantitative data over 3 years. Of relevance to the present study is the fact that in addressing the reforms, one school’s initiative involved dividing the school staff and students into ‘clusters’, not unlike a house-system arrangement. Six secondary schools across two geographical areas, all middle schools (approximately years 6–9), adopted this clustering approach that saw their students

divided into group of 120–150. It allowed for teachers to convene meetings as cluster teams and collaborate on a range of issues from difficulties with a particular student to curriculum and teaching matters. Teachers were also encouraged to teach concepts beyond the explicit curriculum, such as creating interdisciplinary units on concepts such as violence, or emphasising problem-solving and deeper thinking through their pedagogy.

The study featured sound data collection methodology to measure the outcomes of these reforms 3 years into the study, including frequent site visits, observations of hundreds of classes and interviews with the majority of staff associated with the schools involved. Interviews with subsets of students were conducted, as well as case studies written on the progress and experiences of individual students. The study also had access to quantitative data through the local school district, which included academic achievement in maths and reading, attendance, suspensions, dropout rates, course failures and retentions.

Over 3 years, the researchers found that the clustering in the 6 schools involved contributed to the creation of conditions that allowed for more care and support by teachers, and opportunities for teachers to adopt more personal and supportive relationships with students. The researchers posited that clustering can reduce the anonymity felt by students in larger schools and also offers teachers the opportunity to collaborate in decisions regarding the curriculum, instruction, scheduling and student life. However, over the course of approximately 3 years, the clustering structure within one of the regions had not yet changed teachers' mindsets from attributing the causes of student problems (personality, character and home problems) to addressing institutional causes of student failure. Further, teachers were uncertain about how best to use increased opportunities for collaboration. Most were accustomed to working as individuals in separate classrooms and had little or no

experience within the school of cooperating with others on group projects. Simply providing time to meet was no guarantee that teachers would know how to work together in ways likely to result in more engaging curriculum and improved student performance.

The scope of Wehlage, Smith and Lipman's (1992) findings provided an interesting insight into the effect that forming staff and students into clusters can have within only a 3-year period. The finding that such groupings can provide opportunities to establish or enhance staff–student relationships reflects that of other case studies which have examined schools that have newly adopted house systems, such as those of Brennan (2012) and Fincham (1991). However, there is limited research examining whether this correlation is present in schools that already have a longstanding house system and, if a correlation indeed exists between the presence of a house system and positive staff–student relationships, what specific features of the house system lead to this outcome. While unique features of the house system such as tutorials and heads of house to oversee student pastoral issues and development have been identified, there is still little empirical evidence to support these observations. The present study not only endeavours to quantify any potential association between the house system and staff–student relationships, but also allows for house staff to mention specific strategies in order to develop such relationships via the qualitative phase.

Wehlage, Smith and Lipman (1992) concluded by highlighting a number of criteria that they proposed are crucial for judging whether or not a comprehensive restructuring process is underway and articulated a refined definition of what needs changing in schools. Students' sense of 'school membership' is one such criterion. In the schools examined by New Futures, a sense of alienation was exacerbated by an overemphasis on control and frequent adversarial relations between staff and students. Conversely, informal personal and academic counselling and other demonstrations of

care shown by teachers played an important part in building students' feelings of attachment to their school. This sense of school membership strongly aligns with the third construct identified through house system research: school connectedness.

Positive relationships between students and staff play a crucial role in the facilitation of pastoral care in schools. Effects of positive relationships with staff can improve students' perception of school (Roeser & Urdan, 1996), stimulate learning and help build resilience (Roorda et al., 2011). Juvonen (2006) suggested that they also enhance students' sense of belonging, which in turn positively affects their academic and social behaviours. The house system, through its incorporation of tutors and heads of house, aims to facilitate the formation and maintenance of positive relationships between students and staff. Both roles provide students with a trusted adult who can oversee their wellbeing and pastoral care (Barry & Tye, 1972), while also providing opportunities for students to receive more individualised attention (Wehlage, Smith & Lipman, 1992). Issues that have been highlighted concerning these roles, however, include staff not necessarily wanting to have pastoral responsibility (Chittenden, 2010), not feeling sufficiently trained to undertake such a role (Chittenden) and the potential for disconnect in the relationship between the head of house and their students (Dierenfied, 1976). In order to create clarity around the nature and significance of these roles, the present study examines both roles quantitatively from the students' perspective and qualitatively from the staff perspective.

School Connectedness

School connectedness can be broadly defined as a feeling of being part of, and participating in, a fair community with positive relationships with peers and supportive staff (Battistich et al., 1995; 1997; Brew, Beatty & Watt, 2004; Klem & Connell, 2004; Waters, Cross & Shaw, 2010). School connectedness has been

described as ‘a crucial component to health and wellbeing’ (De Jong & Kerr-Roubicek, 2007) and high levels of school connectedness have been associated with a positive self-concept (Anderman, 2002), increased motivation, particularly for economically disadvantaged students (Battistich et al., 1995), and increased attendance (Juvonen, 2002). Other benefits include greater family connectedness, fewer classroom and peer problems, greater prosocial skills, less difficult secondary school transition and fewer emotional problems (Waters, Cross & Shaw, 2010). Priority for pastoral care and participation in extracurricular activities are key factors influencing school connectedness, both of which can be mediated through a house system structure (Brennan, 2012; Green, 2006; Oxley, 1990; Raywid, 1995).

Brennan (2012) conducted an action research case study of a secondary school that implemented a house system. They found that the vertical, cross-grade nature of the system provided opportunities to strengthen connections with students and teachers outside of their own classes. Consequently, one of the main outcomes was that the school experienced reduced students’ feelings of isolation since they felt part of a greater collective (Brennan, 2012). Addison (2012) reinforced the positive effect that tutor group teachers can have on students, suggesting that they essentially act as role models for students and have a special role in building student connectedness through developing relationships based on trust and openness. Addison (2012) notably linked the role of the tutor with enhancing student learning culture by articulating the role of tutors as gatekeepers and role-modellers of learning. Therefore, being part of a small unit—whether it be within a small school itself or a subunit such as a cluster, house or tutor group—appears to have a positive impact on students’ feeling of connectedness and reduced sense of isolation (Raywid, 1995; Wehlage, Smith & Lipman, 1992).

Brennan's (2012) suggestion of students viewing themselves as part of a 'collective' may indeed be a key factor in building connectedness. Additionally, students' sense of connectedness may also derive from them perceiving the school as one that listens to students and provides them with a voice. This theory was suggested by Nixon, Launay-Fallasse and Watts (2010), who, like Brennan (2012), presented another case study examining a school that implemented a house-system structure. The school featured in their study had tried several solutions to attract and retain students including marketing campaigns, strengthening bonds with other local schools and hiring experienced teachers. Although these efforts gradually attracted and retained students, the school wanted something more innovative and creative. Thus, the house system was introduced to improve the school climate, particularly including students' feelings of personal worth and belonging in the community. House games, competitions, academic achievements and fundraising initiatives for charity were assigned various point values and detentions were assigned negative point values. The intention for the latter was to develop communal responsibility to abide by the school rules. Other incentives included a 'house of the month' being awarded and those students having the privilege of wearing their house T-shirt, and the house with the most points at the end of the year being awarded an engraved trophy.

Students were provided with more opportunities for responsibility in the new system with a 20-member student government that met weekly. Members of this government were appointed following speeches made to the house and the students within the house voting for their preferred delegate. Several responsibilities of this student government included organising inter-house competitions, school events and debating policy issues. Shortly after the implementation of the house system, the school observed increases in enrolment, grade-point averages and student participation. Ultimately, Nixon, Launay-Fallasse and Watts (2010) attributed these

outcomes to the widening and deepening of support structures, development of interpersonal relationships and increased sense of identity and belonging within the school community. This particular case study is unique in that it described the effect that having house-elected leaders may have on the school climate, as well as a detailed account of how a house-based points system may operate as a means of behaviour reinforcement. More broadly, it indicated that such a points system may provide unity among house members by providing a superordinate goal to work towards and through communal positive and negative reinforcement. Both of these elements, house-based leadership positions and the house points system, are often-overlooked elements that require further investigation to determine the degree to which they play a role in building students' overall sense of belonging in school.

In addition to helping students feel part of a collective (Brennan, 2012) and an important and valued member of the community (Nixon, Launay-Fallasse & Watts, 2010), the house system may also enhance school connectedness through providing an important degree of continuity for the students. Juvonen (2007) suggested that disruptiveness and discontinuity are some of the most significant factors relating to student alienation and disengagement, particularly for middle school students. She stated that stable and consistent social relationships between peers and teachers are essential for fostering continuity for the student and allowing more meaningful relationships to develop. It has been suggested that staff having interactions with the same students over consecutive years (known as looping) enables teachers getting to know their students more and therefore reduce the chances of a student falling through the cracks (Juvonen, 2007). In relation to the house system, it is hypothesised that such continuity may be mediated by key house staff—heads of house and tutors—who are responsible for and interact with students consistently through their schooling life. Additionally, the students may interact with other teachers within the house over the

years, and peers within their house and tutor group remain consistent as they progress (with the exception of years above them graduating and new students in years below enrolling).

On the point of school staff, previous literature suggests that they too have the potential to benefit from working as part of a smaller organisational subunit. Cotton (2001) suggested that teachers in smaller learning environments feel they have higher morale and are in a better position to make a difference in students' learning and quality of life than teachers in larger schools. They found that this was influenced by factors such as having closer relationships with students and other staff, and being better able to adapt to individual students' needs. This finding relating to the effects of working in a small school raises the question of whether similar feelings of increased morale and efficacy can be observed by staff being assigned to and working within a subunit within a large school (such as a house, rather in a 'small school' per se). The limited research concerning this specific theory does indeed suggest that staff assigned to houses participate more actively in extracurricular activities (Anderson & Van Dyke, 1963; Oxley, 1990). More importantly, they develop stronger relationships with other staff and feel part of a team (Brennan, 2012), facilitate pooling of knowledge and resources (Barry & Tye, 1972) and have greater input into decision-making due to regular group meetings (Barry & Tye, 1972; Oxley, 1989). All of these factors contribute to overall staff morale and the level of collegiality in the school, which are essential features of an effective school and lead to greater job satisfaction (Rutter et al., 1994; Sammons, Hillman & Mortimore, 1995). However, as highlighted by Wehlage, Smith and Lipman (1992), some staff in schools that have recently restructured to a house style of system may be more accustomed to working individually and meetings may not necessarily be effective unless there is clear motivation for the meetings (e.g. to discuss curriculum, students). This is an important

caveat to consider, while also noting that the close interaction required for the house system to run effectively is a key factor in providing a sense of teamwork, value and collegiality (Brennan, 2012). Therefore, a balance seems to be required between having meetings that are frequent enough for staff to build relationships with each other and provide opportunities for input, yet not oversaturating staff with these meetings and ensuring that each meeting has a clear purpose. The concept of teamwork in particular has been identified as a crucial factor in effective school leadership as it provides a sense of shared purpose that can permeate an entire staff cohort (Smith, 2012). Further research explicitly examining and synthesising all of the opportunities that a house system can provide for staff to interact closely with each other may be beneficial in building a clear picture of exactly how schools can gain the most out of this arrangement and thus strengthen staff collegiality, teamwork and morale.

Lastly, unity between all key stakeholders in the school community that includes students, parents, teachers and school management is an essential component of an effective school environment (Sammons, Hillman & Mortimore, 1995). A related additional advantage of the house system is that it facilitates the formation of closer relationships between the school and parents, thereby extending the concept of connectedness beyond students and staff (Anderson & Van Dyke, 1963; Barry & Tye, 1972; Oxley, 1989). However, the research fails to suggest exactly what factors the house system possesses that enables this relationship-building with parents. One suggestion by Oxley (1989), and extrapolating on Fincham's (1991) findings, may be that it is likely due to the fact that unlike a head of a year level, a head of house remains responsible for the same students in their house as those students progress through the year levels. Thus, parents have the opportunity to engage over a longer period of time with only the one staff member, who develops a detailed knowledge of

their child's needs. Parents have the knowledge that there is a designated member of staff overseeing their child's pastoral needs and that their child has less of a chance of 'slipping under the radar' if they are part of a small subunit within the school rather than in a sea of other students.

Students' sense of school connectedness contributes to their motivation, engagement, and emotional and social wellbeing (Anderman, 2002; Battistich, 1995; Juvonen, 2002; Waters, Cross & Shaw, 2010). There are studies that suggest that the house system may play a role in enhancing school connectedness through various means. These include the system's integration of extracurricular activities, increased interaction between students and staff, and opportunities for students to develop relationships with students of other classes and year levels (Brennan, 2012; Green, 2006; Oxley, 1990; Raywid, 1995). Being part of a smaller community within the school appears to have a positive impact on students' feelings of connectedness and reduces the sense of isolation (Raywid, 1995; Wehlage, Smith & Lipman, 1992). However, the sense of community and loyalty students actually feel from being a member of a house, and what factors contribute most to it, are yet to be explicitly examined. The current study empirically investigates this question in further detail via a quantitative student survey.

A Psychological Overview Relating to the House System

The present study focuses predominantly on the potential relationships between the school house system and school-wide outcomes for students. Nonetheless, it is certainly worthwhile providing a brief overview of the relevant psychological research pertaining to small groups and group membership insofar as the house system innately involves students being a part of, contributing to and interacting with other members within a group: their house. This basis includes

psychological phenomena such as social identification, teamwork and small-group dynamics.

Social Identification

Social identity theories are formed upon the foundation of individuals defining themselves based on their group memberships (Abrams & Hogg, 2006). These theories posit that an individual's identity is profoundly influenced by the groups that they belong to: their sense of who they are, what type of person they are and how they relate to others inside and outside of their group (Abrams & Hogg, 2006). Abrams and Hogg (2006) described an emerging concept in social psychology that focuses on the group in the individual, rather than the individual in the group. This is a psychological state whereby a member of a group conforms to a collective concept of who they are and how they should behave, which in turn leads to behaviours such as group solidarity and can lead to discrimination against other groups. This sense of group belonging has been termed 'social identification' (Benish-Wesiman et al., 2015; Ellemers & Rink, 2005). Ellemers and Rink (2005) described the concept in more detail as a multifaceted construct comprising 3 co-varying components: perceived inclusion within the group (self-categorisation), the evaluation of one's membership in the group (collective self-esteem) and the extent to which the individual feels emotionally involved with the group (group commitment).

Social identification can play an important role in motivating individuals (Ellemers & Rink, 2005) and enhancing self-esteem (Benish-Wesiman et al., 2015). Benish-Wesiman et al. (2015) examined the relationship between multiple social identifications and self-esteem in a large study involving over 2000 early and mid-adolescents from Germany and Israel. They found that social identification is accumulative: the sheer number of social identifications is a crucial factor in affecting self-esteem. They suggested that this may be due to one social context being able to

compensate for another to prevent reduction of self-esteem. Social identification in adolescents has also been examined by Tanti et al. (2011), who investigated the degree to which social identity processes differed between early, mid and late adolescence. They focused on two main social identities: their peer group ('normal', 'nerd' or 'popular') and their gender group. They found that early adolescents generally demonstrated stronger ingroup social identification and perceived greater ingroup entitativity than mid and late adolescents. They also demonstrated greater ingroup similarity (feeling as though they shared traits with other group members) and ingroup favouritism (believing that their group was superior to other groups). This was particularly evident for adolescents who had reported experiencing significant change in their social context, such as the transition from primary school to secondary school.

The research of Benish-Weisman et al. (2015) highlighted the importance of students having multiple social identifications in order to build their self-esteem. Their findings encourage schools to offer additional opportunities for students to build additional social identifications. The house system may indeed act as one of these identifications, which is particularly important for older students who have fewer social identifications. Students identifying themselves as part of a house may also be particularly beneficial for early adolescents going through the transition from primary to secondary school, where Tanti et al. (2011) suggested the effects of social identification to be stronger. Reviewing previous research relating to the house system, there are threads of evidence that support the notion of a house providing a source of social identification for students. For example, Brennan (2012) found that a benefit of a school implementing a house system was that students reported feeling part of a greater collective beyond that of their class or peer group. Additionally, through their examination of a school that introduced a house system, Nixon, Launay-

Fallasse and Watts (2010) discovered a number of positive outcomes that were attributed to a range of factors from house-system implementation. One of these was the enhancement of students' sense of identity. The research is even less clear in relation to exactly how this sense of house identity is formed. Through her description of the system, Oxley (1989) suggested that it is formed through student participation in inter-house competitions, while Green (2006) observed a school that intended to develop house identity through more visual and materialistic means such as providing house T-shirts and student identification cards featuring their house logo.

There are only threads of past research that have examined the degree to which students feel a sense of identity within their house and how that identity is formed. Given the benefits for self-esteem and motivation that have been identified for individuals in previous studies (Benish-Wesiman et al., 2015; Ellemers & Rink, 2005), identifying methods of building social identification in students is therefore a key point that house-system research—and pastoral care research more broadly—should further investigate.

Teamwork and Small Group Psychology

In the same vein as social identification, students experiencing a sense of teamwork may also lead to a number of positive outcomes. A strong sense of teamwork and team cohesiveness can lead to benefits such as greater success in elite sports teams (Carron, Bray & Eys, 2010) and within a school context it can enhance students' sense of identity (Criss, 2010). This is particularly important in adolescents, since being part of a social group has been described as an essential component of modern adolescent life (Leets & Sunwolf, 2005). The concepts of teamwork and team-building within the house system have previously been touched upon in case studies by Green (2006), the Summerland Review (2006) and Brennan (2012), but

generally only in the sense that houses bring students together for the purpose of friendly extracurricular competitions.

There is an absence of research explicitly linking an intrinsic sense of teamwork with being a member of a house. That said, parallels can be drawn with previous research that indeed suggest that a feasible connection may exist between being a member of a house and feeling a sense of teamwork and team identity. Criss (2010) was fascinated by the level of teamwork observed in school sports teams and was convinced that similar elements of teamwork were present within performing arts bands and ensembles. These elements included team-based motivation, communication and responsibility. They argued that teachers of ensembles should develop and assess these skills in addition to teaching the required technical skills. Criss made the suggestion that students in music ensembles know the role they play as part of the collective group effort and that the goal of the conductor or director should be to challenge the individual's energy towards perfecting the student's role within the group. Parallels can be drawn here with the house system in that each student is ideally contributing to the collective of the house through either activity participation or a points system (Coughlan, 2004; Green, 2006; Logan, 2011; Nixon, Launay-Fallasse & Watts, 2010). Additionally, heads of house play a key role in managing the students within their house (Fincham, 1991) and by extension it is in their interest that they motivate and encourage students within their house to participate in house-based events. Since the head of house role and responsibilities have seldom been examined in detail, this is a presumption based on their students' best interests. Houses in some schools have also been known to participate explicitly in weekly team-building activities (Brennan, 2012) but the exact nature of these activities is unknown. Therefore, while inter-house competition has often been referenced in previous

studies, there is little known about the intra-house capacity for team-building, in terms of both leadership from staff and through team-based student activities.

Criss (2010) suggested 6 key strategies that should be utilised by performing arts directors to strengthen the sense of teamwork within their student ensemble:

1. **Motivating students through ownership of goals:** some students may be in attendance not of their volition, but due to external factors such as their parents sending them there. The teacher should encourage students to have a say in decisions concerning the group and create a collective vision that everyone has a stake in. Goals for the group should be clear and realistic and, while they should relate to musical ability and skills, goals should also relate to creating opportunities for developing the social dynamic of the group. The teacher should recognise and reward progress, and the goals should be reviewed on an ongoing basis.
2. **Encouraging commitment:** a group that is perceived to be a supportive and collaborative community will develop commitment to group tasks. Students will be more committed to allocated roles if the roles are clear and fair. All students need to feel like they play an integral role within the group regardless of the role that they play. The teacher should provide support to all members, while encouraging peer support among the students in order to develop individual and peer accountability.
3. **The importance of communication:** interaction between members is a clear requirement for a group to function effectively. Student input into group decisions should be encouraged and valued, and ongoing, positive and constructive contributions should be positively reinforced by the teacher. This will subsequently enhance the relationship between the teacher and students, while also

building trust within the group. Students should also be provided with opportunities to reflect on their performance as a group, which can be a formal debrief or an informal conversation. Body language plays a key role in communication too, including one's tone of voice, so the teacher needs to be mindful of these cues. Criss (2010) stated that humour and fun are two more key elements for effective communication, warmth and cohesion within the group.

4. Leadership and role identification: in cohesive teams, all members have clearly defined roles. The role of the teacher or director of the ensemble is crucial in that they are responsible for facilitating a positive culture, having a clear vision and communicating strategies to the group. As previously stated, they should make group members feel valued by recognising their contributions and also foster leadership within the group itself.
5. Inclusion in social support systems: the teacher should focus on ways of nurturing relationships within the team in order to build a culture of peer support and develop mutual trust and respect between members. Examples include setting positive group norms, peer mentoring, extracurricular or social activities to encourage bonding and camaraderie, and allowing all students to contribute to decision-making in some capacity. The teacher may also meet with students individually or in small groups to provide the students with more individualised attention and enhance their sense of importance within the group.
6. Creating team identity: developing a strong attachment to one's team can be important in building team resilience and may lead to greater achievement. This develops as a result of having a sense of pride, loyalty and motivation within the team and being prepared to put the group's achievement above one's own self-interest. Team identity can also be built through establishing traditions and stories that can be spoken of in future years and passed on to new members.

Criss's (2010) description of how music teachers can facilitate team identity and cohesiveness is a refreshing departure from the sports team context. The more generalised strategies they provided can be applied to a range of different school contexts where teams are present, including school houses.

Both social identification and teamwork are interlinked in the sense that both constructs concern the degree to which the individual feels connected to a group. High levels of these can lead to benefits for students' self-esteem (Benish-Wesiman et al., 2015), motivation (Ellemers & Rink, 2005) and sense of identity and responsibility (Criss, 2010). School administrators must therefore aim to cultivate a learning environment where students not only feel a sense of belonging within a team but, as Benish-Weisman et al. (2015) suggested, also feel that they belong to multiple teams or groups, in order to best enhance their self-esteem. Such groups could theoretically include a student's class group, year-level group, sports team, whole-school community group and, as the present study endeavours to investigate, their house group and tutor group. This concept of houses being defined as groups, from a psychological perspective, is supported by Long (1992). Long (1992) defined a group as a system whose characteristics arise from the individuals, their personal attributes and the interactions between the individuals within the group. While small groups involve processes that concern the relationships and interactions between individuals, they are also motivated by unconscious tasks (Long, 1992). Hypothetically, in the context of the house system, such tasks could include students' forming of relationships with other members or staff within their house and the desire for their house to succeed in inter-house competitions. Further, according to Turner's (1987) self-categorisation theory, the more that a student participates in house-related activities and interacts with fellow house members, the more likely they will be to

identify as a house member over and above the other groups they may belong to (e.g. year level, sports team and campus).

While establishing a sense of teamwork within students has its benefits, it can be argued this it is equally important for staff. Stott and Walker (1999) stated that job satisfaction is increased when people work closely together, collaborate and pool resources to solve problems and make decisions, effectively working a professional team. Just as with students (Criss, 2010), staff teams also work together to achieve overall goals and team effort should be praised above individual contributions. Stott and Walker (1999) tied in this philosophy with teaching teams and suggested that in order to achieve effective teacher teamwork, schools must have: (1) free-flowing communication among all levels of the organisation; (2) performance monitoring and recognition at a team level; (3) processes that facilitate team operation; and (4) leaders who understand and encourage effective teamwork. In addition to the benefits outlined by Stott and Walker (1999) when teachers feel a sense of teamwork, similar outcomes have been noted in studies that examined the effects of staff being involved in the house system. Teaching and support staff are often assigned to houses in a house system (Green, 2006; Oxley, 1990; Raywid, 1995) and benefits of being part of a house include increased involvement and efficiency in decision-making, increased collegiality and higher job satisfaction and morale (Anderson & Van Dyke, 1963; Brennan, 2012; Oxley, 1990). Given that both students and staff are assigned to houses, effects for staff—such as an increased sense of teamwork—are certainly worthy of further examination for the potential benefits they can bring, including increased job effectiveness, satisfaction and morale.

Concepts covered in this brief overview of group psychology, including identification, teamwork and small-group dynamics, may play an implicit role in contributing to the outcomes I am examining in the present study: engagement,

connectedness and staff–student relationships. This research may therefore assist in explaining the trends that emerge in my findings. Future research could benefit from focusing on these concepts more explicitly in order to examine a student’s identity within their own individual house and establish an overall psychological profile of their house itself. Rather than a broad analysis of the house system as a whole, this would facilitate an internal comparison between individual houses and could lead to benefits such as understanding how some houses are more effective at achieving positive outcomes than others. While the present study has not examined social identification and teamwork as explicit variables, these two constructs—and the relevant avenues for further research—are discussed further in Chapter 9 in light of the results of the present study.

Considerations of House System Implementation

Caveats of a House System

Along with the suggested benefits of the house-system structure, the literature has also identified a number of caveats that need to be considered in its implementation. Chittenden’s (2010) case study of a large Queensland secondary school (student population of 1313) uncovered several issues relating specifically to the tutorial aspect of the school’s house system, including that:

- Only half of the school’s staff agreed with the statement that tutorials provided opportunities for students to develop peer relationships.
- Less than a quarter believed the tutor system was effective in any capacity.
- Only a third believed the tutor system was appropriate to students’ needs.

Hence, although the tutor group system has been suggested to lead to positive outcomes due to the potential for students to develop a positive relationship with a trusted staff member (Addison, 2012; Butterfield, 2008), Chittenden’s (2010) findings

underscored the need to ensure that staff are adequately trained for pastoral concerns and are familiar with the aforementioned student benefits associated with the establishment of staff–student relationships.

Concerns have also been raised regarding the degree to which house-assigned staff are able to interact with and feel a part of the whole-school community, including interactions with students of other houses. This was identified in Brennan's (2012) study involving the interviewing of house-assigned staff. While staff acknowledged that the house system increased their sense of familiarity with students, some felt that being assigned to a house restricted their ability to interact with the whole school community. The increase in student familiarity and building of positive staff–student relationships through being in contact with the same group of students have been suggested by other previous studies, including those of Anderson and Van Dyke (1963), Green (2006) and Oxley (1990). In contrast to the concerns raised by the staff in Brennan's (2012) study, generally in schools with house systems teachers may still have opportunities to interact with students of other houses through whole-school events and activities (Brennan, 2012; Butterfield, 2008). Additionally, staff may not necessarily be restricted to exclusively teaching students who are within their own house. The teaching of students from other houses may therefore diminish the staff feeling a sense of restriction or confinement to their own house. It is not known whether the teachers in Brennan's (2012) study taught only students of their own house or whether they taught students across the whole school.

Another issue that could potentially arise in a house system concerns negative relationships between particular staff and students, and negative relationships within these two groups. There is the potential that tension could possibly be exacerbated by the close proximity and more frequent interactions they are forced into due to being grouped into the same house. This issue may indeed be present in any form of

subgrouping within a school context. There would be cause for concern if this were the case, since adversarial interactions between staff and students can lead to issues such as feelings of alienation (Wehlage, Smith & Lipman, 1992) and can eventually lead to students dropping out of school (Juvonen, 2006). Fortunately, this issue has not been identified as an issue in research concerning house systems. Rutter et al. (1979) suggested that shared activities towards a common goal which require individuals to work together are an effective method of reducing conflict. I hypothesise that Rutter's (1979) suggestion may be applicable to the nature of the house system, where students band together in teams (houses) to work towards shared goals (e.g. winning in sports, winning a house trophy at the end of the year).

With regards to staff, tension may also arise due to grey areas between responsibilities, such as those of a head of a learning area (curriculum focus) compared to a head of house (pastoral focus) (Fincham, 1991). Therefore, the roles of staff such as assistant principals, heads of house, curriculum leaders and other staff need to be clearly defined in order to minimise perceived conflicts of authority between levels of the administrative hierarchy (Oxley, 1989).

Other considerations relate to the heads of house themselves. Firstly, there is the potential for heads of house to be seen as targeting individual students in their enforcement of discipline (Rutter et al., 1994). Additionally, with several heads of house within a school each running their own house to their own standards and expectations, there is the potential for inconsistency of disciplinary practice between houses within the school (Sammons, Hillman & Mortimore, 1995). To combat these risks, Sammons, Hillman and Mortimore (1995) suggested that heads of house ensure they are enforcing school-wide rules and not rules specific to any house or student. This is because students are more likely to maintain principles and guidelines of the school if they know that it is the whole school's policy, rather than the whim of an

individual teacher. It should be noted that while consistency of practice between heads of house is recommended, so too is a high degree of autonomy between houses (Oxley, 1990). Thus, based on this literature, heads of house are encouraged to find a balance between being perceived as running an autonomous unit within the school, yet maintaining a high degree of practice consistency with heads of other houses.

Structure of a House System

A basic overall concept of a typical house-system structure can be distilled from previous research and from my own professional experiences. Although I provide a general template, each school may have its own perception of how the system should be organised and implemented. Some schools may choose to focus more on specific aspects of the system in order to address certain issues, while other schools may only use the system as a means of grouping students for sports carnivals. Due to the breadth of how the house system can be manifested, the systems of the schools involved in the present study are described in the methodology chapter (Chapter 5).

In schools with a house system, students and staff are assigned to individual houses (Raywid, 1995). From personal experience, the number of houses within each school can vary from 3 to 8. Four tends to be the most common number in public schools, while private schools tend to have 8. The number of houses within a school generally depends on the school population, since there are approximately 150 students and 4 to 5 staff per house (Dierenfied, 1976; Oxley, 1990). In my experience, student numbers range over 120–350 students per house with 4 to 5 staff in addition to the head of house.

In some cases teachers exclusively teach the students within their assigned house (Oxley, 1990; Raywid, 1995). This does not seem to be as commonplace in Victoria, with the house system being an aspect that runs parallel to the teaching side

of the school and being more focused on pastoral care and extracurricular engagement rather than as a means of assigning teachers to classes.

Each house has approximately 4 to 5 tutors, who each micro-manage a small subgroup of approximately 20–30 students within the house (Chittenden, 2010). Typical duties of tutors include attending to minor pastoral care issues and administrative tasks such as marking attendance (Chittenden, 2010; Fincham, 1991). More serious concerns—such as matters relating to student welfare, engagement, bullying, family communication or discipline—progress to the head of house, who is provided with a time allowance to resolve such issues (Fincham, 1991). The head of house supports and meets regularly with their team of tutors and is usually responsible for organising house-related activities (Oxley, 1989). Students usually have the same tutor and head of house throughout their whole time in high school. Heads of house, and the house system itself, are typically overseen by an assistant principal or other senior leader specifically in charge of wellbeing.

Houses are generally assigned a colour and given a name. In my experience I have observed house names inspired by Australian cultural and sporting figures (e.g. Bradman, Freeman, Hollows, Dunlop, Melba), words taken from the local Indigenous language, saints (in some Catholic schools) or surnames of individuals who were involved in the founding of the school. Schools often implement house mascots and, more typically in private schools, some have their own coat of arms emblem and/or motto.

Schools encourage competition between houses. Such activities are predominantly based around sports (Dierenfied, 1976) and may include lunchtime games and activities, as well as larger events such as swimming and athletics canivals that consume most of the day (Coughlan, 2004). Houses accumulate points that can count towards a trophy that is awarded to the winning house at the end of the term

(Logan, 2011) or the end of the year (Nixon, Launay-Fallasse & Watts, 2010). Points may also be awarded based on good behaviour by classroom teachers (Green, 2006) and can be deducted when students receive detentions (Nixon, Launay-Fallasse & Watts, 2010). Aside from sports, house systems may also facilitate community service activities (Green, 2006), performing arts festivals and dance competitions. In addition to inter-house competitions, schools usually allocate some time during the term for intra-house activities where house assemblies are held to motivate students and celebrate student achievements. Sometimes this time is scheduled into staff and students' timetables and it can also be used to run team-building games and activities or to explicitly teach students elements of a wellbeing-related curriculum.

Houses also provide opportunities for student leadership through house captain positions, and election by their peers to what is commonly known in Victoria as a student representative council (SRC). Students in SRCs and similar systems meet regularly to discuss new initiatives and school policies, and provide opinions on various matters on behalf of the student body (Nixon, Launay-Fallasse & Watts, 2010).

School Sectors and the House System

When discussing features of the Australian school system, it is important to consider that there are a range of variables in play that affect the culture and academic achievement of secondary schools. I posit that the house system may be just one of the variables that interact with each other to ultimately determine a school's culture and the attitude of its students. One of the most obvious features of Australian schools is the division between 3 school sectors: public, private and Catholic. Given that school sector is such a significant element of a secondary school structure—governing many aspects including funding, staffing and student enrolment—it is crucial to examine it in further detail.

Andersen (1992) delivered a thorough breakdown of the historical and modern context and outcomes of the school sectors. He suggested that the reason for such a division stems from Australia's vast multiculturalism, which brings with it a diverse range of religions, values and traditions. The diverse range of schools therefore reflects the breadth of cultural diversity within Australian culture. Key definitions within this area and for the purposes of our study are as follows, using Andersen (1992) as a reference. A *public school* is a school that is owned by the state, with its staff employed by the state; it is subject to administration and regulation by the state authorities, it is almost fully resourced from the state budget and it is required to accept all students in its region. A *private school* is not owned by the state, its staff are not employees of the state, it is not administered by a government authority and it charges tuition fees. While receiving fees from parents, generally private schools are also financially supported by the government to some degree and have the ability to screen potential families because of inability to pay, their religion or due to the child's behaviour or intellectual ability. Private schools are exempt from state planning directives that apply to public schools including catchment areas, closures and consolidations, school and class size, pupil–teacher ratios and curriculum. Private schools can be further divided into two main categories: Catholic and non-government. Therefore, the 3 main sectors are public (government-owned), Catholic (owned and operated by the Catholic Church and the various dioceses within it) and private (other independently owned schools and schools run by corporations).

Compared with other English-speaking countries, Australia has a very high proportion of students enrolled in the private school sector due to a number of factors (Andersen, 1992). These include Australia's successful historical implementation and use of Catholic schools and the legality of federal funding to religious schools. In contrast, the United States, for example, has significant constraints on funding for

religious schools. This is largely due to the fact that doing so somewhat conflicts with the first amendment of their constitution, which prohibits the establishment of religion by government (Underkuffler, 2001).

According to the Australian Bureau of Statistics (2017), there were nearly 4 million enrolled students in Australian schools in 2017. Two-thirds of these students were enrolled in public schools, followed by one-fifth enrolled in Catholic schools and nearly one-fifth in private schools. For the 20 years prior to 2015, there was an increasing trend of students being enrolled in non-public schools; however, since 2015 there has been a shift back to enrolling in public schools. In 2017, the state of Victoria, where my study is based, had a higher proportion of students attending public schools than the national figure, with over two-thirds of all students enrolled in a public school.

When discussing school sector, the inevitable question that arises is the reasoning behind parents enrolling their children in a school within a particular sector. While Andersen (1992) suggested that the division between schools exists largely due to multiculturalism, this is not the sole determining factor. The Australian Council for Education Research (ACER) and the research company ACNielsen surveyed parents from 609 households in regards to their attitudes towards public and private schools, and what factors most influenced their decision (Beavis, 2004). The study identified a number of factors:

- Occupational status: families with a ‘high’ occupational status were more likely to enroll their children in a private school.
- Education level of parents: those with the highest levels of education were more likely to send their children to a private school.
- Political preference: Labor voters were more likely to select public schools, while Liberal/National party voters tended to choose private schools.

- Household income: higher family income was associated with greater private school enrolment.

Public school parents were asked if they would move their children into a private school if they were not limited by money. Those who agreed justified their decision by stating that private schools had better discipline, better teachers and quality of education, and smaller class sizes (and thus more individualised attention). Those who disagreed did so due to their belief in the quality of education provided through the public system, support of the public schooling concept, a dislike of the religious aspects of some private schools and the perception of private schools being elitist.

The most important factor for parents who had already sent their children to private schools, however, was the importance of the school having traditional values such as the school uniform. For Catholic school parents, it was a combination of the discipline, uniform, religious values and school traditions that was the most important factors in their decision. For public school parents, the main factors were more superficial, such as their familiarity with the school, its location and the range of subjects offered by the school. These parents placed less importance on factors considered important by the parents in other sectors: uniform, school traditions and religious or moral values of the school. A glaring factor that the study admitted is the difficulty of validating the actual academic achievement across the sectors. Such a comparison is not an equitable one, considering that some schools which obtain the highest results require students to sit an entrance exam and some also draw from higher SES groups in the community that have higher levels of support at home for the students.

An interesting question that this research raises is the degree to which such attitudes are passed down from generation to generation and what causes shifts in

attitudes that lead to swings in sector enrolment over time periods. Furthermore, to what degree do parents' attitudes influence student behaviour and beliefs, and do these attitudes manifest themselves in particular student behaviours? This is an important point that is relevant to my research, given that I am examining students' attitudes and perceptions of their peers, teachers and school environment.

In relation to the difficult task of comparing academic outcomes between school sectors, one way that this can be facilitated is by examining NAPLAN (National Assessment Program—Literacy and Numeracy) data. NAPLAN allows comparisons of student achievement and progress between many groups, including year level, school and state. According to Goss et al. (2018), 20–30 per cent of the variation in NAPLAN results between schools can be attributed to a factor called 'school advantage', which encompasses parent occupations and education levels, remoteness and the proportion of Indigenous students. Student progress is generally higher in educationally advantaged schools. When advantage level is controlled for, the difference in student NAPLAN progress between school sectors (public and private) is small but significant. On average it is up to two months' progress across two years of schooling (Goss et al, 2018). In fact, the most influential factor in secondary student progress aside from school sector is the state in which they receive their education, with differences of up to 6 months of progress over a two-year period. Other factors that have a small effect on NAPLAN progress are remoteness (metropolitan students make more progress, but almost all of this is explained by socio-economic variables) and school size (smaller secondary schools do slightly better).

Through the detailed descriptions of sectors provided by Andersen (1992), it is clear that Australia's school sectors serve different purposes and that parents' different priorities, beliefs and values spearhead their decision-making process. In addition to

these differences, the NAPLAN data reveals a small academic distinction between the sectors as well (Goss, 2018). This information ultimately leads us to several questions that relate to my house-system research. How does the house system sit within the school sectors? Is the system manifested the same way in each sector? Does it have the same purpose and outcomes? Does one sector rely more heavily on the implementation of the house system than another? Research on sectors within the Australian education system is limited, let alone a comparison of systems of pastoral care between sectors. Such a comparison may not only reveal differences in the implementation of house systems, but also identify whether student attitudes and perceptions differ between sectors as a result of different school cultures and parent beliefs. The main qualitative and quantitative phases of the present study involve participating schools from the private and Catholic school sectors.

Summary

Small schools have a number of advantages over large schools, including students having a greater sense of school belonging, greater academic achievement, better attendance and higher student engagement (Cotton, 1996, 2001; Cushman, 1999; Raywid, 1996; Stewart, 2009). Large schools therefore need to divide their population into smaller, more manageable subunits. Doing so provides the school with the potential to better accommodate students' pastoral needs and increase the effectiveness and efficiency of school administration (Raywid, 1995). SLCs (Evan et al., 2006; Oxley, 2001, 2007), the horizontal year-level system (Fincham, 1991) and the house system (Anderson & Van Dyke, 1963; Oxley, 1989, 1990) are examples of strategies that large schools have implemented in order to achieve such subdivision and associated benefits. A summary of each of these systems' key features and potential caveats is provided below.

Table 3.1

Summary of key features and potential caveats of small learning communities, the horizontal system and the house system

System	Key Features	Potential Caveats
Small Learning Communities (SLCs)	Student population is divided into separate learning communities (Oxley, 2007). Each community is assigned a team of teachers (Cotton, 2001; Oxley, 2007). In some cases, each community can be taught with a focus on a particular area of the curriculum (Cotton, 2001; Oxley, 2007).	Difficult to change the physical structure of the school to accommodate a transition to an SLC system (Evan et al., 2006). SLCs may place a high demand on resources, physical space and staff (Oxley, 2007). Students and staff are segregated, confined to their particular community (David, 2008). In turn this restricts interactions with a wider group and may compromise their sense of connectedness to the school community as a whole.
Horizontal System	Staff assigned to each community remain with those students as the students progress through their schooling (Cotton, 2001; Oxley, 2007). Students are managed according to their year level (Anderson & Van Dyke, 1963). All staff teaching a particular year level work together as a team (Anderson & Van Dyke, 1963). Year levels may be overseen by a staff member known as a head of year (Fincham, 1991).	Students may be more likely to be viewed by staff as homogenous groups rather than as individuals (Fincham, 1991). It does not facilitate cross-age interactions (Fincham, 1991). In some schools the students are managed by a different head of year each year (Fincham, 1991). This does not facilitate the heads of year being able to build rich relationships with their students.
House System	Year levels are divided into smaller groups called forms, with each form managed by a form tutor (Fincham, 1991). Students are allocated into small groups (150–500) of mixed year levels (Anderson & Van Dyke, 1963; Green, 2006; Oxley, 1990; Wehlage, Smith & Lipman, 1992). Staff are not necessarily limited to teaching one particular group of students (Oxley, 1990). Students within each house participate in extracurricular activities together, often facilitated by the staff assigned to each house (Green, 2006; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1989; 1990). Students have opportunities for leadership positions within the house (Oxley, 1989; Green, 2006; Rutter et al., 1979). Houses are overseen by a head of house, who monitors student progress throughout	Inadequate training for tutors can lead to tutors perceiving the tutor group system as ineffective (Chittenden, 2010). Being assigned to houses can leave staff feeling restricted in their capacity to interact with other students within the whole school community (Brennan, 2012). There is the potential for tension between particular staff and students to be exacerbated due to the relatively high frequency of interactions within the house. Heads of house can potentially be seen as targeting individual students with regards to discipline (Rutter et al., 1994). When houses are provided with high levels of autonomy, there may be inconsistencies

System	Key Features	Potential Caveats
	their schooling (Chittenden, 2010; Dierenfied, 1976; Fincham, 1991; Kyriacou, 2014; Oxley, 1990). Students in each house are divided into smaller groups called tutor groups, each managed by a tutor. Each tutor group consists of students across all year levels (Addison, 2012; Butterfield, 2008; Chittenden, 2010).	between the heads of house in relation to disciplinary action (Sammons, Hillman & Mortimore, 1995).

A key advantage of the house system is its ability to facilitate competition between students through extracurricular activities and to utilise a house points system, both of which have the capacity to enhance students' school engagement and behaviour (Coughlan, 2004; Green, 2006; Nixon, Launay-Fallasse & Watts, 2010). The house system has also been suggested to enhance staff–student relationships through house staff being involved in these activities, and heads of 1991; Green, 2006; Oxley, 1990). A third advantage is the ability for students to form positive relationships with their peers and students from other year levels through the vertical nature of the system (Fincham, 1991). This feature, along with involvement in house activities and the sense of community that comes from being part of a smaller group, may lead to students in a house system having high levels of school connectedness (Coughlan, 2004; Evan et al., 2006; Oxley, 1990). Aside from increased school engagement, school connectedness and staff–student relationships, evidence from previous studies suggests that the house system may influence more personal psychological concepts such as social identification (Nixon, Launay-Fallasse & Watts, 2010) and a sense of teamwork (Green, 2006). The sense of teamwork may also be true for staff assigned to houses (Anderson & Van Dyke, 1963; Brennan, 2012; Oxley, 1990).

Unfortunately, much of the previous research focusing solely on the house system is based on case studies reporting only qualitative data based on researchers'

anecdotal observations and statements from students and teachers (Coughlan, 2004; Green, 2006; Logan, 2011; Summerland Review, 2006). Other literature has described what the house system is designed to do and what the intended outcomes should be (Anderson & Van Dyke, 1963; Barry & Tye, 1972; Oxley, 1989; Raywid, 1995). The study by Oxley (1990) is one of the only studies that explicitly examined the outcomes of a house-system structure using quantitative empirical research. In this study, Oxley (1990) identified a large range of suggested benefits of the house system for both teachers and students, and the study remains one of the most detailed and comprehensive studies examining the effects of the house system. Thirty years later, more contemporary research is required not only to provide further insight into the house system and its outcomes for students and staff, but also examine whether the house system is still capable of providing benefits similar to those observed by previous research. The present study accomplishes this and, through a mixed-methods approach, combines the level of description obtained in previous case studies with thorough statistical analyses to substantiate claims and observations.

Chapter 4 : Conceptual Framework

Research Focus

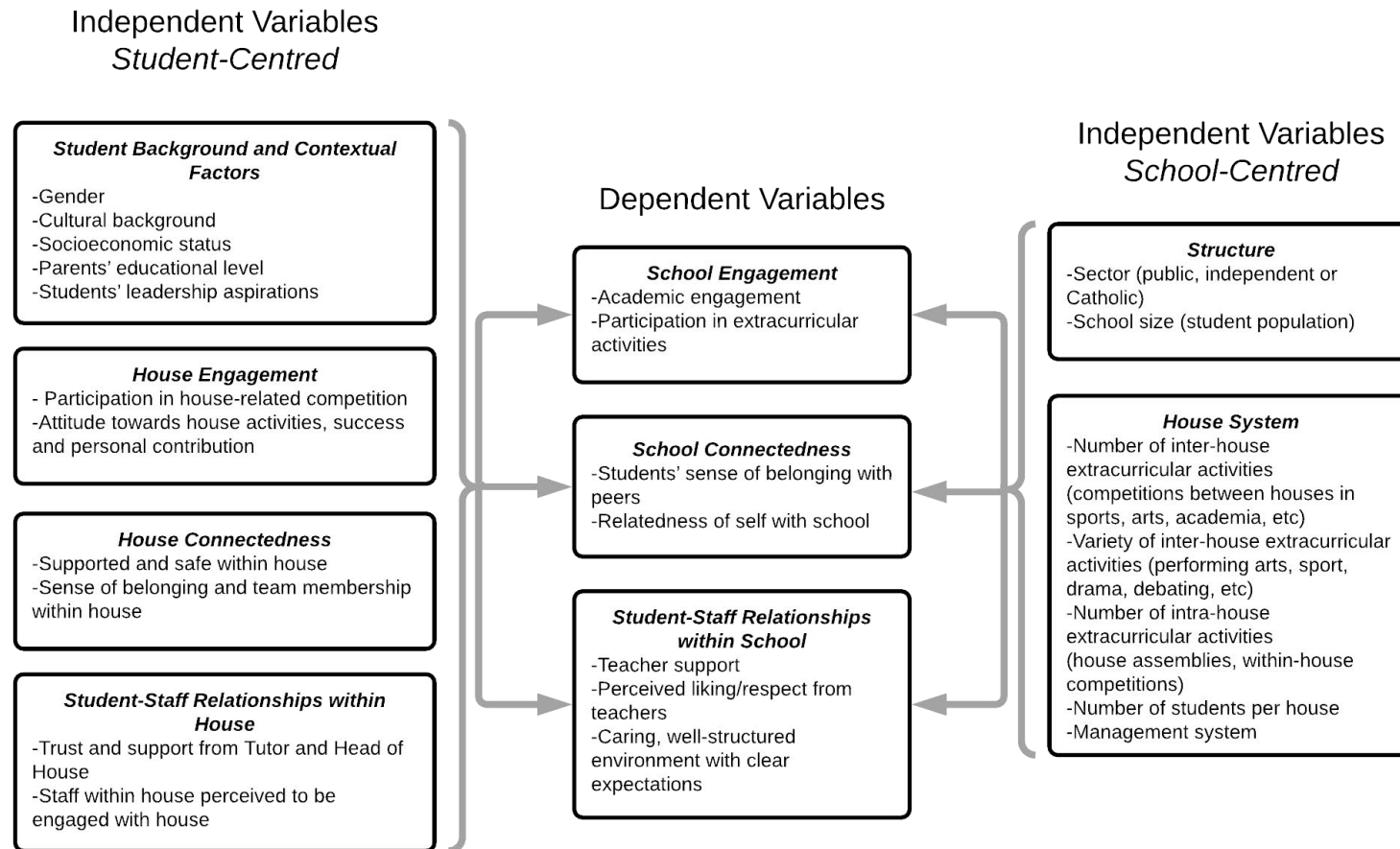
The present study has involved secondary students and staff from a private school in the private sector and a Catholic school within Victoria, Australia. The data from each school was collected within the same year and both schools were closely matched in terms of school advantage. School advantage is measured by an index developed by the Australian Curriculum, Assessment and Reporting Authority (ACARA) called the Index of Community Socio Educational Advantage (ICSEA). It encompasses student factors such as parents' occupation and education, and school factors such as geographical location and the proportion of Indigenous students (ACARA, 2015). In the present study, students answered an online questionnaire that was developed to examine their sense of connectedness, engagement and relationships with staff within the contexts of both their house and their school. Following the questionnaire, a number of staff were also interviewed in order to ascertain their perceptions of and attitudes to the role of the house system within their school and the part they played within it. Since the qualitative data was designed to complement and expand upon the quantitative results, and both types of data were collected simultaneously, the study has employed a concurrent triangulation mixed-methods design (Creswell & Plano Clark, 2006).

My study consists of two main groups of independent variables (IVs): those relating to the structure of the school itself and its house system, and those concerning the individual student. The dependent variables (DVs) are the 3 main constructs identified through previous research as being the key outcomes of effective house systems: school engagement, school connectedness and staff–student relationships.

Figure 4.1 illustrates the hypothesised interrelationships between these IVs and DVs, which form the basic framework around which the present study is centred.

Figure 4.1

Proposed model for investigating students' engagement, connectedness and staff–student relationships



In addition to supporting this theorised model, the overarching aim of my study is to empirically investigate the effect of the house system on secondary students. My study has three specific objectives:

Objective 1:

To investigate, through the development and use of a quantitative questionnaire, the degree to which students feel a sense of connectedness, engagement and positive relationships with staff both within their house and in their school in general.

Objective 2:

By comparing the data from two separate schools in different sectors, to examine whether there are organisational features of a school that may impact on the outcomes of a house system.

Objective 3:

To use qualitative data from staff surveys to complement the results obtained through the student surveys and to gain an indication of the staff culture regarding the house system within each school.

A Proposed Model for Explaining the Effects of the House System

The model I propose in Figure 4.1 is informed by suggestions and findings from prior house-system and pastoral-care research in secondary schools. The IVs are largely informed by Oxley's (1990) and Anderson and Van Dyke's (1963) seminal house system descriptions and advantages, various house-system case studies (Brennan, 2012; Coughlan, 2004; Fincham, 1991; Green, 2006) and other pastoral-care research concerning non-house-system-related factors (Coleman & Hoffer, 1987; Cotton, 2004; Waters, Cross & Shaw, 2010). These IVs are theorised to interact with 3 DVs, which are constructs that have emerged from the literature which encompass

previously observed school-wide benefits associated with house-system implementation (this literature is discussed in the proceeding three subsections below). The following is a dissection of my proposed model, describing the core components within each group of variables and the reasoning behind their inclusion.

Dependent Variable: School engagement

Being part of a house—or more generally a smaller community within a large school—has consistently been linked with enhanced student engagement (Green, 2006; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1990). Although any direct link between the house system and student engagement has seldom been explicitly or quantifiably examined, logical hypotheses emerge from an analysis of the existing research. For instance, students in schools that have implemented a house-system structure in place of a previous system reported feeling more connected to other students, particularly those outside of their class (Brennan, 2012). Several other studies also observed increases in student friendships after implementing house systems (Butterfield, 2008; Green, 2006; Logan, 2011; Nixon et al., 2010). Students forming friendships with their peers plays an important role within students' wellbeing and level of satisfaction with school as an entity, and ultimately leads to students being more engaged at school (Juvonen, 2007; Rowe & Stewart, 2009). Arguably, one of the most obvious and most utilised elements of a house system is its efficiency in facilitating extracurricular activities, since the students and staff are already formed into their own house teams. These activities are typically inter-house sports and competitions (Coughlan, 2004; Dierenfied, 1976; Oxley, 1989) but have also centred around community service (Green, 2006). Participation in these activities is incentivised by students being able to earn points for their house, culminating in a winning house of the term or year award (Green, 2006; Logan, 2011). High levels of student participation in extracurricular activities have been associated with a plethora

of benefits, including a reduction in bullying (Victorian Government, 2006), increased self-esteem and social confidence (Oxley, 1989) and higher engagement in other aspects of the school such as academic endeavour (Fullarton, 2002; Klem & Connell, 2004; Rutter et al., 1979). Such activities may also serve as a primary source of school attachment for students who demonstrate weak academic progress (Finn, 1989).

While schools often run whole-school activities such as assemblies, fundraising initiatives and inter-school competitions, there is a suggestion that running extracurricular activities through a house system in particular may be more powerful in engaging students. This suggestion stems from researchers, teachers and students within schools that have implemented house systems who have remarked on how effective the system was at getting students involved in the extracurricular life of the school (Green, 2006; Logan, 2011; Oxley, 1990). Further, from an analysis of four large New York high schools, Oxley (1990) found that house systems affected students directly in two general ways: through creating more supportive relationships among students, teachers and support staff, and through providing more opportunities for students to participate in school life, that is, extracurricular and co-curricular activities. Oxley's (1990) observation aligns, however, with other studies linking house systems to extracurricular involvement (Green, 2006; Logan, 2011) in that it is largely anecdotal and lacks quantifiable data to support the benefits observed. The findings of previous research therefore underpin the need for a more empirical and contemporary investigation of the relationship between the house system and school engagement.

Dependent Variable: School connectedness

Students' sense of connectedness to their school—and their feeling of belonging within the school community—are important aspects of any system of pastoral care due to their association with promoting students' physical health,

emotional health and social wellbeing (McNeely & Nonnemaker, 2002; Rowe & Stewart, 2009). Studies have shown that school connectedness tends to be higher in small schools (Cotton, 2001; McNeely, Nonnemaker & Blum, 2002). Cotton (1996, 2001) suggested that this is due to students and teachers tending to develop stronger connections and relationships between each other in smaller schools and the school environment having more of a community feel. With regards to teachers' attitudes and satisfaction, Cotton (2001) added that teachers in smaller learning environments feel they have higher morale and are in a better position to make a difference in students' learning and quality of life than teachers in larger schools. This is influenced by factors such as having closer relationships with students and other staff, less misbehaviour and being better able to adapt to individual students' needs. Most likely as a result of their increased levels of school connectedness, small schools exhibit a range of positive outcomes above and beyond large schools, including higher academic achievement, higher attendance and graduation rates, and better behaviour (Cotton, 1996; 2001; Raywid, 1996; Stewart, 2009). Similar benefits have also been found when schools with large populations have introduced systems of organising students into smaller subunits, including the adoption of SLCs (Cushman, 1999; Wehlage, Smith & Lipman, 1992) and the house system (Coughlan, 2004; Green, 2006). Conceptually this makes sense, since the student is going from being a small fish in a big pond to being a small fish in a small pond.

Through extrapolation of previous findings, there may be several ways that the house system may mediate students' sense of school connectedness. According to Rowe and Stewart (2009), school connectedness relies heavily on interpersonal trust and the development of positive relationships between students, which builds their social capital. Accumulation of social capital leads to the reduction or elimination of bullying, increased acceptance of other cultures and increased resolution of conflicts

through discussion (Rowe & Stewart, 2009). Extracurricular activities such as lunchtime games (Green, 2006) provide students with opportunities to interact with their peers and develop such relationships, thus accumulating students' social capital (Rowe & Stewart, 2009; Waters, Cross & Shaw, 2010). As has been previously mentioned, the house system is ideal for facilitating extracurricular activities, but also for promoting a sense of camaraderie between house members, which may enhance students' sense of connectedness not only to their house, but also the school community as a whole (Brennan, 2012; Green, 2006; Nixon et al., 2010). Green (2006) observed one school allowing students to name their houses and students were given T-shirts and identification cards with their house logos on them to further establish a sense of house belonging and connectedness. This concept of students feeling a sense of belonging to a part of a team and feeling a sense of pride about their house has only briefly been touched on by the aforementioned literature. I hypothesise that it in fact has the capacity to be a significant component in developing students' sense of school connectedness and certainly warrants further investigation.

Dependent Variable: School staff–student relationships

The third main benefit that is suggested to stem from the house system is its ability to facilitate positive relationships between students and staff (Anderson & Van Dyke, 1963; Brennan, 2012; Oxley, 1990). There are 3 main features of the system that may enable it to do so. Firstly, staff within the school also tend to be assigned to a house (Raywid, 1995). By being a member of a house, staff typically assist with the running of extracurricular activities. In doing so, they are provided with opportunities for more face-to-face interactions with students within their house in an environment that is in a more fun and relaxed context. Consequently, this allows for stronger and more positive relationships to develop between staff and students (Green, 2006; Oxley, 1990).

A second component of the house system is the tutor group structure that is established within it. While a house may consist of anywhere between 120 to 500 students (Fincham, 1991; Oxley, 1989), it is subdivided into several smaller groups of, for example, approximately 20 students each (Fincham, 1991). These smaller groups have several different names, including ‘tutorials’ (Chittenden, 2010), ‘home group’ (Addison, 2012), ‘homeroom’ (Butterfield, 2008) and ‘care group’, as it is known in my current school of employment. However, for the purposes of this study and in line with a number of studies that defined and/or examined this structure, I refer to it as ‘tutor group’ (Barry & Tye, 1972; Chittenden, 2010; Dierenfied, 1976; Fincham, 1991). The primary purpose of these tutor groups is for students to meet regularly with a designated staff member leading the group—known as a ‘tutor’ or ‘tutor group teacher’—as well as other students across different year levels. It is the responsibility of the tutor group teacher to develop rapport and positive relationships with the students within their group, while monitoring their academic progress and social/personal development (Chittenden, 2010). Being with the same group of students each year also allows teachers to strengthen these relationships and become a significant port of call for their students’ pastoral needs (Cross, Lester & Barnes, 2014; Dierenfied, 1976). The actual effectiveness of the tutor group system, however, was criticised by staff at one particular Queensland school featured in Chittenden’s (2010) study. Overall, staff perceived the initiative as an extra burden, that they were not adequately trained to carry out the associated duties and did not entirely understand their role. This in turn led to only half of the staff stating that tutorials provided opportunities for developing student–student relationships. Furthermore, only a quarter of staff surveyed believed the tutor system was effective and less than half believed that the tutorial system complemented the house system.

Lastly, houses are managed by a designated staff member who is commonly referred to as a ‘head of house’ (Chittenden, 2010) or ‘house coordinator’ (Kyriacou, 2014; Oxley, 1989). The role of the head of house overlaps with Kyriacou’s (2014) ‘social pedagogy’ concept, whereby a trusted adult is trained and tasked with the role of supporting and mentoring troubled or vulnerable students and assisting them in meeting the demands of their lives so that they are better able to lead fulfilling lives. Typical activities include offering advice and help, liaising with other stakeholders and organising social activities designed to enhance personal and social development and wellbeing (Kyriacou, 2014; Oxley, 1989). In Chittenden’s (2010) staff survey within a large Queensland school, the majority of staff considered the head of house to be the first point of contact for disciplinary issues. A key advantage of the role as identified by Fincham (1991) is that the head of house oversees the same cohort of students as they move up through the year levels. This enables heads of house to establish strong rapport with their students and parents within their house, while also developing a deeper understanding of students’ particular needs and family situations (Fincham, 1991). That said, Dierenfied (1976) found in an analysis of 455 students’ survey responses across 10 English schools that there was a breakdown in the relationship between students and their head of house. Just over half of students believed their housemaster/mistress knew them well and nearly a quarter did not know if their housemaster/mistress knew them at all. Furthermore, less than one quarter of students believed they were liked by their housemaster/mistress and less than half of students liked them. Only one in two students respected them and less than a quarter felt that the housemaster/mistress had their best interests at heart. That said, the majority of participants were in favour of retaining the house system in their school, thus demonstrating satisfaction with the potential benefits and activities that the system had to offer and the role it played within the school.

In summary, the nature of the typical house-system structure lends itself to promoting the forming of relationships between students and staff through several ways. The degree to which having staff assigned to houses, tutor groups and heads of house leads to students feeling more engaged in or connected to school as a whole is an important element within my proposed model. The literature reveals both benefits and caveats of the tutor group system and the effectiveness of heads of house, and I endeavour to delve into these two components in order to shed light on their significance.

Independent Variables: School-centred

Structure

There are two main features of a school's structure that may influence the DVs we are using within my proposed model. The first feature concerns the size of the school. School size has been suggested to influence the school climate and students' levels of connectedness (Waters, Cross & Shaw, 2010), with smaller schools tending to have higher levels of connectedness (McNeely, Nonnemaker & Blum, 2002). In contrast, a key downside of large schools is the difficulty of trying to create a sense of community between staff and students, and among the students themselves (Oxley, 1989). Cotton (2001) attributed this to staff in small schools being able to develop closer relationships with their students through more individualised attention and small schools generally having more of a community feel. One resolution for large schools is to reduce the size of the school, which has been shown to increase student participation and engagement, reduce dropout rates, increase student achievement and enhance teacher efficacy (Raywid, 1995). However, this is not necessarily an easy, or practical, solution. Hence I propose that the house system may be an alternative means for a large school to achieve similar levels of connectedness and engagement as found in small schools. This notion is supported by previous literature that suggested

dividing a large student population into smaller subunits does indeed lead to these benefits found in smaller schools (Evan et al., 2006), as well as increased individualised student attention and more effective administration (Oxley, 1989; Raywid, 1995).

In addition to the size of the school, school sector has also been suggested to influence the school climate (Waters, Cross & Shaw, 2010). The student population of Australia is divided across 3 main school sectors, with nearly two-thirds being enrolled in public schools, one-fifth in Catholic schools and a smaller fraction in private schools (Australian Bureau of Statistics, 2017). In a detailed analysis of the 3 sectors, Anderson (1992) stated that the sectors differ across a range of factors including: family culture, values and traditions; and parents' education and occupational status, political preference and household income. Parents of students within different sectors generally have fundamental differences in their priorities for their child's schooling, with Catholic and private school parents placing greater importance on traditions, uniform and discipline. Public school parents believe in the quality of education that public schools provide and support the notion of public schooling, regarding private schools as elitist (Anderson, 1992). Ultimately, these differences relating to parents and family values lead to differences in student achievement (Goss, 2018) and dropout rates (Coleman & Hoffer, 1987). This raises the broader question of the significance of the school sector in influencing student connectedness and engagement, and it is therefore included—along with school size—as an independent variable to consider within my model.

House System

While there is largely anecdotal evidence to suggest that secondary schools that have implemented a house system experience benefits in student engagement (Coughlan, 2004; Green, 2006; Nixon et al, 2010; Oxley, 1990), students' sense of

school connectedness (Brennan, 2012; Butterfield, 2008; Raywid, 1995; Wehlage, Smith & Lipman, 1992) and the development of positive staff–student relationships (Brennan, 2012, Fincham, 1991), a gap in the literature exists in explicitly identifying what specific features of the house-system structure lead to these outcomes, other than generalised observations such as there being inter-house extracurricular activities or the presence of a head of house. A more detailed examination of these facets is required and the design of my methodology allows opportunities for such important details to emerge. For instance, comparing the house-system structure across two different schools may shed light on the ideal number—and variety—of extracurricular activities. This comparison between schools may also suggest whether the number of students within each house has any effect on our measured outcomes or whether any other differences lie between school sectors. Further, examining students’ responses to questions concerning their perceptions of their relationships with staff in their house may address whether a student is more likely to develop trust with their tutor group teacher over their head of house. These are the finer details of the house-system structure that the present study design endeavours to explore. In turn, it provides schools and education administration personnel with practical findings upon which they can base their own structure in order to attempt to achieve beneficial outcomes.

The first group of factors in the present study’s theoretical model relate to the structure of the school house system. This is designed not only to paint a picture of what an average house system in a Victorian secondary school may look like, but also to examine whether structural differences between schools influence the 3 DVs. The number of students per house is one such variable, as past research presented only a vague range of an ideal size. Oxley (1990) recommended that house populations be no more than 500 students and other case studies feature house populations anywhere over 150–500 students (Anderson & Van Dyke, 1963; Green, 2006; Wehlage, Smith

& Lipman, 1992). Another structural DV is the number of house-related activities, which have been viewed by staff as a means of improving integration of students across year levels and establishing an inclusive school environment (Brennan, 2012). Friendly competition between houses has indeed been linked with a number of potential benefits, including building a sense of whole-school community, camaraderie, belonging and school connectedness, and the formation of positive relationships with peers and school staff members (Brennan, 2012; Cotton, 1996; Finn, 1989; Mahoney et al., 2003; Nixon et al., 2010; Oxley, 1989; Rowe & Stewart, 2009; Victorian Government, 2006; Waters, Cross & Shaw, 2010).

The number and nature of these activities, however, are specific factors that have largely gone unaddressed. Studies have seldom provided specific examples or descriptions of extracurricular activities. The case study by Green (2006) identified extracurricular activities such as community service initiatives and lunchtime sporting events whereby students could compete to earn house points. Sporting competition appears to be the most common type of house-related extracurricular activity, also being highlighted by Coughlan (2004) and Dierenfied's (1976) case studies, as well as being a key feature in Oxley's (1989) general description of house-system organisation. Two key gaps therefore emerge within this literature. Firstly, even a vague estimate of the ideal or common frequency of such activities is difficult to ascertain as activities are simply referred to as a general school feature. The second gap concerns the nature of the activities themselves: in terms of inter-house activities, the variety of activities to participate in is a key aspect that has frequently been overlooked. School connectedness has been shown to be increased by participation in extracurricular activities based on students' interests that involve the students and staff participating together. (Rowe & Stewart, 2009). It is highly unlikely that every student's interest lies in sport; therefore school activities need to cater for a range of

student interests in order to achieve this connectedness. Furthermore, Fullarton (2002) stated that students at schools which have the resources or the commitment to provide a broad range of extracurricular activities and encourage students to participate generally have higher levels of engagement than those in schools that do not.

Mahoney, Cairns and Farmer (2003) identified 3 main features of extracurricular activities:

1. They are not a requirement for graduation. Participation is through intrinsic motivation.
2. They are structured—run by one or more adults—and they meet regularly in a context relevant to the activity.
3. Participation in these activities requires effort (i.e. they are challenging).

As long as these aspects generally define the activity, the potential for skill building and competence promotion exists. Since these criteria are applicable to any type of extracurricular activity (not just sports), it raises the question of why other types of activities are so often overlooked. The importance of offering not only varied activities but activities that motivate and interest students is emphasised by Dierenfied's (1976) detailed case study of 10 English schools. With the exception of sports, in terms of actual student perceptions and involvement with respect to the house system it was found that the students seldom participated in any of the house activities. Less than half believed the house activities were 'interesting', there was plenty of variety and the inter-house games were worthwhile. This lack of enthusiasm for house activities was somewhat reflected in the number of students who felt a sense of 'loyalty' to their house, being only just over half. It is apparent from these results that the schools involved needed to address the skew of having a predominantly sports-dominated purpose of the houses by creating a more engaging and involving atmosphere and promoting participation in academic and social endeavours within the

houses in order to boost students' morale and sense of connection and loyalty to their house. The basis for schools offering varied types of extracurricular activities may also extend to gender differences, with Fullarton (2002) suggesting that males are more likely to be engaged in school if there are activities offered that are typically appealing to young males, while females benefit more from activities that focus on developing a strong self-concept of ability and a positive perception of the school climate.

Additionally, by comparing systems between schools and interviewing staff, the current study aims to explore the significance of inter-house and intra-house activities. While the majority of house-system studies predominantly focused on highlighting activities run competitively between houses, very little has been discussed in relation to activities run within the houses themselves. These activities focus on enhancing student collegiality and tend to be social in nature, promoting personal and social development, teamwork and wellbeing (Brennan, 2012; Kyriacou, 2014). That said, Brennan (2012) noted that in one particular school activities between houses were preferred to those within in order to achieve a level of consistency and afford all students similar experiences, minimising opportunities for stigma or 'house envy'. While the chance of this occurring is almost inevitable within a system that grants some degree of autonomy to the head of house, Brennan added that the school still acknowledged the importance of such team-building activities and conducted them on a weekly basis.

The number of intra- and inter-house activities, as well as the variety of activities and the number of students per house, may all contribute in varying degrees to the foundations for a house system to be effective in achieving its purposes of facilitating administration, wellbeing and engagement. These have been designed to be explored using the current proposed model. In addition, there are factors that are

more unique to the individual students rather than being an element of the school's structure and organisation itself. The present model divides these factors into demographic factors—those that are out of the realm of influence of the school or house system itself and those that are directly or indirectly a product of the house system. Overall my proposed model provides a framework upon which empirical analyses can collect tangible data relating not only to the degree to which a school's house system as a whole influences the 3 main constructs, but also highlighting whether certain aspects of the house system are more significant in influencing these constructs than others. This innovative mixed-methods approach may therefore complement the array of qualitative and/or anecdotal case studies currently available (Brennan, 2012; Green, 2006; Coughlan, 2004; Logan, 2011; Nixon et al., 2010) and any future research within this realm.

Independent Variables: Student-centred

Student Background and Contextual Factors

There are a number of demographic factors unique to each student that may potentially influence any or all of the 3 DVs. For instance, Fullarton (2002) suggested that extracurricular activities are particularly important for males in facilitating their engagement and connectedness with school. They also thrive on receiving encouragement and ongoing support from staff. The main focus for schools in relation to female students is more to assist in the development of their perceived self-efficacy and self-confidence (Dhar & Brock, 2014; Fullarton, 2002). Skelton, Francis and Smulyan (2006) stated that behavioural differences between genders are theorised to potentially stem from: (1) biological or innate reasons; and (2) societal constructs and norms. Of particular note is that as children move into adolescence (within secondary schools) they analyse their own masculinity and/or femininity, and those who do not—or cannot—conform to the social norm expected of them may be exposed to

negative experiences such as bullying or alienation (Skelton, Francis & Smulyan, 2006). Thus, particularly at this crucial point in their lives, secondary school student engagement and connectedness to school may be affected not only by how they view school, but also by how others in the school view them. Skelton, Francis and Smulyan (2006) emphasised the need for schools to embrace gender plurality among students, rather than clearcut male and female roles and expectations. Based on Fullarton's (2002) identification of gender differences in student engagement, I anticipate that male students' engagement and connectedness with school may hinge more on their involvement in extracurricular activities and physical participation, while perceiving a positive school climate and sense of self-efficacy is more important for girls. However, if schools and society in general are indeed becoming more pluralised in their gender roles and norms, as Skelton, Francis and Smulyan (2006) suggested, this difference may be minimal.

In addition to controlling for gender, there are several other contextual factors that may influence students' engagement, connectedness and staff-student relationships. A child's SES is been known to play a role in school culture and is recommended to be controlled for when comparing findings between schools (Sammons, Hillman & Mortimore, 1995). A main outcome of socioeconomic disparity relates to the degree of support the child receives at home, with those from higher SES backgrounds generally having higher levels of support at home. High engagement in school, however, can moderate negative effects of a students' SES (Fullarton, 2002). The present study draws upon the ICSEA to gauge the SES of the school and its attendees; this is an index that factors in SES-related variables such as parents' occupation and education, geographical location and Indigenous population (ACARA, 2015).

Parents' highest level of educational attainment is examined in the present study, as it has been suggested to influence their decision about which school sector to enrol their children in (Anderson, 1992). This poses the interesting question of whether students who have parents with higher levels of education—and who are therefore more likely to be enrolled in a private school (Anderson, 1992)—are more engaged in and connected to school or have better relationships with their teachers. Of particular relevance is Anderson's (1992) finding that students in a private school may have a small but significant advantage in academic progress over those in public schools, which may tie in with the relationship between parents' education and their choice of school sector for their children. Further, I hypothesise that students who at least know their parents' highest level of academic achievement may be more engaged in school, since it may indicate a greater understanding of their parents' educational pathways and potentially provide evidence of discussions between parents and children regarding the parents' own school experiences.

Students' cultural background is also considered since, for example, there is a large gap in educational attainment between Indigenous and non-Indigenous Australians. Moreover, the Indigenous high school completion (finishing year 12) rate is almost half that of non-Indigenous Australians and unexplained absenteeism is more prevalent with Indigenous students (Thorpe, Bell-Booth, Straton & Thompson, 2013). Another example comes from students of Asian background. In referring to Asian American students, Gao (2017) stated that students from Chinese, Korean, Filipino and Vietnamese backgrounds had additional pressure placed on them to conform to their cultural norms, including a high emphasis on education, respect for authority, being reserved and having higher educational and professional aspirations for boys. These two studies concerning students of Indigenous and Asian backgrounds

suggest that cultural background may influence the DVs in our study, so cultural background is therefore included as a demographic question in the student survey.

Lastly, students' educational aspirations in general—not just as a result of cultural pressure—have been suggested to be formed by higher levels of engagement in school (Lamb et al., 2004; Mahoney, Cairns & Farmer, 2003). My focus in relation to measuring aspiration is on whether students have—or desire to have—a leadership position within the school. This in itself has been used by schools to engage students in their school and house system (Green, 2006; Logan, 2011; Oxley, 1989). The offering of leadership opportunities to students was in fact one of the key elements of an intervention known as the Gatehouse Project spanning 26 schools in Victoria, which was designed to improve student wellbeing, increase school connectedness and increase students' everyday coping skills (Bond et al., 2001; Centre for Adolescent Health, 2004).

House-Based Engagement, Connectedness and Staff–Student Relationships

While controlling for individual contextual and demographic factors such as gender, SES, cultural background and aspirations, a main objective is to assess students' personal attitudes and self-reported behaviours in relation to specific aspects of the house system. This aspect of my model—and the survey questions associated with it—is designed to provide me with a means of measuring a student's levels of engagement and connectedness with their house, as well as their relationships with house staff. For house connectedness, elements in my model include the student's perception of friendly rivalry between houses, a sense of culture and support within their house, a feeling of being part of a community and the degree to which they identify with their house. Students' house engagement in my model relates to how involved they are in—and their attitudes towards—house-related activities such as

assemblies, competitions and tutor group, their willingness to contribution to their house and whether they want their house to succeed. Their perceptions of the staff within their house, including the nature of their relationships with their tutor and head of house, are included in our model as a means of measuring house staff–student relationships. Including all of these specific aspects of the house system in a model that can then be empirically tested allows us to investigate which elements play the most significant role in a student’s life as a member of a house. Moreover, it may also identify aspects that mediate their whole-school experience.

Summary

As discussed, my hypothesised model comprises 3 DVs that are constructs associated with the benefits of the house system based on previous research. These constructs are school connectedness, school engagement and staff–student relationships. The model hypothesises that these constructs are influenced by house-related IVs at both the school level (e.g. number of students per house, number of activities and management system) and student level (e.g. relationships with house staff, sense of community and engagement in activities). Additionally, there are contextual variables at both the school level (school sector and school size) and student level (gender, SES, cultural background and aspirations) that are also suggested to influence the 3 main constructs.

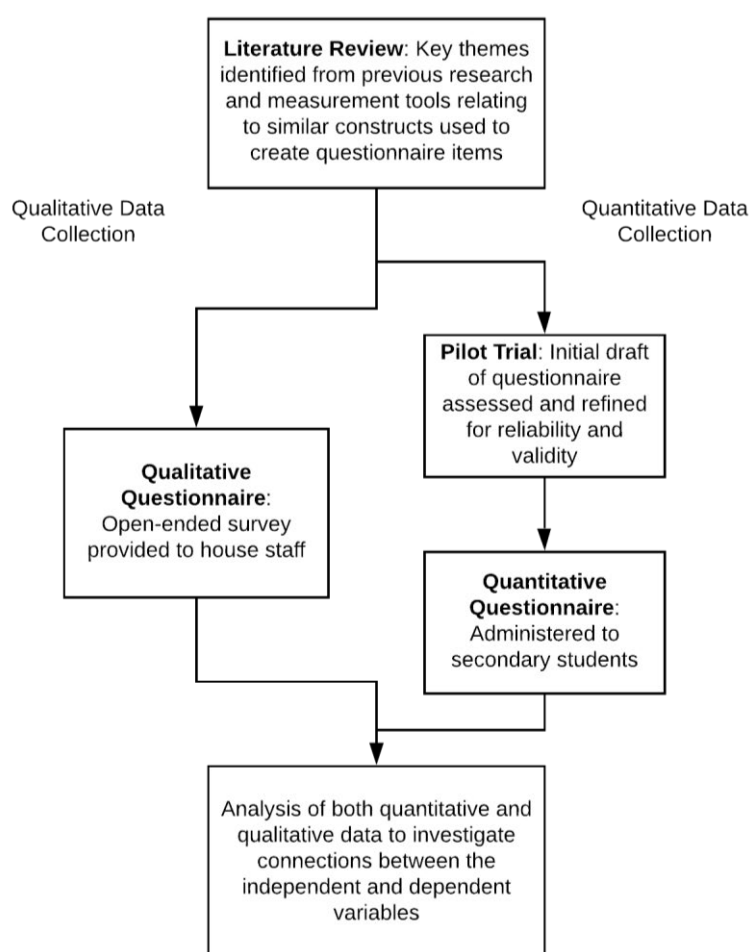
Research Design

The present study has involved the simultaneous collection of quantitative student data and qualitative staff data, with the intention of the qualitative data corroborating or potentially explaining any trends observed in the quantitative phase. The study has therefore subscribed to a concurrent triangulation mixed-methods design (Creswell & Plano Clark, 2006). This can be particularly useful if the

quantitative results are unexpected (Creswell, 2005). The quantitative component has made attempts to address the study's research aims, while the qualitative component has sought to clarify and offer in-depth insights pertaining to the attitudes and opinions of staff who work within the house system. For clarity, the methodological design for the present study is shown in Figure 4.2.

Figure 4.2

Concurrent triangulation mixed-methods design of the present study



The quantitative component of the design initially involved developing a questionnaire designed to examine the degree to which students feel a sense of connectedness to their house and school, their engagement within their house and school, and their relationships with the staff within their house and school. The

questionnaire is informed by previous research and measurement tools within the realms of pastoral care (Crouch, Keys & McMahon, 2014; Parker, Lee & Lohmeier, 2008), student engagement (Li & Lerner, 2013) and school connectedness (Brew, Beattie & Watt, 2004). Although inspired by previous measurement tools, the questionnaire is unique in its relevance specifically to aspects of the house system. The questionnaire was then used in a pilot trial and adjustments were made to the questionnaire in order to achieve greater validity and reliability. This refinement process is discussed in detail in Chapter 5. Once finalised, the questionnaire was then completed by a broader sample of secondary students from different school sectors within Victoria (private and Catholic schools).

The qualitative component of the design consisted of staff at participating schools completing an anonymous online survey with open-ended questions relating to their attitudes towards, and involvement within, the house system. The list and development of the student survey questions and the staff survey questions are presented and discussed in greater detail in Chapter 5.

Chapter 5 : Methodology

A mixed-methods approach has been utilised in order to examine the effects of the house system in detail. This consisted of a quantitative phase for students and a qualitative phase involving relevant school staff. Mixed-methods approaches to researching pastoral care and house systems have been used successfully in previous research, including studies by Brennan (2012) and Chittenden (2010). Such an approach is suitable for the present study in order to adequately address my overarching aim: to empirically investigate the effect of the house system on secondary students. This incorporated the aim of developing a questionnaire to quantifiably measure the degree to which aspects of the house system or school structure affect aspects of students' school experience. Consequently, this has enabled me to compare schools of different sectors and therefore potentially highlight more influential school features, which is another aim of this project. The collection of qualitative data from staff associated with the house system was designed to address my third aim, which is to gain an indication of the staff culture regarding the house system within each school. This data has provided insights into commonly held beliefs and attitudes from those who work at the coalface of the house system, as well as staff behaviours that influence student outcomes, along with further identification of strengths and limitations, and recommendations for improvement. Qualitative data was also collected in order to assist the interpretation and/or try to explain trends that emerged from the quantitative data phase.

Methodological Approach—Quantitative phase

Quantitative student data was collected via a questionnaire I developed—entitled the House System Assessment Survey (HSAS)—to measure the 3 main constructs surrounding the house system as identified by the literature: school

engagement, connectedness and staff–student relationships. A quantitative approach was adopted to empirically examine any effect of the house system on these constructs, as well as allowing more accurate comparisons of house systems and associated effects between different schools. In addition to being able to control for demographic variables, it also allowed me to compare student populations within the schools such as year level and house. A quantitative approach also more easily accommodates larger sample sizes appropriate for gauging an average of any effect across multiple schools (Creswell, 2014). More specifically, the present study has subscribed to an explanatory correlational design examining the co-variance between variables relating to the school house system (e.g. house engagement and house connectedness) and variables relating to the whole-school context (e.g. school engagement and school connectedness). A first draft of the questionnaire was developed and tested with a sample population ($N = 524$) to initially gauge its reliability and conduct factor analyses to evaluate how well the items loaded onto distinct factors. Following refinement of the questionnaire through this process, a second version was developed and distributed to other separate student populations in different secondary schools. The results from this final version of the HSAS are discussed in Chapter 6 and have been used as the basis for the main quantitative data analysis within the present study. All quantitative data in this study was analysed using IBM SPSS version 25.

Development of the HSAS—First draft

Findings and suggestions from previous literature formed the foundation of the first version of the HSAS that was tested in the pilot trial. The questionnaire was developed with the intention of being used within the secondary school context due to my background in secondary schools. Additionally, while the house system may be present in primary schools (Shepherd, 2009), previous research relating to the system

focuses predominantly on secondary schools, where it appears to play a more significant role in the school community and in student management. That said, future studies may extend upon the present version of the questionnaire by adapting it to the primary school context, since similar house system benefits found in secondary schools have also been observed in the primary sector (Shepherd, 2009).

The first draft of the HSAS consisted of a set of demographic questions (including gender, year level, ethnic background and parent educational attainment) all of which were designed to allow for comparisons to be made between groups of participants and to control for particular variables such as cultural factors. Justifications for the inclusion of demographic questions within the questionnaire are outlined in Appendix D.

These initial items also required the student to record their house and tutor group to potentially allow for comparisons within schools (e.g. different tutors and different heads of house may use different approaches with their students) or between schools (to compare the effects of slight differences between systems). Such comparisons within the house system itself may be beneficial for future users of the HSAS. However, since participating staff in the qualitative phase of this study were anonymous, it was not possible to link particularly effective houses or tutor groups to strategies or approaches employed by specific staff in the present study. This data was therefore useful to me more so that I could simply be aware of the spread of students across the tutor groups and houses within the sample population.

The items that form the crux of the questionnaire were developed following an extensive literature review that examined a range of studies concerned with pastoral care and the potential effects of the house system. These questions can be divided into 3 main groups based around the 3 main constructs of engagement, connectedness and staff–student relationships. Each of these groups can then be subdivided into two:

those variables that relate to the school structure and organisation as a whole, and those that relate to an aspect of the school's house system. The staff–student relationships and connectedness groups consisted of 5 questions each, while the two engagement groups consisted of 6 questions each. The theoretical reasoning behind each item's development and inclusion—and the specific studies from which they drew—are outlined in Appendix E. Some of the key previous questionnaires that inspired the items in the HSAS include the School Connectedness Scale (Parker, Lee & Lohmeier, 2008) and the Life Stressors and Social Resources Inventory—Youth Form (LISRES-Y; Crouch, Keys & McMahon, 2014).

Pilot Trial

Participants

A pilot trial using the draft HSAS was conducted with secondary students ($N = 524$) ranging between year 7 and year 12 from two co-educational Catholic secondary schools located in Victoria, Australia. Both schools had virtually identical house-system structures and a similar level of emphasis on house-related activities and initiatives. One school was a single campus inner-regional school with 840 students enrolled in 2017. The school had a significant emphasis on utilising the house system and building students' identity with their house. House assemblies were held every 4 weeks and every 4 weeks there was a whole-school assembly. It offered a variety of inter-house competitions including swimming, athletics and cross-country. It also conducted inter-house sport with year 7 and 8 students every fortnight. The student uniform incorporated students' house colour into the sports polo shirt and each house had a designated meeting area that could be identified, with doors on buildings being the colour of the designated house. On a more superficial level, the students had a house-coloured lanyard for their locker key and the locks for their lockers were also the colour of their house. The students all used the same type of laptop and these had

covers with the school logo and elements of their house colour. The students were divided into 8 houses, each subdivided into 5 tutor groups consisting of 20–23 students each. Each house was led by a head of house who led the team of 5 tutors and oversaw the pastoral care of the students within their house.

The second school had two campuses located within the same metropolitan region. The more recently established campus had 630 student enrolments as of 2017, while the other had 830. Like the first school, they also organised their students and teaching staff into 8 houses and ran large inter-house competitive events such as swimming, athletics and cross-country. Smaller inter-house competitions included chess and occasional lunchtime activities that the houses took turns in facilitating. These consisted of novelty games such as a ‘lip-sync battle’ and an array of party games. Houses competed for points throughout the year that were tallied at the end and the house with the most points was awarded the house shield. House points could be awarded or deducted based on other facets of school life as well, including school attendance. The school SRC was made up of representatives from each house and, similarly to the first school, students’ sense of identity with their house was reinforced through the school uniform (e.g. house colour on sports uniform jumper) and items such as blazer badges. Each house was divided into tutor groups of approximately 20 students each; however, the larger campus had one head of house leading each house, while the smaller campus had only four heads of house responsible for two houses each.

Method

Prior to distributing the surveys to the students, parents were informed of the survey and consent was obtained for their children to participate. Students whose parents had provided consent were given the survey to complete during tutor group time. This is time set aside—typically around 15 minutes—in the morning before

classes for students to meet as a group with their tutor. This was therefore a suitable time for them to complete the survey, which took approximately 10 minutes for students to complete. The surveys were then immediately collected by one of the researchers for analysis.

Results

Upon collection of the data, several statistical analyses were conducted in order to highlight any areas for improvement of the questionnaire. An exploratory factor analysis (EFA) was conducted in order to determine whether the 6 intended subsets revealed themselves as separate factors within the questionnaire. With maximum likelihood, a direct oblimin rotation and only accepting item eigenvalues above 0.3, it achieved significant Bartlett's sphericity and goodness-of-fit tests, an excellent KMO of 0.928 and 6 distinct factors explaining 50.32% of the total variance. Table 5.1 illustrates the item loadings produced with this analysis.

Table 5.1

Initial item factor loadings for the HSAS (pilot study)

Items	Construct Intended to Measure	Factor Loading
16, 3, 31, 12, 19, 32	Engagement (within house)	Factor 1
20, 10, 27, 4, 13, 23	Engagement (whole school)	Factor 3
22	Connectedness (within house)	Factor 2
24, 6, 1, 11	Connectedness (within school)	Factor 5*
5, 15	Staff–student relationships (within house)	Factor 6
17, 30, 8, 14, 2	Staff–student relationships (within school)	Factor 5*

* Items from both the 'connectedness (within school)' and the 'staff–student relationships (within school)' constructs loaded onto factor 5.

Along with school connectedness and school staff–student relationships co-loading onto one factor, I was concerned that out of the 5 items designed to measure connectedness within the house, only one loaded onto its own factor. The other items were spread across two other factors, but primarily co-loaded onto factor 1 with the items for engagement within the house. Therefore, a second EFA was conducted in order to try and achieve a standalone factor with those items. This follow-up analysis

used principal axis factoring with a varimax rotation, excluding items with eigenvalues less than 0.3. It also identified 6 total factors but this time the variance explained by these factors was slightly less at 50.19%. This further revealed co-loading of items from the house engagement and house connectedness constructs.

Each of the 6 intended subsets of questions were assessed using Cronbach's alpha to identify and remove particular items within each subset that were negatively impacting on that subset's reliability. Following this procedure, all of the subsets—staff–student relationships within whole school (5 items, $\alpha = 0.787$), staff–student relationships within house (5 items; $\alpha = 0.743$), engagement within whole school (5 items; $\alpha = 0.816$), engagement within house (6 items, $\alpha = 0.848$), connectedness within whole school (4 items, $\alpha = 0.745$) and connectedness within house (4 items, $\alpha = 0.795$)—achieved satisfactory reliability.

Outcomes From Pilot Study

The reliability tests revealed that removing item 22 ('I would feel upset if someone said something bad about my house') would result in an increased Cronbach's alpha for the house connectedness construct from $\alpha = 0.795$ to $\alpha = 0.839$. Similarly, removing item 29 ('I would feel bad if someone said something bad about my school') would lead to an increased Cronbach's alpha for the school connectedness construct from $\alpha = 0.745$ to $\alpha = 0.784$. Both of these items were therefore removed from the questionnaire in order to achieve greater reliability for these constructs. A third item (item 9: 'the teachers in my house often get involved in house activities') was also removed from the questionnaire as not only would it lead to a slightly higher Cronbach's alpha for the staff–student relationships (within house) construct (from $\alpha = 0.743$ to $\alpha = 0.776$) but it had weak correlations with the other items in that intended subset.

Given the degree of items from separate intended constructs cross-loading onto shared factors, the researchers had concerns regarding the validity of this initial version of the questionnaire. Despite the items being drawn from measurement tools used by previous studies to examine school connectedness, engagement and staff–student relationships, the cross-loading of items seen in the analysis of this questionnaire highlighted a degree of conceptual overlap of these constructs.

Following the analysis of the pilot trial, the final adjustments made to the first draft of the HSAS were as follows:

- The survey was moved from being in a paper hard-copy format to being conducted through an online medium. This increased efficiency of completion for participants and greatly minimised the chances of any breach of confidentiality or anonymity. Since the data was already digital and did not require coding from hard copy, this also reduced the risk of any coding or data input errors.
- Demographic questions requiring participants to write answers to open-ended questions such as their house and tutor group were replaced with multiple-choice options. In the trial, questions requiring participants to write answers to questions were occasionally left blank, presumably due to either being uncomfortable adding their handwriting to a survey (worried about identification) or because they were unsure what to write. Multiple-choice options effectively addressed both of these issues.
- The demographic question requiring participants to indicate their ethnic background by selecting from a range of multiple-choice options was changed to an open-ended question. Having it as an option for students to write their own ethnic background gave them more flexibility in answering how they chose to identify themselves, particularly if it was a mixed background.

- A question relating to whether participants had a leadership position was added. Answer choices included ‘yes’, ‘yes, specifically within my house’, ‘no, but I’m interested’ and ‘no’. This allowed investigation of whether the house system has any connection with student leadership and/or ambition. Further, students having a leadership position has previously been correlated with both student behaviour and academic success (Rutter et al., 1979).

The following changes relate to items within the school engagement (whole school) construct. Most of the changes were made in order to make the items more specific to the student’s consistent learning behaviours at school rather than their broad views of their school, which for young teenagers may be more prone to fluctuation based on good or bad events that have happened on the day of the survey.

- ‘I never skip class’ was replaced with ‘I put effort into my school work and in class’.
- ‘I often contribute to class discussions’ was replaced with ‘I try to pay full attention in class’.
- ‘I find school fun and exciting’ was replaced with ‘I often get bored in class’ (reverse-scored).
- ‘School is important for later success’ was replaced with ‘I set myself goals and work towards them’.
- ‘I enjoy the challenges of schoolwork’ was replaced with ‘I study and prepare for tests and assessment tasks’.
- ‘I want to learn as much as I can at school’ was replaced with ‘I want to do the best I can at school’.
- Added item: ‘I complete my homework on time’.
- Added item: ‘I rarely hand in work on time’ (reverse scored).

The following changes relate to items within the school engagement (within house) construct:

- ‘I find inter-house activities and competitions exciting’ was simplified to ‘inter-house competitions are exciting’.
- ‘Contributing to my house where I can help it succeed in the long run’ was replaced with ‘I do not often contribute to my house’ (reverse-scored).
- Added item: ‘I do not find house activities interesting’ (reverse-scored).

The following changes relate to items within the school connectedness (whole school) construct:

- ‘At this school I experience a sense of belonging’ was replaced with ‘I feel like I belong in this school community’.
- Added item: ‘overall I respect and get along well with other students’; this was designed to incorporate more of the participants’ perceptions of their peer relationships in this construct.

The following changes relate to items within the school connectedness (within house) construct:

- Added item: ‘my house is a supportive community’; this was designed to tap into the participant’s perception of the house as a whole community rather than being based on reflections of interactions with specific students, which may be more likely with items such as ‘the other students in my house support me’.

An interesting observation was that the items relating to students’ perception of their relationship with their tutor group teacher did not load onto the same factor as those items relating to their head of house. This suggests that there may be an overall difference in the quality of relationships between these two house staff members. Nonetheless, since they are both house staff members and the construct relates to

staff–student relationships within the house as a whole, no change was made to these items.

The changes made to the HSAS following the pilot trial ultimately led to a second version being produced. This revised version was then used in subsequent testing in two other schools—schools A and B—to collect the main data to be used in the present study.

Application of HSAS to Collect Main Quantitative Data

This section pertains to the phase of the study that involved recruiting student participants to participate in the main quantitative phase of the project. This process included the collection of quantitative data that has been used to investigate the degree to which students experienced connectedness and engagement within their school and house, and the quality of relationships they had with their teachers and their house staff. The data was also used to assess the quality of the HSAS itself.

Student Participant Recruitment

Parent consent was obtained through parents being sent parent and student plain language statements that outlined the nature of the study, the student participants' ethical rights, use of the data and contact details of the researchers. Parents were given a two-week window to submit their consent via an online form and were sent a reminder halfway through this period. I then collated the responses and sent the school the list of students for whom I had received parental/guardian consent. I also provided the school with a draft email invite to send to participating students that contained an embedded link to the survey and reiterated ethical rights such as it being voluntary, the right to withdraw, anonymity of responses and confidentiality of data. The schools were required to send these invites to the students on my behalf since their internet infrastructure did not allow emails to be sent to student accounts from external sources.

Data Collection

Once the schools had emailed the survey invitation and information to consenting students, the head of wellbeing organised a specific morning for each tutor to allocate time in their morning tutor group session (approximately 15 minutes) for participating students to complete the survey. Teachers who had administered the hard-copy surveys to students in the pilot study reported that students were completing the survey in approximately 10 minutes. This feedback helped determine the morning tutor group time to be a suitable time for most students to complete the survey under similar conditions. The tutors were also provided with instructions to set students who had not received the survey something quiet to do during this time such as reading the daily bulletin, checking their timetable for the week or mindfulness colouring. Such activities would not only allow the participating students to complete the survey in a quiet environment, but would also minimise the likelihood for distraction or wandering eyes from the non-participating students.

While all data from School A was collected on the one day, in School B several more surveys were completed over a number of days following the designated morning session of testing, mainly from students who were absent on that morning. Two students completed the survey the day after the designated day, one 4 days later and one 6 days later. The ability for absent students to complete the survey in their own time was an advantage over the hard-copy surveys, since the hard-copy surveys had to be collected on the day of testing in order to ensure security of the data. However, a greater amount of time between the main testing day and the students' actual testing day could possibly allow for those students to be influenced by individuals who had already completed the survey. 99% of participants completed the entire survey in School A, taking an average of 5 minutes and 55 seconds to complete it. 94% of participants completed the entire survey in School B, taking an average of 4

minutes and 38 seconds to complete it. A list of the items included in the final HSAS that was used for the main data collection is included as Appendix F.

Two Participant Schools

I invited a number of secondary schools across the 3 main sectors—private, Catholic and public—to take part in the both the quantitative and qualitative phases of the present study. Two secondary schools agreed to take part. Communication was initially by phone call and then through follow-up meetings in person with each school’s head of wellbeing.

School A

School A was a coeducational school located in the outer south-east region of Melbourne, Victoria. Established as just one campus in the early 1980s (Campus I), a second campus was established in the early 2000s (Campus II) located within 15 km of Campus I. Both campuses consisted of an early learning centre that facilitated children from 6 months through to 5 years of age. The students then moved into a junior school at each campus (preparatory to year 4). At year 5 they moved to a middle school area of the school that was dedicated to facilitating year 5 to year 8. Year 9 was in a separate centre some distance away from the rest of the school. This reflected the school’s approach to teaching year 9, which introduced a focus on hands-on activities, community service, team building and character development. Students then returned to the main school area in the form of the senior school from years 10 to 12. The school was of a Christian denomination with 5 chaplains who worked with the counselling team and heads of house to support students and families. The school offered church services throughout the year for staff, students and families to attend.

In addition to the house system, which is described in its own section below, the school managed students within the separate sections of the school: the early learning centre, junior school, middle school, year 9 centre and senior school. Each of these sections was overseen by a head of section (e.g. head of middle school) accompanied by a deputy. Staff in these roles worked with the heads of house to support pastoral care, but also worked with the head of teaching and learning (not present in year 9) to ensure delivery of curriculum and reinforcing of the school philosophy and values. Their primary concern was to foster a positive and productive learning environment for the students within their section. Above the tiers of the heads of house and heads of section, the college executive team included heads of campus, head of wellbeing, business manager, deputy headmaster and headmaster.

According to the Australian Curriculum, Assessment and Reporting Authority (ACARA) website MySchool (2018), School A had a total student population of 2932 as of 2018 from preparatory to year 12 and nearly 300 teaching staff, which made it a large school within the region. It also had 0% Indigenous students and 21% of students had a background other than English (ACARA, 2018). It had a gender balance of 51% boys and 49% girls. ACARA also has a system of comparing schools' Index of Community Socio-Educational Advantage (ICSEA). The ICSEA provides an indication of the level of educational advantage of a school. It incorporates a number of factors including parent occupation, parent education, the school's geographical location and the proportion of Indigenous students (ACARA, 2016, 2018). An ICSEA of 1000 is used as a baseline average, with schools below 1000 being considered to have lower educational advantage and schools above 1000 having higher educational advantage. ACARA (2018) emphasises that the ICSEA is not a reflection of the staff, facilities or teaching programs of the school, but rather the backgrounds of the school's students and parents. Schools with similar ICSEA values are therefore

predicted to have students who achieve similar standardised testing results (ACARA, 2016). School A had an ICSEA of 1004, which placed it slightly above the national baseline average of 1000.

House Structure

Students and teaching staff were placed into one of 8 houses. Each house was assigned a colour and named after a person who played an important role in the founding or early days of the school. The house system was present in the primary, middle and senior school sections. That said, the house system was not heavily emphasised in the primary school and only started to play a more major role in student management from year 5, which was the first year of middle school. This was due to junior school students having a core teacher who taught them for most of their subjects and this person was essentially the port of call for pastoral care. The houses in each section each consisted of three tutor groups of approximately 20–25 students that were managed by designated staff: tutors. A diagrammatical representation of the house-system structure within the middle and senior sections is presented in Figure 5.1.

Figure 5.1

The house system of pastoral care within the middle and senior sections of School A

Middle School				Senior School			
<i>House A</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House A</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House B</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House B</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House C</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House C</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House D</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House D</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House E</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House E</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House F</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House F</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House G</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House G</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3
<i>House H</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	<i>House H</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3

The tutors met with their tutor group for 15 minutes every morning to go through bulletin messages, issue reminders and check in on their students' progress and wellbeing. The student population of each house in each section was approximately 60–70 students and a head of house oversaw each house in the middle school and senior school. Responsibilities of the head of house included overseeing student discipline, mediating conflict between students, supporting their house tutors, organising house assemblies and activities, monitoring student welfare and wellbeing, and communicating with parents. Although the heads of house and their tutors worked together within their houses, they did not have allocated time to meet together as a house staff team.

The school offered a large number and variety of house-related extracurricular activities. Houses competed against each other in yearly athletics, swimming and cross-country carnivals, as well as in performing arts, public speaking, mathematics,

debating, spelling and reading competitions. The houses met together once a fortnight when students took part in intra-house activities relating to school transition team building and study skills. Each house was assigned a particular area of the school for these assemblies (e.g. the art area for one house, the science area for another house).

On the day that there was a house assembly, students could wear their house-coloured polo shirt. In addition to a house polo shirt, students also wore ties that incorporated a house-coloured stripe and were provided with house badges to wear on their blazers, and house captains had embroidered blazer pockets.

In the main foyer of each section of the school, there was a display featuring descriptions of each of the founders whom the houses were named after along with their representative house colour. There were also boards with photos of past heads of house for each house.

School B

School B was a single-campus Catholic co-educational school located in a large ‘inner regional’ (ACARA, 2018) town further east of Melbourne than School A. The school catered for students from years 7 to 12. Years 7 and 8 offered students a broad curriculum encompassing all learning areas. A number of elective subjects were introduced in year 9 and the choices were broadened as they moved into year 10, where they could also engage in an applied learning program. As with School A, the students could study a range of VCE (Victorian Certificate of Education) subjects in years 11 and 12. Alternatively, the school offered students a selection of VETiS (Vocational Education and Training) programs and the VCAL (Victorian Certificate of Applied Learning) program.

The school’s pastoral-care structure consisted of several components including their house system, tutor groups and heads of house, which are described in the *house structure* section below. The school also offered: a learning support area that assisted

students with special needs (e.g. speech pathology, literacy intervention and academic extension); a counselling team consisting of the school psychologist, counsellor and chaplain; a careers office to aid in program selection, work placement and tertiary application; and special programs that were specifically designed to re-engage small groups of students with their learning environment. This pastoral-care system was overseen by the school's deputy principal: pastoral care.

According to the ACARA website MySchool (2018), School B had a total student population of 844 as of 2018 and 78 teaching staff. It had 1% Indigenous students and 2% of students had a background other than English (ACARA, 2018). It had a gender balance of 47% boys and 53% girls. The school's ICSEA value was 1016, which placed it slightly above both the baseline national average of 1000 and School A's ICSEA of 1004.

House Structure

Like School A, School B organised its students and staff across 8 houses. Each house had its own colour, motto and logo, and each was named after a significant global historical figure in Catholicism. Each house consisted of approximately 110 students and was managed by a head of house who oversaw the wellbeing of students within their house and organised house assemblies, activities and student teams for inter-house events. Heads of house also managed a team of support staff and 5 tutors, each of whom was responsible for their tutor group of approximately 20 students across years 7 to 12. Tutor groups met every morning for 20 minutes to essentially conduct the same types of activities described for School A: marking attendance, communicating important notices for the day and checking in on students' wellbeing. The tutor was typically the first port of call for student issues. The house structure of School B is illustrated in Figure 5.2.

Figure 5.2

The house system of pastoral care within School B

Whole School – Years 7–12					
<i>House A</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House B</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House C</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House D</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House E</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House F</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House G</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5
<i>House H</i>	Tutor Group 1	Tutor Group 2	Tutor Group 3	Tutor Group 4	Tutor Group 5

The school timetable had a block of time dedicated to assemblies and other initiatives. Around once per term, this time was allocated to heads of house to run an assembly or conduct house-based activities. In addition, the timetable also allocated an afternoon for year 7 and 8 students to engage in inter-house sport once a week. From this house sport, as well as the other main inter-house events (athletics, swimming, performing arts, visual arts and academic achievement), points could be won for the house and these were tallied at the end of the year. The house that accumulated the most points won the champion trophy.

The house system could be physically observed in a number of different ways around the school. Each student had a large house-coloured school sticker on their device, as well as a house-coloured lock on their locker, a house lanyard and a badge for their blazer with their house name and colour. For house sport they had a house-coloured shirt and they acquired another house-coloured shirt on year 9 camp, where the activities were run within house groups. The school hall had banners with the

house names hung up and there were portable banners to bring to whole-school or inter-house events.

Methodological Approach—Qualitative Phase

This section pertains to the phase of the study concerned with obtaining thoughts, opinions and attitudes from secondary school staff regarding the house system. This phase links with one of my aims of the project: to use qualitative data from staff surveys to complement the results obtained through the student surveys and to gain an indication of the staff culture regarding the house system within each school. The open-ended questions in the staff survey relate to the perceived role of the system within their school, its strengths and weaknesses, and their role within it. This data complements the quantitative data obtained from the student surveys in that it paints a more detailed picture of the house system, highlights key factors that may help explain some of the quantitative data variance, and identifies new themes emerging that have previously not been observed or predicted. Such complementation was previously achieved in another mixed-methods study design by Chittenden (2010), which helped inform my decision to include a qualitative component in the current study. Chittenden's study examined staff perceptions of the house system, with the qualitative component involving semi-structured interviews. The qualitative data collected by Chittenden (2010) assisted the researchers' attempts to explain the trends observed through the analysis of their staff quantitative survey and also provided opportunities for staff to provide suggestions for improvement from their perspective.

This phase draws parallels with Brennan's (2012) qualitative study, in which staff were asked to judge the house system's contribution towards building a sense of community and staff collegiality. The study successfully identified several positive

aspects of the house system including increased student familiarity. Due to the open-ended nature of the questions, it allowed for other points to be raised such as some staff feeling that being assigned to a house restricted their ability to interact with the whole school community. The main points of difference between Brennan's (2012) study and mine is my use of a survey compared with Brennan's use of interviews, and that the schools in this study had long-established house systems while Brennan's study was an action research study within a school that had only recently adopted the system. My study also consists of more questions that paint a broader picture of how staff perceived the system and their role within it.

Qualitative data was collected via an online survey that consisted of contextual/demographic questions and open-ended questions relating to their role within—and opinions towards—the house system in their school. I decided on an online survey approach over an interview approach for several reasons:

1. An online survey would be more convenient for teachers—particularly heads of house—to fit into their busy and sometimes unpredictable schedules during the day.
2. It offered staff the chance to complete the survey after-hours when they might have more time to complete it.
3. Staff had more time to contemplate their answers than the set duration of time that an interview would provide.
4. The presence of the researcher as an interviewer might affect how interviewees responded (Creswell, 2014).

This being said, I am conscious of the caveat that this survey format would not allow for the impromptu probing of the participants for further elaboration or additional information to complement their answers. I attempted to account for this with the encouragement within the survey questions for participants to try to justify

their answers. The questions were purposefully made to be as open-ended and undirected as possible, since hypotheses are not tested within qualitative research (Creswell, 2014). The use of open-ended questions was also important since they allowed for participants' thoughts and experiences to be voiced without being constrained by the researcher (Creswell, 2014). The questions were designed to allow a general profile of the house system to be developed from the perception of the staff member. This included what its purpose was, whether it fulfilled this purpose, its strengths and weaknesses, and questions regarding the role they played within the system. Rather than the more random sampling used to recruit participants in the quantitative research phase, the qualitative phase involved purposeful sampling to include only key house staff—tutors and heads of house—within my sample population. Answers to the online survey were then analysed for overlapping themes, as well as other suggestions from staff experiences that might complement the quantitative data. Unlike the HSAS in the quantitative phase, a pilot trial was not conducted for this qualitative staff survey. The results are not focused around particular intended constructs as with the HSAS, so it was less crucial for us to run a pilot test to determine initial patterns of responses. In order to effectively analyse the quantitative student data later on the project, it was important that the questions in the HSAS were fine-tuned (from the pilot study) in order to measure each of the subscales as accurately as possible. However, in the qualitative staff survey each question was essentially a standalone question asking for the participant's opinion or suggestion about a particular aspect of their role or the house system. Given their open-ended nature, these questions were open to a wide range of possible answers and therefore a pilot study would not necessarily have been efficacious in refining the survey.

Staff Participant Recruitment

Rather than the random sampling used to recruit participants in the quantitative research phase, my qualitative phase involved purposeful sampling—a process of intentionally selecting individuals to learn more about a central phenomenon (Crewsell, 2014). In this case, it involved selecting a more targeted group of staff based on their positions within the school: tutors and heads of house. A list of the names and work email addresses of all tutors and heads of house within the whole school was provided to me by liaisons within each school, sorted by house. Each school consisted of 8 houses, so I randomly selected 4 houses per school and sent invitations—including plain language statements and the online survey link—to the tutors and heads of house within these randomly selected houses. For School A, which had the houses split across middle school and senior school, invitations were sent to both the middle and senior school staff from each of the 4 selected houses.

Data Collection

Fortunately, staff email addresses accepted emails from external sources—unlike the student email addresses—and therefore I was able to send the invitations from my university email account rather than from the school. I believe this helped emphasise that their information would only be accessible by myself as the researcher and was not going to be collected or read by their employer. Staff were given 3 weeks to complete the survey and were sent a reminder after one week. 100% of participants completed the entire survey, which took an average of 11 minutes and 27 seconds to complete.

The staff survey itself consisted of 3 main sections:

1. Background/contextual questions.
2. Questions regarding the house system as a whole.
3. Questions relating to the individual's role within the house system.

The first 3 questions were designed to simply provide a general idea of the staff member's context within the school, including the name of the school (the same survey was sent to both schools), whether they were a tutor or a head of house, and how many years they had been in their current role.

The participants then answered 4 questions designed to gauge their perception of the house system within their school:

- 'What do you think are the main overarching goals of your school's house system?'
- 'Do you think your house system serves these goals successfully? Please explain.'
- 'What are the key strengths of the house system?'
- 'How could the house system in your school be improved?'

Gaining an understanding of the perceived goals of the house system from those staff who were at the coalface of it in the school has allowed me to compare this perception to what the student data may reveal about what impact it may actually have. Gauging their perception of the goals of the house system also provided me with an insight into how staff perceived the overall purpose of the house system and the degree to which they were informed of its role within their school. An assessment from the participant as to whether the house system was indeed serving these goals allowed the participant some freedom to further elaborate on their perceived purpose of the system and what they felt it should achieve. Asking for suggestions of strengths provided opportunities for themes to emerge that may tie in with my hypothesised model (Figure 4.1) involving the effect of the house system on staff–student relationships, while also allowing opportunities for new suggestions of potential benefits that may have otherwise been overlooked in previous research. Participants suggesting areas for improvement also allowed potential highlighting of limitations of the house system that may not have previously been identified.

The third section of the survey asked participants questions relating to their role as a tutor or a head of house:

- ‘What do you see as the key responsibilities of your role as a tutor/head of house?’
- ‘Do you feel that you are able to successfully fulfill these responsibilities? Are there any obstacles?’
- ‘What are the highlights of your role as a tutor/head of house?’
- ‘What are the downsides of your role as a tutor/head of house?’
- ‘What kinds of initiatives do you help facilitate in order to benefit student engagement in your house?’
- ‘What kinds of initiatives or activities do you help facilitate in order to benefit students’ sense of connectedness to your house?’
- ‘How do you establish positive relationships with the students in your house?’
- ‘Do you have any other thoughts or comments regarding the house system and its role within the school?’

Several previous studies hinted at the types of activities that tutors and/or heads of house may be required to perform within the house system, including building positive relationships with students (Addison, 2012), parent communication (Oxley, 1989), liaising with education support staff (Fincham, 1991) and familiarising themselves with student academic, social and personal development (Chittenden, 2010). Additional responsibilities of heads of house may include student discipline, oversight of records and planning social activities (Dierenfied, 1976). While these threads from previous—and in some cases very dated—studies help to construct an idea of the significance of staff roles, these roles are still vague and lack specificity. The purpose of this section of the survey was to develop a clearer and more contemporary image of what house staff perceived their roles to be and, in turn, whether there were any obstacles to them fulfilling these responsibilities. This latter

component may tie in with caveats they previously identified in the earlier question asking them to suggest how their house system could be improved, but this question was designed to link more specifically to issues concerning their role rather than the system as a whole.

In the same vein as the previous questions concerning the overall system, I included two questions asking for highlights and difficulties concerning their role as a tutor or head of house. The answers provided to these have helped identify specific aspects of the school structure and organisation that either enhance or diminish the influence of the house system on students, particularly in relation to the development of staff–student relationships. For example, Chittenden (2010) found that while staff felt the house system was useful in addressing individual student issues, not all staff wanted to be a part of the system because it was seen as an extra demand and there was a lack of understanding of their roles as tutors.

The next 3 questions asked participants to suggest ways in which they attempted to enhance student house engagement, house connectedness and the formation of positive relationships with their students. As with the general role that tutors and heads of house play in schools, previous research only provided hints as to what specific initiatives are implemented by house staff to mediate these constructs. Students' level of house engagement has previously been linked with staff running house points–based activities in their classrooms and helping facilitate house extracurricular activities (Green, 2006; Oxley, 1990). Students' sense of house connectedness has also been linked with these types of activities (Oxley, 1989), as well as other staff-supported initiatives including developing house banners, providing identification cards with the house logo and teaching students the origin of their house name (Green, 2006; Nixon, Launay-Fallasse & Watts, 2010).

Staff–student relationships have been associated with the high level of staff–student interaction that is experienced through the nature of the tutor group structure, where tutors play an administrative and/or counselling role (Chittenden, 2010; Dierenfied, 1976; Fincham, 1991). Evidence of the relationships formed between students and the head of house has largely been based on organisational features of the school itself that allow the capability for relationships to develop. For example, heads of house generally have a greater time allowance that enables them to interact more intensively with students who need the most support (Barry & Tye, 1972). Additionally, the nature of the house system itself whereby students remain with the same head of house as they move up through the years also allows heads of house to have greater interaction with students and develop a greater understanding of individual needs (Fincham, 1991).

Exactly what types of strategies and initiatives tutors, and particularly heads of house, employ in order to develop these constructs—or indeed to provide any benefit via the house system—requires further investigation. Hence, these questions in our survey allowed us to gather further evidence in order to help build a more specific picture of what houses and house staff can do in order to achieve any positive outcomes for students. The final question of the survey simply provided participants with a final opportunity to share any previously unsaid thoughts, ideas or concerns regarding the house system or their role within it. The question allowed for a broader answer that was not limited to themes dictated by ourselves as the researchers (e.g. their role in enhancing student engagement) and allowed for ‘unfiltered’ responses from the participants (Creswell, 2014).

Chapter 6 : Quantitative Results

In this chapter I discuss the process of analysing the quantitative data. The analyses described within this chapter address two of the main objectives of this project. The first of these objectives is to investigate, through the development of a questionnaire, the degree to which students feel a sense of connectedness, engagement and positive staff–student relationships within their house and within the wider school context. The second objective addressed is whether house-system–related outcomes differ between school sectors, specifically private and Catholic. This process began with an initial screening of the data and a description of the participants. The quantitative results are then discussed in this chapter in two main parts. The first part examines the House System Assessment Survey (HSAS)—the psychometric measure developed in this project—using exploratory and confirmatory factor analyses to scrutinise the 6 original subscales that the items were intended to measure.

The second part of this chapter examines the findings of the survey in relation to my research questions once the subscales were finalised and computed as variables. Bivariate correlations were produced to guide me with my regression analyses later on in the chapter. This included generating the means, standard deviations and multivariate analyses of variance (MANOVAs) for each of the demographic groups of participations: gender, school, year level, mother’s highest level of education, father’s highest level of education, self-reported ethnic background and school leadership. One of these tests explicitly addressed one of the major objectives of the study: the investigation of a difference in the house variable scores between school sectors.

Multiple regression analyses were then conducted in order to investigate the degree to which house-related variables (house engagement, house connectedness and house staff–student relationships) contributed to the variance in school-related

variables (school engagement and school community). In addition to identifying the strongest predictors, these analyses also allowed for the control of the demographic variables and each of the school-related variables.

Data Screening

Checking the dataset for errors is an essential initial stage prior to conducting statistical tests, as errors in the input or coding of data can lead to inaccurate results (Pallant, 2007). In the present study this included an examination of the dataset for outliers, addressing missing data and examining the skewness of the survey answers.

Outliers

The identification of outliers was an important step in my data-screening process not only to identify and control for response biases, but especially since one of the latter tests—multiple regression—is particularly sensitive to outliers (Pallant, 2007). The boxplots for each item in the survey were inspected for outlying responses. Participants answering surveys in a particular style, such as only providing responses at the extreme ends of the scale, can contaminate the validity of survey data (Baumgartner & Steenkamp, 2001). An analysis of each item's boxplots revealed 7 cases that were found have outlying responses to 6 or more items in the survey (Appendix I, Figures I1–I39).

These cases, presented in Table 6.1, formed a small group of participants who were consistently responding extremely negatively to the survey items. Their answers reflected a disacquiescence response style: the tendency to answer with a negative bias (Baumgartner & Steenkamp, 2001). In addition, these cases consisted of consistent 'strongly disagree' responses, which indicates an extreme response style (Baumgartner & Steenkamp, 2001; Wetzel, Boehnke & Brown, 2016). The combination of a disacquiescence response style and an extreme response style

suggests that participants' responses to the questions were independent of the content of the items themselves (Baumgartner & Steenkamp, 2001; Wetzel, Boehnke & Brown, 2016). These cases were therefore removed from the data to avoid unnecessary skewing of the data.

Table 6.1

Cases with 6 or more outlying answers

Case Number	Number of Items with Outlying Answers
75	6
185	6
222	7
234	15
237	6
282	6
288	11

Missing Data

As seen in Table 6.2, 9 cases (cases 7, 126, 130, 200, 270, 287, 286, 289 and 290) were excluded from the dataset due to having multiple missing answers (excluding the demographic questions) that would adversely affect the data. The proportion of missing answers from these participants ranged between 52% and 100%. The remaining missing values in the dataset were replaced with the mean answer for each item, rounded to the nearest whole number using conventional rounding. The replacement—rather than the coding—of missing values was a requirement for the confirmatory factor analysis (CFA) that was later performed on the data. Descriptive statistics were also generated in order to confirm that all of the values for each item were within the possible range of values for the Likert scale used in the survey: 1–6. This was indeed the case.

Table 6.2

Cases with significant proportions of missing data

Case Number	Proportion of Items Unanswered
7	100%
126	52%
130	100%
200	100%
270	100%
286	52%
287	100%
289	100%
290	100%

Normality

Examining the degree to which the data aligns with a normal distribution is another component of the data-screening process (Pallant, 2007). Through this process I was able to identify whether the participants' responses were spread over the full range of the Likert scale or whether as a whole group they answered more towards 'strongly agree' or 'strongly disagree' overall (known as skewness). As seen in Table 6.3, Shapiro–Wilk tests for all items were significant, indicating non-normal distribution (Shapiro & Wilk, 1965). However, the skewness for 29 out of the 39 survey items lay within ± 1 , which is an acceptable level of skewness (Namli & Demir, 2020).

Table 6.3

Normality testing of the House System Assessment Survey (HSAS) items

Item	Shapiro–Wilk	Skewness	Kurtosis
		SE = 0.147	SE = 0.293
1	0.804***	−1.025	1.928
2	0.843***	−0.698	0.481
3	0.886***	−0.354	−0.094
4	0.760***	−0.963	1.790
5	0.832***	−0.858	0.639
6	0.916***	−0.082	−0.666
7	0.790***	−.982	2.284
8	0.867***	−0.494	−0.167
9	0.804***	−0.638	1.001
10	0.832***	−0.930	1.066
11	0.748***	−1.303	3.468
12	0.835***	−0.741	0.984
13	0.798***	−1.195	1.370
14	0.862***	−0.442	0.575
15	0.688***	−0.920	−0.141
16	0.802***	−0.840	0.909
17	0.787***	−1.215	1.555
18	0.820***	−1.045	0.880
19	0.809***	−1.097	1.849
20	0.835***	−0.684	0.335
21	0.815***	−1.010	1.381
22	0.844***	−0.891	0.885
23	0.643***	−0.643	−0.087
24	0.849***	−0.832	0.637
25	0.906***	−0.266	−0.563
26	0.833***	−0.893	0.778
27	0.833***	−0.818	0.839
28	0.864***	−0.523	0.487
29	0.799***	−1.182	1.746
30	0.808***	−1.019	1.321
31	0.845***	−0.514	0.025
32	0.907***	0.033	−0.901
33	0.898***	−0.258	−0.548
34	0.867***	−0.441	0.015
35	0.861***	−0.751	−0.150
36	0.828***	−0.647	0.802
37	0.798***	−0.763	1.176
38	0.752***	−1.242	2.173
39	0.826***	−0.597	0.481

*** p < 0.001

The items with the highest degree of skewness (< -1) were items 11, 38, 17, 13, 29, 19, 18, 1, 30 and 21. This indicates that, overall, the sample population tended to select ‘agree’ or ‘strongly agree’ for their responses to these items. Fortunately

these skewed items were not localised to one particular subscale but were spread across 4 different subscales: items 11, 13 and 30 related to school engagement, item 18 and 38 related to house engagement, items 17 and 29 related to house staff–student relationships and item 1 related to school connectedness.

Descriptive Statistics

Following the data-screening process, the total sample population consisted of 275 secondary school students from two schools located in south-east Victoria. The following figures illustrate the distribution of the sample population across the various demographic groups including: school, gender, year level, self-reported ethnic background, mother's highest level of education, father's highest level of education and leadership position within their school.

School

Proportion of student participants by school: School A had 70.91% and School B had 29.09% ($N = 275$).

Gender

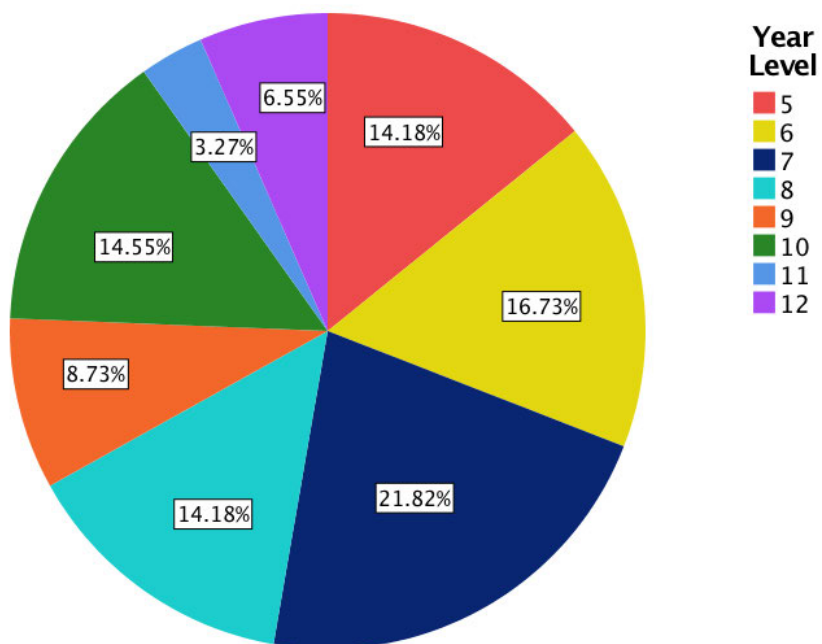
Proportion of student participants by gender: 52.73% of the participants were female and 47.27% were male ($N = 275$).

Year Level

Proportion of student participants by year level (Figure 6.1): year 5 (14.18%), year 6 (16.73%), year 7 (21.82%), year 8 (14.18%), year 9 (8.73%), year 10 (14.55%), year 11 (3.27%) and year 12 (6.55%) ($N = 275$).

Figure 6.1

Proportions of student participants by year level

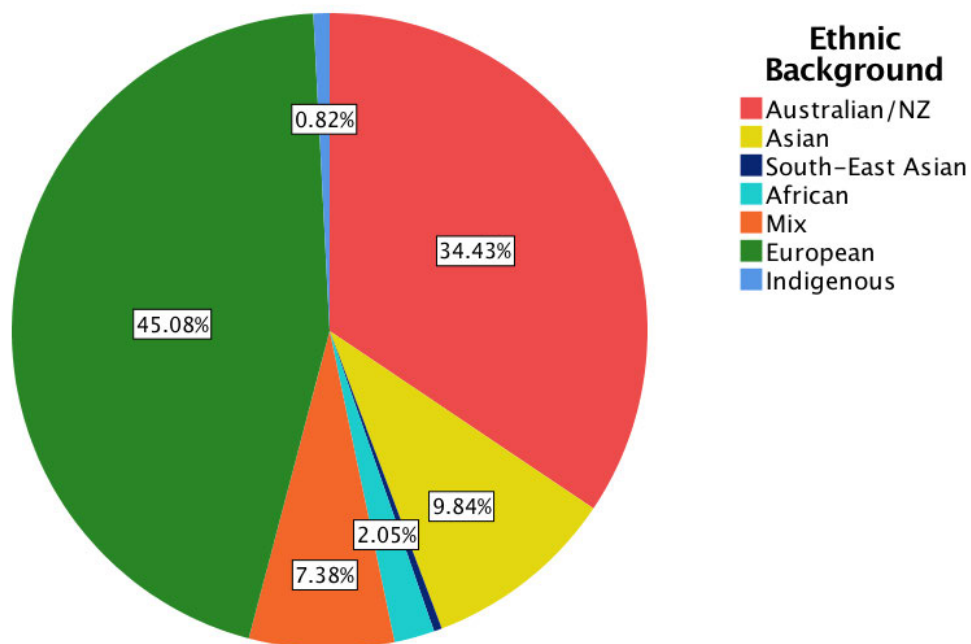


Ethnicity

In relation to students' self-reported ethnic background (Figure 6.2): Australian or New Zealand (34.43%), Asian (9.84%), South-East Asian (0.40%), African (2.05%), a mix of two or more ethnicities (7.38%), European (45.08%) and Indigenous Australian (0.82%) ($N = 244$).

Figure 6.2

Proportions of student participants by ethnicity

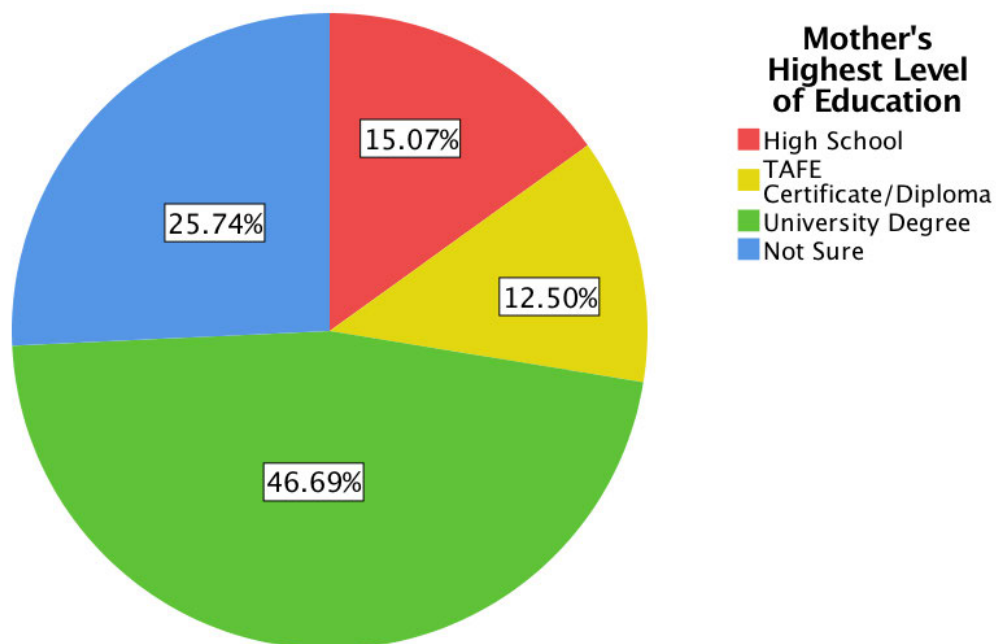


Mother's Highest Level of Education

In relation to students' mothers' highest level of education (Figure 6.3): high school completion (15.07%), tertiary and further education certificate/diploma (12.50%), university degree (46.69%) and not sure (25.74%) ($N = 272$).

Figure 6.3

Proportions of student participants by mother's highest level of education

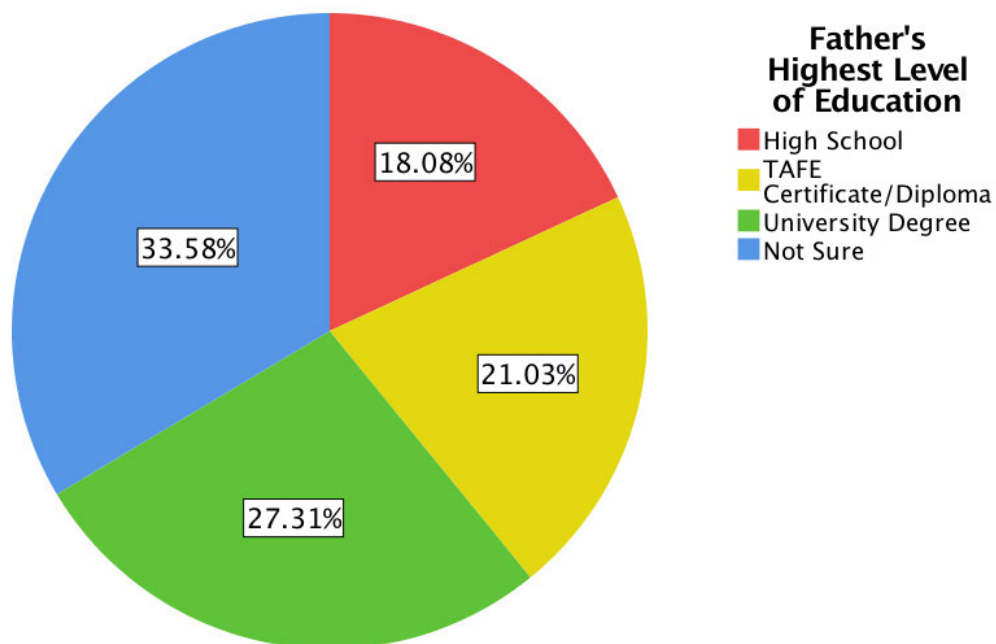


Father's Highest Level of Education

In relation to students' fathers' highest level of education (Figure 6.4): high school completion (18.08%), tertiary and further education certificate/diploma (21.03%), university degree (27.31%) and not sure (33.58%) ($N = 271$).

Figure 6.4

Proportions of student participants by father's highest level of education

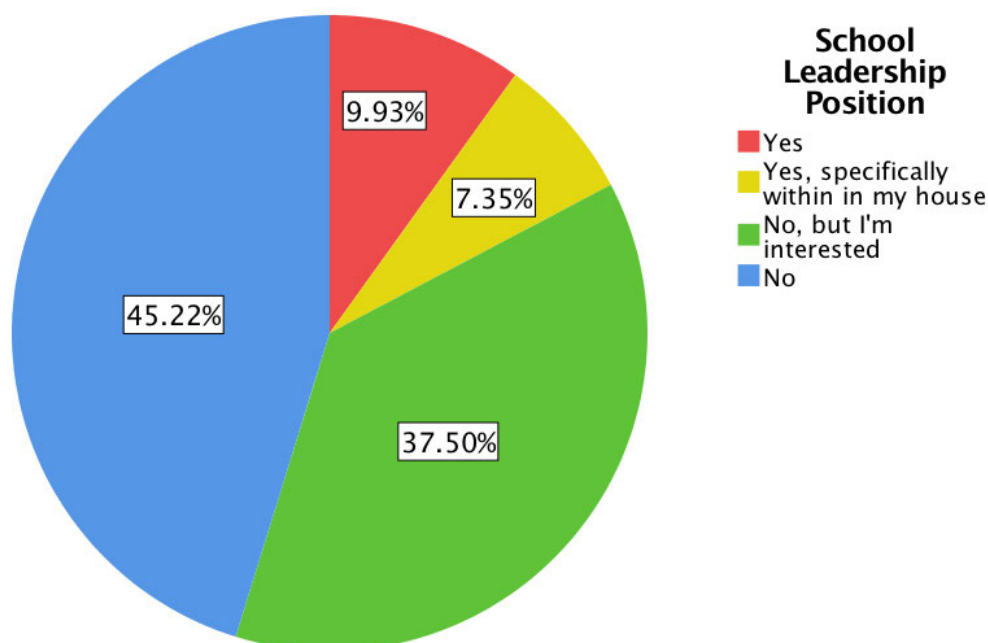


School Leadership Position

Proportion of student participants by leadership position (Figure 6.5): students with a leadership position in their school (9.93%), students with a leadership position specifically within their house (7.35%), students without a leadership position but interested in one (37.50%) and students without a leadership position (45.22%) ($N = 272$).

Figure 6.5

Proportions of student participants by leadership position



Analysis of the House System Assessment Survey (HSAS)

Reliability Testing

A number of analyses were initially conducted to determine the reliabilities of the item groups that were designed to measure each of the 6 constructs integrated into the HSAS: school engagement (8 items), house engagement (8 items), school connectedness (6 items), house connectedness (6 items), school staff–student relationships (6 items) and house staff–student relationships (5 items).

Cronbach's alpha was used to test the reliability of each subscale since it is one of the most commonly used tools for assessing reliability, particularly with scales that are designed to measure attitudes and affective constructs such as mine (Taber, 2018). More specifically, Cronbach's alpha is used as a measure to determine the internal consistency of an item or, in my case, groups of items within a questionnaire

(Bonett & Wright, 2015). Streiner (2003) suggested that an ideal alpha for research tools is in the range of 0.80 to 0.90, stating that values above 0.90 may indicate that some items are redundant due to being too similar. Likewise with the HSAS pilot trial phase, calculating this value allowed me to initially gauge the reliabilities of each subscale, to identify and remove weak contributors to each subscale, and to maximise the potential for items loading as predicted in the EFA. The alphas for each of the subscales were within the high range of reliability. As shown in Table H1 in Appendix H, the inter-item correlations for school engagement ($\alpha = 0.80$) were all positive and the majority between 0.30 and 0.60, which is a healthy indication that the items within the subscale may indeed be assessing the same construct. Item 22 ('I set myself goals and work towards them') demonstrated low correlations with items 4, 13 and 30 (all under 0.30 correlation); however, an examination of the item total statistics found that Cronbach's alpha would be lowered if any of the items in the scale were removed, decreasing to 0.79 if item 22 were to be removed from the scale.

The items used in the house engagement subscale demonstrated high reliability ($\alpha = 0.81$) and most of the inter-item correlations were all positive and between 0.30 and 0.70 (Table H2, Appendix H), particularly if item 6 was removed. The reverse-scored item 6 ('I do not find house activities interesting') had correlations below 0.30 with 4 other items: 3, 23, 36 and 38. Cronbach's alpha would be lowered if any of the items in the subscale were removed, but it would only decrease to 0.80 if item 6 was removed.

The items used in the school connectedness subscale demonstrated good reliability ($\alpha = 0.78$) and the inter-item correlations were all positive and between 0.20 and 0.70 (Table H3, Appendix H). Item 33 ('I would feel upset if someone said something bad about my school') had low correlations (below 0.30) with items 7, 12

and 37. Cronbach's alpha would rise to 0.79 if item 33 was removed from the subscale.

The items used in the house connectedness subscale demonstrated high reliability ($\alpha = 0.83$) and the inter-item correlations were all positive and between 0.30 and 0.70 (Table H4, Appendix H). Cronbach's alpha would rise to 0.84 if item 25 ('I would feel upset if someone said something bad about my house') was removed from the subscale.

The items used in the school staff–student relationships subscale demonstrated high reliability ($\alpha = 0.80$) and the inter-item correlations were all positive and between 0.20 and 0.70 (Table H5, Appendix H). Item 34 ('I am treated with as much respect as other students') had low correlations (below 0.30) with items 2, 9, 19 and 21. Cronbach's alpha would rise to 0.81 if item 34 was removed from the subscale.

The items used in the house staff–student relationships subscale demonstrated good reliability ($\alpha = 0.75$) and the inter-item correlations were all positive and between 0.10 and 0.70 (Table H6, Appendix H). Cronbach's alpha would be lowered if any of the items in the subscale were removed.

Following these reliability and inter-correlational findings, items 6, 22, 25, 33 and 34 were removed from the proceeding factor analysis. Upon inspection of these items, it is possible to speculate why they had low reliabilities within their respective item groups. Item 6 ('I do not find house activities interesting') was one of the 4 reverse-scored items in the HSAS. Given that 35 out of the 39 questions in the questionnaire were positively worded, it is possible that students may have misread this question as a positively worded question. Additionally, it may have also been confusing for students to provide a double-negative response to indicate that they found house activities interesting (i.e. 'disagree' that they do not find house activities interesting).

Item 22 was a goal-oriented item: ‘I set myself goals and work towards them’. I believe that we, as adults, often take for granted how important it is to set—and work towards—clear goals for ourselves. In my experience, however, secondary school students—particularly in middle-school years—are generally still developing the ability and understanding of the importance of goal setting. Therefore I can understand why the responses to item 22, a goal-setting question, might be more inconsistent with than other items. Additionally, perhaps narrowing the breadth of the question to focus specifically on academic goals may have made it more congruent with the other school engagement items.

Items 25 and 33 asked students to rate how they would feel if someone said something bad about their house and their school, respectively. While the other items in these groups of questions concerned the student themselves (e.g. ‘I feel like this school is the right place for me’, ‘I feel like I belong in my house’ and ‘I feel safe being part of a house’), these two items can be differentiated due to them concerning the entities of the house and school themselves, rather than the student. The lower reliabilities of these items suggests that while students may, for example, have felt a sense of belonging within their house or school, they still might not mind whether something negative was said about that house or school. Hence, the students’ house or school experience may be more tied to how they feel being *part* of their house or school rather than their feelings about the house or school *itself*. This may be an avenue for further research concerning the house system or school connectedness.

Item 34 (‘I am treated with as much respect as other students’) stands out among the other staff–student relationship questions. While the other 5 items concern the student’s perception of their own immediate relationship with their teachers (e.g. ‘I trust my teachers’, ‘I get along well with my teachers’ and ‘my teachers help me when I ask for it’), item 34 asks the student for their perspective on their relationship

with teachers *compared to other students*. The fact that this item had weak correlations with the other staff–student relationships items suggests that there may be disparity between how a student perceives their relationship with their teachers and how they feel they are treated compared to other students. This would certainly be worthwhile exploring in further research.

Exploratory Factor Analysis

EFA is a statistical technique that allows a researcher to identify whether questionnaire items group together based on the degree to which items linearly correlate with each other (Francis, 2008a). These groups of correlated items, which should be conceptually linked within each group, separate out in an EFA to form variables called factors (Francis, 2008a). An EFA was conducted in the present study in order to determine whether the items in the HSAS loaded onto factors that represented the respective intended subscales. These subscales were house engagement, school engagement, house connectedness, school connectedness, house staff–student relationships and school staff–student relationships. Therefore it was hypothesised that in the EFA these 6 subscales would emerge with the appropriate items loaded onto them.

Initially an EFA was performed with a maximum likelihood extraction, an oblimin rotation and no specified number of factors to extract. Maximum likelihood is a commonly used method of extraction in EFA (Shaobo et al, 2018) and an oblimin rotation was used since it allows for the factors to be correlated with one another (Francis, 2008a; Geller et al., 2009). The basis for hypothesising that the factors would be correlated to some degree was two-fold. Firstly, the 6 intended factors could be divided into two groups: those measuring a student’s experience within their house, and those measuring a student’s experience within their school. Hence, it was expected that the 3 house-related factors would share some covariance with each

other, as would the 3 school-related factors. Secondly, the factors could also be divided into pairs. Two factors related to student engagement (house and school), two related to student connectedness (house and school) and two related to students' relationships with staff (within their house and within their school). It was therefore appropriate for a rotation method that assumed factor correlation, such as the oblimin rotation, to be used in this scenario.

This extraction yielded 6 factors with eigenvalues greater than 1 that explained 57.32% of the total sample variation. The Kaiser–Meyer–Oklin value was 0.90 and Barlett's test of sphericity reached statistical significance ($p < 0.001$), supporting the factorability of the correlation matrix (Francis, 2008a). The factor eigenvalues were 10.16, 2.89, 2.48, 1.43, 1.31, 1.23, respectively. Using an r correlation criteria of 0.30 or greater, overall the pattern matrix revealed mostly simple structure with only 3 items having cross-loadings across two factors and two items not loading onto any factors. The item loadings are presented in Table 6.4. In terms of the item groupings, they were mostly consistent with the intended subscales:

- Factor 1 loaded 5 items from the school staff–student relationships subscale (2, 9, 16, 19 and 21), 4 items from the school connectedness subscale (1, 7, 12 and 27) and one item from the school engagement subscale (32).
- Factor 2 loaded 7 items from the house engagement subscale (3, 14, 18, 23, 35, 26 and 38) and one item from the house connectedness subscale (8).
- Factor 3 loaded 7 items from the school engagement subscale (4, 11, 13, 15, 26, 30 and 32) and one item from the school staff–student relationships subscale (9).
- Factor 4 loaded two items from the house staff–student relationships subscale (24 and 29).
- Factor 5 loaded 3 items from the house staff–student relationships subscale (5, 10 and 17).

- Factor 6 loaded 4 items from the house connectedness subscale (8, 20, 28 and 39).

Table 6.4

Exploratory factor analysis item loadings with eigenvalues greater than 0.30

Item	Eigenvalue					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1: This school offers learning opportunities that interest me.	0.34					
2: I trust my teachers.	0.66					
7: I think my school is a safe place to be.	0.65					
9: I get along well with my teachers.	0.38					
12: I feel like I belong in this school community.	0.62					
16: My teachers help me when I ask for it.	0.47					
19: Teachers at this school care about their students.	0.67					
21: I am comfortable asking teachers for help.	0.35					
27: I feel like this school is the right place for me.	0.62					
32: I often get bored in class.	0.42					
3: I help out in house activities and tutor group.		-0.49				
8: I feel like a part of a team in my house.		-0.34				
14: It is satisfying when I contribute to my house.		-0.43				
18: I often participate in inter-house competitions.		-0.63				
23: I do not often contribute to my house.		-0.53				
35: Inter-house competitions are exciting.		-0.64				
36: I help my house where I can to help it succeed.		-0.68				
38: I want my house to win.		-0.49				
4: I put effort into my schoolwork and in class.			0.67			
9: I get along well with my teachers.	0.38		0.35			
11: I try to pay full attention in class.			0.57			
13: I rarely hand in work on time.			0.66			
15: I want to do the best I can at school.			0.58			
26: I study and prepare for tests and assessment tasks.			0.55			
30: I complete my homework on time.			0.54			
32: I often get bored in class.	0.42		0.33			
24: I have a good relationships with my Tutor.				0.84		
29: I trust my tutor.				0.74		

Item	Eigenvalue	
5: My head of house acts in my best interests.	0.75	
10: The teachers in my house often get involved in house activities.	0.38	
17: I trust my head of house.	0.65	
8: I feel like a part of a team in my house.		0.50
20: I feel like I belong in my house.		0.57
28: The other students in my house support me.		0.69
39: My house is a supportive community.		0.36

The HSAS consisted of 6 subscales that I developed, each with 5 to 8 items that were informed by previous literature (as outlined in Chapter 5). The EFA supported 6 subscales within the HSAS and 3 of the intended subscales emerged as separate factors. Items from the house engagement subscale, school engagement subscale and house connectedness subscale largely loaded onto their own factors. However, the EFA also provided some suggestions that needed to be considered. Most of the items from the school staff–student relationships subscale and the school connectedness subscale loaded onto the same factor. This suggests that these items may be measuring the same construct. Conceptually this is plausible and this could become a combined subscale essentially measuring a student’s overall sense of ‘school community’: a product of their sense of belonging and comfort within their school combined with the interactions and level of trust with their teachers.

Another interesting development from the EFA was the separation of items measuring students’ relationship with their tutor and items measuring their relationship with the head of house and the degree to which house staff were involved in house activities. These were originally intended to be part of the same subscale—house staff–student relationships—since tutors and heads of house are both house-based staff members and both are involved in a partnership to facilitate students’ pastoral care. With there only being two items measuring tutor relationship, there

were insufficient items for that to become a separate distinct factor. Therefore the house staff–student relationships subscale, as well as the other 5 subscales in the HSAS, were further analysed using CFA. Combined with EFA output, CFA is a measurement model that would provide insight into the presence of the subscales as latent variables predicted by the measured indicators (the HSAS items).

Confirmatory Factor Analysis

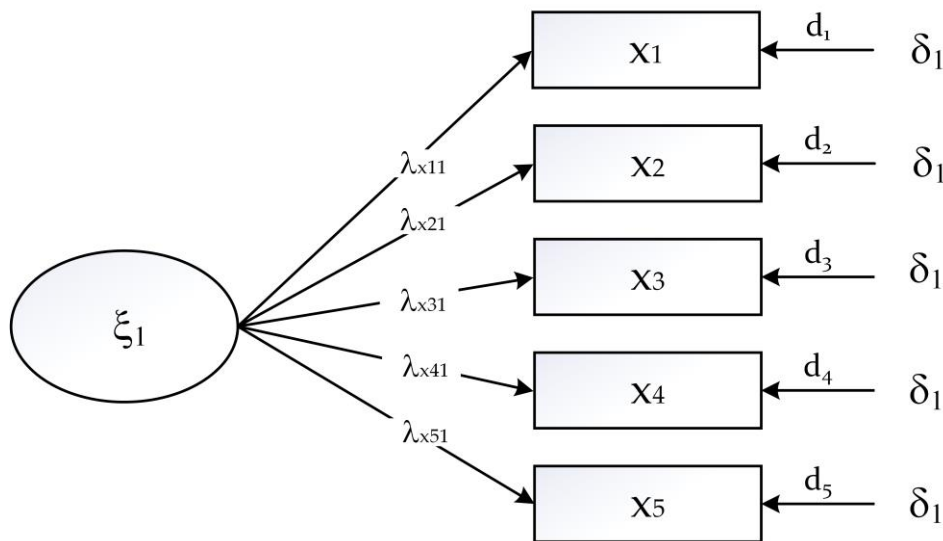
CFA is a statistical technique that allows for the modelling of how measured indicators, such as questionnaire items, form associations with overarching latent factors (Phan et al., 2020). CFA is essentially a data-reduction technique, since the primary goal of CFA is to determine whether many observed variables explain the covariance of a fewer number of latent variables (Bollen, 1989).

To explain this process, consider a hypothetical construct, Z , that is defined by 5 measured (or observed) indicators: X_1 , X_2 , X_3 , X_4 , and X_5 (Figure 6.6). By convention the theoretical construct Z —a latent variable—is denoted ξ_1 and the factor loadings from ξ_1 to the 5 measured indicators are denoted λ_{11} , λ_{21} , λ_{31} , λ_{41} and λ_{51} (Bollen, 1989). The errors of the 5 measured indicators, in this case, are denoted δ_1 , δ_2 , δ_3 , δ_4 and δ_5 .

A factor loading from a measured indicator to a latent factor ranges from 0 to 1.0. Values that are closer to 1.0 indicate better factor loadings, and the appropriateness and suitability of the measured indicators (e.g. a Likert-scale item). Conversely, low values (e.g. < 0.30) indicate low factor loadings, which may provide grounding for item deletion and/or refinement of the subscale (e.g. addition of new measured indicators).

Figure 6.6

A one-factor congeneric model



CFA is a typical second step when researchers have conducted an EFA and simple structure has been obtained (Asparouhov & Muthen, 2009). Perfect simple structure is when there are no cross-loadings of items in the EFA. A significant advantage of using CFA in addition to, or in some cases opposed to, EFA is that when using CFA: (1) researchers are encouraged to have sound measurement hypotheses; (2) the measurement tool should have simple structure; and (3) the latent variables with their loaded items are specified by the researcher and grounded in theory (Asparouhov & Muthen, 2009). These criteria therefore increase the robustness of the measurement tool. This makes CFA appropriate in my context since my EFA does indeed suggest that the HSAS has mostly simple structure (see Table 6.2) and my items and latent factors are informed by previous research and similar questionnaires (as described in Chapter 5).

My sample size of 275 was sufficient to conduct a CFA (Tabachnick & Fidell, 2007). There have been a number of case studies involving simulations that have led

to suggestions for appropriate sample sizes for CFA. For instance, Wolf et al. (2013) conducted Monte Carlo simulation studies to calculate ideal sample sizes for CFA. These studies found that a minimum sample size of 190 was required for a single-factor model with 4 indicators. The inclusion of more indicators reduced the required sample size. Other Monte Carlo studies by Jackson et al. (2013) further support my sample size. They found that 4 indicators per latent variable only required a minimum sample size of 200. This applied to a 3-factor model as opposed to our one-factor model, in which case an even smaller sample size may be suitable (greater sample sizes were required for models with more factors). Further, this estimation of 200 as a minimum was based on low loadings of 0.40; a sample of only 50 was required for higher loadings of 0.80.

Maximum likelihood estimation was used; however, with largely non-normal data (Table 6.1) a Bollen–Stine bootstrapping analysis with 2000 replications was applied. As discussed earlier and seen in Table 6.1, my data demonstrated elements of skewness and kurtosis (e.g. a skewness of < -1 for items 11, 38, 17, 13, 29, 19, 18, 1, 30 and 21). Such non-normality in CFA techniques can lead to overestimation of one of the key statistics I would be using to compare models—the χ^2 statistic—as well as underestimation of standard errors for the model parameters (Walker & Smith, 2017). Both of these results could lead to inaccurate conclusions about the accuracy of the models. To address this, bootstrap techniques such as the Bollen–Stine bootstrap have previously been shown to be useful in interpreting and assessing skewed data in CFAs (Cecchini et al, 2014; Scholte et al, 2011). According to Walker and Smith (2017), this procedure involves repeatedly sampling from the covariance matrix implied by the model to produce an empirical distribution of χ^2 values. The observed maximum likelihood estimation χ^2 statistic's position can then be examined within these derived χ^2 values. This test generates a p value that can be used to assess overall model fit.

The proposed model is rejected if the p value is less than 0.05 (i.e. if 5% or fewer of the bootstrapped χ^2 statistics exceed the χ^2 test statistic). If the Bollen–Stine p value is greater than 0.05, the proposed model is suggested to be consistent with the data. This Bollen–Stine test is not recommended for samples under 100, so it was suitable to be used with my sample size.

In terms of the number of samples used in the bootstrapping, 2000 is the number of samples that has previously been used by other published studies that utilised the Bollen–Stine bootstrapping technique (Cid et al., 2019; Urbonas et al., 2015).

In addition to the Bollen–Stine test, the models were assessed by a range of statistics, known as ‘goodness-of-fit’ indices, in order to compare models and determine the most appropriate model for the data. These indices included:

- χ^2 : a significant value indicates that the covariances in the model significantly differ from the observed sample covariances, indicating a poor model fit. The χ^2 is sensitive to sample size whereby smaller samples ($N < 200$) may lead to Type II errors, while larger samples ($N > 200$) can lead to Type I errors (Walker & Smith, 2017). My sample size of 275 sat nicely between these two margins.
- Comparative fit index (CFI): this ranges from 0 to 1.0, with values closer to 1.0 indicating a good fit (Walker & Smith, 2017). Close to 0.95 is an acceptable cutoff score (Hu & Bentler, 1999).
- Tucker–Lewis index (TLI), also known as the non-normed fit index (NNFI): this ranges from 0 to 1.0, with values closer to 1.0 indicating a good fit (Walker & Smith, 2017). Close to 0.95 is an acceptable cutoff score (Hu & Bentler, 1999).
- Root mean square error of approximation (RMSEA): this reflects ‘badness of fit’ whereby larger values that are closer to 1.0 indicate poor fit and smaller values closer to 0 indicate good fit (Walker & Smith, 2017). Close to 0.06 is an

acceptable cutoff score (Hu & Bentler, 1999). The upper (HI) and lower (LO) bounds of a two-sided 90% confidence interval are also included when reporting RMSEA (Aluja et al., 2005).

For the most part, the subscales tested in the CFAs were the same as suggested by the EFA. One modification was that the cross-loaded items 32 and 8 were confined to just one factor each: they were assigned to the factor that they loaded most strongly with and that most closely matched their content. The other modification was that while the EFA separated the tutor-related items from the other house staff–student relationship items, these were combined in the same model in the CFA.

School Engagement

The first model for the school engagement subscale (Model 1) was the same as that suggested by the EFA, consisting of 7 items. This resulted in an unsatisfactory fit across two of the indices (< 0.95 for the CFI and NNFI) as well as an unsatisfactory Bollen–Stine test ($p < 0.05$). I sought to improve the model by removing item 32 (creating Model 2) due to a weak loading compared with the other items (0.54) and also due to item 32 having loaded onto another factor in the EFA. This led to a slightly improved χ^2 , but the CFI, NNFI and RMSEA values were slightly negatively affected and the Bollen–Stine test was still significant ($p < 0.05$). However, the modification indices of this model indicated high covariance between the errors of items 19 and 23 (23.53) and therefore a third model (Model 3) was tested with this high covariance defined. As shown in Table 6.5, this led to the best results out of the 3 models in terms of all goodness-of-fit criteria: the CFI and NNFI were above 0.95, as per Hu and Bentler’s (1999) recommendation, and the RMSEA was close to their cutoff of 0.06. This was also the only model to generate a non-significant Bollen–Stine test ($p = 0.30$), thereby rejecting the null hypothesis.

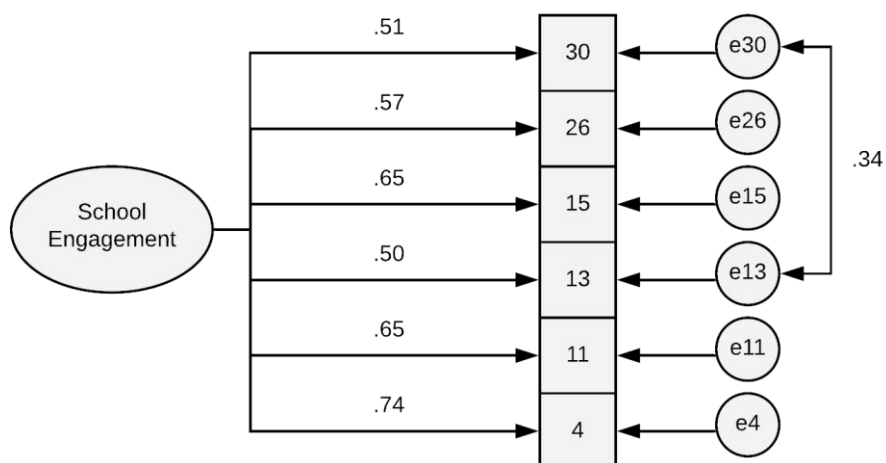
Table 6.5

Fit indices of school engagement

Model	Description	d.f.	χ^2	CFI	NNFI	RMSEA	LO	HI
1	EFA model	14	48.50	0.93	0.89	0.10	0.07	0.13
2	EFA model with item 32 removed	9	44.67	0.91	0.85	0.12	0.09	0.16
3	EFA model with item 32 removed and covariance between item errors 19 and 23 defined	8	18.02	0.98	0.95	0.07	0.03	0.11

d.f., degrees of freedom; CFI, comparative fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation.

Figure 6.7

CFA item loadings for Model 3 of the school engagement subscale

School Community

Model 1 of the school community subscale was constructed as per the EFA with the exception of item 32 due to this item having cross-loaded onto the school engagement factor. It consisted of 9 items. This analysis revealed unsatisfactory fit (< 0.95) across the various indices and failure to reject the Bollen–Stine null hypothesis test ($p < 0.01$). Inspection of the modification indices (MI) revealed high covariance between the errors of items 1 and 2 (MI = 33.25) and therefore a second model (Figure 6.8) was tested. Model 2 had improved goodness of fit indices, meeting Hu

and Benter's (1999) 0.95 cutoffs for the CFI and NNFI, and the RMSEA being close to 0.06. The model just fell short of passing the Bollen–Stine null hypothesis test ($p < 0.05$), but it was nonetheless an improvement on the first model.

Table 6.6

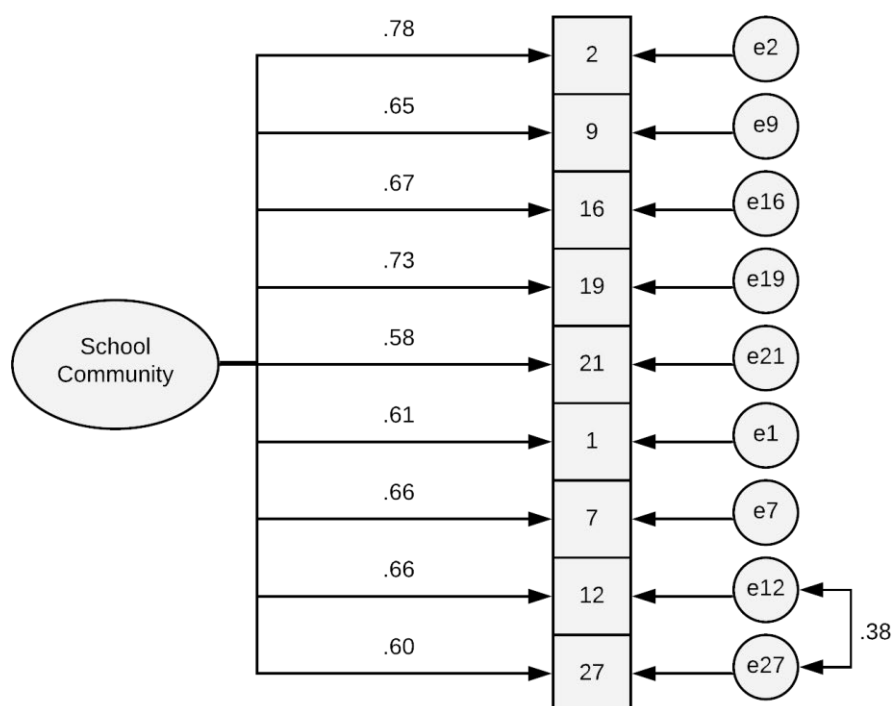
Fit indices of school community

Model	Description	d.f.	χ^2	CFI	NNFI	RMSEA	LO	HI
1	EFA model excluding item 32	27	96.13	0.93	0.90	0.10	0.08	0.19
2	EFA model excluding item 32 and covariance between item errors 1 and 2 defined	26	60.04	0.96	0.95	0.07	0.05	0.09

d.f., degrees of freedom; CFI, comparative fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation.

Figure 6.8

CFA item loadings for Model 2 of the school community subscale



House Engagement

The first model for the house engagement subscale was constructed as per the EFA but with item 8 removed due to a low EFA eigenvalue (-0.34) and cross-loading

onto the house connectedness factor. This revealed unsatisfactory fit across the CFI and NNFI indices (both < 0.95) and failure to reject the Bollen–Stine null hypothesis ($p < .01$). Inspection of the loadings indicated that items 23 and 38 both had weak loadings of 0.50. To improve the goodness-of-fit criteria and to attempt to satisfy the Bollen–Stine null hypothesis test, a second model was tested with item 38 removed. Item 38 (‘I want my house to win’) was removed over item 23 (‘I do not often contribute to my house’) since—in terms of content validity—item 23 seemed more aligned with the concept of house engagement. This resulted in little change across the goodness-of-fit indices other than an improved χ^2 and a more significant Bollen–Stine test ($p < 0.001$). With the Bollen–Stine test still unsatisfactory, the NNFI less than 0.90 and the RMSEA still above 0.10, a third model was tested with item 23 removed due its low loading in Model 2 (0.51). Model 3 resulted in an improved χ^2 and Bollen–Stine test ($p < 0.05$); however, the other indices were still not satisfactory according to Hu and Bentler’s (1999) criteria. Inspection of the loadings revealed item 3 had a weak loading of 0.49 and therefore this item was removed in a fourth model. This model resulted in the best fit, indicated by an improved but still significant Bollen–Stine test ($p < 0.05$), improved χ^2 and improved CFI and NNFI indices, with the CFI now above 0.95. Further, the item loadings were now a more satisfactory 0.59 or above.

Table 6.7

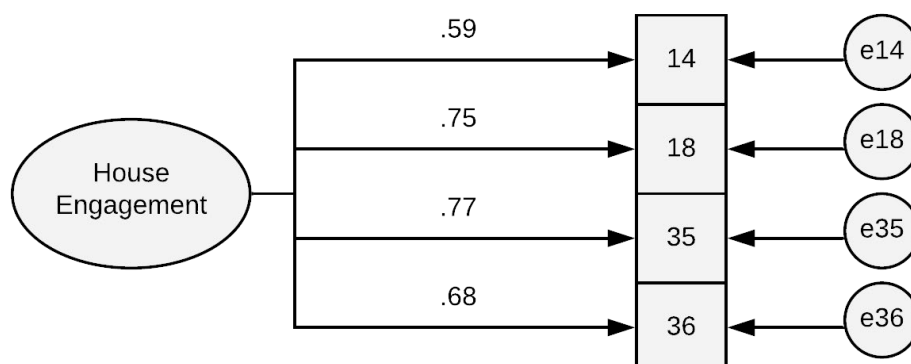
Fit indices of house engagement

Model	Description	d.f.	χ^2	CFI	NNFI	RMSEA	LO	HI
1	EFA model excluding item 8	14	51.50	0.93	0.89	0.10	0.07	0.13
2	EFA model excluding items 8 and 38	9	43.06	0.93	0.88	0.12	0.08	0.15
3	EFA model excluding items 8, 38 and 23	5	30.92	0.93	0.87	0.14	0.09	0.19
4	EFA model excluding items 8, 38, 23 and 3	2	13.32	0.96	0.89	0.14	0.07	0.22

d.f., degrees of freedom; CFI, comparative fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation.

Figure 6.9

CFA item loadings for Model 4 of the house engagement subscale



House Connectedness

The house connectedness subscale achieved good fit and rejected the Bollen–Stine null hypothesis ($p = 0.50$) in the first and only analysis required. This model (Figure 6.10) was the same as that suggested by the EFA.

Table 6.8

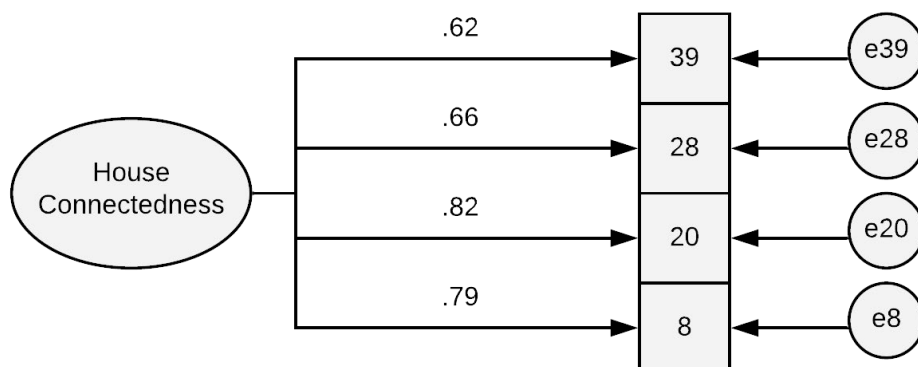
Fit indices of house connectedness

Model	Description	d.f.	χ^2	CFI	NNFI	RMSEA	LO	HI
1	EFA model	2	1.46	1.00	1.00	0.00	0.00	0.11

d.f., degrees of freedom; CFI, comparative fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation.

Figure 6.10

CFA item loadings for the house connectedness subscale



House Staff–Student Relationships

Given that the EFA separated the items from this subscale across two factors, this model took 4 attempts to find a good fit. The first model had all 5 items of the subscale included together. This resulted in poor fit across all indices and a failure to reject the Bollen–Stine null hypothesis ($p < 0.001$). Inspection of the modification indices revealed a very high correlation (74.65) between the errors of items 5 and 17. This covariance was defined in a second model. Model 2 resulted in a better fit, but still an unsatisfactory NNFI (< 0.90), a failure to reject the Bollen–Stine null hypothesis ($p < 0.05$) and a high RMSEA. A very weak loading was identified with item 5 (0.26) and therefore that was removed in a third model. This resulted in a slightly better fit again, but still with an unsatisfactory NNFI (< 0.90), a failure to reject the Bollen–Stine null hypothesis ($p < 0.05$) and a high RMSEA. The previous pair of co-varying errors involved item 5, but after an analysis of the third model with item 5 removed, another pair of errors appeared to be correlated: the errors of items 10 and 17 (11.47). This was defined in the fourth and last model (Figure 13), which

clearly achieved the best fit across all indices and successfully rejected the Bollen–Stine null hypothesis ($p = 0.29$).

Table 6.9

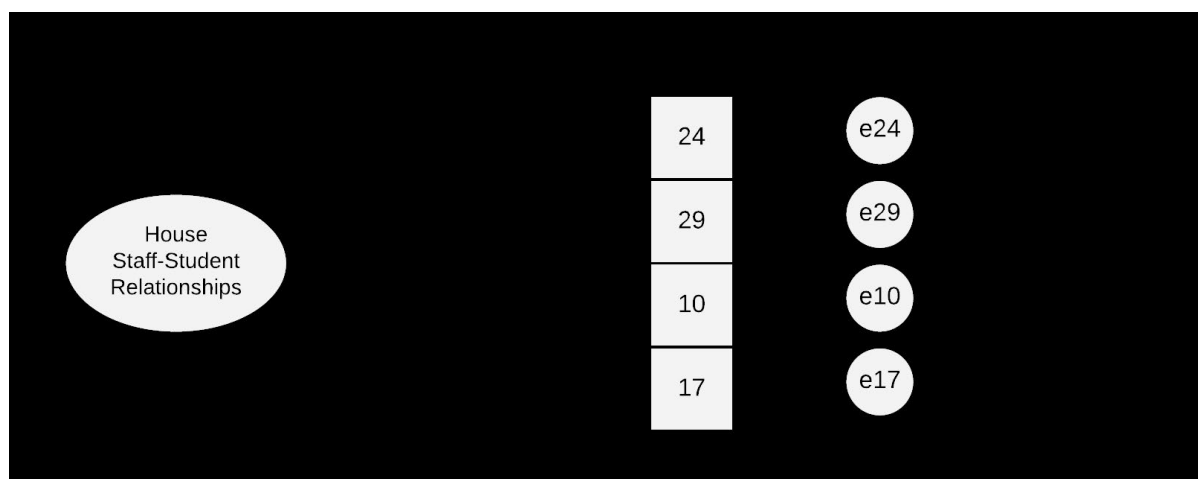
Fit indices of house staff–student relationships

Model	Description	d.f.	χ^2	CFI	NNFI	RMSEA	LO	HI
1	All five items	5	112.47	0.73	0.47	0.28	0.24	0.53
2	All five items with co-varying defined	4	25.61	0.95	0.87	0.14	0.09	0.20
3	Item 5 removed	2	13.51	0.96	0.88	0.15	0.08	0.22
4	Item 5 removed with co-varying errors defined	1	1.15	1.00	1.00	0.02	0.00	0.16

d.f., degrees of freedom; CFI, comparative fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation.

Figure 6.11

CFA item loadings for the house staff–student relationships subscale



Final Reliability Testing

Reliability analyses were conducted with the final subscales as per the CFA. All 5 subscales achieved good Cronbach's alpha results: school engagement (0.78), school community (0.88), house engagement (0.79), house connectedness (0.81) and house staff–student relationships (0.73).

These subscales were then computed as new variables within SPSS by using the sum of the scores for the items within each subscale. Doing so allowed for

subsequent multiple regression analyses to be performed with these house and school-related constructs.

Summary

The HSAS was initially developed to consist of 6 subscales, each with 5 to 8 items. Three of these related to the house system (house engagement, house connectedness and house staff–student relationships) and 3 related to the general school experience (school engagement, school connectedness and school staff–student relationships). Initial reliability tests of these subscales identified items that were not effectively contributing to these subscales. An EFA allowed for further refinement of the subscales, while also revealing the prospect of school connectedness and school staff–student relationships to be combined. I named this new subscale ‘school community’. The EFA also separated the tutor-related items from the other house staff items; however, since there were only two items, it was not possible for them to form their own factor. A CFA was then performed in order to examine the subscales in more detail, particularly in assessing their goodness of fit. While some minor adjustments were required in some cases, such as removing items with low loadings, all 5 subscales including the combined house staff–student relationships subscale achieved excellent goodness of fit. Final reliability tests of each of the subscales revealed good alpha scores ranging between 0.70 and 0.90.

Between-Group Analyses

Single factor between-subject MANOVAs were performed to determine whether significant differences were present between the demographic-based IVs. These IVs included students’ gender, school, year level, parents’ educational levels, ethnicity and student leadership status. The DVs in these analyses were the 5 subscales of the HSAS: school community, school engagement, house engagement,

house connectedness and house staff–student relationships. As per my hypothesised model in Figure 3.2, I anticipated that these demographic variables would have some degree of influence on students’ levels of the two school-context constructs. The house-context ones were additionally included at this stage to determine whether demographics also played a role in influencing students’ experience within their house.

Gender

An analysis was performed to examine potential gender difference in the 5 DVs between males and females. Means, standard deviations and zero-order correlations for each of the variables between genders are presented in Table 6.10 for each gender. An analysis of the correlations suggests that out of the 10 pairs of correlations analysed, 7 were higher for female students than male students. The largest difference in correlation strength was between school engagement and house engagement, with female students reporting a moderate correlation of 0.47 ($p < 0.01$) and male students reporting a non-significant correlation of 0.16. This was the only non-significant correlation.

Table 6.10

Means, standard deviations and zero-order correlations for school community, school engagement, house engagement, house connectedness and house staff–student relationships by gender

Measure	School Community	School Engagement	House Engagement	House Connectedness	House Staff–Student Relationships	Total		Male N = 129		Female N = 139		Effect Size η^2
						M	SD	M	SD	M	SD	
School Community	–	0.45**	0.27**	0.45**	0.58**	4.05	0.55	4.08	0.57	4.02	0.54	0.00
School Engagement	0.52**	–	0.16	0.28**	0.24**	4.21	0.54	4.11	0.55	4.31	0.52	0.04**
House Engagement	0.55**	0.47**	–	0.57**	0.44**	3.87	0.72	3.87	0.74	3.87	0.73	0.00
House Connectedness	0.68**	0.32**	0.66**	–	0.53**	3.90	0.67	3.93	0.68	3.87	0.67	0.00
House Staff–Student Relationships	0.54**	0.23**	0.46**	0.50**	–	4.06	0.63	4.09	0.62	4.01	0.63	0.00

Note. Correlations below the matrix are for the female students; correlations above the matrix are for the male students. Means for the 5 subscales reflect the 5 points of the Likert scale.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

A MANOVA indicated a significant difference between males and females: Wilks = 0.94, $F(5, 262) = 3.57$, $p < 0.01$, partial $\eta^2 = 0.06$.

Univariate tests revealed that this difference was in school engagement, with female students reporting greater school engagement than male students ($M = 4.31$ versus 4.11). This difference was significant ($F(1, 266) = 10.02$, $p < 0.01$).

School

An analysis was performed to examine potential differences in the DVs between the two participating schools: School A and School B. Means and standard deviations for each of the variables are presented in Table 6.11 for each school. This analysis in particular addresses one of the main aims of the present study, which is to examine whether there are organisational features of a school that may impact on the outcomes of a house system by comparing the data from two separate schools in different sectors.

Table 6.11

Means and standard deviations for the 5 DVs between schools

Measure	School A N = 189		School B N = 79		Effect Size η^2
	M	SD	M	SD	
School Community	4.08	0.59	3.98	0.44	0.01
School	4.20	0.56	4.24	0.51	0.00
Engagement					
House	3.88	0.71	3.86	0.76	0.00
Engagement					
House	3.90	0.66	3.90	0.70	0.00
Connectedness					
House Staff–	4.02	0.64	4.14	0.59	0.01
Student					
Relationships					

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

A MANOVA indicated no significant differences in all the DVs between School A and School B.

Year Level

An analysis was performed to examine potential differences in the DVs between the year levels of the participating students: year 5, year 6, year 7, year 8, year 9, year 10, year 11 and year 12. Means and standard deviations for each of the DVs are presented in Table 6.12 for each year level.

Table 6.12

Means and standard deviations for school community, school engagement, house engagement, house connectedness and house staff–student relationships for year 5 to year 12

Measure	Year 5 N = 38		Year 6 N = 46		Year 7 N = 59		Year 8 N = 37		Year 9 N = 24		Year 10 N = 38		Year 11 N = 9		Year 12 N = 17		Effect Size η^2
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
School Community	4.23	.57	4.16	0.51	3.88	0.68	3.81	0.52	4.03	0.57	4.02	0.37	4.05	0.42	4.49	0.30	0.11***
School Engagement	4.27	.47	4.26	0.49	4.03	0.54	4.14	0.59	4.35	0.47	4.21	0.61	4.30	0.60	4.53	0.51	0.06*
House Engagement	4.07	.84	3.96	0.76	3.86	0.75	3.80	0.75	3.89	0.62	3.68	0.64	3.67	0.45	3.88	0.60	0.03
House Connectedness	3.94	.70	4.00	0.78	3.91	0.68	3.69	0.76	4.05	0.43	3.74	0.64	3.72	0.38	4.18	0.51	0.04
House Staff–Student Relationships	4.20	.54	3.97	0.73	4.08	0.71	3.97	0.71	4.19	0.52	3.89	0.44	3.94	0.41	4.22	0.49	0.03

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

A MANOVA initially indicated that there was a significant difference in the DVs between year levels: Wilks = 0.78, $F(35, 1079) = 1.91$, $p < 0.01$, partial $\eta^2 = 0.05$. Univariate tests revealed significant differences across year levels for school community ($F(7, 260) = 4.45$, $p < 0.001$) and school engagement ($F(7, 260) = 2.34$, $p < 0.05$). Post hoc testing using Tukey's HSD showed that year 5 students ($M = 4.23$, $p < 0.05$) and year 12 students ($M = 4.49$, $p < 0.01$) reported significantly higher levels of school community than year 8 students ($M = 3.81$). Year 5 students ($M = 4.23$, $p < 0.05$) and year 12 students ($M = 4.49$, $p < 0.01$) also reported significantly higher levels of school community than year 7 students ($M = 3.88$). Year 12 students also had significantly higher school engagement ($M = 4.53$) than year 7 students ($M = 4.03$, $p < 0.05$).

Parents' Levels of Education

An analysis was performed to examine differences in students' scores across the 5 DVs based on their parents' levels of education. Means and standard deviations for each of the DVs are presented in Table 6.13 for mothers' highest level of education and Table 6.14 for fathers' highest level of education.

Table 6.13

Means and standard deviations for the 5 DVs based on students' mothers' highest level of education

Measure	High School N = 40		TAFE Certificate/Diploma N = 33		University Degree N = 123		Not Sure N = 69		Effect Size η^2
	M	SD	M	SD	M	SD	M	SD	
School Community	4.00	0.45	4.10	0.52	4.07	0.53	4.04	0.55	0.00
School	4.16	0.60	4.37	0.46	4.23	0.59	4.16	0.45	0.02
Engagement									
House	3.74	0.62	3.97	0.59	3.93	0.75	3.78	0.79	0.01
Engagement									
House	3.89	0.55	3.93	0.63	3.91	0.72	3.86	0.70	0.00
Connectedness									
House Staff–	4.10	0.55	3.97	0.66	4.10	0.65	3.98	0.56	0.01
Student									
Relationships									

* $p < 0.05$

A MANOVA indicated no significant differences in the DVs based on students' mothers' highest level of education.

Table 6.14

Means and standard deviations for the 5 DVs based on students' fathers' highest level of education

Measure	High School N = 47		TAFE Certificate/Diploma N = 54		University Degree N = 73		Not Sure N = 90		Effect Size η^2
	M	SD	M	SD	M	SD	M	SD	
School Community	4.06	0.46	4.01	0.63	4.12	0.52	3.99	0.55	0.01
School	4.22	0.61	4.21	0.52	4.27	0.60	4.15	0.46	0.01
Engagement									
House	3.73	0.79	3.87	0.67	4.02	0.71	3.82	0.74	0.02
Engagement									
House	3.81	0.69	3.88	0.63	4.00	0.68	3.86	0.69	0.01
Connectedness									
House Staff- Student Relationships	4.13	0.65	4.00	0.65	4.17	0.63	3.94	0.55	0.03

* $p < 0.05$

A MANOVA indicated no significant differences in the DVs based on students' fathers' highest level of education.

Student Leadership

An analysis was performed to examine differences in the 5 DVs based on students' level of school or house leadership, including leadership ambition. Means and standard deviations for each of the DVs are presented in Table 6.15.

Table 6.15

Means and standard deviations for the 5 DVs based on students' level of leadership

Measure	Leadership Position in School N = 27		Leadership Position in House N = 18		No Position but Interested N = 101		No Position N = 119		Effect Size η^2
	M	SD	M	SD	M	SD	M	SD	
School	4.04	0.76	3.97	0.59	4.21	0.52	3.92	0.50	0.06**
Community									
School	4.26	0.59	4.10	0.60	4.37	0.47	4.10	0.56	0.06**
Engagement									
House	4.09	0.67	4.10	0.57	4.12	0.66	3.57	0.71	0.14***
Engagement									
House	3.96	0.54	3.76	0.81	4.10	0.64	3.73	0.67	0.07**
Connectedness									
House Staff–	4.00	0.68	4.15	0.58	4.20	0.62	3.92	0.60	0.05**
Student									
Relationships									

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

A MANOVA indicated that a significant difference in the DVs was present between student leadership positions: Wilks = 0.81, $F(15, 710) = 3.71$, $p < 0.001$, partial $\eta^2 = 0.07$. Post hoc testing with Tukey's HSD revealed the following differences:

- Students who did not have a leadership position but were interested felt greater school community than students who did not have a leadership position ($M = 4.21$ vs. 3.92 , $p < 0.01$).
- Students who did not have a leadership position but were interested had higher school engagement than students who did not have a leadership position ($M = 4.37$ vs. 4.10 , $p < 0.01$).
- Students who did not have a leadership position but were interested ($M = 4.12$, $p < 0.001$), students with a leadership position in their house ($M = 4.10$, $p < 0.05$) and students with a school leadership position ($M = 4.09$, $p < 0.01$) all had higher house engagement than students who did not have a leadership position ($M = 3.57$).

- Students who did not have a leadership position but were interested had higher house connectedness than students who did not have a leadership position ($M = 4.10$ vs. 3.73 , $p < 0.001$).
- Students who did not have a leadership position but were interested had more positive house staff–student relationships than students who did not have a leadership position ($M = 4.20$ vs. 3.92 , $p < 0.01$).

Ethnic Background

An analysis was performed to examine differences in the 5 DVs based on students' self-reported ethnic background. Means and standard deviations for each of the DVs are presented across Tables 6.16 and 6.17.

Table 6.16

Means and standard deviations for the 5 DVs based on self-reported Australian/New Zealander, Asian, South-East Asian and African backgrounds

Measure	Australian/NZ		Asian		South-East Asian		African		Effect Size η^2
	N = 83		N = 24		N = 1		N = 5		
	M	SD	M	SD	M	SD	M	SD	
School	4.02	0.54	4.23	0.53	4.89	–	4.44	0.48	0.04
Community									
School	4.12	0.51	4.42	0.43	4.50	–	4.37	0.57	0.03
Engagement									
House	3.90	0.69	3.96	0.60	3.50	–	4.15	0.65	0.01
Engagement									
House	3.95	0.63	4.00	0.82	5.00	–	4.30	0.78	0.03
Connectedness									
House Staff–	4.30	0.70	4.27	0.55	5.00	–	4.15	0.58	0.03
Student									
Relationships									

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 6.17

Means and standard deviations for the 5 DVs based on self-reported mixed, European and Indigenous backgrounds

Measure	Mixed		European		Indigenous		Effect Size η^2
	N = 16		N = 107		N = 2		
	M	SD	M	SD	M	SD	
School Community	3.91	0.67	4.04	0.56	3.67	1.01	0.04
School Engagement	4.12	0.64	4.21	0.61	4.25	0.35	0.03
House Engagement	3.88	0.71	3.86	0.74	4.25	0.35	0.01
House Connectedness	3.78	0.83	3.88	0.66	3.75	0.35	0.03
House Staff–Student Relationships	4.11	0.56	4.02	0.61	4.38	0.18	0.03

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

A MANOVA indicated no significant differences in the DVs between students' self-reported ethnic backgrounds.

Summary

A comparison between genders of the bivariate correlations between the 5 main DVs revealed all significant correlations except for house engagement and school engagement for male students. A significant difference in mean scores was identified for school engagement between males and females, with females having higher school engagement. Significant differences were found between year levels, with year 5 and year 12 students having higher scores for school community than year 7 and year 8 students. Year 7 students also had significantly lower scores for school engagement than year 12 students. Student leadership was the last source of mean score differences, with students without leadership positions having significantly lower scores in all 5 subscales than students who did not have leadership positions but were interested. Students without leadership positions also had significantly lower scores in house engagement than students who held leadership positions in their

school and those who were leaders in their house. One of the 3 main objectives of the current study—to investigate differences in house variables across school sectors—has been examined and no significant differences in mean scores across any of the house-related DVs have been observed.

Multiple Regression

This section concerns multiple regression analyses that were pertinent in addressing my research questions. While bivariate regression analyses examine relationships between two variables—a DV and an IV—multiple regression analyses allow for more than one IV to be included. This has the advantage of being able to examine the effects of multiple different IVs on the DV being investigated. In doing so, the researcher can predict the DV more accurately and can also assess the relative importance of the IVs that predict it (Francis, 2008b).

With the items and subscales of the HSAS confirmed, multiple regressions were utilised in the present study to investigate the relationships between the IVs and DVs. The variables varied according to the question being examined. At this point it is worth revisiting two of the 3 overarching research objectives of the present study:

1. To investigate, through the development and use of a quantitative questionnaire, the degree to which students feel a sense of connectedness, engagement and positive relationships with staff both within their house and in their school in general.
2. To examine whether there are organisational features of a school that may impact on the outcomes of a house system by comparing the data from two separate schools in different sectors.

Since the previous MANOVA findings revealed no significant differences between school sectors across any of the subscales, the proceeding multiple

regressions have therefore focused on the former research objective. School sector was still included in the group of demographic variables to control for just in case it did contribute some degree of variance. In Chapter 4 I proposed a hypothesised model (Figure 4.1) whereby the house-related constructs and demographic variables were IVs and the school-related constructs (school engagement, connectedness and staff–student relationships) were DVs. Therefore the first multiple regression analyses were conducted to address two important questions that concern the first research objective above:

1. Do the house-related constructs (house engagement, house connectedness and house staff–student relationships) predict the school-related constructs (school community and school engagement)?
2. If I control for the possible effects of other independent variables such as school, gender, year level, parents’ education levels, ethnicity and student leadership, are the house-related constructs still able to predict a significant amount of variance in the school-related constructs?

In addition, the previous MANOVAs comparing each of the participant groups revealed significant differences in relation to gender and leadership position. These findings have been further investigated in these regression analyses in order to determine whether the observed difference in mean scores translated to differences in the degree to which the house variables predicted variance in the school variables. However, due to low sample sizes of students with leadership positions either in their school or in their house, only comparisons between students without a leadership position and those who did not have one but were interested are included in the proceeding analyses.

Explaining the Variance in School Community

To answer the first question, multiple regressions were performed with the demographic variables (gender, school, year level, ethnicity, parents' educational levels and student leadership) and the 3 house-related subscales of the HSAS as IVs. The school engagement subscale of the HSAS was included as an IV when school community was input as the DV. Likewise, school community was included as an IV when school engagement was input as the DV. This has allowed me to determine the amount of variance these school-related variables contribute to each other.

Although small, my sample size is adequate according to Tabachnick and Fidell's (2007) formula whereby the sample size must be greater than $50+8m$, with m being the number of IVs. Multicollinearity was not an issue since all 5 variables demonstrated significant correlations between 0.2 and 0.6 ($p < 0.001$) and all variance inflation factors (VIFs) were below 10. The normal probability plot (P-P) of the regression standardised residual demonstrated no major deviations from normality and the scatterplot indicated only 5 outliers just beyond the standardised residual of 3.3 or -3.3 (Tabachnick & Fidell, 2007). An inspection of the Mahalanobis distance values revealed only 3 outliers that exceeded the critical value of 18.47 for analyses with 4 IVs (Pallant, 2007). Therefore these cases were excluded from the sample and the regression was conducted again, this time with all Mahalanobis distances being within the critical value.

Hierarchical regression analysis is a specific technique that has enabled me to examine the degree to which school engagement and the other demographic variables contributed to the variance in school community in addition to the house variables. This also reveals how much variance house engagement, house connectedness and house staff–student relationships contribute when the other variables have been controlled for. Table 6.18 illustrates the progressive step-wise nature of this type of

analysis. The first step—Model 1—consisted of only the demographic variables as the IVs. This was followed by the addition of the school engagement variable as an IV (Model 2), then finally the house-related variables in Model 3. The r^2 value of each model indicates the total amount of variance that is explained by the combination of IVs included within that model (Francis, 2008b).

Table 6.18

Results of hierarchical regression analysis with school community as the DV

Model	Variable Entered	Total		Male Students		Female Students		No Leadership		No Leadership But Interested	
		R Sq.	R Sq. Change	R Sq.	R Sq. Change	R Sq.	R Sq. Change	R Sq.	R Sq. Change	R Sq.	R Sq. Change
1	Demographic Variables	0.02	–	0.08	–	0.04	–	0.09	–	0.16*	–
2	School Engagement	0.25***	0.23***	0.26***	0.18***	0.31***	0.28***	0.31***	0.22***	0.35***	0.19***
3	House Variables	0.52***	0.27***	0.45***	0.19***	0.63***	0.32***	0.49***	0.18***	0.62***	0.27***

*** $p < 0.001$

The group of demographic variables entered at Step 1 did not explain a significant amount of variance in school community. After entry of school engagement at Step 2, the total variance explained by the model as a whole was 25% ($F(8, 229) = 9.51, p < 0.001$), a significant increase of 23% (R square change = 0.22, F change (1, 229) = 70.14, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 52% of the variance in school community ($F(11, 226) = 3.46, p < 0.001$), a significant increase of 27% (R square change = 0.27, F change (3, 226) = 43.03, $p < 0.001$). These results indicate that while the inclusion of school engagement as an IV predicts 23% additional variance in school community over and above the demographic variables, the addition of the house-related variables predict a further 27% of school community variance.

For male students, the group of demographic variables entered at Step 1 (school, year level, parents' highest levels of education, ethnic background and leadership position) did not explain a significant amount of variance in school community. After entry of school engagement at Step 2, the total variance explained by the model as a whole was 26% ($F(7, 109) = 5.47, p < 0.001$), a significant increase of 18% (R square change = 0.18, F change (1, 109) = 25.98, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 45% of the variance in school community ($F(10, 106) = 1.39, p < 0.001$), a significant increase of 19% (R square change = 0.19, F change (3, 106) = 12.49, $p < 0.001$).

For female students, the group of demographic variables entered at Step 1 (school, year level, parents' highest levels of education, ethnic background and leadership position) did not explain a significant amount of variance in school community. After entry of school engagement at Step 2, the total variance explained by the model as a whole was 31% ($F(7, 107) = 6.95, p < 0.001$), a significant increase of 28% (R square change = 0.28, F change (1, 107) = 42.76, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 63% of the variance in school community ($F(10, 104) = 17.87, p < 0.001$), a significant increase of 32% (R square change = 0.32, F change (3, 104) = 30.14, $p < 0.001$).

For students without a leadership position, the group of demographic variables entered at Step 1 (school, gender, year level, parents' highest levels of education, and ethnic background) did not explain a significant amount of variance in school community. After entry of school engagement at Step 2, the total variance explained by the model as a whole was 31% ($F(7, 94) = 5.93, p < 0.001$), a significant increase of 22% (R square change = 0.22, F change (1, 94) = 29.14, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 49% of the

variance in school community ($F(10, 91) = 8.69, p < 0.001$), a significant increase of 18% (R square change = 0.18, F change (3, 91) = 10.79, $p < 0.001$).

For students without a leadership position but interested in one, the group of demographic variables entered at Step 1 (school, gender, year level, parents' highest levels of education and ethnic background) explained 16% of the variance in school community ($F(6, 86) = 2.76, p < 0.05$). After entry of school engagement at Step 2, the total variance explained by the model as a whole was 35% ($F(7, 85) = 6.51, p < 0.001$), a significant increase of 19% (R square change = 0.19, F change (1, 85) = 24.49, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 62% of the variance in school community ($F(10, 82) = 13.23, p < 0.001$), a significant increase of 27% (R square change = 0.27, F change (3, 82) = 19.17, $p < 0.001$).

Table 6.19

Results of hierarchical regression analysis for predictors of school community

	Total	Male Students	Female Students	No Leadership	No Leadership But Interested
Variable	β	β	β	β	β
House Engagement	-0.03	-0.05	-0.06	-0.07	0.09
House Connectedness	0.26***	0.17*	0.42***	0.29***	0.28**
House Staff–Student Relationships	0.31***	0.29***	0.17**	0.17*	0.16
School Engagement	0.34***	0.28***	0.38***	0.30***	0.31***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

A final model of school community was examined whereby the individual house variables, as well as school engagement, were solely included in the hierarchical regression. This would reveal the proportional variance predicted by each of these key variables. School engagement predicted the most variance in school community ($\beta = 0.34, p < 0.001$), followed by house staff–student relationships ($\beta = 0.31, p < 0.001$) and house connectedness ($\beta = 0.26, p < 0.001$).

For male students this was reversed, with house staff–student relationships being the strongest predictor of school community ($\beta = 0.29, p < 0.001$), followed by school engagement ($\beta = 0.31, p < 0.001$) and house connectedness ($\beta = 0.17, p < 0.05$).

For female students, the strongest predictor was house connectedness ($\beta = 0.42, p < 0.001$), followed by school engagement ($\beta = 0.38, p < 0.001$) and house staff–student relationships ($\beta = 0.17, p < 0.01$).

For students without a leadership position, the strongest predictor was school engagement ($\beta = 0.30, p < 0.001$), followed by house connectedness ($\beta = 0.29, p < 0.001$) and house staff–student relationships ($\beta = 0.17, p < 0.05$).

For students without a leadership position but interested in one, the strongest predictor was school engagement ($\beta = 0.31, p < 0.001$), followed by house connectedness ($\beta = 0.28, p < 0.01$).

Explaining the Variance in School Engagement

Another hierarchical regression was conducted with school engagement as the DV and school community as one of the IVs alongside the house and demographic variables entered at separate steps.

Table 6.20

Results of hierarchical regression analysis with school engagement as the DV

Model	Variable Entered	Total		Male Students		Female Students		No Leadership		No Leadership But Interested	
		R Sq.	R Sq. Change	R Sq.	R Sq. Change	R Sq.	R Sq. Change	R Sq.	R Sq. Change	R Sq.	R Sq. Change
1	Demographic Variables	0.06	–	0.03	–	0.11*	–	0.05	–	0.09	–
2	School Community	0.28	0.22***	0.21** *	0.19***	0.37** *	0.25***	0.27** *	0.23***	0.29** *	0.20***
3	House Variables	0.30	0.03*	0.22** *	0.01	0.46** *	0.09**	0.30** *	0.03	0.32** *	0.03

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The group of demographic variables entered at Step 1 did not explain a significant amount of variance in school engagement. After entry of school community at Step 2, the total variance explained by the model as a whole was 28% ($F(8, 229) = 10.93, p < 0.001$), a significant increase of 22% (R square change = 0.22, F change (1, 229) = 70.14, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 30% of the variance in school engagement ($F(11, 226) = 1.90, p < 0.001$), a significant increase of 3% (R square change = 0.03, F change (3, 226) = 2.66, $p < 0.05$). This analysis suggests that, as a whole, school community as an IV predicts much more variance in school engagement than the 3 house-related variables combined. That said, as described below, the variance contributed by the house-related variables significantly differed between genders.

For male students, the group of demographic variables entered at Step 1 (school, year level, parents' highest levels of education, ethnic background and leadership position) did not explain a significant amount of variance in school engagement. After entry of the school community at Step 2, the total variance explained by the model as a whole was 21% ($F(7, 109) = 4.24, p < 0.001$), a significant increase of 19% (R square change = 0.19, F change (1, 109) = 25.98, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 22% of the variance in school engagement ($F(10, 106) = 3.02, p < 0.001$). The increase in variance explained by the addition of the house variables was not significant.

For female students, the group of demographic variables entered at Step 1 (school, year level, parents' highest levels of education, ethnic background and leadership position) explained 11% of the variance in school engagement ($F(6, 108) = 2.28, p < 0.05$). After entry of school community at Step 2, the total variance explained by the model as a whole was 37% ($F(7, 107) = 8.82, p < 0.001$), a significant increase of 25% (R square change = 0.25, F change (1, 107) = 42.76, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 46% of the variance in school engagement ($F(10, 104) = 8.80, p < 0.001$), a significant increase of 9% (R square change = 0.09, F change (3, 104) = 5.91, $p < 0.01$).

For students without a leadership position, the group of demographic variables entered at Step 1 (school, gender, year level, parents' highest levels of education and ethnic background) did not explain a significant amount of variance in school engagement. After entry of school community at Step 2, the total variance explained by the model as a whole was 27% ($F(7, 94) = 5.03, p < 0.001$), a significant increase of 23% (R square change = 0.23, F change (1, 94) = 29.14, $p < 0.001$). With the

addition of the 3 house variables at Step 3, the whole model explained 30% of the variance in school engagement ($F(10, 91) = 3.97, p < 0.001$). The increase in variance from the addition of the house variables was not significant.

For students without a leadership position but interested in one, the group of demographic variables entered at Step 1 (school, gender, year level, parents' highest levels of education and ethnic background) did not explain a significant amount of variance in school engagement. After entry of school community at Step 2, the total variance explained by the model as a whole was 29% ($F(7, 85) = 4.98, p < 0.001$), a significant increase of 20% (R square change = 0.20, F change (1, 85) = 24.49, $p < 0.001$). With the addition of the 3 house variables at Step 3, the whole model explained 32% of the variance in school engagement ($F(10, 82) = 3.78, p < 0.001$). The increase in variance from the addition of the house variables was not significant.

Table 6.21

Results of hierarchical regression analysis for predictors of school engagement

	Total	Male Students	Female Students	No Leadership	No Leadership But Interested
Variable	β	β	β	β	β
House Engagement	0.14*	0.04	0.31***	0.17	0.14
House Connectedness	-0.03	0.06	-0.21*	0.00	-0.15
House Staff-Student Relationships	-0.09	-0.06	-0.10	-0.08	-0.03
School Community	0.47***	0.47***	0.54***	0.53***	0.46***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

In the final model, school community predicted the most variance in school engagement ($\beta = 0.47, p < 0.001$), followed by house engagement ($\beta = 0.14, p < 0.05$). However, for male students the only significant predictor was school community ($\beta = 0.47, p < 0.001$). For female students the strongest predictor was school community ($\beta = 0.54, p < 0.001$), followed by house engagement ($\beta = 0.31, p < 0.01$) and house

connectedness ($\beta = -0.21, p < 0.05$). For students without a leadership position, the only significant predictor was school community ($\beta = 0.53, p < 0.001$). Similarly, for students without a leadership position but interested in one, the only significant predictor was school community ($\beta = 0.46, p < 0.001$).

Summary

The overarching research aim of the current study is to empirically investigate the effect of the house system on secondary students. This includes 3 main objectives, one of which has been addressed in the earlier MANOVA that did not identify any significant differences between the two school sectors. Another objective is to collect and analyse qualitative data from staff and this is addressed in the following chapter. The third objective, which has been addressed in both the MANOVA analyses and these hierarchical regressions, is to develop a questionnaire to investigate the degree to which students feel engaged and connected, and perceive positive relationships with staff within their house and within their school. While the MANOVAs have provided mean scores of the variables to allow comparisons to be made, the advantage of regression analysis is that I was then able to analyse whether the house variables predict variance in the school variables. This has allowed me to test the hypothesised model I proposed in Chapter 4.

The combination of the demographic variables, school engagement and the 3 house variables contributed 52% of the variance in school community. For the total sample, the demographic variables did not significantly predict any variance on their own (only for students without leadership but interested), while school engagement explained an additional 23% variance and the house variables another 27%. The strongest predictors were school engagement, house staff–student relationships and house connectedness. For the most part these 3 variables were significant predictors for all 4 individual groups examined: males, females, students without leadership and

students without leadership but interested. An interesting discrepancy is that house connectedness was the strongest predictor for female students, but the weakest for males. Conversely, house staff–student relationships were the strongest predictor for male students, but the weakest for females. House staff–student relationships were a significant predictor for students without a leadership position, but not for students without a leadership position but interested in one. This was the only major difference between these two groups across both regression analyses.

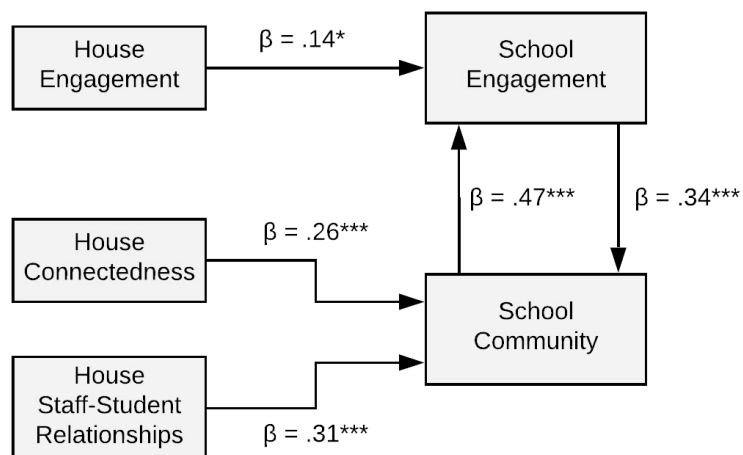
With school engagement as the DV, the combination of the demographic variables, school community and the 3 house variables contributed a much lower 30% of the total variance. The demographic variables did not significantly predict any variance on their own, while school community explained an additional 22% and the house variables only another 3%. However, for female students alone this increase was 9%. This may be due to house engagement being the strongest predictor for female students, while house engagement and the other house variables were not significant predictors for any other individual groups examined. While house engagement was indeed a strong predictor for girls, school community was the strongest predictor for the total sample and across the individual groups. An interesting observation was that house connectedness had a significant negative beta coefficient for female students.

Notwithstanding the differences that have been found in relation to gender and leadership position, a path diagram illustrating the beta coefficients (the variance explained unique to that specific variable) for each of the variables for the total sample population is presented in Figure 6.12. The diagram is a visual summary of the findings from the regression analyses and not a diagram derived from path analysis. This is important to note. Had it been a path analysis diagram, one could infer that school engagement may mediate the effect of house engagement on school

community. However, path analysis and/or structural equation modelling (SEM) were not conducted as part of the present study (although this is discussed as a direction for further research in Chapter 9).

Figure 6.12

Path diagram illustrating beta coefficients for the total sample population



* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Chapter 7 : Qualitative Results

This chapter concerns qualitative data that has been obtained through surveys that were distributed to tutors and heads of house who were employed in the participating schools and who participated in the quantitative data phase. One of the objectives of the current study is to collect qualitative data, since it complements and possibly assists in explaining trends within the quantitative data. In doing so, we gain a better understanding of how the house system affects secondary school students, the primary research question of the current study. Additionally, it is hypothesised that the opinions provided by staff can provide an understanding of the staff culture, attitudes and responsibilities regarding the house system, thus bridging a gap in previous literature.

Participants

I randomly selected heads of house and tutors from the participating schools and sent invitation emails containing information about the current study and a link to complete the survey. The participants consisted of 15 staff members, one of whom was employed in School A and 14 were employed in school B. Three of the participants were heads of house and the remaining 12 were tutors. Their years of experience in their current role varied from one year (3 participants) to 20 years (one participant). The average years of experience in the participant's current role were 6.2 years. Participants were given 3 weeks to complete the online survey and were sent a reminder after one week. All participants completed the entire survey, which took an average of 11 minutes and 27 seconds to complete.

Heads of House/Tutors Data and Emerging Themes

Perceived Goals and Assessment of House System Implementation

Figure 7.1

Distribution of responses relating to perceived house system goals

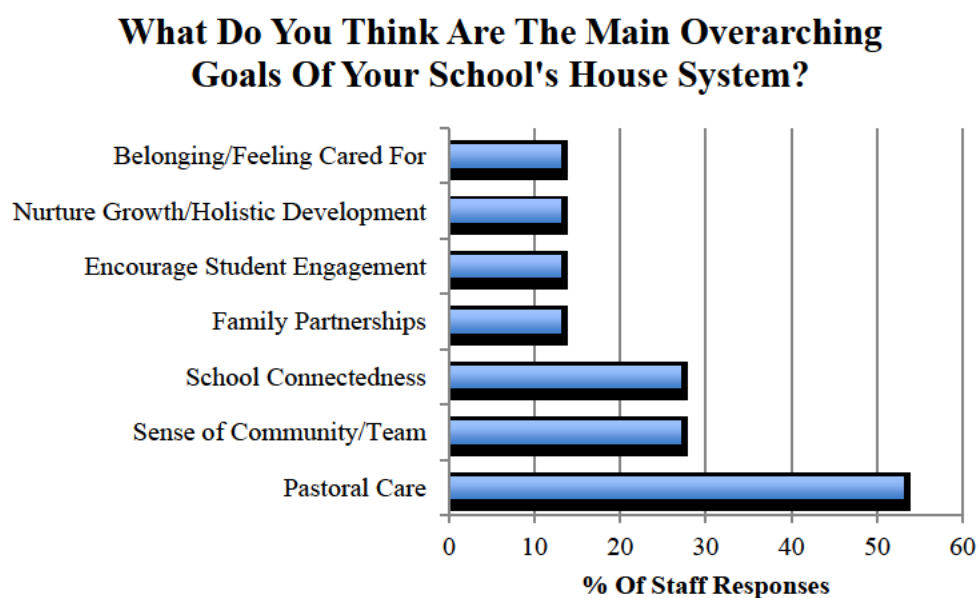
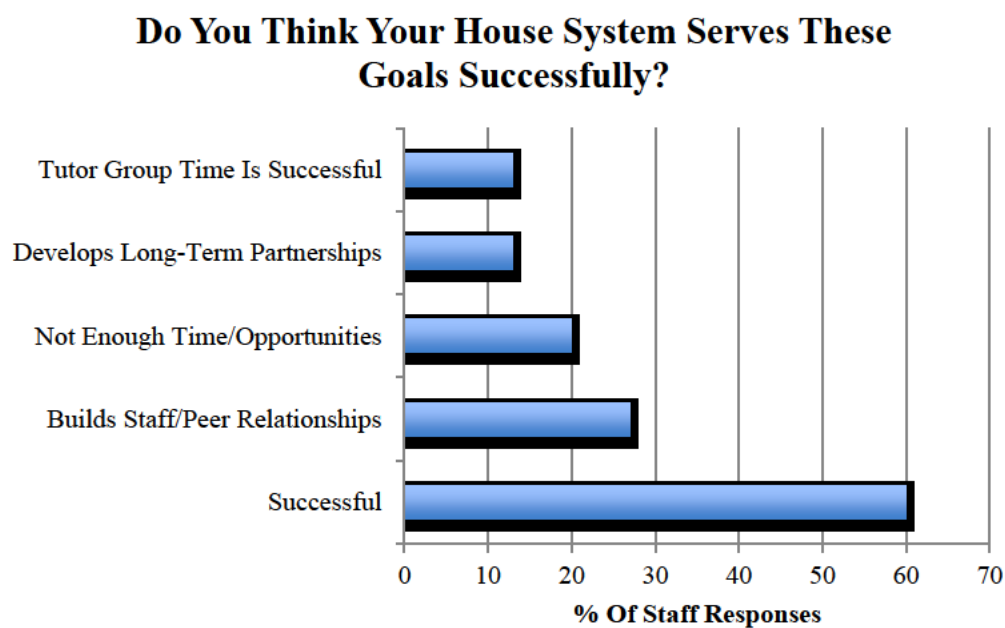


Figure 7.2

Distribution of responses relating to perceived success of the house system



The participants were mostly united in their opinion that the primary purpose of the house system within their school was to facilitate pastoral care. This included 4 participants who only stated ‘pastoral care’ as the sole goal of the system, while the others explicitly referred to it in addition to a number of other suggestions. The second most common themes relating to the perceived goals of the house system concerned a sense of community/teamwork and students’ school connectedness. The sense of community/teamwork encompassed suggestions of the system facilitating relationships across a range of year levels, students experiencing a sense of shared achievement with others in the school community and the capacity of the system to build teams. The core element of the school connectedness theme was students developing a sense of attachment to the school itself via the house system. Serving as a point of contact between the school and families was mentioned by two participants, with one stating that an overarching goal of the system was to ‘[build] strong family partnerships between students, parents and teachers during a students [sic] time at the College’. Other themes that were identified by a total of two participants included: encouraging student participation and engagement; nurturing the growth and holistic development of the student; and developing a sense of belonging within the student. In relation to the sense of belonging, one participant highlighted the house system as being a means of ‘[reassuring] the individual student of their importance [and providing] a structure where students feel that their learning journey matters to someone outside the family unit’.

In terms of whether house system actually addressed the goals successfully within their school, the majority of participants (9) agreed that it did indeed meet the goals that they mentioned. The most commonly stated aspect of where the system had succeeded was in relation to building positive relationships between students and their peers, and with their teachers. One participant further highlighted the cross-age

relationships that could be formed within the house, stating that ‘the family focus of the house structure that creates a cohesive unit within the larger entity of the whole College assists the students to feel secure and assist [sic] in building personal relationships within the house at both the same level as the student and with more junior/senior students’. They were also passionate about the importance of the role of the tutor, stating that the tutor is ‘an essential element in the helix of a student’s College life’. The opportunity for house staff, predominantly the tutor during tutor group time, to build rapport and form long-term relationships with students over the course of their secondary school was mentioned as an advantage by 5 participants. One stated, ‘tutor time allows students and teachers a chance to build a rapport [and] discuss any questions [and/or] concerns that may arise day to day within the College’. Said another, ‘welcoming a student in year 7 and building up a strong support network over the next 6 years is a strength of the house system’. However, the need for more time allowance or opportunities to allow staff to successfully contribute towards the intended goals of the system was mentioned by 3 participants. One participant, a head of house, was the only participant who explicitly stated that their house system was not meeting its intended goals. They were critical of their house system’s current structure: ‘The time and opportunities to ensure we can achieve the goals have been eroded over time. The house carnivals [that] were designed, and are said to still, foster house spirit, engagement and staff–student relationships no longer achieve these goals due in part to constraints placed on them. Also due to the changing nature of student interests and needs’. Another participant mentioned that ‘time is quite rushed to achieve [pastoral care and peer relationships]—we only have tutor groups and there are only rare chances for us to have extended time to achieve our goals’. The other simply stated that although the house system achieved its goal of facilitating pastoral care, more time allowance was needed. Other criticisms included one participant

stating that students ‘would still prefer to interact within their year level’ and another related more to attitudes of students and staff within the system rather than the system structure itself: ‘I don’t think the students have as much house spirit as they could ... students tend to be too worried about their own wants and needs rather than giving things a go ... I feel that we need to encourage participation more’.

In sum, the participants perceived the main overarching goals of the house system to be a means of facilitating pastoral care, establishing a sense of community and team spirit, and building a sense of school connectedness. Participants largely believed that the system in their school was indeed successful in achieving these goals, with an emphasis on the capacity for staff to build rapport and long-term relationships with their students. Areas identified for improvement in relation to achieving these goals were the time allowance and the number of opportunities provided to staff to do so.

Strengths and Suggested Improvements of the House System

Figure 7.3

Distribution of responses relating to house system strengths

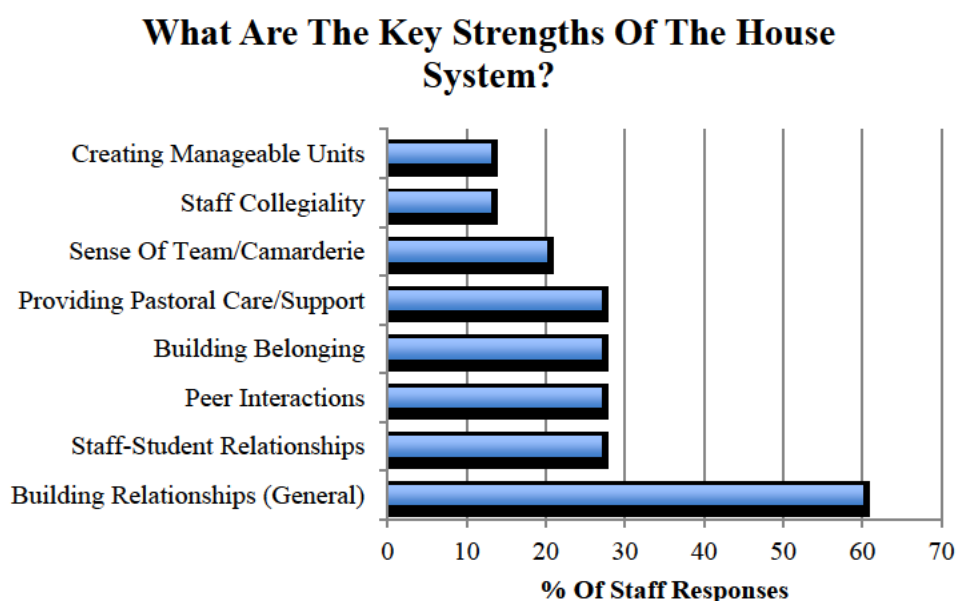
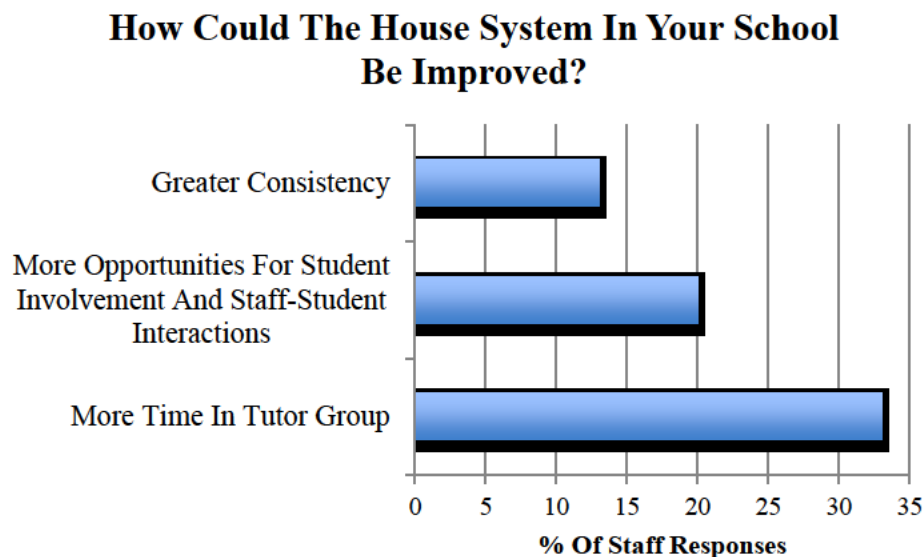


Figure 7.4

Distribution of responses relating to house system improvement



A prevailing strength that participants identified within their house system was the building of relationships, mentioned by 9 participants. Of those 9, 4 highlighted forming of positive staff–student relationships: ‘staff and students working with each other outside of the classroom’ and referred again to the role of the tutor in building rapport with the students and providing them with individualised attention. Four also referred to the opportunities for students to form connections with their peers from other age groups through the vertical nature of the tutor groups and communal occasions such as ‘house time’. While this mostly concerned students ‘interacting’ and ‘getting to know’ one another, one participant suggested that these cross-year level relationships could also be formed through the ‘opportunity for students to seek advice and support from older students and also the ability to [lead] and role-model for younger students’ in tutor group. Still within the peer relationships vein, 3 participants mentioned the concept of students banding together as a team through ‘opportunities to celebrate and worship as a house’, ‘inter-house competition’ and the building of ‘family spirit’. The relationships theme also extended to staff, with one

participant mentioning that ‘house team, staff wise, has been a really strong part for [our] house’ and another participant referring to the collegiality they experienced through working with other staff in their house. The building of a sense of belonging in students was mentioned by 4 participants as another strength of the house system. While 3 simply stated ‘belonging’ as the strength, one participant—a head of house—elaborated further: ‘in general it can produce a core group of people who really know and care for each individual and give every student the opportunity to *belong*’. Four participants identified the facilitation of pastoral care and the ability of the house system to provide a support network for students as a strength. No further elaboration was provided in relation to this theme; however, one participant simply stated ‘representing’, perhaps implying that house staff such as tutors and heads of house played a role in advocating for the student. The fourth and last strength identified by two participants was the breaking down of the large school cohort into smaller and more manageable units, allowing ‘connection to a small cohort of staff and students’.

In relation to improvements that could be made to their house system, two main themes emerged along with other individual suggestions. Having more time in tutor group was the strongest theme, being suggested by 5 participants. ‘More time allowance for tutors to connect with tutees’ and ‘more time in tutor [group] to connect with students’ were the most elaborate answers within this theme, with participants also suggesting that smaller student numbers per group might be a possible improvement. The second main theme—mentioned by 3 participants—was to have more opportunities for student involvement and staff–student interactions. In doing so, this would assist in helping build ‘cohesiveness’, ‘family’ and ‘connection to the house’. One participant elaborated further by stating that increased opportunities for engagement in activities were required ‘outside the confines of sporting arenas. As an academic institution, I believe greater focus needs to be on the academic achievement

of the students—with progress recognised at a house level and not just in the morning tutor time as people rush out the door for the day’. Two participants briefly stated that consistency and communication between houses needed to be improved, while one participant wanted more opportunities for the tutors to meet with parents at parent–teacher meeting evenings.

Overall, key strengths of house systems that were identified by participants included the building of relationships (with staff, peers of other ages, between staff and as whole house), the capacity to build a sense of belonging, providing pastoral care and a support network for students, and breaking a large population into smaller cohorts. Suggested areas for improvement related to having more time allowance in tutor group for students to build relationships with their peers/tutors, the school providing more (and more varied) opportunities for interactions and engagement to take place, and greater consistency and communication between the houses.

Tutor/Head of House Responsibilities and Perceived Success/Obstacles

Figure 7.5

Distribution of responses relating to role responsibilities

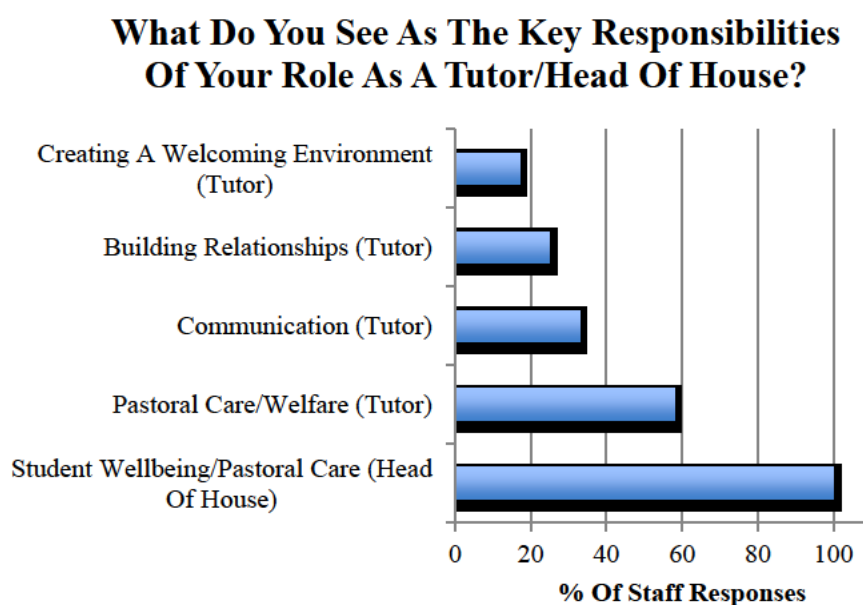
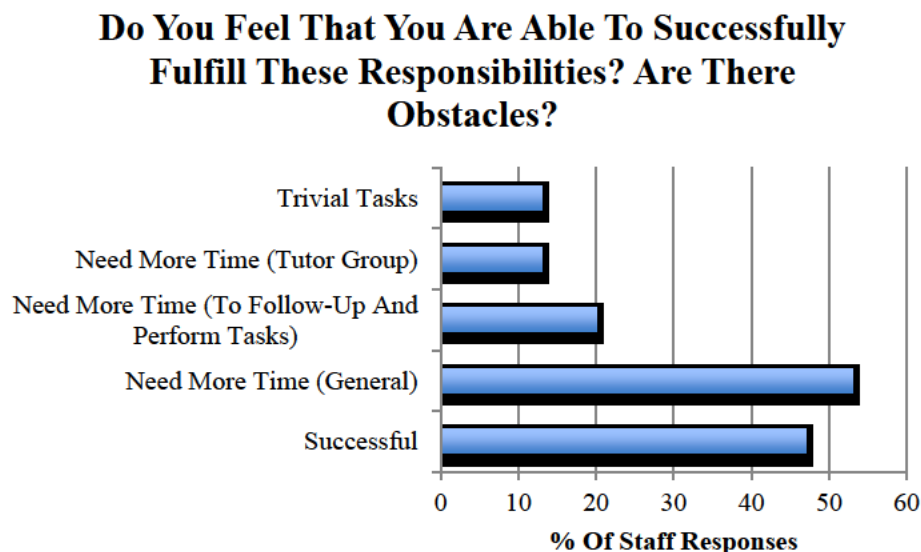


Figure 7.6

Distribution of responses relating to role success and obstacles



For tutors, 7 out of 11 believed that one of their main responsibilities was to oversee the pastoral care and welfare of their students, including ‘making sure the students are fully supported’. The theme of communication was mentioned by 4 tutors, with responsibilities including being a ‘first port of call for students, parents and staff’ and being available for parents and guardians to ‘answer questions or pass on information to teaching staff’. Three tutors stated that a key responsibility of theirs was to build relationships with the students, including the provision of ‘[guidance] and support’, ‘a person they can trust and turn to’ and for them to assist in helping students ‘creating a sense of belonging and identifying to/with something more than just yourself’. Two tutors highlighted the creation of a ‘welcoming’, ‘fun’ environment that is a ‘safe place within the school’ as another responsibility of theirs. In response to being asked whether they could successfully carry out these responsibilities and what obstacles they faced, only 5 tutors explicitly stated that they were successful. The most commonly mentioned obstacle to tutors’ success was the issue of time: two mentioning it in relation to time spent with the students (‘time

devoted to tutor group is minimal’) and 3 in terms of following up administrative duties (‘time limitations means administrative task [sic] dominate time with the students’). The need to perform trivial tasks was identified by two tutors as a contributor to this perceived lack of time—‘there are many extra things we are given to do instead of focusing on our goal’—along with timetabling issues mentioned by one tutor. While these participants did not identify the specific additional tasks that interfered with their ability to ‘focus on their goal’, from my experience having been a tutor for several years myself, I suggest that the administrative tasks they were referring to include marking the morning roll, reading out daily bulletin messages, checking uniform, following up on various enquiries (e.g. reports of poor behaviour in classes), reminding students of key dates and events, and assisting the students with other miscellaneous issues such as losing their locker key or not having any money for their lunch. Cumulatively, these tasks take away from the time available to focus on team-building or wellbeing-based activities.

All three heads of house stated that their main responsibility was overseeing student wellbeing and pastoral care, but they did not provide much further information. Individual additions included being ‘a person to have conversations with’, to ‘deal with behavioural issues’ and to ‘make connections with families’. Two out of 3 heads of house stated that they were successful in carrying out their responsibilities. The head of house who stated that they were not successful attributed their answer simply to a lack of time. In the same vein, another stated that they were able to fulfill their duties; ‘however, time is always an issue when finding meaningful moments to fulfill the responsibilities’. The other head of house cited ‘increased documentation and larger numbers’ as the key obstacles to their success. Again, while this participant did not go into specifics about this burdensome ‘documentation’, as a head of house myself I spend an average of at least 3 to 4 hours per day typing up

transcripts of phone calls with parents and meetings with colleagues and students, completing counselling referral forms and surveys, and managing paperwork associated with student behavioural concerns (e.g. receiving incident reports from teachers, typing up summaries of events and consequences, and arranging detentions). Most of this is done online through the school's intranet for wellbeing and welfare staff to access in case further follow-up is required.

To summarise, the most-mentioned responsibility for tutors was to oversee students' pastoral care and welfare, followed by being a conduit between teachers, students and parents, building relationships with students to enhance their sense of belonging, and creating a safe and welcoming environment. All 3 heads of house also identified the overseeing of pastoral care as a key responsibility of theirs. A reported lack of appropriate time allowance—both with the students and to perform administrative duties—was the most common obstacle mentioned by tutors. Timetabling issues and the need to perform trivial tasks as part of their role were identified as contributors to this lack of time. Heads of house largely echoed the lack of time sentiments, as well as mentioning increased documentation and larger student numbers.

Highlights and Downsides of the Tutor/Head of House Role

Figure 7.7

Distribution of responses relating to highlights of house staff role

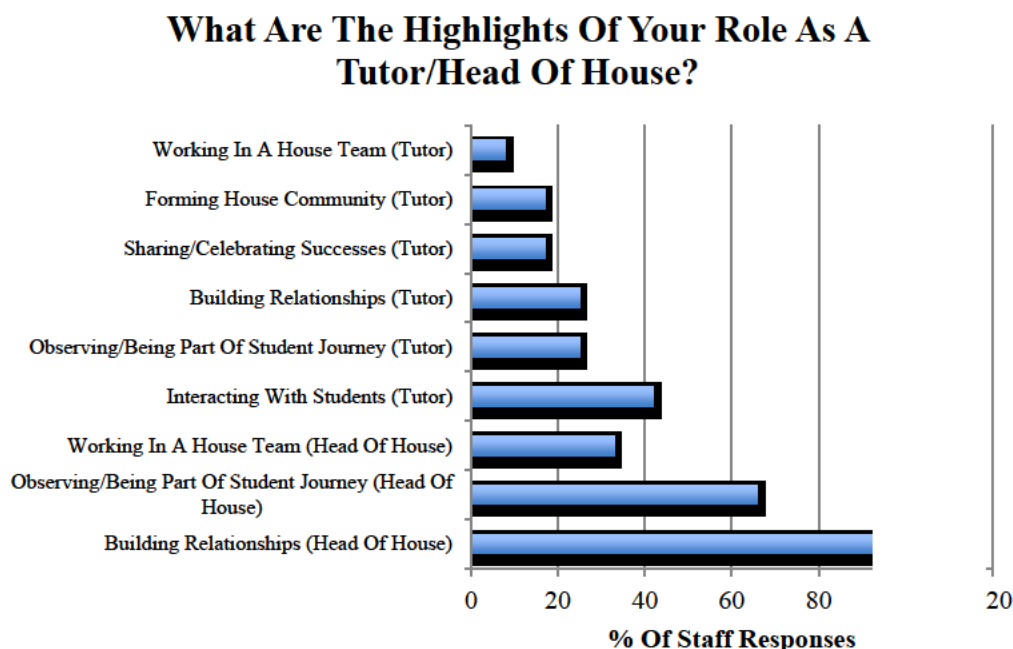
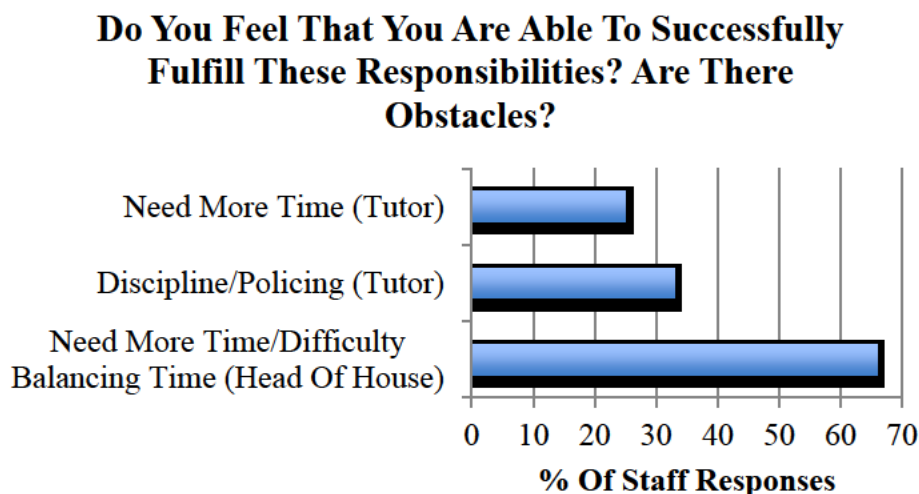


Figure 7.8

Distribution of responses relating to downsides of house staff role



The most common theme mentioned as a highlight by tutors was interacting with and getting to know the students on a more personal level outside of the classroom. The tutor who provided the most elaboration stated that a highlight for them was ‘when a tutee actually approaches me with a concern, or a highlight from

their weekend'. Watching and being part of a student's 'growth' or 'journey' over the course of their secondary schooling was mentioned by 3 tutors as being a highlight for them. Said one tutor, 'there are many moments to celebrate and many challenges along the road, but you have a strong connection over the 6 years'. The building of positive relationships and trust with their students was explicitly mentioned by 3 tutors and two mentioned that a highlight for them was to be a part of the forming of a 'community' or 'family'. One tutor also mentioned that 'working within a smaller team of staff that I would perhaps not normally work with [i.e., within the same faculty]' was a highlight for them. The most commonly mentioned downside to the tutor role—mentioned by 4 tutors—was dealing with student discipline and the policing of trivial concerns. One tutor effectively summarised these concerns: 'I am constantly wary of having the *little thing* smothering the greater achievements and efforts of the tutees, [for example] discussions of uniforms, unfinished work and poor manners or performance/behaviour in classes'. The discipline duties were not just confined to what the tutor observed with their own students but also included, as one tutor stated, the 'following up [of] discipline matters for other staff' as well. Echoing the obstacles to their success, the need for more time was mentioned by 3 tutors as a downside to their role, with one stating that there is 'too much work in [our] own time to follow up issues of discipline, following up complaints, etc', while another simply stated, 'I wish I had more time'.

All 3 heads of house mentioned the building of relationships with students and families as a highlight for their role. One head of house stated that a highlight for them was 'always the relationships and success stories', while another said that they 'love the interaction with the students and having great relationships'. Two heads of house also mentioned that being a part of student's schooling journey and 'seeing the students' growth over the years' was a highlight for them. Working within a team of

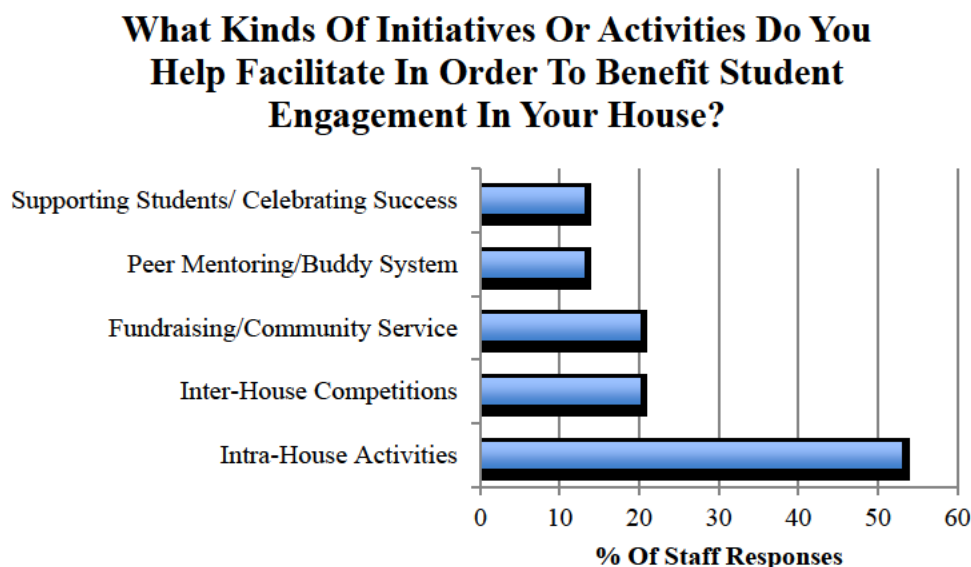
house staff was also mentioned as a highlight for one head of house. Likewise with the tutors—and which they had previously mentioned as an obstacle—a lack of time was mentioned by all 3 heads of house as a downside to the role. One head of house linked the lack of time to not being able to fully develop relationships with their students, stating that ‘the limited time available often leads to [the] head of house becoming a bit like the old fashioned father—the disciplinarian who doesn’t really know his family’. Another highlighted the difficulty of balancing their teaching load with the interruptions and demands that came with pastoral care, as well as working with ‘tutors who are not as efficient or don’t really care’.

Overall, the key highlights that tutors mentioned as part of their role included getting to know the students on a more personal level, watching and being a part of students’ ‘journey’ and ‘growth’ over the 6 years and being able to build positive relationships and trust with students. Heads of house also cited the building of relationships with students as a highlight for them, as well as being part of and observing students’ growth over the course of their schooling. Downsides identified by tutors included the need to regularly police discipline, following up trivial issues and a lack of time allowance to perform the tasks asked of them. The lack of necessary time allowance to perform tasks was also mentioned as a downside by heads of house, along with the balancing of teaching and pastoral workloads, and working with inefficient or indifferent tutors.

Initiatives for Developing Student Engagement Within the House

Figure 7.9

Distribution of responses relating to initiatives/activities to benefit students' house engagement



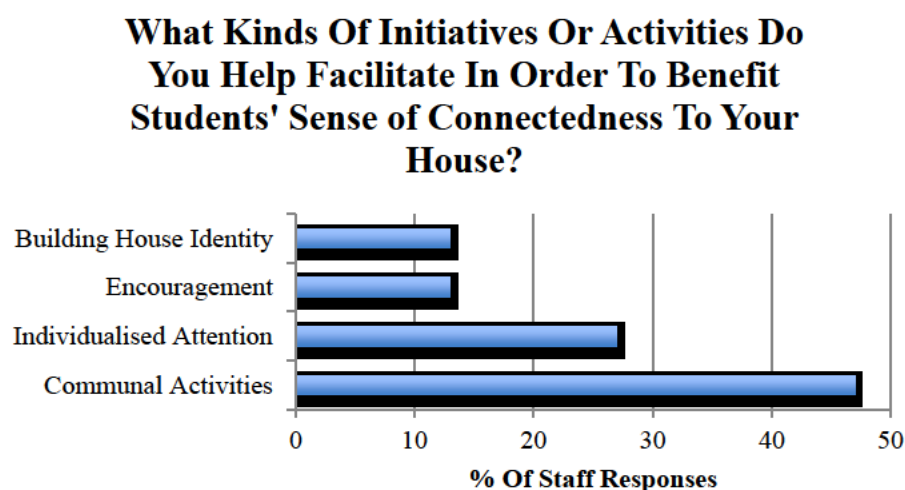
The most commonly mentioned method of increasing student engagement within the house was providing opportunities for them to engage in intra-house activities, thereby maximising the number of interactions with other students in the house. This theme was mentioned by 8 participants and such activities included 'house time activities', 'morning prayer', 'games during tutor group', and other 'activities that encourage students to get to know and work with each other'. One participant elaborated further by describing the superordinate goal-driven nature of these activities: '[to promote engagement, students are] interacting during house assembly by partaking in a game that aims to meet others but has a goal that needs to be achieved by working together'. Three participants mentioned inter-house activities as a means of promoting engagement, including 'carnivals', 'house competitions', 'house sport', 'performing arts' and 'inter-house swimming', and one participant mentioned that at their school 'students represent their house for year 7 and 8 sport'. Three participants also mentioned that 'various fundraising events' and community

service were methods of getting students engaged in the house. The peer mentoring system was mentioned by two participants, with an example of ‘year 11s taking care of new year 7s’. Two also mentioned that engagement was promoted through celebrating success and milestones, and ‘supporting and encouraging all students to get involved and participate’.

Initiatives for Developing Student Connectedness Within the House

Figure 7.10

Distribution of responses relating to initiatives/activities to benefit students’ house connectedness



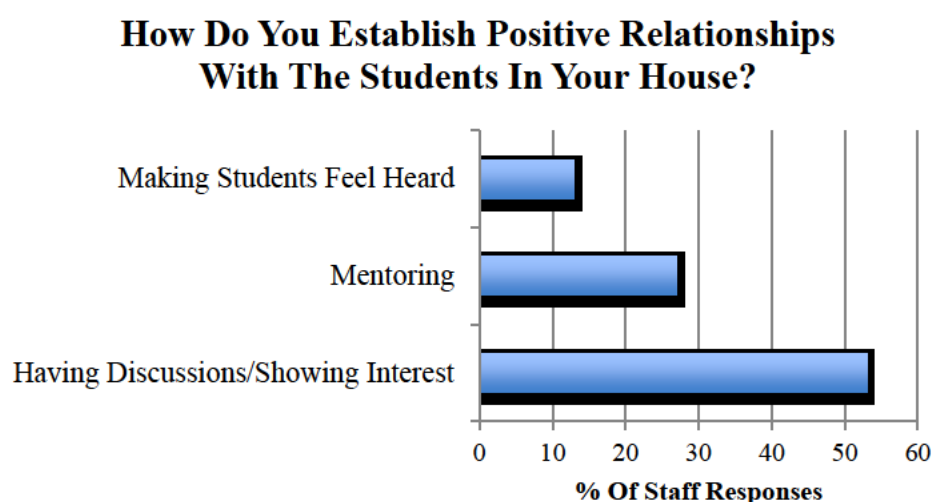
Students being involved in communal activities was the main initiative to build students’ sense of house connectedness, mentioned by 7 participants. One participant provided an example of a ‘walkathon that raises money for our house charity. [The] overall goal is to give someone a better life by simply working together’. Other house communal activities included ‘house games’, ‘barbecues’, ‘pizza lunches’, ‘peer activities’, ‘engaging in the daily prayer’, ‘[celebrating] birthdays’ and ‘working together on fundraising’. Four participants mentioned that connectedness was increased through providing individualised attention, as suggested by the celebrating of birthdays previously mentioned, but also by one participant ‘[making] sure that every student has a say and [trying] to see every student every day’. Another

participant stated that they built connectedness by ‘going around individually checking up on all students and developing rapport’. Two participants mentioned a theme of building a sense of identity and attachment to the house itself, such as teaching them the ‘backstory to their house’ (e.g. the origin of the house’s namesake). Supporting students and encouraging their involvement in activities (e.g. through awarding points or movie vouchers) was also mentioned by two participants.

Initiatives for Developing Positive Relationships with Students in the House

Figure 7.11

Distribution of responses relating to how staff build positive student relationships within their house



Simply having discussions with students and showing interest in their lives was mentioned by 8 participants as a strategy to build positive relationships. This included ‘[talking] to them in our morning sessions about how they are going with everything’, ‘[asking] them questions about their interests, experiences, etc’ and ‘casual chats about how they are progressing and their weekend activities’. One participant said that they worked towards it by ‘focusing on the achievements, efforts and strengths of the students in my care while gently steering students to take action to address their weaknesses and seeking help for their concerns ... having personal

discussions and taking a genuine interest in the student's progress'. From my own experience, offering assistance—or encouraging students to seek assistance from other relevant staff members—can relate to a number of different concerns, including:

- Academic concerns: when students are consistently achieving unsatisfactory results, if they are disengaged in the classroom or if they want to improve their current results.
- Transition concerns: when year 7 students or other new students to the school need help understanding their timetable, what resources they need and where their classes are.
- Pathway concerns: when students, particularly around years 9 and 10, are seeking advice on which subjects they should select in preparation for their future post-school.
- Wellbeing concerns: when students are feeling overwhelmed, anxious, alienated or bullied, or if teachers have any wellbeing concerns about the student.

Four participants mentioned their interactions to build relationships as being more in terms of a mentoring/modelling capacity. 'We try to model respect, integrity and compassion' said one participant, while another mentioned 'offering assistance with activities/work that is coming up'. Two participants identified the need for a student to feel heard as an initiative of theirs. One participant mentioned that they 'spend time asking questions and allowing them to speak'. Another elaborated further in relation to their responsibility as a tutor, stating that 'the tutor is often the advocate for the student regarding any matters so its [sic] important to hear the students [sic] side of a story first, before making any judgements'.

Other Comments on the House System

A number of participants took the opportunity at the end of the questionnaire to suggest their own additional thoughts and comments relating to the house system

and these were quite varied. Key themes that emerged were the themes of time, consistency and the variety/quantity of opportunities to engage students. All of the comments concern ways that the house system could potentially be improved.

In terms of time, one tutor stated that ‘for the house system to be effective, tutors need more time in the mornings to connect with their tutees’. Another suggested that adequate time needs to be offered in order to fully implement initiatives, so that they do not become ‘a token gesture’. Exactly how much time is needed for tutors to satisfactorily fulfill their duties, or at least feel that they are, is certainly worth examining in further research. At my current school, tutors are provided with 195 minutes per two-week cycle. This allocation is the total of all of the face-to-face tutor group sessions that are conducted with the students in the morning. However, this does not include any time that may be required for the tutor to conduct other duties related to their role. This includes attending house meetings, meeting with students outside of the morning sessions to provide additional guidance and calling/meeting with parents.

In regards to initiatives and activities, one participant supported an earlier answer from another participant that a greater emphasis needs to be placed on engaging students outside of the sporting realm. Increasing student collaboration by giving more responsibility to the student house leaders and having peer-led activities was another recommendation from a participant. From my own experience, examples of how student house leaders have been given responsibility have included: organising and speaking at house assemblies, assisting in the organisation of competitor teams for inter-house sporting competitions, assisting in lunchtime fundraising initiatives and meeting regularly with the head of house to relay any feedback and/or concerns.

The theme of consistency was referred to across two main areas, firstly in terms of having greater ‘consistency from leadership in terms of discipline’ and

secondly in the ‘application of house duties by staff across the College and across houses’. They added that this would lead to all students having a similar experience ‘regardless of [which] tutor or house they belong to’.

Miscellaneous recommendations included one participant suggesting that being a tutor should be optional rather than compulsory: ‘I have experienced the vertical pastoral care system as a student myself, and as a head of house and tutor. I am very supportive of this system, but I think it is essential that tutors indicate a preference to be involved, rather than being appointed as a tutor. We have some staff who would love to be tutors and are not. Others are tutors and would prefer not to be’. House culture and identity were mentioned by two tutors, with one saying that despite opportunities for engagement and/or connectedness needing to be developed further, they had ‘observed a subtle shift in the culture around [their] house in the short time that [they] have been at the College’. Another mentioned house identity as a component of a scathing assessment of the current status of their system: ‘a greater emphasis on house identity is required, as at the moment the students don’t see it as an important part of who they are within the school’. This participant mentioned in previous answers that a lack of opportunities and time were areas of improvement for their house system. One participant stated, ‘the house system is quite awkward when dealing with disciplinary issues across a year level’. They recommended that year-level coordinators would be an effective means of handling year-level-specific issues throughout the year. An intriguing comment came from a head of house, who said that while the house system can be ‘such a powerful positive influence’, it can also be ‘a divisive aspect of the school’. They added, ‘it can be overrated because *we have a house system* will not ensure it achieves anything’. This statement is likely insinuating that the house system needs to be more supported by the school administration,

particularly given the context of their other responses; they mentioned a lack of adequate time in 4 previous answers.

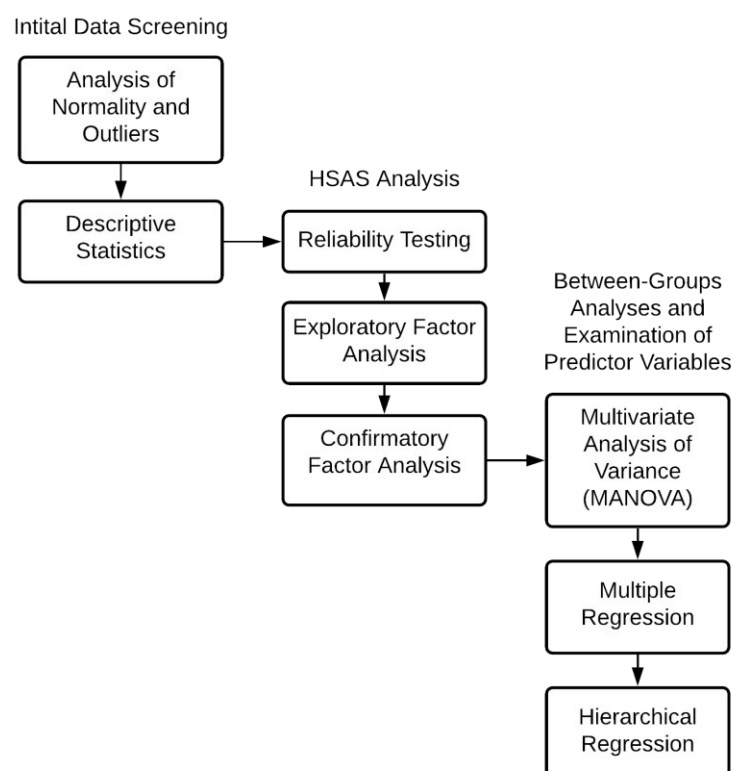
Final comments regarding the house system were essentially recommendations for how the system could be improved. These largely centred around providing more time for interactions, a more consistent staff approach and a greater amount and variety of house engagement opportunities. Additional comments included the tutor role being optional, a stronger focus on 'house identity', year-level coordinators, giving more responsibility to students and the house system being more than a token gesture of the school addressing pastoral care.

Chapter 8 : Discussion

The present research project was developed with a primary focus on the secondary school house system. The project has utilised a mixed-methods design to empirically investigate whether the house system has an effect on secondary students' attitudes and perceptions of their school experience, more specifically, their school engagement, sense of connectedness and quality of staff–student relationships. Firstly, the quantitative phase involved the development of a questionnaire to examine the degree to which secondary students feel engaged, connected and have positive staff–student relationships within their house and their school. This phase also included the investigation of whether school sector has any effect on the outcomes of the house system, specifically in relation to connectedness, engagement and staff–student relationships. The data from this questionnaire underwent a rigorous data analysis process, a summary of which is provided in Figure 8.1.

Figure 8.1

A summary of the statistical analyses conducted using the quantitative data



Secondly, the qualitative phase gathered open-ended responses from tutors and heads of house in order to analyse their opinions, attitudes and recommendations regarding various aspects of the house system. This chapter integrates the findings of both of these phases and draws upon relevant previous research in order to gain a deeper understanding of the mechanisms and effect of the house system in relation to students' senses of school engagement and community. In doing so, this chapter addresses the overarching research question of whether the house system has any effect on secondary students. The 3 research objectives of this study are integrated into the discussion throughout this chapter: (1) the development and use of questionnaire to investigate students' engagement, connectedness and staff–student relationships within the house and the school; (2) investigating the effect of school sector on the outcomes of the house system; and (3) using qualitative staff data to gain an understanding of staff attitudes and opinions of the house system, and to complement the quantitative student data.

Development of a New Measurement Tool—HSAS

In order to specifically target the key themes that emerged from the literature review in relation to the house system—engagement, connectedness and staff–student relationships—the decision was made to develop my own questionnaire. The inclusion of items relating specifically to elements of the house system made the questionnaire unique in that it has allowed comparisons between the whole-school context and house context. Many of the questions relating to the whole-school context were derived from previous research that utilised or developed questionnaires to investigate similar themes. This included, for example, questions from the School Connectedness Scale (Parker, Lee & Lohmeier, 2008) and the Life Stressors and Social Resources Inventory—Youth Form (LISRES-Y; Crouch, Keys & McMahon, 2014). However, in

the absence of pre-existing house-specific questionnaires, house-contextualised questions were drawn from findings of previous research within this limited field. For instance, questions relating to engagement within the house system were inspired by relevant case studies and findings by Brennan (2012), Coughlan (2004), Green (2006), Nixon et al. (2010) and Oxley (1989, 1990). The survey also consisted of demographic questions, which allowed for comparisons between groups of participants. I termed this questionnaire the House System Assessment Survey (HSAS) since it is potentially, to my knowledge, the first questionnaire that has an explicit focus on the house system and is a means by which schools may be able to determine its impact within their context.

The HSAS initially consisted of 6 subscales: school engagement, house engagement, school connectedness, house connectedness, school staff–student relationships and house staff–student relationships. Having questions relating to the 3 key constructs (i.e. engagement, connectedness and staff–student relationships) within both a whole-school and a house context allowed for relationships between these variables to be examined in the results. These are discussed through the course of this chapter. The Cronbach’s alphas for each of the subscales initially had high reliability ($\alpha = 0.75\text{--}0.83$); however, some individual items were removed in order to enhance the reliability of their respective subscales and these have been discussed in Chapter 7. The validity of the subscales was also improved as a consequence of this refining process. Further modifications to the HSAS were made in response to the EFA and CFA findings. These modifications are detailed in Chapter 7, but they include the removal of several items due to low loading onto factors or cross-loading onto multiple factors and/or removal of items in order to achieve a satisfactory model fit.

Following an investigation of the school engagement items through reliability testing using the EFA and the CFA, the subscale remained largely unchanged from the

original design. Six of the 8 original items remained in the scale. Item 32 ('I often get bored in class') was removed due to weak loadings in the EFA and CFA, and its cross-loading with another factor (school community). Conceptually this cross-loading holds water, since students who have a low sense of school community may also be less likely to be engaged in school. This is a theory that is supported by the high degree of correlation between these items, which is discussed later in this chapter. The other item removed from the subscale was item 22 ('I set myself goals and work towards them') due to its low correlations with other items in the subscale. Speculation regarding this is given in Chapter 6. This includes a suggestion that secondary students, particularly middle-school students, are still learning goal-setting behaviours. Therefore goal-setting is not necessarily a key part of their academic routine yet and this may explain its incongruence with the subscale.

Merging of School Connectedness and Staff–Student Relationships

School community was not initially included as a variable in the HSAS with its own dedicated subscale. The findings from the EFA and CFA resulted in the merging of the school connectedness and school staff–student relationships subscales, which were intended to be two separate DVs. This new merged variable consisted of the following items from the school connectedness scale:

- This school offers learning opportunities that interest me.
- I think my school is a safe place to be.
- I feel like I belong in this school community.
- I feel like this school is the right place for me.

It consisted of the following items from the school staff–student relationships scale:

- I trust my teachers.
- I get along well with my teachers.

- My teachers help me when I ask for it.
- Teachers at this school care about their students.
- I am comfortable asking teachers for help.

The fact that these two subscales combined was not a big surprise, but it does provide evidence for the interconnectedness of the two constructs. This finding therefore supports previous literature that indicated links between staff–student relationships and school connectedness. This includes suggestions by Rowe and Stewart (2009) that positive interactions between students and staff improve students’ school connectedness, and that connectedness is enhanced when students respect their teachers and perceive them as being personable and relatable. The link between these constructs is further supported by Waters, Cross and Shaw (2010), who suggested that student levels of teacher connectedness and school connectedness are positively correlated. Other variables, such as peer relationships and a feeling of safety, have been identified as playing key roles in influencing school connectedness (Cross et al., 2006; Juvonen, 2006), hence the focus on these themes in the intended school connectedness subscale items. McNeely, Nonnemaker and Blum (2002) supported these variables, but went further in suggesting that school connectedness can essentially be influenced by the degree to which the school meets a student’s needs. These needs include: (1) increasing autonomy; (2) opportunities to demonstrate competence; (3) developmentally appropriate supervision; (4) acceptance by peers; and (5) caring and support from adults. The statistical merging of these subscales in the present study adds support to the latter variable. Drawing not only from the statistical findings from the EFA and CFA but also from a theoretical standpoint, the merging of these two constructs in the present study appears valid. Since this emergent subscale consists of items relating to safety, peers and staff, it therefore seems appropriate to title this subscale ‘school community’. In the school

environment, I see events that influence students' sense of school community on a daily basis. This includes interactions with their classmates (e.g. friendships and social hierarchies), interactions with their teachers (e.g. whether they feel their teachers are treating them fairly or unfairly) and their sense of safety (e.g. bullying, alienation, trust and perceived support from peers and teachers).

From a practical perspective, the fact that these two constructs are so intertwined that they literally emerged as one variable highlights the key role that staff have in facilitating a student's sense of school connectedness. Teachers are essentially the face of the school from the student's perspective. Logically, if a teacher is perceived as being unnecessarily strict or is someone the student is unable to relate to, this may negatively impact on their perception of the school itself. Conversely, a student may feel a more positive connection with their school if they have teachers whom they respect and perceive as being helpful and trustworthy. The sum of the student's interactions with their teachers—along with their peer interactions—helps to determine the student's overall sense of being part of a school community. In my experience, it is almost inevitable that a student will not get along with at least one teacher or perceive a teacher as being unnecessarily strict or unfair. However, I speculate that it is indeed the sum of all of the student's interactions with their teachers combined that influences their overall sense of community.

Notable Item Discrepancies

Following the reliability and inter-correlation testing, items 6, 22, 25, 3 and 34 were removed from the analyses. I provide possible reasons for the inconsistencies regarding these items in Chapter 6; however, item 34 stood out as a particularly interesting outlier from its intended subscale. This item ('I am treated with as much respect as other students') was included within the school staff–student relationships subscale but had weak correlations with the 5 other items in the subscale, and

Cronbach's alpha rose marginally when it was removed (from $\alpha = 0.80$ to 0.81). Even though this subscale was eventually merged into the newly formed school community subscale, as a school leader in pastoral care myself I find this result particularly noteworthy as we certainly hope that all of our students feel fairly treated and equally respected.

Out of the 5 other items that item 34 weakly correlated with, 4 of them concern the student's immediate relationship with their teachers; 'I trust my teachers', 'I get along well with my teachers', 'I am comfortable asking teachers for help' and 'my teachers help me when I ask for it'. However, a distinct difference with item 34 is that it asks the student for their perspective on their relationship with teachers *compared to other students*. The fifth and last item in the subscale with which it was weakly correlated was item 19 ('Teachers at this school care about their students'). Essentially this item asks the student to assess the degree to which teachers care about the student cohort in general, leaving us with the possibility that some students may see themselves as being treated differently to the rest of the class or student cohort by their teachers. The notion of a student perceiving their own personal relationship with their teacher as an entirely separate entity to their perception of the way they are treated compared to their peers is a fascinating discovery. I would like to think that all teachers, particularly those involved in discipline or pastoral care, are conscious of treating students with respect and developing a positive rapport with the pupils in their care. That said, teachers could be forgiven for not always being mindful of how some students may interpret conversations that they are having with other students. While unfortunately some teachers may not be proficient at hiding the fact that they have 'favourite' students, it is also perhaps possible that, on a subconscious level, teachers do this more often than they might think. It is possible that while the teacher may be oblivious to the signs of favouritism they are displaying, students are particularly

sensitive to these displays. Based on my own experience as a teacher, I suspect that students who receive constant praise from teachers will be less susceptible to detecting favouritism towards themselves compared to students who believe they are entitled to praise but feel that praise is consistently going to other students instead. The group receiving noticeably less praise (in their own eyes) may develop envy or feel disdain towards the students who are receiving more. Proportionally, I speculate that the latter group may be more numerous than the former, which in turn may explain why students view their personal relationship with the teacher as different to how they are treated in comparison to their peers. While this is speculative, it is nonetheless a plausible hypothesis based on my experience as a secondary teacher and as a head of house, and this finding certainly warrants further investigation.

Another item of interest is item 37 ('Overall I respect and get along well with other students'). This item had a low eigenvalue (below 0.30) in the EFA, meaning it did not meet the criteria to load satisfactorily onto the school community factor. This item was originally within the school connectedness subscale. Other items in this scale include 'This school offers learning opportunities that interest me', 'I think my school is a safe place to be', 'I feel like I belong in this school community' and 'I feel like this school is the right place for me'. This item had a moderate correlation with 'I feel like I belong in this school community', but weak correlations with the other items. This may be due to these two items being mostly concerned with the student as a component of the social network within their school, factoring in not just their friends but also those with whom they have conflict. The other 3 items are more concerned with the school as an entity.

It could be the case that when a student views the school as a whole, their relationships with their teachers, not just their peers, play a role in influencing this perception. This, combined with the school offering an engaging and accessible

curriculum, may indeed play a larger role in explaining these 3 items, which are concerned with the student's safety, learning opportunities and the belief that their school is the right place for them. This hypothesis is supported by my finding that item 33 ('I would feel upset if someone said bad things about my school')—an item clearly viewing the school as an entity—had higher correlations with the other items in this vein and weaker correlations with the items that could relate more to their social situation. McNeely, Nonnemaker and Blum (2002) suggested 4 main school features that influence students' sense of connectedness: (1) classroom management climate; (2) school size; (3) severity of discipline policies; and (4) level of engagement in extracurricular activities. I hypothesise that some of these features were being considered by students—even at a subconscious level—when they were answering those items concerning the school as an entity. Additionally, when they were answering the items that relate to their sense of belonging and community, they were drawing upon their friendships, their more hostile peer relationships and their place in their own social hierarchy. In turn, these social variables also influence their sense of school connectedness (Cross et al., 2009; Juvonen, 2006; McNeely, Nonnemaker & Bum, 2002). This small but notable finding in the present study underscores the complexity of school connectedness as a variable, with it indeed being a product of several different sources of influence.

Overall Success of the HSAS

Not only have the 5 subscales of the HSAS emerged quite clearly through the EFA results—referring to the simple structure observed in Table 6.2, Chapter 6—but I have also been able to achieve excellent model fit with each subscale when run through a CFA and each demonstrates very good reliability. As a recap, CFA is a statistical technique that allows for the modelling of how measured indicators, such as questionnaire items, form associations with overarching latent factors (Phan et al.,

2020). It is a typical second step when researchers have conducted an EFA and simple structure has been obtained (Asparouhov & Muthen, 2009), as is the case in the present study.

My positive overall appraisal of the HSAS is therefore a judgement based on the following pieces of statistical evidence:

1. Close to 0.95 is an acceptable cutoff score for the CFI (Hu & Bentler, 1999) and all 5 subscales achieved a CFI above 0.95.
2. TLI/NNFI values closer to 1.0 indicate good fit, with values above 0.95 being a cutoff (Hu & Bentler, 1999; Walker & Smith, 2017), and all 5 subscales achieved 0.95 or better.
3. Two of the subscales (house connectedness and house staff–student relationships) had an RMSEA below 0.06, which has been suggested to be an acceptable cutoff score (Hu & Bentler, 1999). Furthermore, the RMSEA values for school engagement and school community were within the lower bound of a two-sided 90% confidence interval (Aluja et al., 2005). The RMSEA for house engagement was just outside of the lower bound of the 90% confidence at 0.07.
4. Additional support for 3 of the scales in particular—school engagement, house connectedness and house staff–student relationships—came from their successful rejections of the Bollen–Stine null hypothesis test (Walker and Smith, 2017).
5. All 5 subscales achieved high Cronbach’s alpha results for reliability: school engagement (0.78), school community (0.88), house engagement (0.79), house connectedness (0.81) and house staff–student relationships (0.73). Streiner (2003) suggested an ideal alpha for research tools to be in the range of 0.80

and 0.90, but values of 0.70 and above have been deemed satisfactory by Bland (1997) and at least 9 other papers in leading journals (Taber, 2018).

In summary, the HSAS questionnaire has played a major role in the current research project and therefore it is crucial that my measurement tool was accurate and reliable. The initial research that formed the foundation for the items themselves certainly helped to support the validity of the separate constructs embedded within the questionnaire. The validity along with the reliability of the subscales was further supported by the data itself, as described above. The HSAS has proved to be a tool that I can rely upon with a high level of confidence to isolate students' scores for particular constructs, compare these scores between groups of participants, and investigate relationships between the constructs themselves.

House Engagement

Within the context of this study, house engagement generally involved assisting in intra-house and inter-house activities and competitions, and having a willingness to contribute to the house and for the house to succeed. The items within this subscale were based on previous house-system case studies, including descriptions of the types of extracurricular house activities (Logan, 2011; Oxley, 1989, 1990) and the feelings of friendly competition and achievement that can come as a result of participating in these activities (Coughlan, 2004; Green, 2006). The present study has found no significant differences in house engagement across gender, school, year level, parents' education or ethnic background. However, significant differences have been found between students in relation to student leadership. This was found with several of the variables and is discussed throughout the course of this chapter. Students who did not have a leadership position but were interested ($M = 4.12$, $p < 0.001$), students with a leadership position in their house ($M = 4.10$, $p <$

0.05) and students with a school leadership position ($M = 4.09$, $p < 0.01$) all had significantly higher house engagement than students who did not have a leadership position ($M = 3.57$). This finding is in the same vein as that of Lizzio, Dempster and Neumann (2010), who found that students who demonstrated high levels of ‘school citizenship’ (participating in and contributing to the life of the school) demonstrated higher levels of leadership motivation. Anecdotally, student leaders tend to be some of the most motivated and confident students, and they have a desire to get the most out of their school experience. The disengagement within the house of students who do not have leadership, nor any desire for leadership, reinforces this view.

In my experience as a head of house, while most house activities (e.g. inter-house sports carnival days) are compulsory to attend, it is not always possible to convince all students to actually participate. As a high school student myself in the house that always won the house trophy each year, I know first hand the battle that my head of house constantly fought trying to rally some of the disengaged students in order to avoid losing a competition and tarnishing our dominant reputation. The year level above me had some of the most competitive students in the school and most were in our house. Conversely, my own year level had some of the most disengaged students in our house. When it came time for me to step in as house captain in year 12 we did not have those highly engaged older students to rely upon and, devastatingly, our reign ended. It was at that moment when I was truly able to sympathise with my head of house and to this day, as a head of house myself, I see this pattern continue with my own students. It is inevitable that there will be students in each house who are disengaged and do not put their hands up for anything, be it for fear of embarrassment, fear of failure or apathy. It is therefore logical that these are the same students who do not have leadership positions, nor any interest in leadership. However, as heads of house, and indeed as any school staff member, we should do our best to keep

developing methods of encouraging students to be actively involved in extracurricular house activities because they have been shown to lead to a range of benefits. Such benefits include students having more positive perceptions of school (Coughlan, 2004), improved behaviour (Coughlan, 2004), building relationships with peers and teachers (Green, 2006) and further developing their interpersonal skills (Oxley, 1990).

As we begin to examine evidence for such benefits in the present study through links between house engagement and the other constructs, we also see an emergence of gender differences. While no significant differences between boys and girls were found in terms of their overall level of house engagement, these differences concern the relationships between house engagement and the other variables. In relation to Pearson correlations, the biggest gender difference was found between house engagement and school engagement. While this correlation was a significant moderate correlation for girls ($r = 0.47$, $p < 0.01$), it was not a significant correlation for boys ($r = 0.16$). What makes this result even more compelling is that this non-significant correlation for boys was the only non-significant correlation found between any of the variables for either gender. This result was examined further in a multiple regression analysis, whereby house engagement was an IV and school engagement was the DV. This analysis found a significant beta coefficient of 0.31 for girls ($\beta = 0.31$, $p < 0.001$) but a non-statistically significant coefficient for boys. Essentially, for girls this indicates that house engagement as an IV has a moderate degree of influence on school engagement as a DV. However, house engagement did not explain any variance in school engagement for boys. It is therefore likely that the overall beta coefficient of 0.14 ($p < 0.05$) of house engagement predicting school engagement is a product of the strong effect found with the girls.

According to Pekkarinen (2012), there is an increasing gender gap in educational attainment globally, with females more likely to graduate from secondary

education, enrol in tertiary education and graduate from tertiary education. Pekkarinen attributed this increasing trend to factors including increases in numbers of women in the workforce and the changing role of women in the family. Further, Buchmann et al. (2008) stated that males have consistently been found to be the dominant gender in populations of students with certain learning challenges, such as reading disabilities, antisocial behaviour, attention disorders and dyslexia. This factor has been found to explain the aforementioned trend of females being more likely to enrol in tertiary education (Jacob, 2002). Closer to home—in terms of both geography and the themes of the present study—Fullarton (2002) stated in a paper published by the Australian Centre for Educational Research that gender plays a large role in influencing students' school engagement. They found that boys needed extracurricular activities and a supportive school and classroom environment in order to be engaged in school. Conversely, for girls it was more important for them to develop a strong sense of self-efficacy. It has been suggested that this stems from differences in cognitive-motivational functioning (Ghazvini & Khajepour, 2011; Rusillo & Arias, 2004) and through the way that attributions are made for success and failures (Rusillo & Arias, 2004). To elaborate further on the cognitive-motivational differences, Rusillo and Arias (2004) suggested that boys are more concerned with maintaining their self-image in class and therefore attribute failures to external causes (e.g. bad luck or the teacher). Conversely, girls take greater responsibility for their failures and tend to make more use of significant learning strategies rather than approaching the learning process in more of a superficial manner. The present study further supports this notion of gender difference in school engagement, with girls scoring higher in school engagement than boys ($M = 4.31$ versus 4.11), and this difference being significant ($F(1, 266) = 10.02, p < 0.01$). Interestingly, Fullarton (2002) posited that boys draw their sense of school engagement more from the supportiveness of their classroom

environment and their participation in extracurricular activities, while girls tend to draw more from their sense of self-efficacy and positive view of the school climate.

Bearing in mind these previous findings regarding the alternative ways that boys and girls engage with school, one could be forgiven for hypothesising that if gender played any role in influencing the relationship between house extracurricular participation and school engagement, it would be more favourable towards boys. While the present study has not only found that this is in fact the case for girls rather than boys, the non-statistically significant finding for boys altogether also warrants discussion. There are several possible explanations for these outcomes. In regards to the finding for boys that house engagement has no significant relationship to school engagement, the extracurricular activities that were mentioned by Fullarton (2002) as a means of engaging boys may relate more to activities that they have specifically chosen to be involved in and that are parallel with their own personal interests, such as being a member of the school football team because football is their favourite sport. House activities are not necessarily aligned with students' interests and are more communal in nature. For example, typical inter-house activities include a school swimming carnival where representatives from each house swim against each other. This may not be of any interest to boys. It should be noted that boys did not score significantly lower in house engagement than girls; it is just the flow-on effect to school engagement where the difference in house engagement lies. Thus, if boys were disengaged in house activities, girls were too. For girls, though, it may be the case that contributing to their house by engaging in house activities helps to enhance their sense of self-worth and self-efficacy, and that the excitement of partaking in such activities promotes a positive view of the school climate. In turn, these elements flow on to benefit other aspects of their school experience and contribute to their engagement in

the classroom, which aligns with Fullarton's (2002) research surrounding girls' mechanisms of school engagement.

Another large gender difference was observed in the correlation between house engagement and school community, although the beta coefficient was not significant for boys or girls. This suggests that the relationship between the two variables is bilateral and not a case of a change in a Y variable leading to an X amount of change in a Z variable, which is the premise of a beta coefficient. The correlation for girls had a moderate strength of 0.55 ($p < 0.01$), while for boys it was weak but still significant at 0.27 ($p < 0.01$). We can derive from the finding of the correlation itself that higher levels of house engagement may lead to higher levels of school community. In the present study, school community is characterised by items relating to students' perceptions of their relationships with their teachers and their sense of school connectedness. Since the correlation is bidirectional, I propose that when students are comfortable within their school environment—manifested through high levels of school community—they feel more confident in themselves and are more likely to enthusiastically engage in activities within their house. Rowe and Stewart (2009) posited that students who perceive themselves as belonging to a school community are more likely to be more academically engaged in school. It may be the case that the benefits of this sense of belonging extend beyond just academic engagement and influence other areas of engagement embedded within the house system. Further support for this theory comes from Oxley (1989), who specifically stated that the house system allows students to build their self-esteem and social confidence through house-run activities. Likewise, students actively participating within their house and having a desire to contribute to a communal team increase the opportunities for positive interactions with peers and teachers, and these relationships enhance their overall sense of school community. This is supported by several

previous studies which stated that participation in extracurricular activities indeed helps to develop new friendship groups for students, leading to increased satisfaction and connectedness to school (Juvonen, 2007; Rowe & Stewart, 2009). Based on the data, I propose that this not only applies to general extracurricular activities run within the school, but also specifically encompasses house-based extracurricular activities. Additionally, participation in such activities provide students with opportunities to develop interpersonal skills (Oxley, 1990) which, too, may improve their peer and teacher relationships and foster their sense of school community.

While the quantitative data identifies the nature of house engagement in terms of its positive outcomes and gender differences, the qualitative data from staff provides in-depth insight into the ways that they saw house engagement facilitated within their school. The most-mentioned source of house engagement was intra-house activities, mentioned by 53% of staff. These activities included ‘house time activities’, ‘morning prayer’, ‘games during tutor group’ and other ‘activities that encourage students to get to know and work with each other’. One participant specifically mentioned activities that were performed in their house that focus on having superordinate goals which the students must work as a team to complete. Essentially this example describes the competitive nature of inter-house activities as a whole and they might therefore have been used by that particular head of house as a means of establishing camaraderie while also invoking a healthy sense of pressure and competition that could prepare students for inter-house events against other houses. Such activities are commonplace at a number of schools. For instance, both participant schools in the present study had a timetabled period once a fortnight specifically for running intra-house activities which could be used for team-building activities, teaching study skills and running house assemblies. While my current school of employment does not have a timetabled house period as frequently as once a

fortnight, we do occasionally implement a 'modified timetable' day that frees up the time after lunch for houses to congregate and participate in such activities. In their case study of a Catholic secondary school, Brennan (2012) mentioned the school houses meeting weekly to participate in team-building exercises. As a result, students at that school reported that their house system helped them to develop friendships with students not in their class, maintain relationships with past teachers, create new relationships with other teachers and know the names of most other students and teachers in their house. Overall, compared to not having a house system, the study found that staff perceived the house activities as improving cross-age relationships between students and building an inclusive school climate.

Following intra-house activities, 20% of staff in the present study mentioned inter-house competitions as means of engaging students within the house. While the participating schools conducted intra-house activities fortnightly, inter-house events were much less frequent. These competitions, such as athletics, swimming, cross-country running, public speaking, performing arts, debating, spelling and reading, were yearly events. At my current school, and in public schools that I have worked in, these competitions are even less frequent due to the more limited range of activities: they are commonly limited to just athletics, swimming and cross-country running. Hence, these activities are likely not at the forefront of teachers' minds when they are asked to list activities that promote house engagement. Further, as I mentioned earlier, the level of engagement in these activities depends on the degree of motivation of the students themselves, as well as that of the house staff. Motivation to participate may hinge on a number of factors including personal interest in the activity, perceived value of the activity, risk of reward versus embarrassment and level of commitment to contribute to the house. It is possible that we might find different results if we were to ask this question to staff within houses who were very enthusiastic and competitive in

these inter-house events, compared to staff in houses who were more indifferent and perhaps had their focus on other elements of their house. An in-depth comparison between houses of a school examining student/staff attitudes, student/staff participation and the motivating factors for student participation would be an interesting direction for future research beyond this thesis.

Fundraising and community service initiatives were mentioned by 20% of staff. Previous studies made reference to the house system being a means of facilitating community service activities (Dierenfied, 1976; Green, 2006); however, Dierenfied (1976) also found that less than half of the students in their study were interested in the house-run activities. In my experience as a head of house, unfortunately the community service and fundraising-based activities garner some of the lowest levels of involvement from the house cohort. Despite educating students about the value of donating to the less fortunate in our society, we often find ourselves needing to add an inter-house competitive element in order to pique their interest. For example, at my current school we run a yearly term-long drive for students to donate cans of food, blankets and other supplies to a local charity. Initially this was not going to be run with a focus on comparing the amounts of donations between houses, but the donations were only trickling in for the first few weeks. Some houses therefore began to emphasise to their students that the donations would be compared and there would be a winning house based on the most donations. There was a significant increase in donations from students of those houses compared to other houses, like mine, where we maintained our focus on educating the students about the intrinsic nature of the initiative. Thus, there can be substantial variation in terms of how community service activities are facilitated through the house system but, in my experience, the most fruitful ones tend to be conducted more as inter-house competitions.

Lastly, peer mentoring and collective celebration of student success were both mentioned by 13% of staff. An example of peer mentoring was ‘year 11s taking care of new year 7s’ in a buddy system. Opportunities for students to form positive relationships with their peers, not necessarily due to involvement in extracurricular activities, was mentioned previously by Cross, Lester and Barnes (2014) and cited as a specific factor in enhancing school connectedness (Juvonen, 2007). Tutor group, being a smaller and therefore less intimidating cross-section of students of various year levels, is an ideal place for this to take place. While explicit pairing of students to create mentor–protégé relationships may take place in some schools, in my experience this is more implicit in nature, established through ‘activities that encourage students to get to know and work with each other’ as one staff member stated. In relation to celebrating successes and milestones, this also entailed ‘supporting and encouraging all students to get involved and participate’. This could be done informally through casual praise perhaps during tutor group time or announced more formally at house assemblies through house awards. The presentation of house awards at house assemblies is relatively commonplace at my current school, as it is a public way of recognising student engagement, effort and achievement. This is done with the intention of not only rewarding these particular students, but also setting an example to motivate other students in the house. The concept of public praise ultimately stems from Festinger’s (1954) seminal social comparison theory, whereby individuals appraise themselves with the objective information available to them. When this information is unavailable, individuals tend to select others with whom they can compare their own abilities (Festinger, 1954). Schools provide fertile ground for these social comparisons to take place, predominantly in terms of performance and achievement (Dijkstra et al., 2008). As students get older, their self-evaluations indeed tend to become more heavily influenced by social comparisons (Dijkstra et al., 2008).

Having a student being publicly recognised can have several benefits for lower performing/achieving students who engage in an upward comparison with them. This includes providing the students with information on how to improve, increasing confidence and self-efficacy, and encouraging them to set higher goals (Dijkstra et al., 2008). Further, public praise for individual students has previously been associated with improved student behaviour (Rutter et al., 1979). That said, Exline et al.'s (2004) study of university students' social comparisons and public praise suggested that individuals were conscious of their public achievements being perceived both positively and negatively by their peers, with women being more concerned about the negative perceptions. Inevitably, Exline et al. (2004) found that university students who were concerned about the negative responses from their peers generally preferred private or no recognition at all over public recognition. Dijkstra et al. (2008) highlighted a gap in social comparison theory applied in the secondary school context, stating that the bulk of current research lies within the primary school. Thus, combining the primary school-based research and Exline et al.'s (2004) university student research suggests that secondary students may overall appreciate public recognition, but staff must be mindful of those who will be concerned about negative peer perceptions. Additionally, we must also be mindful of praising whole groups of students when necessary (Stott & Walker, 1999).

House Connectedness

The development of the house connectedness subscale was informed from previous research associating the house system with developing a sense of community and identity, and the notion of being part of a greater collective with peers outside of their classroom (Battistich et al., 1995; Brennan, 2012; Cross et al., 2009; Nixon, Launay-Fallasse & Watts, 2010; Oxley, 1989; Shepherd, 2009). These items assessed

the degree to which students felt supported by their house peers and the sense of teamwork, belonging and safety they experienced within their house. As with house engagement, the present study has found no statistically significant differences in house connectedness across gender, school, year level, parents' education or ethnic background. However, similar to house engagement, statistically significant differences have been found between students in relation to student leadership and gender differences have emerged when examining the relationship between house connectedness and the other constructs.

Students who did not have a leadership position but were interested had higher house connectedness than students who did not have a leadership position ($M = 4.10$ vs. 3.73 , $p < 0.001$). Interestingly, the mean score for students who had a leadership position within their house was only marginally higher than those who did not have a leadership position at all ($M = 3.76$ vs. 3.73), albeit with a small sample population of 18 student house leaders. The emergence of student leadership as an influential variable in this study therefore continues in relation to house connectedness. I mentioned earlier in relation to house engagement that, anecdotally, students who are in leadership positions tend to be more confident, outgoing and engaged in the school environment. However, those who scored significantly higher than the lowest in this case included only those students who did not have leadership but expressed that they were interested in it. In other words, these were students who had leadership ambition and were presumably striving for achievement and recognition, and contributing to various aspects of the school in order to position themselves as worthy leadership candidates. This line of thought may help to explain why, for all 5 constructs, those who had this ambition scored significantly higher than those who had no leadership and no desire for it. Further explanation can be extrapolated when we look at studies exploring what leads to students' motivations for leadership in general. Lizzio,

Dempster and Neumann's (2010) study examined this concept and found that students who had high levels of school identification had higher levels of school citizenship and in turn this led to increased leadership motivation in students. A student's specific motivation for becoming a leader is less clear and may be due to a number of reasons. In my teaching experience, these reasons can include: pressure from their parents to have a leadership position; a desire to attract praise and present themselves in a positive light to the school community; peer pressure/competition; or simply an innate desire to have a go at everything, contribute to the school, improve themselves and reach their potential. Since student leadership is not an explicit focus in the present study, it is unknown whether the pattern described by Lizzio, Dempster and Neumann (2010) occurs within a house context. However, given that the correlation between house connectedness and house engagement is one of the strongest in the present study (boys: $r = 0.57, p < 0.01$; girls: $r = 0.66, p < 0.01$), this may indeed be the case and would be worthwhile investigating further in future studies. Correlations such as these between house variables are discussed in a separate section later in this chapter.

Previous literature has seldom mentioned the concept of student leadership within the house system, and where it is mentioned it is referred to only in terms of it being an additional opportunity that the house system offers (Green, 2006; Logan, 2011; Oxley, 1989). In attempting to explain the finding that those in house leadership had almost the same levels of house connectedness as those with no leadership, I refer to the study of MacBeath (1998), where a student made the statement that leadership roles in schools were often dictated by teachers. Furthermore, by extension Dempster and Lizzio (2007) noted that previous research examining student leadership predominantly focused on adults' perspectives and definitions of leadership, rather than those of students. They went on to propose that we should consciously separate our ideals and expectations of leadership from what we would *like* our student leaders

to be to what they *are*. Furthermore, they argued that additional research is needed in order to address this gap in the literature and to understand leadership from a student's perspective, including definitions, purposes, relationships and cross-cultural views. Relating back to my finding, it is possible that the expectations and responsibilities of house leadership roles are largely defined by teachers—more specifically, heads of house—and that students themselves have little influence in shaping the role to suit their own strengths. As a head of house with house captains myself, I can confirm that this is indeed the case in practice. We have few opportunities for house captains to actually have any influence on how the houses are conducted; while we do have some degree of autonomy in terms of how we conduct assemblies and the rare periods of house time, the houses must be largely consistent under the overall direction of our campus management. Essentially, our captains play a largely figurehead role exemplifying a positive attitude and work ethic, motivating the students at our inter-house competitions and assisting the heads of house at these events. It seems that this is also the case at the participating schools, with one staff member stating that an improvement to be made to their system would be giving student house leaders more responsibility. Hence, the unusually low level of house community observed in house leaders is likely a reflection of the limited nature to which they feel they can actually sink their teeth into their positions and contribute to the building of house community themselves.

Together with house staff–student relationships, house connectedness contributed to 27% of the variance in students' sense of school community and, as an IV in a multiple regression analysis, it had a significant beta coefficient ($\beta = 0.26$, $p < 0.001$). The benefits of students experiencing a sense of school community—inclusive of a sense of belonging, positive teacher relationships and positive peer relationships—have already been established by previous research. A sense of

belonging has been described as a basic psychological need (Battistich et al., 1997) and an essential component of effective pastoral care (Richardson, 2014). It has been associated with positive outcomes such as being a preventive factor for adolescent mental health (Rowe & Stewart, 2009), academic motivation and achievement (Anderman, 2002; Rowe & Stewart, 2009) and attitudes towards school (Anderman, 2002) and as an influential factor on students' prosocial behaviour (Juvonen, 2006). In addition, high levels of belonging may contribute to students' overall sense of self-esteem and social capital, which in turn may also lead to other positive outcomes such as academic performance (Cross, Lester & Barnes, 2014; Phan & Ngu, 2018). Battistich et al. (1997) posited that a sense of belonging develops when students are able to participate actively in a cohesive, caring group with a shared purpose. Essentially, this describes a student's house: a more intimate community established within the greater school community through which students build relationships with each other and with staff and, particularly in relation to inter-house competitions, work together towards a shared goal. This is reflected in my findings: students' sense of being a part of their house community—feeling a sense of identity, belonging, support and teamwork within their house—indeed has a flow-on effect to their sense of overall school community. I therefore posit that being a member of a house provides students with an additional group with which they can feel a sense of membership and identification. Developing a sense of personal and social identity becomes increasingly important during adolescence and peer-group identification is particularly significant for early adolescents, who may be going through social change such as transitioning from primary into secondary school (Koni et al., 2019; Tanti et al., 2011). According to Abrams and Hogg (2016), the hypothesis that underpins social identity theory is that individuals define themselves based on their social group memberships. Being assigned to a house provides students an opportunity to expand

the number of social groups they belong to—and which they can use to develop their sense of identity—from their first day of school. In addition to building identity, multiple social identifications enhance students' self-esteem (Benish-Weisman et al., 2015) which, as previously mentioned by Phan and Ngu (2018), can have a positive impact on academic performance.

While significant for both boys and girls, for girls house connectedness had the most significant effect on school community ($\beta = 0.42, p < 0.001$), while for boys it had the least effect on school community ($\beta = 0.17, p < 0.05$). Thus, although no statistically significant difference was found between the levels of house connectedness, there is a statistically significant difference in the underlying mechanism. We can find suggestions to try to explain this difference through sociological research exploring gender differences in youth behaviour. Adler, Kless and Adler (1992) investigated the factors that determine popularity for boys and girls within a primary school context. These factors are presented in Table 8.1.

Table 8.1

Adler, Kless and Adler's (1992) factors that determine popularity for primary school-aged boys and girls

Boys	Girls
Athletic ability	Family background, particularly parents' SES and level of permissiveness. Parental income dictated the degree to which girls had access to fashionable clothing, material possessions, enviable extracurricular activities (e.g. horse riding) and the neighbourhood they lived in.
'Coolness': a fluid construct primarily concerning self-presentation, persona and access to popular equipment such as clothing, electronics and skateboards	Physical appearance
Toughness: physical prowess, athletic ability and pugnaciousness	Social development: precociousness, including verbal expression, an understanding of intra- and inter-group dynamics, manipulation of others and interests in 'mature' topics such as makeup and boys. If girls were successful in having boys reciprocate their interest, this garnered peer popularity. This factor also includes the element of 'exclusivity'—the formation of elite social groups through gossip and other tactics—and the maintenance of social group boundaries.
'Savoir faire': confidence in handling social situations with peers and adults	Academic performance: there was less stigma attached to being academically successful for girls than boys; however, this was mediated by the extent to which the school streamed its students into classes based on their ability. Homogenous groupings based on academic ability increased the likelihood of girls forming friendships with girls of similar academic ability.
Cross-gender relationships: boys in relationships were seen as more mature and received higher status among their peers.	
Academic performance: boys skewed towards either end of the academic continuum were less popular and in the higher years success in academia became perceived as incongruent with the toughness and coolness factors	

While being conscious of generalisations, a comparison of the two lists above reveals significant differences in how boys and girls view popularity and how they go about attaining it. For boys, the focus is more within the physical realm—being seen as being tough, macho and athletic—while for girls, there is a strong focus on group and interpersonal dynamics, social roles and hierarchy. The authors argued that these factors in primary school form the foundation for what is observed in later years. If this is indeed the case, then it may assist in explaining the current finding. The sense

of connectedness that girls establish within their house may play a larger role in influencing their overall sense of school community than for boys. This could be due to the higher priority that girls place on social interactions and forming of close friendship groups. As the house is one of the first groups to which students belong and, unlike classes, the majority of the group of peers that students interact with within their house remains relatively consistent each year (except for year 12 students departing and new year 7 students beginning), the house therefore provides an opportunity for friendships to develop within the house and, in doing so, also provides fertile ground for social groups to form. Drawing upon Adler, Kless and Adler's (1992) findings, participation in these social groups forms a more integral part of girls' focus than boys' and therefore girls' sense of house belonging and community may be more likely to be used a reflection of their whole-school experience of belonging and sense of community. Additionally, the friendship groups that girls have within their house may be more likely to be their main friendship groups than for boys, which would also explain this discrepancy.

Gender discrepancy concerning house connectedness extends into the variable's relationship with school engagement, albeit in an unexpected manner. The results found that house connectedness had a negative influence on school engagement for girls ($\beta = -0.21$, $p < 0.05$). There are two possible competing inferences that can be drawn from this finding. The first inference is that while girls may indeed have a greater focus on their social networking within the house than do boys, as suggested in the postulation regarding house and school community, a consequence is that this distracts them from engaging in the positive academic behaviours that are embedded within the school engagement subscale (e.g. completing homework on time, wanting to do their best at school, putting effort into classwork and studying for tests). An alternative explanation may be that girls who feel a sense

of school community may be more likely to be critical of themselves academically. This inference takes into account the fact that participants' level of school engagement is derived from self-analysis and the students' own opinions of the degree to which they engage in the behaviours included within the subscale. Further research is therefore needed in order to clarify this particular finding and may wish to integrate an examination of objective data such as academic achievement grades.

In conjunction with these competing inferences, it is also interesting to note that while this *negative* beta coefficient was observed in the regression, a *positive* correlation was found for girls between the two variables ($r = 0.32, p < 0.01$). While uncommon, this discrepancy can be explained by one of 3 possible reasons. According to Falk and Miller (1992), the first of these reasons may be due to the relationship being so close to zero that the relationship fluctuates around the central point of zero. With a significant beta coefficient of -0.21 and a significant correlation of 0.32 , this is not the case in the current study. The second reason may be that other variables are measuring the same information and the negative sign produced in the regression reflects redundancy due to another variable already measuring the construct. Since the result was found only for girls, I do not believe that this is the case. Lastly, the third—and most probable—reason may be due to the true relationship indicated by the beta coefficient being suppressed by another variable in the correlation analysis, a phenomenon known as 'real suppression' (Falk & Miller, 1992). Essentially, it indicates that a variable that plays a key role in explaining the constructs is suppressing the true relationship (a negative relationship in this case) between another predictor variable. The beta coefficient is taken as the true relationship since it indicates a variable's direct influence on another variable (Falk & Miller, 1992).

The quantitative findings discussed above provide an unprecedented insight into the nature of house connectedness: how it influences school community and school engagement, and the unexpected role that gender plays in influencing these influences. To complement this information, the qualitative staff surveys highlight key initiatives that were implemented in their schools to develop house connectedness in their students. The dominant initiative was communal house activities, mentioned by 47% of staff. According to staff, these activities included charity initiatives (e.g. a 'walkathon'), house games, communal lunches (e.g. barbecues and pizza lunches), engaging in daily prayer and celebrating birthdays. Activities conducted for the purpose of building house community have been mentioned in previous studies, although not as specifically as the activities mentioned by the staff in the present study (Anderson & Van Dyke, 1963; Brennan, 2012). However, Brennan (2012) highlighted a particular school that purposely focused more on whole-school activities rather than intra-house activities, based on the notion that students should share a similar experience and that houses running different activities may create 'house envy'. Having worked in schools with fairly strong emphases on the house system, I can anecdotally support this concern. For instance, a popular activity for some houses recently was to go to a local bowling alley. I can certainly confirm that the students who were in the remaining houses left doing activities at school were indeed very envious of those houses who had the chance to go on this excursion. Discrepancies in opportunities such as these also run the risk of leading to more negative responses from students such as animosity and resentment not only towards the houses that have the more enjoyable experiences, but also towards their own house or house staff. Therefore, while intra-house activities play an important role in building house community, school staff need to be mindful of providing all students with relatively equal experiences and opportunities.

The next most-mentioned initiative (27% of staff) was providing individualised attention. By nature, through creating smaller subunits within the whole school community, the house system lends itself to facilitating micro-management of students' pastoral and welfare needs (Barry & Tye, 1972) and having specific staff assigned to assisting the students within each house such as heads of house and tutor group teachers (Fincham, 1991; Kyriacou, 2014). This allows more close contact between staff and students and, as the participants suggested, allows staff to get to know students on a more personal level. For example, the celebrating of birthdays, developing rapport and ensuring every student was greeted each day were initiatives specifically mentioned by staff as activities they conducted in order to provide this individualised attention and enhance students' sense of being a part of the community. To a large degree this ties in with 'providing encouragement', which was mentioned by 13% of staff. This may be done individually through these one-on-one interactions, but may also be done more broadly and publicly at house assemblies. Prior to significant events such as inter-house competitions or exam periods, heads of house will often address the house as a whole at an assembly, providing general encouragement and urging the students to tap into their potential. While schools have whole-school assemblies, house assemblies allow for heads of house to tailor and reinforce key messages or words of encouragement to a smaller student audience. Further elaboration regarding the nature of house staff–student relationships is given in the next section of this chapter.

The last initiative mentioned by staff to build a sense of house community, mentioned by 13%, was establishing and reinforcing a sense of house identity. To do so, the participating schools implemented a range of strategies including houses being designated to particular areas of the school for their meeting places, house-coloured polo shirts being worn on days where there was a house assembly, having house

colours on school ties, house badges for blazers, house-coloured locks for lockers, house lanyards and large house-themed stickers for school laptops, and students being taught about the origins of their house name. Additional initiatives mentioned in other studies included house T-shirts, school identification cards featuring the house logo and the creation of banners, mascots and chants (Green, 2006; Nixon, Launay-Fallasse & Watts, 2010).

House Staff–Student Relationships

The third and last subscale assessing a construct of the house system concerned the perceived nature of the relationship students had with their house staff, particularly their tutor and head of house. More specifically, the items related to the degree to which the student trusted their tutor and head of house, whether they perceived a partnership with their tutor and the degree to which teachers in their house involved themselves in house activities. These items were informed by previous case studies that identified the roles of the tutor and head of house as not only being the two key staff roles within the house system (Fincham, 1991; Kyriacou, 2014), but also highlighted the crucial responsibility they have for students' wellbeing and welfare (Addison, 2012; Butterfield, 2008; Cross, Lester & Barnes, 2014). Butterfield (2014) described the role of the tutor as being a trusted adult whom students can turn to, as did Kyriacou (2014) in relation to heads of house.

While a statistically significant but weak correlation was found between house staff–student relationships and school engagement (boys: $r = 0.24$, $p < 0.01$, girls: $r = 0.23$, $p < 0.01$), this was the weakest correlation between house and school variables, and the beta coefficients for all of the subgroups (across gender and student leadership) were non-statistically significant. However, a significant moderate correlation was found between house staff–student relationships and school

community for both boys ($r = 0.58, p < 0.01$) and girls ($r = 0.54, p < 0.01$). This relationship was supported by the regression analysis: combined with house connectedness, house staff–student relationships explained 27% of the variance in school community, demonstrating a slightly greater degree of influence in school community than house connectedness ($\beta = 0.31, p < 0.001$ vs. $\beta = 0.26, p < 0.001$). This moderate correlation and significant beta coefficient overall implies that students’ perceptions of their relationships with their tutor and head of house assisted in shaping their overall sense of school community (i.e. their perceptions of their classroom teachers and their sense of school belonging and connectedness). According to the qualitative staff data, this was primarily achieved through tutors and heads of house having discussions with students about how they were feeling, their interests and experiences, and having casual chats about things such as weekend activities. This was mentioned by 57% of staff. In turn, this generated a positive rapport with the student and translated into the student feeling valued and liked by the teacher (Criss, 2010)—an outcome that has been associated with increased levels of school connectedness (Cross, Lester & Barnes, 2014). Mentoring was also mentioned by staff (27%) as a means of facilitating positive relationships with students. This included focusing on the achievements, efforts and strengths of students, discussing their progress on a regular basis and ‘gently steering’ students to take action to address their weaknesses and seek help when needed.

Staff mentioned that morning tutor group time was an ideal time for many of these types of discussions to take place; however, a common thread in answering any questions regarding caveats of the house system or obstacles to their role was a lack of appropriate time allocated to tutor group and for heads of house to perform their role. This is summarised by statements such as ‘time is always an issue when finding meaningful moments to fulfil the responsibilities’ and ‘time devoted to tutor group is

minimal'. In answering the question of how the house system could be improved in their school, a third of staff stated that more time in tutor group was needed, followed by a fifth of staff wanting more opportunities for student involvement/staff–student interactions. Furthermore, tutors suggested that the time that they did have with the students was consumed by seemingly trivial duties that prevented them from 'focusing on their goal' of developing positive rapport. Such duties included matters relating to discipline (sometimes on behalf of other staff), uniform, incomplete work and classroom behaviour concerns. In one sense this echoes the findings of Chittenden's (2010) case study of a Queensland secondary school, which found that administrative and discipline-related duties asked of tutors developed a lack of desire for them to continue as tutors and created confusion around the role that the tutor group component played in the house system. The staff involved in that study recommended that a more informal and open-ended structure would be beneficial for staff and students. Interestingly, the staff involved in Chittenden's (2010) study were much more critical of the tutor group system compared to the participants in the present study. Only half of them believed that tutor group provided opportunities for developing staff–student relationships, only one third believed that it was appropriate to their students' needs and a little over a third believed it should be retained. Possible reasons for these attitudes included staff viewing the role as an additional demand, not being appropriately trained and the overall structure of the system not being popular with the staff involved.

In contrast, aside from the obstacles mentioned relating to time and other duties, the perception of the tutor group system—and house system overall—by participants in the current study was that it was effective. When asked the open-ended question of defining the goals of the house system, the most common themes were facilitating pastoral care, building a sense of community and facilitating students'

sense of connectedness. In terms of whether these goals were actually achieved, 60% of staff outright agreed that the house system was successful, with over a quarter of staff emphasising that it did indeed build positive relationships between staff and students. The majority of the remaining 40% of staff either chose not to answer the question or answered in favour but with the inclusion of caveats (e.g. insufficient time or student participation to see it reach its full potential). Only one staff member—a head of house—mentioned that the house system was not successful, stating that ‘the time and opportunities to ensure we can achieve the goals have been eroded over time’. Speaking from my own experience, I can attest to the increasing demands of administrative tasks as a result of increasing student numbers and expectations from the school executive, particularly around the areas of occupational health and safety, child protection and risk assessments. These are necessary duties, but they come at a compromise and unfortunately that compromise is often either a reduction or removal of time that could otherwise have been spent interacting with students or planning/conducting intra-house activities. Moving forward, based on my experience and the suggestions from house staff involved in this study and previous studies (Chittenden, 2010), I appeal to school administrators to consider these issues, which hinder the opportunity for house staff–student relationships to grow and, in turn, for students’ sense of school community to flourish. School administrators should be conscious of the time pressures and administrative duties placed on their house staff and whether these are hindering their capacity to fulfil the responsibilities of their role. Additionally, heads of house play a key role in leading and supporting their team of house staff and should be attentive to any staff who may appear to be struggling with their time/task management. Team-teaching their care group, sharing some of the work for a couple of sessions (e.g. having disciplinary conversations with students,

checking uniform, etc.) and professional peer coaching are some practical ways that a head of house may assist a care group teacher in these circumstances.

The present study's finding that positive relationships with house teachers lead students to feel a sense of school community is inferentially supported by previous research. This includes findings that positive staff–student relationships lead to more positive perceptions of school and a greater sense of belonging (Lizzio, Dempster & Neumann, 2010; Roeser & Urdan, 1996) and greater satisfaction with school (Klem & Connell, 2004). Positive teacher–student relationships have also been associated with benefits of an academic nature, including more positive academic engagement (Rutter et al., 1979), academic attitudes (Klem & Connell, 2004) and academic achievement (Roorda et al., 2011). Explicit evidence linking house staff relationships and academic engagement (as measured via the HSAS school engagement construct) has not been found in the present study; however, it may be the case that positive house staff–student relationships have an indirect effect on school engagement facilitated by school community. The house staff–student relationships variable was the strongest contributor to the variance in school community ($\beta = 0.31, p < 0.001$) and school community was the strongest contributor to the variance in school engagement ($\beta = 0.47, p < 0.001$). I therefore propose that a distinction exists between the outcomes of relationships between students and house staff compared to relationships between students and their classroom teachers. The responsibilities of the tutor and head of house are, as staff mentioned in the qualitative phase, predominantly concerned with student wellbeing, pastoral care, student welfare and parent communication. Furthermore, they collectively mentioned that the building of relationships with students, and observing and guiding students' school journey, were indeed the most significant highlights of these pastoral roles. Hence, it is logical that the outcome of this type of relationship is a direct increase in more pastoral and wellbeing-related

outcomes (higher school community) rather than a direct affect on academic outcomes (school engagement). Conversely, as previous research suggested (Klem & Connell, 2004; Roorda et al., 2011), students' relationships with their classroom teachers consequently lead more directly to positive academic outcomes such as greater school engagement and achievement. Roorda et al. (2011) suggested that this latter outcome occurs when classroom teachers show interest in their students' learning, provide structure and expectations, and support the students' own level of independence.

Like house connectedness, a gender difference was observed regarding the effect of house staff–student relationships on school community. In this case, however, we see a flipping of the effect: the influence of house staff–student relationships on school community was stronger for boys ($\beta = 0.29, p < 0.001$) than for girls ($\beta = 0.17, p < 0.01$). While this difference was not as large as that observed with house connectedness, it is nonetheless a difference worthy of discussion. The present finding is somewhat different to that of Roorda et al. (2011), who suggested that staff–student relationships for boys had a more significant impact on their academic endeavour and achievement. While this could be the case in the present study if indeed house staff–student relationships do have an effect on school engagement via school community, house staff–student relationships were not found to have any direct effect on school engagement for either boys or girls. The present finding implies that boys draw more of their sense of school community—the rating of the interactions with their classroom teachers and their sense of school belonging and inclusion—from their interactions with their tutor and head of house than their sense of connectedness with their house. This draws a parallel with a study by Tosolt (2010). Their case study, involving students from year 5 to year 8, found that girls were more likely to value the type of care from teachers that assisted with their academic achievement, while boys were more likely to value the type of care that built

interpersonal relationships (e.g. offering protection, physical contact and compliments). This is an intriguing finding, since such behaviours do not necessarily align with the typical behaviour or stereotypical image associated with boys (Kless & Adler, 1992; Tosolt, 2010). Tosolt (2010) suggested that, while unclear, this finding may imply that either boys have a desire for these behaviours, that girls gain this type of affection from elsewhere, or a combination of both of these factors. The same can be inferred from the present finding, as well as the importance of tutors and heads of house establishing and maintaining positive relationships with boys in particular in order to enhance their overall sense of school community.

Aside from gender, it should be noted that another variable that influenced the degree to which house staff–student relationships affected school community was student leadership. The present study has found house staff–student relationships to be a significant predictor for students with no leadership ($\beta = 0.17, p < 0.05$), but not a significant predictor for students with no leadership but who were interested ($\beta = 0.16$). That said, the difference of only 0.01 in beta coefficients does not necessarily warrant any speculation regarding this difference.

Relationships Between the House Variables

The primary focus of the present study, and hence most of the discussion in this chapter up until now, is to essentially examine whether students' experiences and perceptions within their house relate to their experiences and perceptions within their school in general. That said, examining the relationships between the house variables themselves adds some further understanding about the internal mechanisms of the house system. None of the 3 relationships described below have previously been examined to the level of detail included in the present study, let alone quantitatively.

House Engagement—House Staff–Student Relationships

A key benefit of house-related extracurricular activities is that they provide greater opportunities for students to interact and build positive relationships with their house staff. While this has been previously reported anecdotally through case studies, such as those by Coughlan (2004) and Green (2006), this is now quantitatively supported by the present study's finding that house engagement was moderately correlated with house staff–student relationships for both boys ($r = 0.48, p < 0.01$) and girls ($r = 0.46, p < 0.01$). While the activities themselves may enhance these staff–student relationships, receiving encouragement and praise from their tutor and/or head of house may, reciprocally, reinforce the student's desire to contribute to their house.

House Engagement—House Connectedness

The correlation between house engagement and house connectedness was one of the highest correlations between any of the variables (boys: $r = 0.57, p < 0.01$; girls: $r = 0.66, p < 0.01$). This has quite logical and sound reasoning: students who feel a sense of comfort, belonging, teamwork and support within their house are more confident and enthusiastic with participating in house activities with their peers. A contributing factor may also be that the identification acquired through being part of the house leads to greater self-esteem (Benish-Weisman et al., 2015), which in turn provides them with confidence to become involved and contribute. By the same token, students' sense of house community, identity and team spirit may be enhanced when they participate in communal and team-building intra-house activities, as well as representing the house in competitions against other houses.

House Connectedness—House Staff–Student Relationships

Given that both house connectedness and house staff–student relationships influenced school community, it is not surprising that they share a moderate correlation with each other (boys: $r = 0.53, p < 0.01$; girls: $r = 0.50, p < 0.01$). The

merging of the school connectedness and school staff–student relationships provided initial evidence for these two fundamental concepts to be linked. Although, since the EFA generated the two house-related variables as separate factors, it seems that they are not as closely linked within the house as they are for the whole-school context. Nonetheless, the moderate correlation implies that positive student perceptions of their relationships with their tutors and head of house (including trust, partnership and perceived house staff engagement) helped to facilitate the student’s sense of house connectedness: their feeling of belonging and support within their house. This is best characterised by one staff member’s statement, ‘welcoming a student in year 7 and building up a strong support network over the next 6 years is a strength of the house system’. I suggest that while the previous two house correlations feature high degrees of reciprocity between the variables, this particular correlation is more unilateral in nature. While students’ sense of house connectedness may—to some degree—positively influence their perceptions and interactions with their tutor and head of house, previous research (Addison, 2012; Brennan, 2012; Butterfield, 2008) indicated that these staff interactions may have more of a significant effect on students’ sense of house connectedness.

School Sector

One of the objectives of the present study is to investigate the effect of school sector on the outcomes of the house system. Anecdotally, I have taught within the 3 main school sectors in Victoria—public/government, Catholic and private—and have found that Catholic and private schools have a much stronger focus on using the house system than public schools. Previous research found differences between sectors in terms of dropout rates (Bryk & Thum, 1989; Coleman & Hoffer, 1987), student engagement (Fullarton, 2002) and, to some degree, academic progress (Anderson,

1992). These differences in outcomes may have been due to a range of reasons, including variations in the organisational/structural features of the school (Waters, Cross & Shaw, 2010) or, in relation to Catholic students, the additional sense of community outside of school from belonging to their parish (Coleman & Hoffer, 1987).

I hypothesised that the difference in how the house system is utilised—particularly between the public sector and the other two sectors (which both use the system quite similarly)—would be reflected in differences in degrees of house engagement, connectedness and staff–student relationships. Unfortunately, out of the 24 public secondary schools that I approached to participate in this research, only 7 schools replied (a 29% reply rate). In contrast, 20 out of the 34 Catholic and private schools I contacted replied: a much higher reply rate of 59%. The reasons for non-participation provided by the gatekeepers at these schools were due to timing (coinciding with exams, camps or other events) or survey fatigue (I know first hand the sheer number of questionnaires schools are invited to, and do, conduct). However, I posit that the lower reply rate for public schools may suggest a lesser focus of the house system within public schools. This is perhaps best characterised by my conversation with a wellbeing coordinator at a public school who said that while he knew there were 4 houses, he did not know the names of the houses or how they were named, and admitted that the house system did not play a significant role in his school. He did mention, however, that it was something that he endeavoured to develop further. He said at his school, not unlike the public schools I personally have experience in, the house system may be used to conduct tutor group in the morning but is primarily just used simply as a means of grouping students together for whole-school sports days. This is in contrast to the heavier emphasis on the house system in Catholic and private schools, with it being more visible and having a stronger focus on

building a sense of house identity and community. Examples of how the participating schools demonstrated this are outlined in their descriptions in Chapter 5. While most public schools in my region have house systems in place, my conversation with the wellbeing coordinator reflects an anecdotally observed trend for public schools to view the house system as simply a means of grouping students for discipline, sports and pastoral care to some degree (some schools manage this via year-level coordinators). They do not place as high a priority on the building of house identity and community as the Catholic and private sectors, where it is done so through initiatives such as timetabled house assemblies, intra-house activities and greater visibility of house identity (e.g. blazer badges, coloured ties, coloured locks, etc.).

The two schools that participated in the present study were private and Catholic schools. Through my descriptions of the schools presented in Chapter 5, it is clear that both schools had very similar house system structures. For example, both schools featured: 8 houses; a similar care group structure; a variety of inter- and intra-house activities throughout the year; scheduled times for house assemblies; a house points system; and a strong visual presence of the house system throughout the school (e.g. banners, names of buildings) and among the students (e.g. coloured parts of uniform, locks, lanyards, laptop stickers). Therefore, it is not surprising that no statistically significant differences have been found between the two schools. As previously mentioned, future research would benefit from including and analysing public schools in order to investigate the full effect that school sector may have on the house system and its outcomes.

Summary of House System's Effect on School Engagement

Of the 3 house variables—house engagement, house connectedness and house staff–student relationships—house engagement was the only house variable to have a

statistically significant direct effect with boys and girls combined. However, when this was broken down by gender, the present study has found a moderate correlation and beta coefficient for girls, but non-significant results for boys. This is despite boys and girls having the exact same mean value for house engagement ($M = 3.87$). Drawing upon previous research (Fullarton, 2002; Rusillo & Arias, 2004), I reason that this may be due to the cognitive-motivational differences between the two genders and how these differences influence their overall level of school engagement. Rather than by engagement in house-based activities, boys' degree of school engagement behaviours may instead be influenced by extracurricular activities that are more aligned with their own personal interests (e.g. lunchtime sport). Participation in house activities for girls, on the other hand, may assist in developing their self-efficacy, which consequently has a flow-on effect to other aspects of their schooling such as their school engagement (e.g. putting effort into school work, paying attention in class, wanting to do the best they can, studying for tests and submitting work on time).

The other house variable found to have an effect on school engagement was house connectedness, although this was also only significant for girls. Curiously, house connectedness was found to have a negative effect on girls' school engagement. It is suggested that this could be due to one of two reasons. Girls who feel a greater sense of house community either: (1) place a higher priority on the social nature of their school experience which hinders their school engagement; or (2) are more self-critical when it comes to describing their own academic behaviours. Since the present study has relied upon students self-reporting their level of academic engagement, this finding could be examined further with access to academic achievement data. Achievement data would eliminate the ambiguity and reveal whether girls' school engagement is indeed negatively affected by their degree of house community. If this is the case, it would raise some issues that would need to be considered by heads of

house and school administrators. Such issues would include: (1) whether girls' sense of house community is simply based on having friends in their house; (2) whether high achieving girls experience a strong sense of house community; and, more broadly, (3) the potential for social preoccupation to interfere with girls' academic achievement. Conversely, if my finding was due to girls being more self-critical with their academic self-reporting, analysing the achievement data in a future study—in conjunction with our HSAS—would reveal the true nature of the effect of house community on girls' school engagement.

Other Factors Affecting School Engagement

The house system aside, the variable that had the most influence on school engagement was school connectedness, explaining 22% of the total variance. This is supported by moderate correlations for both boys ($r = 0.45, p < 0.01$) and girls ($r = 0.52, p < 0.01$) and the highest beta coefficient in the study ($\beta = 0.47, p < 0.001$). Therefore, while engaging in house activities has some impact on school engagement (for girls), students' sense of belonging, safety, peer support and positive relationships with classroom teachers have the largest effects on their level of school engagement.

Summary of House System's Effect on School Community

The two house variables that influenced students' sense of school community were house connectedness and house staff–student relationships, with both variables explaining 27% of the variance in school community. House staff–student relationships had a slightly stronger influence than house connectedness, but overall both variables had a moderate effect. These findings suggest that students' sense of connectedness within their house (teamwork, belonging, peer support and safety) has a flow-on effect to their overall sense of school community, enhancing the perceptions of their teacher relationships and degree of school connectedness. Additionally,

students' sense of school community may also be benefiting from the establishment of house identification. Social identification has been associated with the development of students' sense of identity and can have significant effects on students' self-esteem and other benefits such as increased feelings of meaning and security (Benish-Weisman et al., 2015; Koni et al., 2019). The effect of house connectedness on school community was stronger for girls than boys. Previous sociological research examining gender differences in youth behaviour (Kless & Adler, 1992) suggested that girls tend to place a higher priority on social interactions at school, being more focused on developing their social networks and position within their social hierarchy than boys. Hence, it is suggested that the more interpersonal aspects of the house system—specifically relating more to social interactions with peers—manifest themselves in a stronger influence of house connectedness on school community for girls. Girls having friendship groups at school whose members are largely within their own house would also explain this stronger connection.

With regards to house staff–student relationships, their significant influence on school community implies that a student's positive relationships with their tutor and/or head of house enhances the student's overall perception of the school itself. These positive relationships include a sense of trust and partnership from the perspective of the student and are reinforced by the focus of the house staff on building rapport, offering guidance and providing individualised attention to their students. Positive relationships have previously been shown to have beneficial outcomes that relate to students' sense of school connectedness (Klem & Connell, 2004; Lizzio, Dempster & Neumann, 2010; Roeser & Urda, 1996); however, the quantitative finding in the present study highlights the crucial impact of staff specifically within the house. A gender difference was also observed in the impact of house staff–student relationships, with the present study finding that the effect was

stronger for boys. Drawing upon Tosolt's (2010) study, this suggests that interactions with their tutor and head of house have a stronger influence on boys' sense of school community than does house connectedness, possibly due to boys placing a higher value on personal care from teachers than girls, who prefer care relating more to their academic achievement. This inference is fairly speculative and I agree with Tosolt (2010) that this pattern warrants further investigation.

The gender differences observed in the correlations and beta coefficients between the house variables and school community imply that the mechanism of the house system's effect on school community is slightly different for boys and girls. For girls, their level of house connectedness—their sense of belonging to the house community, being part of a team and feeling supported by house peers—has the strongest effect. The stronger effect for boys, on the other hand, is based on their perception of their relationships with their tutor and head of house. This highlights the dichotomy of the school community variable: its encompassing of both staff relationships and school connectedness. It is possible that the house system's influence on school community for girls gravitates more towards the school connectedness element via their house connectedness, while for boys the influence leans more towards the staff relationships element via their house staff–student relationships.

Other Factors Affecting School Community

While house connectedness and house staff–student relationships played significant roles in influencing students' sense of school community, the variable that had the largest effect was school engagement. School engagement alone explained 23% of the variance and its effect had the second-highest beta coefficient in the model ($\beta = 0.34$, $p < 0.001$), the highest being the effect of school community on school engagement. Thus, these two school-related variables appear to have a reciprocal

relationship. Students who feel a sense of school community, manifested through positive relationships with their teachers and a sense of school connectedness, are more likely to engage in positive academic behaviours. This finding is supported by previous studies that also found this to be the case (Battistich et al., 1995; Fullarton, 2002; McNeely, Nonnemaker & Blum, 2002). In turn, students who are engaged in their classes and take responsibility for their learning develop more positive relationships with their teachers and feel more connected to their school. This reverse effect has not been as extensively researched, but high levels of school engagement have been found to moderate negative effects of SES or ethnic status (Fullarton, 2002), and school engagement features as an integral aspect of a student's school life in the highest level of Finn's (1989) taxonomy of engagement.

Lastly, it should be noted that student leadership was also a factor affecting school community: being interested in a leadership position was found to enhance the effects of the house system. When the house variables were added into the regression model explaining school community, the overall amount of variance predicted was greater for students with no leadership but who were interested than for students with no leadership ($r^2 = 0.62$ vs. 0.49 ; r^2 increase = 0.27 vs. 0.18). This implies that students with leadership ambition derive more from the house system, specifically house connectedness and house staff–student relationships, in forming their overall sense of school community. In fact, leadership ambition may play a role in enhancing students' school community as a standalone variable, since the demographic variables in the regression model—which include student leadership—explain a significant amount of variance ($r^2 = 0.16$, $p < 0.05$). A gap exists in the literature regarding the nature of leadership within the house system, particularly in relation to leadership ambition; however, the latter finding is supported by Lizzio, Dempster and Neumann (2010), who found an association between leadership motivation and students

displaying ‘school citizenship’ and participating in the life of the school. Extending on Lizzio, Dempster and Neumann’s (2010) research, based on my findings I posit that students with leadership aspirations indeed experience a sense of citizenship not only towards their school, but also towards their house. This sense of citizenship is reinforced through positive interactions and relationships with their tutor and head of house, and the sense of pride and camaraderie they experience—and likely contribute to—within their house. As previously mentioned, I have consistently experienced student leaders to be confident and outgoing young people, and these traits lend themselves excellently to forming relationships with their peers and their teachers. As a result, these students often have wide social networks, are popular within the school community and would therefore have reason to view the school community in the most positive light. This high standing in the community becomes particularly useful for these students if leadership positions are based on student and/or staff voting, which a number of significant positions often are.

Summary of Findings

The results of both phases of the present study—the quantitative student data and the qualitative staff data—have successfully addressed the overarching research question of whether the house system has any effect on secondary students by finding that aspects of the house system do indeed influence students’ school experience. Through the use of a questionnaire developed through this study, I have successfully been able to determine the degree to which students feel a sense of engagement, connectedness and positive staff–student relationships both within their house and within the school context (objective 1). The findings therefore partially support the initial hypothesised model presented in Figure 4.1, Chapter 4. To recall, the hypothesised model proposes that the 3 house variables (engagement, connectedness

and staff–student relationships) and the demographic variables (gender, cultural background, SES, parents’ educational levels and student leadership) affect all 3 of the school-context variables (engagement, connectedness and staff–student relationships). House engagement and house connectedness (for girls) have been found to significantly influence school engagement. Additionally, house connectedness and house staff–student relationships have been found to have significant effects on students’ sense of school community. School sector has not been found to have any influence on any aspects of the house system, nor any impact on school-related variables (objective 2). This suggests that there may not be a significant difference in house-system structure/utilisation between the Catholic and private sectors. The hypothesised model includes school size as a potential factor but, given that the participating schools were a similar size, the present study could not determine whether school size plays any role in influencing any of the variables in the model. Additionally, since the house system was implemented similarly within both participating schools it was not possible to determine whether significant differences in the system’s structure across schools (e.g. frequency and types of activities, tutor group structure, number of students per house, house management system) play a significant role in influencing the measured constructs.

Out of the demographic variables that have been tested (and included in the hypothesised model), significant gender differences have been observed within each of these effects and leadership ambition has also been found to play a role in enhancing school community. The suggestions and opinions from the staff participants have added clarity around a number of the findings concerning the house system (objective 3). They have been particularly useful in identifying how engagement and connectedness are established within the house system, as well as in adding definition to the responsibilities and priorities of house staff. The discussion of

the results, in light of previous research, has identified a number of unprecedented discoveries and new bases and/or innovations for theories that warrant further exploration. To summarise, these include:

- The concepts of school connectedness and school staff–student relationships are integrated as one ‘school community’ construct.
- House engagement plays a significant role in influencing overall school engagement for girls.
- House connectedness has a negative influence on school engagement for girls.
- Both house connectedness and house staff–student relationships contribute to students’ overall sense of school community, but the underlying mechanisms of these effects are different for boys and girls.
- Not only does students having leadership ambition enhance the effects of the house system on school connectedness, but the variable may have a significant impact of its own accord.
- Students with leadership ambition demonstrate higher levels of all 5 constructs—the 3 house constructs and the 2 school constructs—than students with no leadership and no desire for it.
- A relatively strong reciprocal relationship exists between students’ sense of school connectedness and their level of school engagement. Much of the previous research only focused on a unilateral relationship of connectedness affecting students’ engagement.

Conclusion

In conclusion, the present study makes a significant theoretical contribution to our understanding of how the house system shapes a student’s perspective of school, including their level of engagement, sense of community and relationships with staff.

My findings provide a firm foundation upon which school administrators, staff and other relevant stakeholders can review their current house system—or other system of pastoral care—and identify potential strengths and areas for improvement. This can also be explicitly examined through the use of my questionnaire, the HSAS, developed during this research. Moreover, I hope more broadly that this research highlights the holistic nature of schooling and the crucial impact that pastoral-care systems have on students. Further discussion surrounding the implications of this research is included in the following chapter, along with limitations and recommended directions for further research.

Chapter 9 : Conclusions, Recommendations and Implications

Introduction

As reported in the previous 8 chapters, a mixed-methods study design (Creswell & Plano Clark, 2006) has been used in order to empirically investigate the effects of the school house system on secondary students. This relates to students' self-reported level of school engagement, sense of community and relationships with teachers. The study has involved the development of a new research tool specifically designed to collect quantitative student data, as well as the collection of qualitative data from tutors and heads of house. The present study has also endeavoured to compare the effects of the house system between school sectors, but this was made difficult due to the lack of school participation particularly from the public sector. In the previous chapter I have discussed the findings from this research, which revealed a number of important implications and issues that are discussed further in this chapter. This is followed by a discussion of the caveats of the study and recommendations for further research.

Contributions of This Research Study

Theoretical Contribution: A thorough empirical investigation

The results of the present study make some significant theoretical, methodological and practical contributions. *Theoretically*, my study provides empirical and statistical support for associations between the house system and student engagement, connectedness and staff–student relationships. This improves upon previous studies where outcomes of the house system were predominantly based on observations (Coughlan, 2004; Nixon, Launay-Fallasse & Watts, 2010) or derived from statements from staff and students (Green, 2006; Logan, 2011) without quantifiable evidence. Oxley (1990) incorporated a quantitative measure as part of

their investigation into house systems; however, this was to compare the effects of different degrees of house system implementation, rather than to assess relationships between house-related variables and whole-school variables. In my study, I have identified the existence of statistically significant relationships between: (1) house engagement and school engagement; (2) house connectedness, house staff–student relationships and school community; and (3) school engagement and school community. My findings also illustrate the strength and nature of these relationships, which have not previously been investigated (e.g. determining the beta coefficients of house connectedness and house staff–relationships, indicating that the latter explains more variance in students’ sense of school community). Additionally, my findings reveal significant house-system–related differences in relation to gender and student leadership, both of which had not previously been investigated as variables in prior house-system studies. While studies such as those of Pekkarinen (2012), Buchmann (2008) and Fullarton (2002) highlighted gender differences in relation to school engagement and learning challenges, my findings suggest that boys and girls also differ in terms of how they interact with their house staff and how these relationships, along with house connectedness, affect their sense of overall school community. Another unique finding in terms of gender is the significant effect of house engagement on girls’ level of school engagement. In relation to leadership, my study has found strong positive effects for students with leadership ambition, particularly once house connectedness and house staff–student relationships are included in the model.

Similar to previous studies by Brennan (2012) and Chittenden (2010), the inclusion of qualitative data from house staff has highlighted positives and negatives of their role and the house system overall. However, my study goes a step further and uses staff suggestions to build a detailed picture of the day-to-day responsibilities and

obstacles that tutors and heads of house experience in their positions. Some of these suggestions had not been mentioned in previous studies and I believe they are crucial in that they begin to reflect the emotional investment from house staff. For instance, nearly half of the participating staff identified the fact that they were part of their students' growth and 6-year high school journey as a highlight of their role.

Methodological Contribution: A mixed-methods design involving both students and staff

From a *methodological* perspective, the majority of previous studies investigating the house system based their findings only on qualitative data and observations (Coughlan, 2004; Fincham, 1991; Green, 2006; Logan, 2011). Notable exceptions include Dierenfied's (1976) dated study surveying students' perspectives on their house involvement and Oxley's (1990) comparison of 4 New York secondary school house systems. My research design most closely aligns with Oxley's (1990) study in that both quantitative and qualitative data has been collected; however, Oxley's qualitative data concerned observations of students' daily activities and interactions. In contrast, my study has collected additional qualitative information directly from staff regarding their attitudes and experiences from being a part of the house system. This includes references to specific initiatives that were employed to enhance students' house engagement, house connectedness and relationships with house staff. Consequently, this approach provides us with an insight into the 'behind the scenes' structure of the house system and points towards particular strengths and areas for improvement within schools. The comments and suggestions provided by the staff paint a positive and optimistic overall picture of the house system, and also assist in explaining trends observed in the quantitative data in Chapter 8. For example, house staff–student relationships were the strongest house-related predictor of school

community, and house staff mentioned that this was achieved through having frequent casual conversations and being a mentor figure for their students.

Practical Contribution: Providing practical initiatives and strategies

The present study provides secondary school staff and administrators with a number of *practical* implications and suggestions. A number of studies that focused on house systems were brief in their descriptions of house-related activities (Anderson & Van Dyke, 1963; Coughlan, 2004; Oxley, 1990) or primarily focused on the element of inter-house competition (Green, 2006; Logan, 2011). The innovative inclusion within the present study of collecting and analysing qualitative staff feedback now provides us with a more substantial and practical list of specific strategies that house systems in secondary schools—and associated staff—can utilise to enhance student outcomes across my 3 main constructs:

- *Building house engagement*: intra-house activities (e.g. house team-building activities, games during tutor group time), inter-house activities (e.g. school sports carnivals, year-level house sport), fundraising/community initiatives, peer mentoring/buddy systems and house staff celebrating students' successes and milestones.
- *Building house connectedness*: involving students in communal activities (e.g. house games, special house lunches, charity/fundraising initiatives), providing individualised attention (e.g. checking up on students, building rapport), encouraging students to participate in the life of the school (e.g. awarding points or prizes) and facilitating the establishment of students' house identity (e.g. providing background information about the house itself).
- *Building positive house staff–student relationships*: having genuine discussions with students and showing interest in their progress and pursuits, being a mentor

figure to students (e.g. offering advice or encouraging students to seek advice) and making students feel heard (e.g. demonstrating respect, compassion and empathy).

These contributions by tutors and heads of house can allow existing schools to reflect on the initiatives that they currently utilise and evaluate which ones may be useful to adopt in order to address any particular areas of concern.

My findings suggest that schools need to consider the significant effect of student leadership. Leadership has been mentioned within the context of the house system (Green, 2006; Logan, 2011; Oxley, 1989); however, it has been in the limited capacity of simply being an opportunity for interested students. Compared to students with no leadership, students with leadership ambition have emerged in my model as having significantly higher levels of school community, school engagement, house engagement and house connectedness, and more positive house staff–student relationships. This suggests that students with leadership ambition are trying their best at school and making the most of their school experience to the point where they want to apply for a role of responsibility within their house/school. Therefore, schools must provide plentiful leadership positions for such students to aim and apply for in order to nurture their positive perception of school and desire to contribute to their school community. For instance, my current school not only offers a wide range of leadership positions (e.g. house captain, campus captain, college captain, SRC, sports captain, arts captain), but a large number of these positions are available at each year level as well (e.g. each house nominates one student from each year level of be a part of the SRC). Furthermore, the effects of house connectedness and house staff–student relationships on the sense of school community have been found to be greater for students with leadership ambition than for those with no leadership. Heads of house must look for ways within the house to provide these students with the opportunities they are seeking. While hands may be tied in terms of the limited number of formal

house leadership roles on offer (typically only house captain and SRC), heads of house can engage these students by offering less formal roles of responsibility such as having assistants on inter-house sports days, running intra-house activities, being mentor figures for younger students and providing feedback and ideas to the head of house.

The identification of significant gender differences in how elements of the house system influence students' sense of school community is a finding that has the potential to influence how house staff consciously interact with their students and the design of the house system itself. The most significant of these findings is house connectedness being the strongest predictor of school community for girls but the weakest for boys. Conversely, house staff–student relationships were the strongest predictor for boys but the weakest for girls. Gender differences aside, both of these variables combined predicted over a quarter of the variance in school community. From a practical perspective, these findings reinforce the need for house staff to develop and maintain positive relationships and mutual respect with the students within their house—this is particularly important for boys. Additionally, the house system itself must offer opportunities for students—more importantly for girls—to build house connectedness, including forming relationships with their peers and developing a sense of safety, belonging and pride within their house.

A final practical recommendation comes from the downsides of the head of house/tutor role as suggested by the participating staff. These include the need to regularly enforce discipline, following up trivial issues and a lack of time allowance to perform the tasks asked of them. The lack of necessary time allowance to perform tasks was also mentioned as a downside by heads of house, along with the balancing of teaching and pastoral workloads, and working with inefficient or indifferent tutors. Having a supportive head of house who is willing to step in and assist when tutors are

feeling overwhelmed may ease some of the pressure placed on them. This assistance could take the form of team-teaching, offering strategies/advice and running house assemblies where important messages can be communicated by the head of house rather than the tutor. With regards to the comments made about working with inefficient or indifferent colleagues, the head of house should also be actively encouraging and motivating their house staff team and building a team that is confident in their capacity to engage and connect with their students. An additional layer of support should come from the school administrators, who must be mindful of the workload being placed on tutors and whether the time allowance provided to them—and the time dedicated to tutor group time in the mornings—is sufficient for them to be able to effectively facilitate initiatives to develop students' house engagement, connectedness and staff–student relationships.

Caveats and Future Directions

Although the present study makes significant theoretical, methodological and practical contributions, it is important to consider 3 main caveats within the project. The first of these concerns the sample population. My total sample size was adequate according to Tabachnick and Fidell's (2007) formula, whereby the sample size must be greater than $50+8m$, with m being the number of independent variables. Random sampling (Creswell, 2007) was utilised though every student having been invited to participate in the study, thus creating an equal chance for the sample population to be comprised of students from all houses, all year levels and both genders. These points aside, a larger sample size may have allowed me to conduct MANOVA analyses with all of the subgroups of students and made more comparisons between them. With my sample, some of the subgroups were too small to be included in between-group analyses. For instance, due to low sample populations of students with leadership

positions either in their school or in their house, only comparisons between students without a leadership position and those who did not have one but were interested were able to be included in the between-group analyses. Small subgroup sample sizes also limited my comparisons between ethnicity (e.g. there was only one student of South-East Asian background) and year level (e.g. there were only nine year 11 students). In addition to limited between-group comparisons, my modest sample size from only two secondary schools—in a similar geographical region, with similar demographics and both having some degree of religious alignment—limits the generalisability of my findings. Future studies would therefore benefit from not only having a larger sample size, but having one that was comprised of a broader range of schools across different geographical regions and school sectors.

My sample size was limited in the present study due to a number of factors. Firstly, parent consent was required in order for students to participate in the study and complete the questionnaire on the recommendation of the ethics committee. A larger sample size may have been obtained if an opt-out approach had been adopted whereby parents and were informed of the study and were then welcome to withdraw their child at any time if they did not agree for their child to participate. This approach is commonly used in the schools I have worked in for a variety of questionnaires, including questionnaires relating to wellbeing. The sample size was also limited by the reluctance of schools, particularly public schools, to participate in the study. This could have been due to a number of factors including school staff being time-poor due to assessments or other initiatives at the time or the risk of students and staff suffering from survey fatigue due to other wellbeing-related questionnaires that had recently been conducted. It could also have been simply due to a lack of interest in the house system itself from the gatekeepers, which, as outlined previously, was more likely the

case for public schools where the house system does not seem as much of a significant priority compared to private and Catholic schools.

Secondly, as is the case with research projects involving the surveying of participants, response bias is a caveat that needs to be considered. Creswell (2007) defined response bias as being when the responses do not accurately reflect the sample and population. Although the subscales integrated within the HSAS recorded high levels of consistency in responses (as determined by the Cronbach's alpha coefficient; all $\alpha \geq 0.75$), there may nonetheless have been variables that influenced the nature of the responses for each participant. Some of the student participants' responses may have been affected by events on that day or otherwise shortly prior to completing the questionnaire that could have affected their judgement in answering some of the questions. For example, recently being reprimanded by their tutor or head of house could have had a short-term negative effect on a student's judgement of the relationship they had with that staff member, despite having an overall positive relationship outside of that event. In the same vein, a student may have had a falling out with a friend in their house which could have negatively biased their responses to questions concerning their peer relationships. The responses in the present study therefore need to be considered as a snapshot of students' current perceptions and attitudes. A longitudinal methodological approach, in tandem with the use of latent growth modelling (Bollen & Curran, 2006; Hancock & Lawrence, 2006) techniques, has the advantage of allowing researchers to examine trends (e.g. individual growth) within a population (Creswell, 2007; Phan & Ngu, 2017) and would help to control the effect of such biases. This could include offering the HSAS every year to the same cohort of students or having it open to different students each time. Either approach would allow for the identification of broader trends in the data and paint a bigger

picture of how students—particularly across the different year levels—engage in and experience effects of the house system.

It is important to note that longitudinal approaches are not always ideal due to the time commitment involved, so response bias could also potentially be reduced through simple random sampling. This is a recruitment technique where even sample populations of students from each year level would be selected to participate. This would create a more representative cross-section of the school and equally distribute any bias in the population (Creswell, 2007).

Another form of response bias that could have inherently played a part in the current study is acquiescence bias. Acquiescence—the tendency for participants to consistently agree to questionnaire items—affects a measure’s validity by inflating its predictability (Costello & Roodenburg, 2015). Similarly, participants consistently disagreeing with items regardless of item directionality or content, known as disacquiescence or counter-acquiescence, can also affect the validity of a measure (Baumgartner & Steenkamp, 2001; Costello & Roodenburg, 2015). In the present study, instances of disacquiescence were rare (7 cases) and were therefore easy to identify and remove from the dataset. It was more difficult to identify instances of consistent agreeableness—regular acquiescence—due to the negative overall skewness of the data. To try to control for this response bias, I incorporated negatively worded questions into the HSAS. This is a commonly used technique, although its effectiveness in reducing acquiescence has been debated (Costello & Roodenburg, 2015). In a similar vein to using negatively worded items, Hofstee, ten Berge and Hendriks (1998) suggested a technique whereby the questionnaire includes pairs of items that are semantically opposite (e.g. one pair could consist of the items “talkative” and “quiet”). Over the course of the entire questionnaire, researchers can generate the sums of these pairs and calculate the deviation from a midpoint score that

essentially becomes an indicator of the degree of acquiescence. The explicit calculation of an acquiescence score could potentially be applied in future studies that utilise the HSAS; however, the wording of the items would need to be revised to ensure that appropriate semantically opposed items were present. Costello and Roodenburg (2015) found that participants' level of education was a factor in the likelihood of acquiescent responding, with those more educated (e.g. having completed tertiary education) demonstrating less acquiescence. Although the sample population in the present study was all secondary students, it would be interesting for future studies to examine whether differences in this bias exist between year levels since year 12 students have had more years of education than year 7 students.

Lastly, in addition to acquiescence bias, there is also the risk that participants—students and staff alike—demonstrated some degree of social desirability bias. Larson (2019) defined this bias as occurring when participants provide responses in accordance with impression management (to look better to others) or self-deception (to feel good about themselves) or to help define their own identity. Larson (2019) added that this can occur in face-to-face scenarios as well as all types of surveys. In the context of the present study, it is possible that some students answered more favourably in the questionnaire in order to make themselves come across as being, in their opinion, 'good' students. I attempted to mitigate this by emphasising in the plain language statement that their responses would be anonymous, that the school would not be able to identify them and to answer the questions honestly. Nonetheless, students may have answered questions in order to help them define their own 'ideal' identity (Brenner, 2011). Future studies may therefore benefit from using more objective data, if available, to minimise the opportunities for students to inflate aspects of their house or school involvement. For example, in assessing student house engagement, the questionnaire could ask students

to list the different activities they have been actively involved in within the last 12 months. Alternatively, a list could be provided and students could tick the activities that they have participated in. While it would still be possible for students to falsify the degree of their involvement, I posit that falsification would occur less frequently in this format than via answering the less specific and more subjective options of the Likert-scale questions. In quantitative studies involving measures such as the HSAS in the present study, it may be worthwhile also utilising a measure specifically designed to assess the social desirability of participants. Examples of these measures include the Marlowe–Crowne Scale (Crowne & Marlowe, 1960), the BIDR scale (Paulhaus, 1984) and the SDS-17 scale (Stober, 2001). These can either be incorporated into or used alongside the main questionnaire to assess whether social desirability is present and can be included in regressions during the data-analysis stages (Larson, 2019). It is possible that social desirability bias may have influenced some of the staff participants' qualitative responses; however, their data collection phase was also anonymous and the questions they were asked were focused more on their attitudes and ideas rather than involving self-assessment of their own performance. I believe that questions concerning their own performance would have been more likely to elicit aspects of social desirability bias than the more open discussion that was predominantly concerned with an independent topic (i.e. the house system in general). Future studies may also benefit from finding ways of incorporating more objective data into their study and not relying on students' self-reporting of their own level of house and school engagement. For instance, the degree of house engagement could perhaps be assessed more objectively by including an element in the survey that required students to write all of the house activities that they are involved in or select events/activities from a list. This would provide the researchers with a quantifiable number of activities that, combined with their questionnaire answers, could more

accurately indicate students' levels of house participation and engagement. In relation to overall school engagement, obtaining academic data for each of the participants could help create a more detailed and objective picture. However, this would need to be done cautiously: while a student may not be achieving high academic results, this does not necessarily mean that they are not demonstrating positive behaviours associated with school engagement (e.g. setting goals, submitting work on time, completing homework).

While the present study centres around 3 key themes—engagement, connectedness and staff–student relationships—there are avenues for other themes to be investigated more specifically related to the house system itself. Given that the present study has found a significant link between house connectedness (which incorporates a sense of belonging to the house) and school community, further house-system research can develop this further by specifically examining students' sense of house identity as a standalone variable. I have touched upon the foundation of identity in Chapter 4, including an introduction to social identity theories (Abrams & Hogg, 2006) and social identification (Benish-Weisman et al, 2015; Ellemers & Rink, 2005). I hypothesised that this may occur when students feel a sense of connection with their house. Additionally, students identifying themselves as part of a house may be particularly beneficial for early adolescents going through the transition from primary to secondary school, where Tanti et al. (2011) suggested the effects of social identification to be particularly strong. In my study, I have defined a house connectedness variable and illustrated a link between this variable and students' sense of overall school community. In doing so, my findings may act as a stepping stone to further research through house connectedness being distilled into a more specific 'house identity' variable and investigating that variable's effects on students' attitudes and school experience. Likewise, in Chapter 4 I have also discussed the basis of

teamwork and group psychology. This includes previous research that examined teamwork within performing arts ensembles (Criss, 2010). While the present study has not explicitly featured teamwork as a standalone variable, similar to social identification it is an implicit component of students' sense of house connectedness. Therefore, deeper investigation into the psychological effects of the house system may benefit from expanding on students' sense of teamwork within the house as a standalone variable.

The present study has utilised a range of statistical techniques (e.g. regression modelling) to analyse the data and identify relationships between the 5 key constructs. A summary of the beta coefficients is provided in a diagram at the end of Chapter 6, illustrating which variables explain the most amount of variance within other variables. Future studies may benefit from taking the statistical analysis further by utilising structural equation modelling (SEM) (Kline, 2011; Loehlin, 2004). This statistical technique allows for the mapping of all variables, including both latent variables and their respective measured indicators, and has the ability to test and determine the overall fit of a model, guided by various goodness-of-fit indices (Wang & Wang, 2012). Of particular significance, however, is the fact that SEM techniques enable the testing and comparison of competing *a priori* and *a posteriori* models. Moreover, unlike regression modelling techniques, SEM analysis, including path analysis, has the capacity to estimate direct, indirect and total effects (Wang & Wang, 2012). A decomposition of the indirect effects in this analysis could provide evidence to substantiate further development into the mediating mechanism of a variable (Baron & Kenny, 1986; Trafimow, 2015). For example, SEM may reveal that while house engagement does not directly influence students' sense of school community, it does so *indirectly* through its effect on students' school engagement.

A number of research studies investigating the importance of academic engagement in educational settings have used SEM techniques (Liem & Martin, 2011; Phan, Ngu & Alrashidi, 2016; Salmela-Aro & Upadyaya, 2014; Wang & Eccles, 2013). SEM techniques, however, are empirically grounded, relying on existing evidence and theorisations for support. For example, there is clear and consistent evidence to indicate the positive effect of academic engagement on different types of adaptive outcomes (e.g. academic performance) (Liem & Martin, 2011; Phan, Ngu & Alrashidi, 2016). On this basis, notwithstanding the fact that SEM was not used here, it is important to highlight that the empirical evidence established in the present study provides grounding for further research development. One interesting line of enquiry for consideration, in this case, relates to the potential use of multilevel SEM to compare the results depicted in Figure 6.12 to different samples or contexts. Factorial invariance techniques could allow the testing of a structural model (e.g. the final solution shown in Figure 6.12) and a comparison of this model between two cohorts (e.g. Cohort A in School 1 in Melbourne and Cohort B in School 2 in Sydney) using a $\Delta\chi^2$ test. Is the solution clear and consistent for different cohorts?

Conclusion

The present mixed-methods study has sought to empirically investigate the effects of the school house system on secondary students. This has been achieved through 3 main research objectives: (1) to develop a measure that allowed the quantitative investigation of the level of engagement, sense of connectedness and staff–student relationships students experience within their house and their school; (2) to investigate the effect of school sector on the outcomes of the house system; and (3) to use qualitative data from staff to complement the quantitative data and paint a more detailed picture of house staff roles. As hypothesised, the study has been successful in

identifying significant relationships between house- and school-related variables. Additional variables such as gender and leadership ambition have also been found to play significant roles in influencing the outcomes of students' house-system experiences. This chapter has described the contributions of the present study across 3 main areas: theoretical, methodological and practical. Firstly, the present study has expanded upon prior house-system research by defining house-related variables and empirically investigating relationships between these variables and the broader school context. Secondly, a mixed-methods design has been utilised that not only incorporated student data, but also collected qualitative data from staff to complement and explain trends in the student data. The input from the house staff has also provided crucial practical contributions to this field, including initiatives for enhancing students' connectedness, engagement and staff–student relationships within the house. Caveats have been discussed, which predominantly concern the sample size of the study and the potential for acquiescence and social desirability biases. Future research may benefit from: (1) finding methods of incorporating objective data to complement the questionnaire; (2) examining other house-related themes such as house identity and teamwork; and (3) expanding on the statistical analyses by utilising SEM.

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Appendices

Appendix A: Ethics Approval from the University of New England*

	Ethics Office Research Development & Integrity Research Division Armidale NSW 2351 Australia Phone 02 6773 3449 Fax 02 6773 3543 jo-ann.sozou@une.edu.au www.une.edu.au/research-services

HUMAN RESEARCH ETHICS COMMITTEE

MEMORANDUM TO: A/Prof Huy Phan, Dr Bing Ngu & Mr Todd Zadow

School of Education

This is to advise you that the Human Research Ethics Committee has approved the following:

PROJECT TITLE:	The House System: Its effect on Engagement, Connectedness and Relationships in Catholic Schools
APPROVAL No.:	HE16-270
COMMENCEMENT DATE:	01 December, 2016
APPROVAL VALID TO:	01 December, 2018
COMMENTS:	Nil. Conditions met in full

The Human Research Ethics Committee may grant approval for up to a maximum of three years. For approval periods greater than 12 months, researchers are required to submit an application for renewal at each twelve-month period. All researchers are required to submit a Final Report at the completion of their project. The Progress/Final Report Form is available at the following web address:
<http://www.une.edu.au/research/research-services/rdi/ethics/hre/hrec-forms>

The NHMRC National Statement on Ethical Conduct in Research Involving Humans requires that researchers must report immediately to the Human Research Ethics Committee anything that might affect ethical acceptance of the protocol. This includes adverse reactions of participants, proposed changes in the protocol, and any other unforeseen events that might affect the continued ethical acceptability of the project.

In issuing this approval number, it is required that all data and consent forms are stored in a secure location for a minimum period of five years. These documents may be required for compliance audit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.


 Jo-Ann Sozou
 Secretary/Research Ethics Officer

* The title of the study has been changed at a later stage to reflect the broader range of school sectors focused on in the study.

Appendix B: Consent Form for Students Completing the HSAS

	School of Education University of New England Armidale NSW 2351 Australia Phone 02 6773 4221 Fax 02 6773 2445 education@une.edu.au

CONSENT FORM for Students

Research Project: The House System: Its Effect on Engagement, Connectedness and Relationships in Secondary Schools

Please write your name after 'I,' and circle the yes/no answer you want.

I, ..., have read the Information Sheet for Participants and any questions I asked have been answered and I understand them. Yes/No

I agree to participate in the study, realising that I may withdraw at any time. Yes/No

I agree that research data gathered for the study may be published provided my name is not used. Yes/No

..... Participant	 Date
..... Researcher	 Date

Appendix C: Digital Consent Form for Staff Completing the Qualitative Survey



House System Assessment - Staff

Open-Ended Questionnaire - Staff

The following questions relate to your opinions about several aspects of the house system within your school.

We value the honesty and detail of your answers, as well as your privacy: all information you provide is **completely confidential** and will only be accessible to the researchers.

By completing and submitting this survey, you confirm that you:

- have read the [Information Sheet for Staff Participants](#) and any questions you have been answered
- agree to participate in the study, realising that you may withdraw at any time
- agree that research data gathered for the study may be published provided your name is not used, and
- understand that information you provide may be quoted, but that your identity will be kept anonymous at all times.

Thank you sincerely for your time and valuable contribution to this research.

OK

Appendix D: Development of the House System Assessment survey (HSAS)—Demographic Questions

Question	Reason for Inclusion
1. Please indicate your gender (m/f)	Mediators for school engagement in males are participation in extracurricular activities and classroom environment, while for females they include self-concept of ability and positive views of school climate (Fullarton, 2002).
2. Please indicate your year level (7, 8, 9, 10, 11, 12)	Mixed-age Tutor Groups ideally give older students opportunities to become role models for, and support, younger students in their academic and personal development (Jones, 2006). If this is indeed the case, one would expect students in lower year levels to potentially demonstrate greater feelings of support within the Tutor Group/house. Such a finding may be exacerbated by the suggestion that older students feel less attached to school (McNeely et al, 2002). Mixed age group extracurricular activities have also been shown to result in less bullying of younger students by older students (Victorian Government, 2006). Younger students have been shown to be more strongly influenced by relationships with adults (Roorda et al, 2011).
3. What is the name of the school you currently attend?	Being able to identify which school students attend may be useful in case of a situation where students of a particular school have outlying results for some reason (i.e., due to their school structure differing significantly to the others involved the sample).
4. Circle your ethnic background (Anglo-Saxon, Asian, Middle-Eastern, African, Pacific Islander or Aboriginal/Torres Strait Islander)	Being able to control for ethnic background may allow mitigation of cultural differences between participants. For example, with reference to Thorpe et al (2013), there are several points in relation to controlling for indigenous background: 1) There is a large gap in educational attainment, health and social outcomes between indigenous and non-indigenous Australians. 2) The high school drop-out and absenteeism (particularly non-explained absenteeism) rates are greater for indigenous students. 3) That said, it is possible that on entry to school, marginalised children can gradually adapt socially and become more included in the school community.
5. Please indicate your Mother's educational attainment: (high school, TAFE certificate/diploma, university degree).	Parents' educational level has been found to affect individual student engagement, over and above the influence of whole-school engagement (Fullarton, 2002).
6. Please indicate your Father's educational attainment: (high school, TAFE certificate/diploma, university degree).	

Appendix E: Development of the House System Assessment Survey (HSAS)—Construct Questions (Pilot Study Version)

Construct	Item	Authors	Reason for Inclusion
Staff-Student Relationships—within school (overall)	17. Teachers at this school care about their students.	Parker, Lee and Lohmeier (2008).	Authors developed the School Connectedness Scale (SCS), and this question is designed to measure students' perception of support from school staff.
	30. I am treated with as much respect as other students.	Crouch, Keys and McMahon (2014).	Forms part of the 'school belonging' factor in the Life Stressors and Social Resources Inventory—Youth Form (LISRES-Y). It examines the students' perception of justice and equality from the staff.
	8. I get along well with my teachers.	Crouch, Keys and McMahon (2014).	Synthesises 4 questions from the 'school stressors' factor of the LISRES-Y. The questions relate to arguing with teachers, being criticised and getting annoyed with them.
	14. My teachers help me when I ask for it.	Crouch, Keys and McMahon (2014).	Derived from the 'school resources' factor of the LISRES-Y, relating to being able to count on teachers for help.
	2. I trust my teachers	Crouch, Keys and McMahon (2014).	Synthesises 2 questions from the 'school resources' factor of the LISRES-Y, relating to perceptions of teachers' understanding of and concern for students' opinions and feelings.
Staff-Student Relationships—house system	5. My Head of House acts in my best interests.	Kyriacou (2014); Fincham (1991)	Head of House has the role of being a trusted adult trained in and tasked with supporting and mentoring students.
	15. I trust my Head of House.		
	21. I have a good partnership with my Tutor.	Butterfield (2008); Addison (2012); Cross, Lester & Barnes, 2014)	Tutor Group provides an opportunity for members of teaching staff (Tutors) to be a point of call for students' pastoral needs and, along with the Head of House, is an additional trusted adult and role model within the school community.
	26. I trust my Tutor.		
	9. The teachers in my house often get involved in house activities.	Anderson and Van Dyke (1963); Brennan (2012); Bryk and Thum (1989); Green (2006); Rowe and Stewart (2009)	Schools with high staff engagement, informal contact and interest in students have been associated with lower absenteeism and greater engagement among disadvantaged students. Extracurricular activities that involve staff and students together have been suggested to increase student

Construct	Item	Authors	Reason for Inclusion
Student Engagement— within school (overall)	20. I never skip class.	Li and Lerner (2013)	satisfaction and connectedness with school by establishing rapport and trust.
	10. I often contribute to class discussions.		Questions relating to behavioural engagement focus on voluntary behaviours within the school context. Range from 'shallow' engagement (attendance) to 'deep' engagement (effort).
	27. I find school fun and exciting.	Li and Lerner (2013)	Questions relating to emotional engagement focus on students' affective reactions in the classroom and toward school.
	4. I enjoy the challenges of schoolwork.		
	13. I want to learn as much as I can at school.	Li and Lerner (2013)	Questions relating to cognitive engagement focus on students' thoughts in relation to learning and education.
School Engagement— house system	23. School is important for later success.		
	16. I often participate in inter-house activities and competitions.	Anderson and Van Dyke (1963); Brennan (2012); Coughlan (2004); Green (2006); Logan (2011); Nixon, Launay-Fallasse and Watts (2010); Oxley (1989; 1990)	Participation in house related activities has been associated with improved behaviour and increased socialisation, self-esteem, sense of identity, attendance and academic performance.
	3. I help out in house assemblies and Tutor Group.		Both of these questions have been designed to encompass 'behavioural' engagement.
	31. I find inter-house activities and competitions exciting.		Both of these questions have been designed to encompass 'emotional' engagement.
	12. It is satisfying when I contribute to my house.		
Connectedness— within school (overall)	19. I want my house to win.		Both of these questions have been designed to encompass 'cognitive' engagement.
	32. Contributing to my house where I can helps it succeed in the long run.		
	24. I feel like this school is the right place for me.	Parker, Lee and Lohmeier (2008)	These questions from the School Connectedness Scale all loaded onto a factor relating to students' attitude and loyalty to their school based on the level of support received from their school (teachers, friends, classmates, classes, etc).
	6. I think my school is a safe place to be.		
	29. I would feel upset if someone said bad things about my school.		
	1. This school offers learning opportunities	Brew, Beattie and Watt (2004)	Questions from the 'relatedness of self with school' factor within the

Construct	Item	Authors	Reason for Inclusion
Connectedness— house system	that interest me.		Student Sense of Connectedness Scale (SSCS). They incorporate cognitive and emotional perspectives of connectedness respectively.
	11. At this school I experience a sense of belonging.		
	25. The other students in my house support me.	Battistich et al. (1995); Brennan (2012); Cross et al. (2009); Juvonen (2009); Nixon, Launay-Fallasse and Watts (2010);	House systems have been developed in schools to help facilitate positive support from siblings and friends. They have also been associated with developing a sense of community, identity and a notion of being part of a greater collective with peers outside of their classroom. Consequently, peer support has been associated with higher levels of connectedness and reduced bullying.
	18. I feel like I belong in my house.		
	7. I feel like a part of a team in my house.	Oxley (1989); Shepherd (2009)	
	22. I would feel upset if someone said bad things about my house.		
	28. I feel safe being part of a house.		

Appendix F: House System Assessment Survey (HSAS)—Final Version

Demographic Questions

1. What is your gender: (*Male/female*)
2. What is your year level: (*7, 8, 9, 10, 11, 12*)
3. Which house are you in: (*school-specific options*)
4. What Tutor Group are you in?
5. What ethnic background do you identify with (e.g. European, Asian, Middle-Eastern, African, Pacific-Islander, Indigenous, etc)?
6. Select your mother's highest level of education: (high school, TAFE certificate/diploma, university degree, not sure)
7. Select your father's highest level of education: (high school, TAFE certificate/diploma, university degree, not sure)
8. Do you have a leadership position in your school? (yes, yes specifically within my house, no but I'm interested, no)

Questionnaire

Questions are answered using a 5-point Likert scale from 1—Strongly Disagree to 5—Strongly Agree.

1. This school offers learning opportunities that interest me.
2. I trust my teachers.
3. I help out in house activities and Tutor Group.
4. I put effort into my school work and in class.
5. My Head of House acts in my best interests.
6. I do not find house activities interesting. (*Reverse-scored*)
7. I think my school is a safe place to be.
8. I feel like a part of a team in my house.
9. I get along well with my teachers.
10. The teachers in my house often get involved in house activities.
11. I try to pay full attention in class.
12. I feel like I belong in this school community.
13. I rarely hand in work on time. (*Reverse-scored*)
14. It is satisfying when I contribute to my house.
15. I want to do the best I can at school.

16. My teachers help me when I ask for it.
17. I trust my Head of House.
18. I often participate in inter-house competitions.
19. Teachers at this school care about their students.
20. I feel like I belong in my house.
21. I am comfortable asking teachers for help.
22. I set myself goals and work towards them.
23. I do not often contribute to my house. (*Reverse-scored*)
24. I have a good partnership with my Tutor.
25. I would feel upset if someone said something bad about my house.
26. I study and prepare for tests and assessment tasks.
27. I feel like this school is the right place for me.
28. The other students in my house support me.
29. I trust my Tutor.
30. I complete my homework on time.
31. I feel safe being part of a house.
32. I often get bored in class. (*Reverse-scored*)

33. I would feel upset if someone said bad things about my school.

34. I am treated with as much respect as other students.

35. Inter-house competitions are exciting.

36. I help my house where I can to help it succeed.

37. Overall I respect and get along well with other students.

38. I want my house to win.

39. My house is a supportive community.

Appendix G: Staff Survey Questions (Qualitative Phase)

1. What is the name of your school?
2. What is your role within the house system? (head of house/tutor)
3. How long have you been in your current role (years)?
4. What do you think is the main overarching goals of your school's house system?
5. Do you think your house system serves these goals successfully? Please explain.
6. What are the key strengths of the house system?
7. How could the house system in your school be improved?
8. What do you see as the key responsibilities in your role as a tutor/head of house?
9. Do you feel that you successfully fulfill these responsibilities? Are there any obstacles?
10. What are the highlights of your role as a tutor/head of house?
11. What are the downsides of your role as a tutor /head of house?

12. What kinds of initiatives or activities do you help facilitate in order to benefit student engagement in your house?

13. What kinds of initiatives or activities do you help facilitate in order to benefit students' sense connectedness to your house?

14. How do you establish positive relationships with the students in your house?

15. Do you have any other thoughts regarding the house system and its general role within the school?

Appendix H: Correlation Matrices of HSAS Subscales

Table H 1

Inter-item correlation matrix for student engagement subscale.

Item	4	11	13	15	22	26	30	32
4	1.000	.547	0.354	0.487	0.283	0.367	0.340	0.357
11	0.547	1.000	0.294	0.363	0.337	0.343	0.332	0.353
13	0.354	0.294	1.000	0.366	0.152	0.316	0.506	0.297
15	0.487	0.363	0.366	1.000	0.386	0.428	0.330	0.310
22	0.283	0.337	0.152	0.386	1.000	0.498	0.174	0.320
26	0.367	0.343	0.316	0.428	0.498	1.000	0.357	0.339
30	0.340	0.332	0.506	0.330	0.174	0.357	1.000	0.372
32	0.357	0.353	0.297	0.310	0.320	0.339	0.372	1.000

Table H 2

Inter-item correlation matrix for house engagement subscale

Item	3	6	14	18	23	35	36	38
3	1.000	.109	.304	.325	.391	.267	.464	.214
6	.109	1.000	.450	.321	.205	.437	.281	.254
14	.304	.450	1.000	.393	.272	.435	.500	.334
18	.325	.321	.393	1.000	.379	.610	.488	.284
23	.391	.205	.272	.379	1.000	.302	.392	.204
35	.267	.437	.435	.610	.302	1.000	.490	.382
36	.464	.281	.500	.488	.392	.490	1.000	.416
38	.214	.254	.334	.284	.204	.382	.416	1.000

Table H 3

Inter-item correlation matrix for school connectedness subscale

Item	1	7	12	27	33	37
1	1.000	.410	.408	.428	.388	.363
7	.410	1.000	.498	.444	.234	.317
12	.408	.498	1.000	.624	.299	.430
27	.428	.444	.624	1.000	.345	.329
33	.388	.234	.299	.345	1.000	.234
37	.363	.317	.430	.329	.234	1.000

Table H 4

Inter-item correlation matrix for house connectedness subscale.

Item	8	20	25	28	37	39
8	1.000	.658	.390	.510	.543	.482
20	.658	1.000	.338	.540	.503	.499
25	.390	.338	1.000	.245	.441	.425
28	.510	.540	.245	1.000	.470	.443
37	.543	.503	.441	.470	1.000	.537
39	.482	.499	.425	.443	.537	1.000

Table H 5

Inter-item correlation matrix for school staff–student relationships subscale

Item	2	9	16	19	21	34
2	1.000	.542	.479	.635	.403	.225
9	.542	1.000	.475	.412	.362	.215
16	.479	.475	1.000	.501	.495	.381
19	.635	.412	.501	1.000	.386	.267
21	.403	.362	.495	.386	1.000	.277
34	.225	.215	.381	.267	.277	1.000

Table H 6

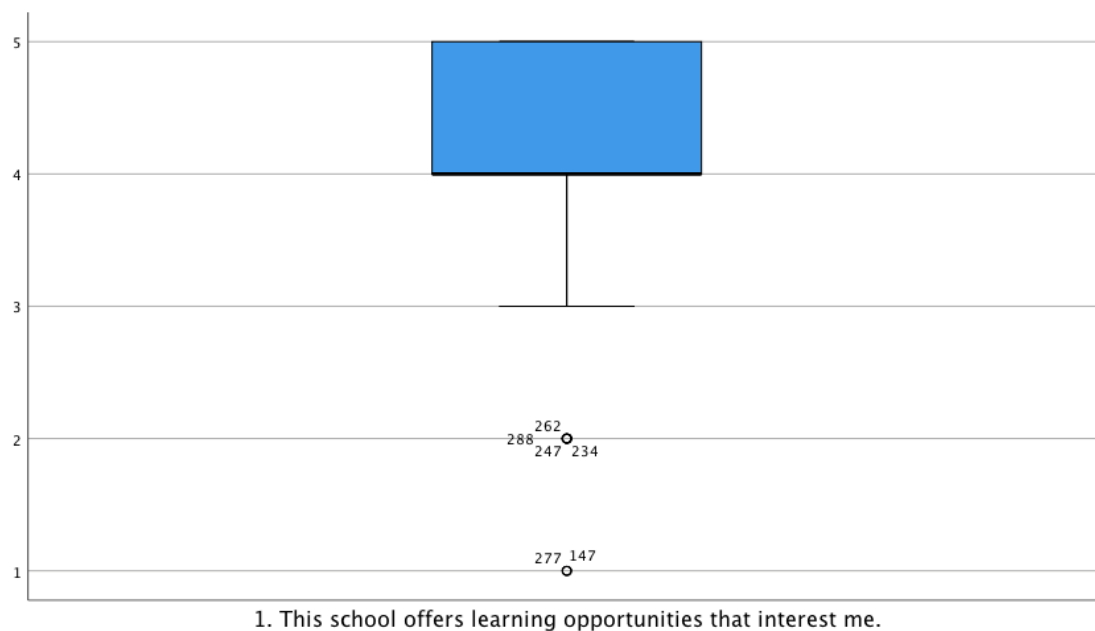
Inter-item correlation matrix for house staff–student relationships subscale

Item	5	10	17	24	29
5	1.000	.340	.577	.140	.232
10	.340	1.000	.346	.272	.317
17	.577	.346	1.000	.336	.474
24	.140	.272	.336	1.000	.684
29	.232	.317	.474	.684	1.000

Appendix I: HSAS Item Boxplots

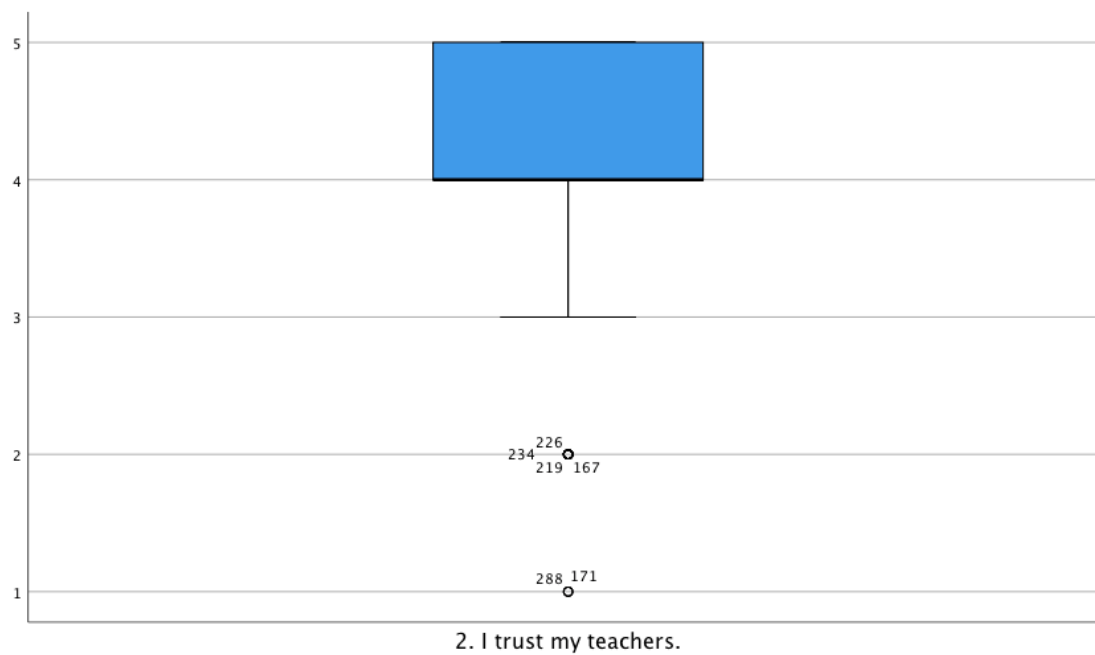
Boxplot 1 1

For item 1



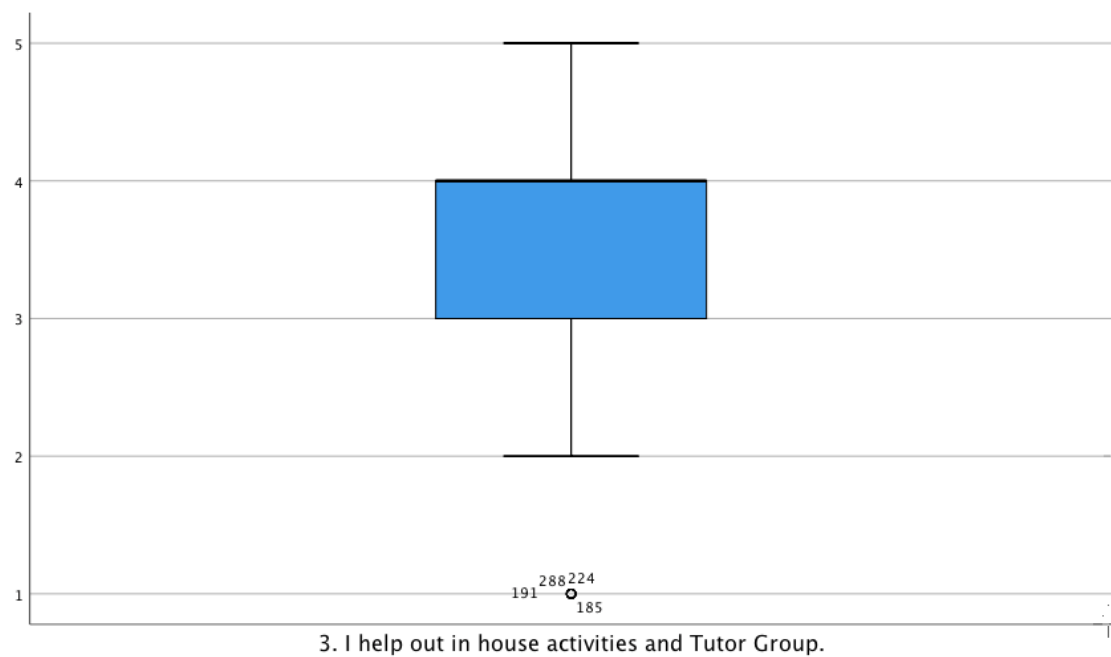
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For item 2



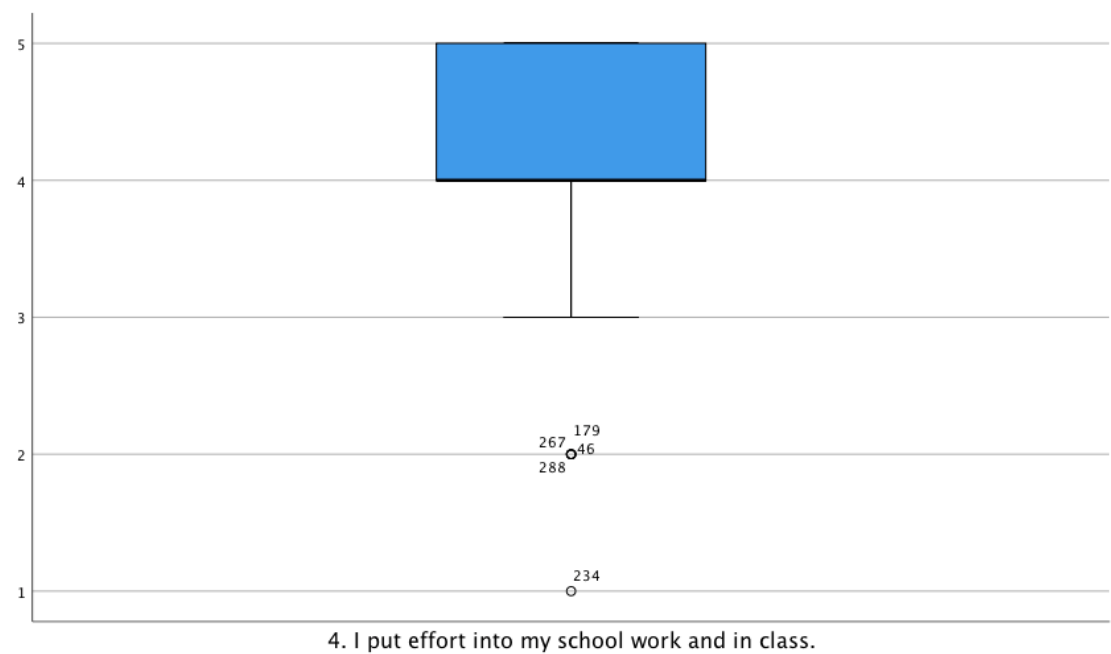
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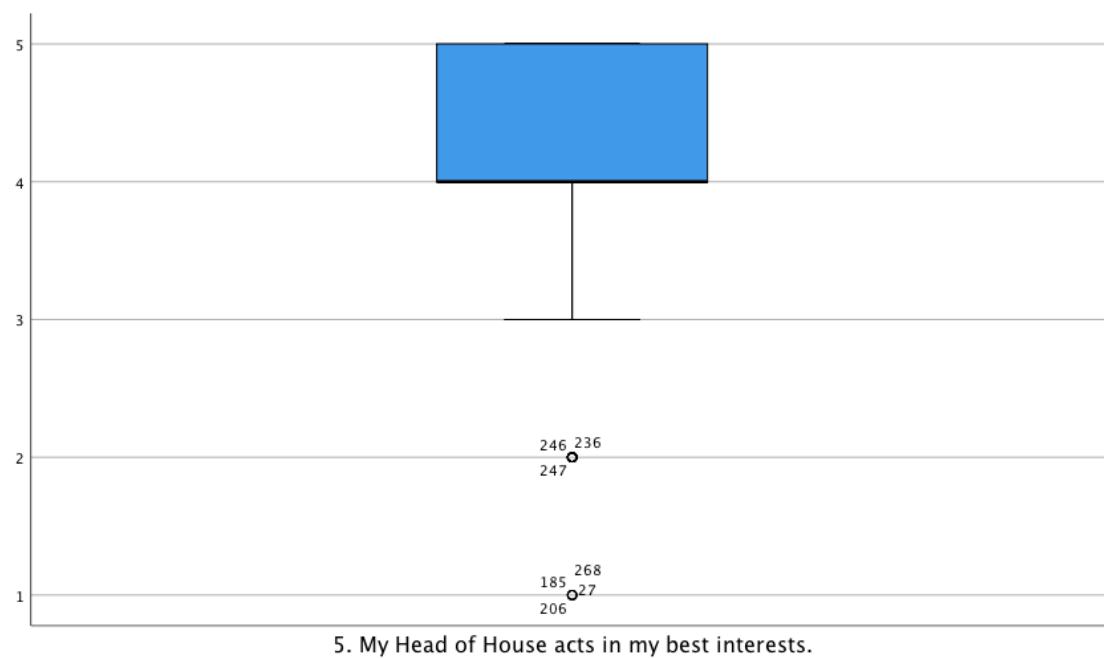
Boxplot I 4

For item 4



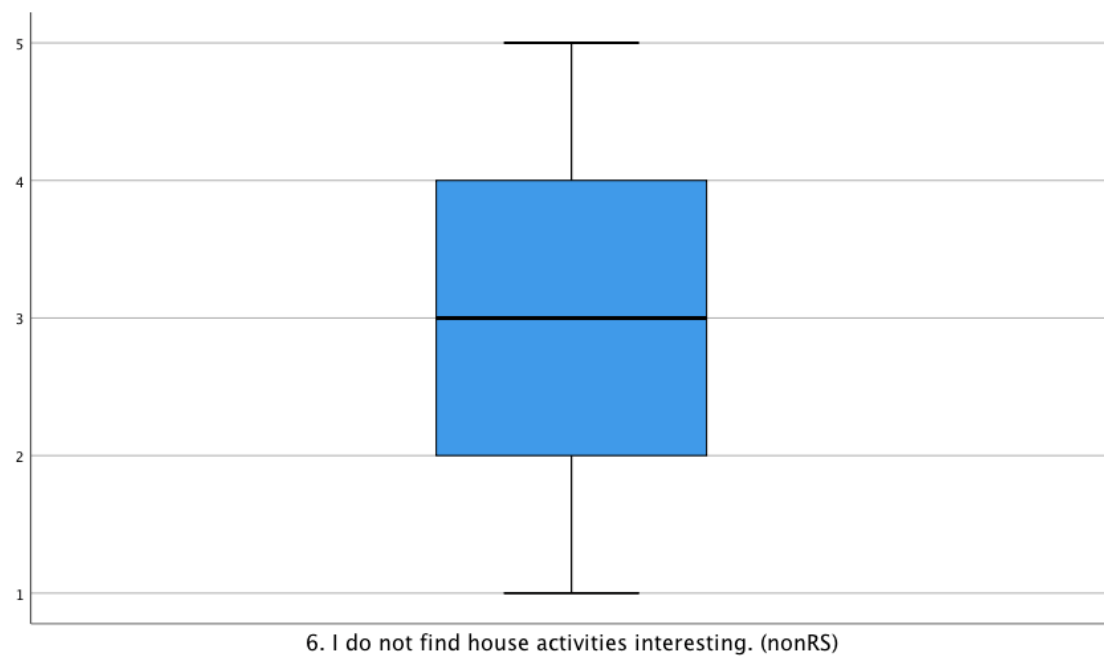
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For item 5



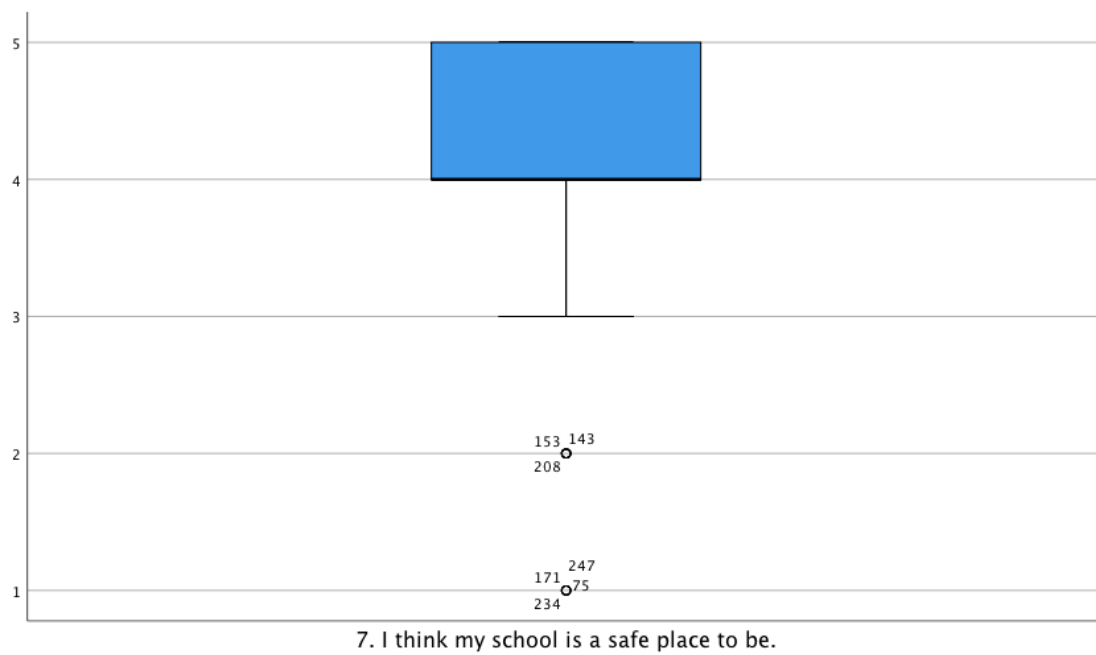
Boxplot I 6

For item 6



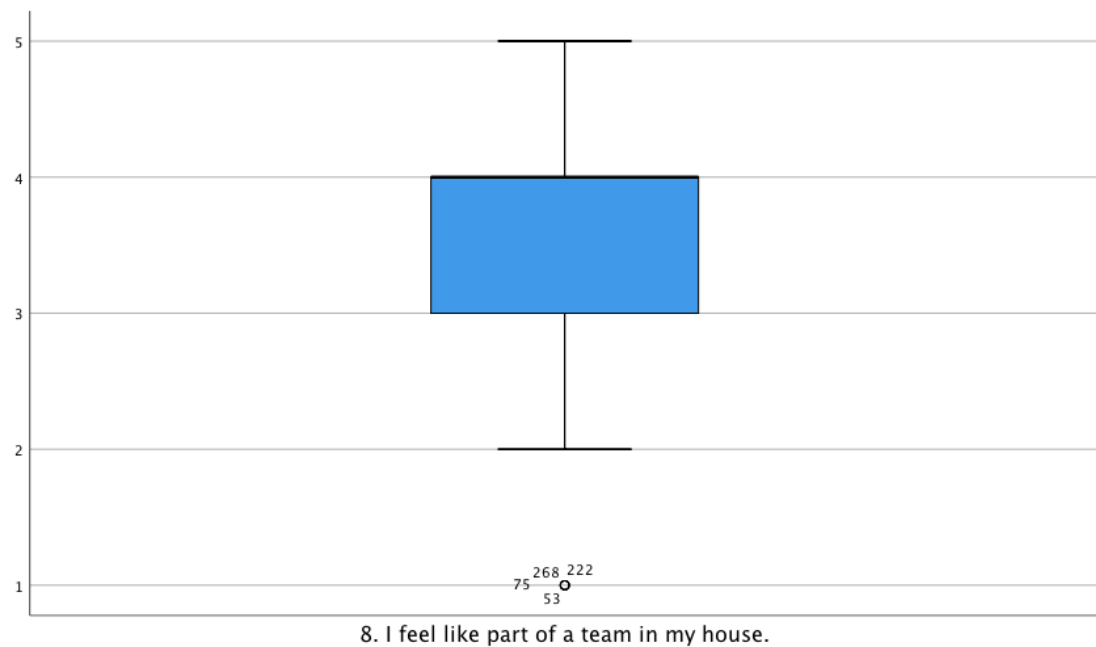
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For item 7



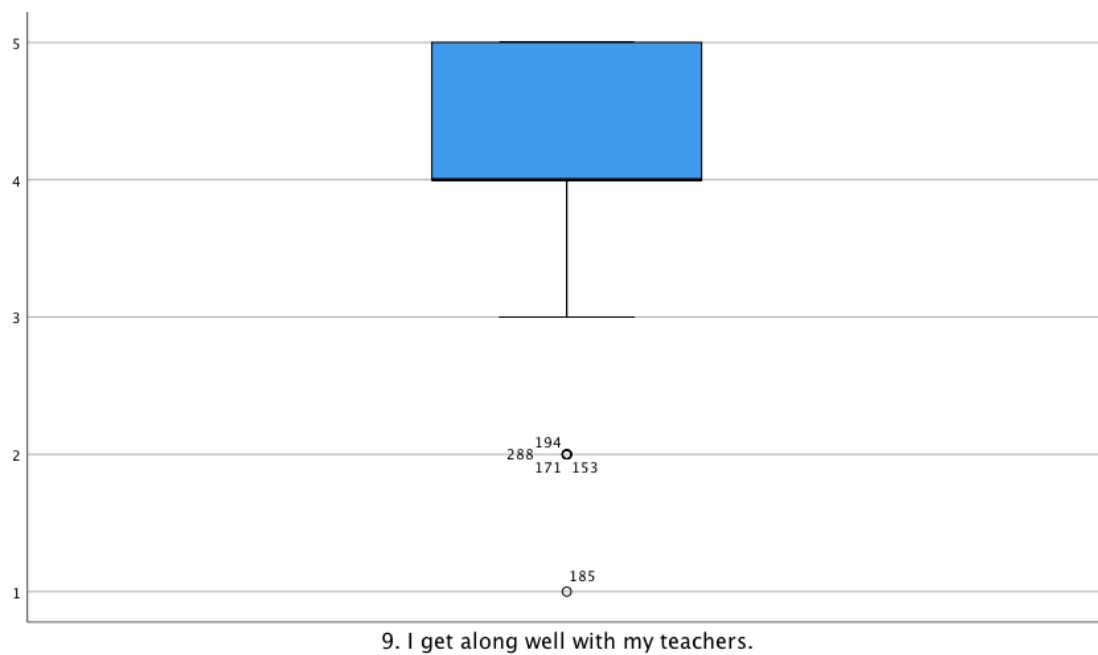
Boxplot I 8

For item 8



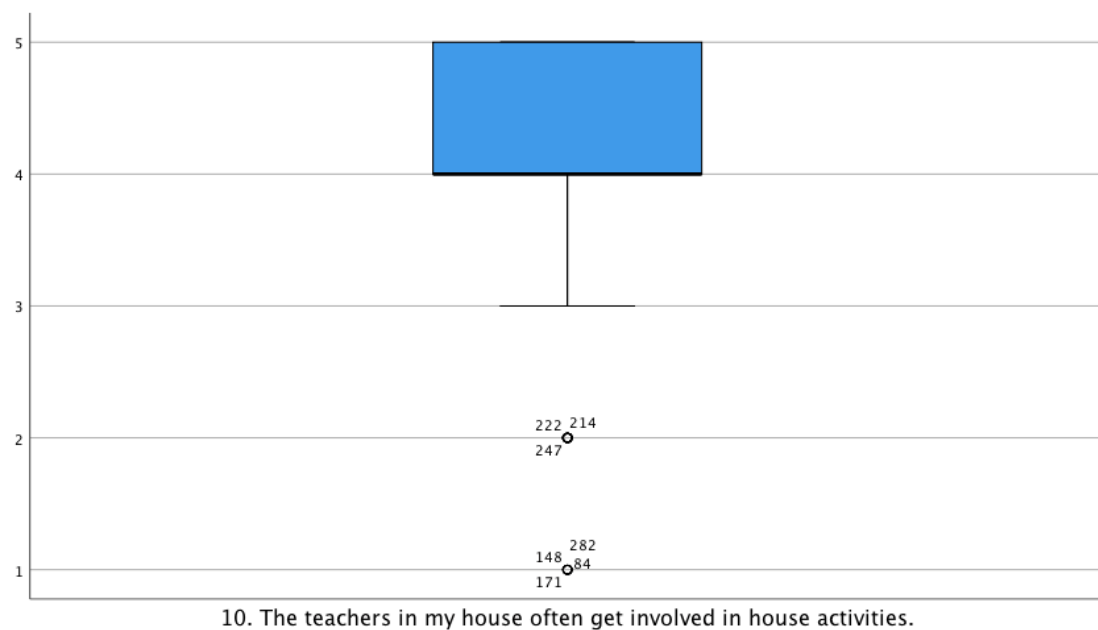
Boxplot I 9

For item 9



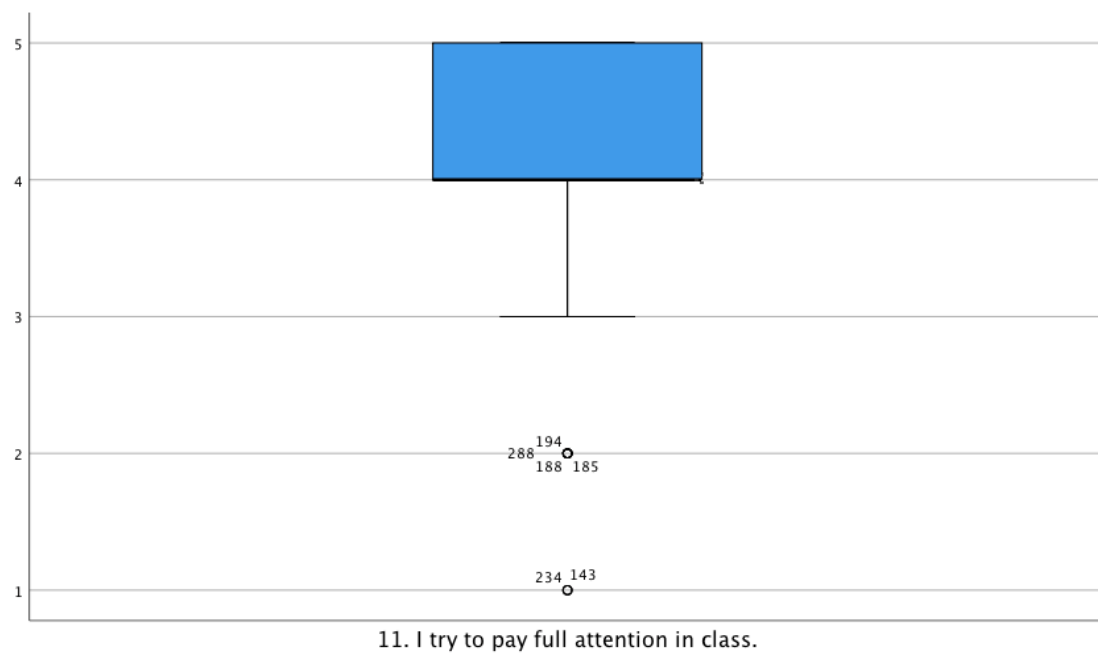
Boxplot I 10

For item 10



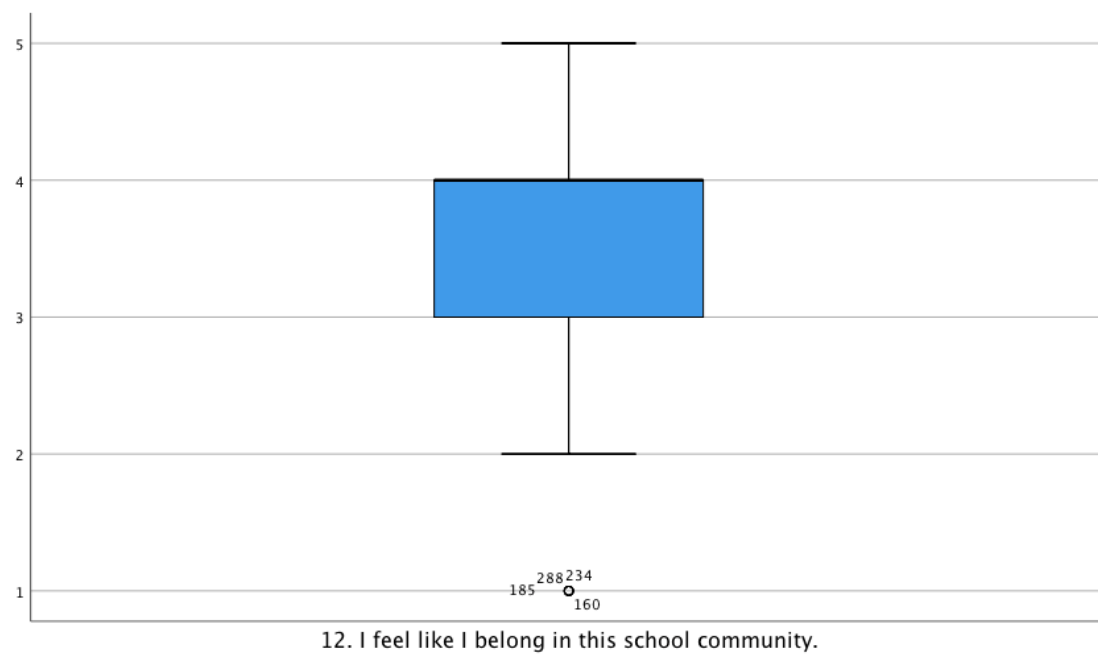
Boxplot I 11

For item 11



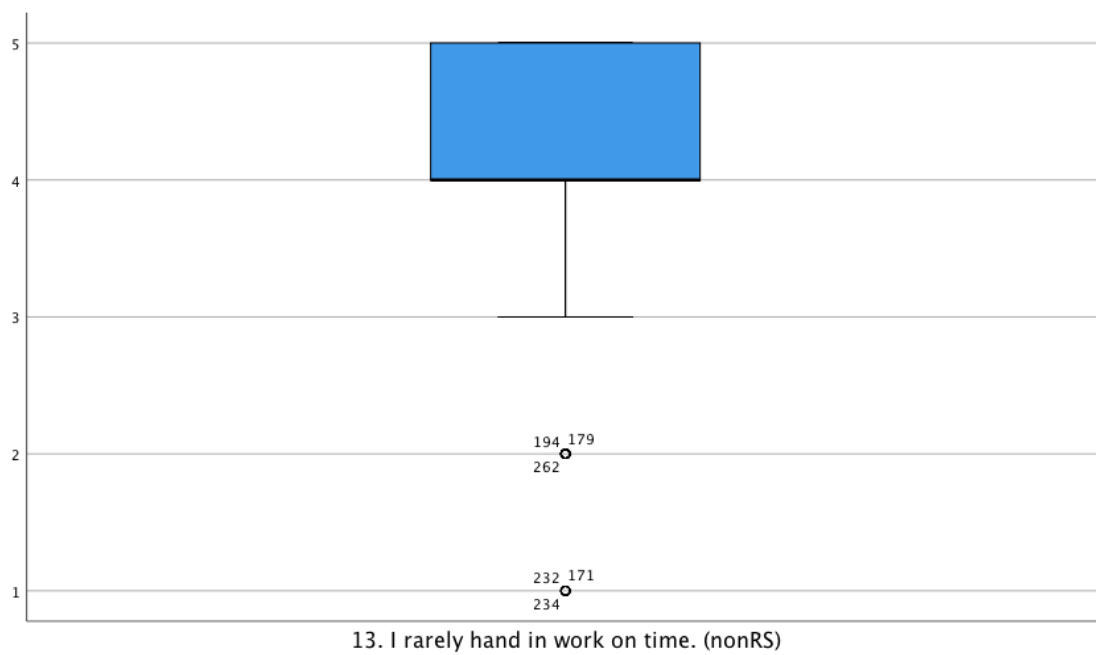
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For item 12



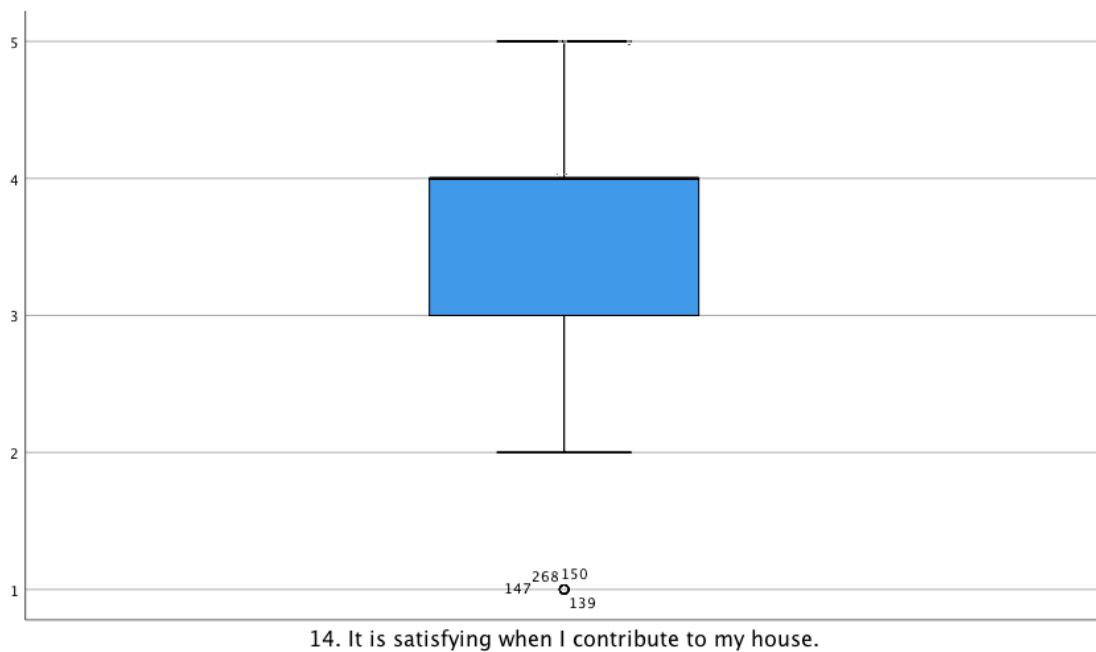
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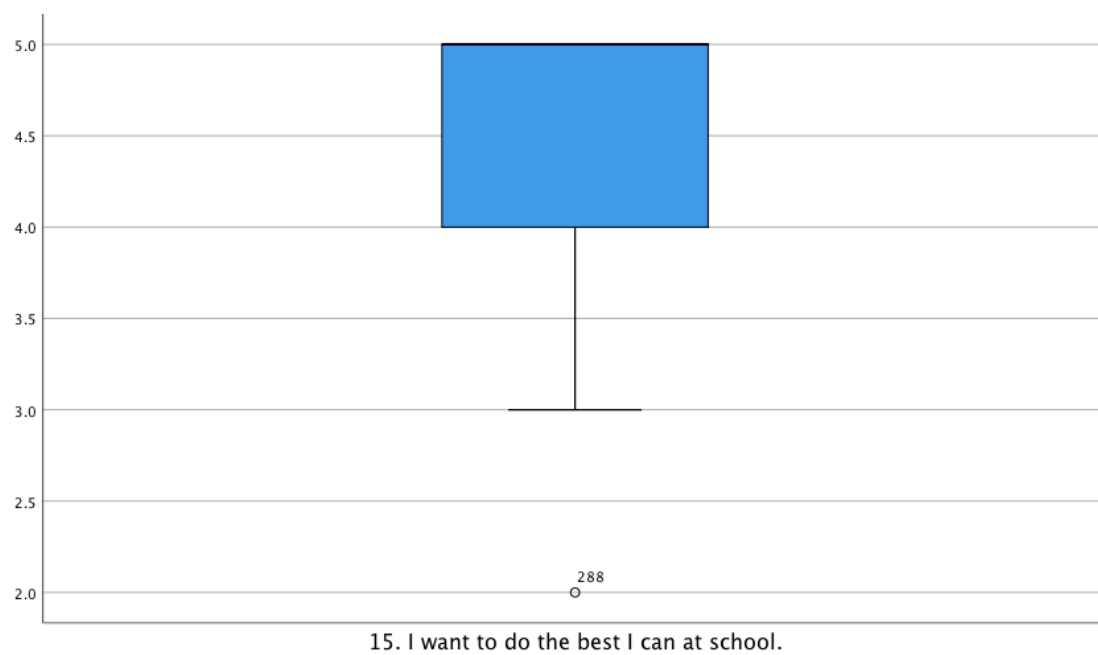
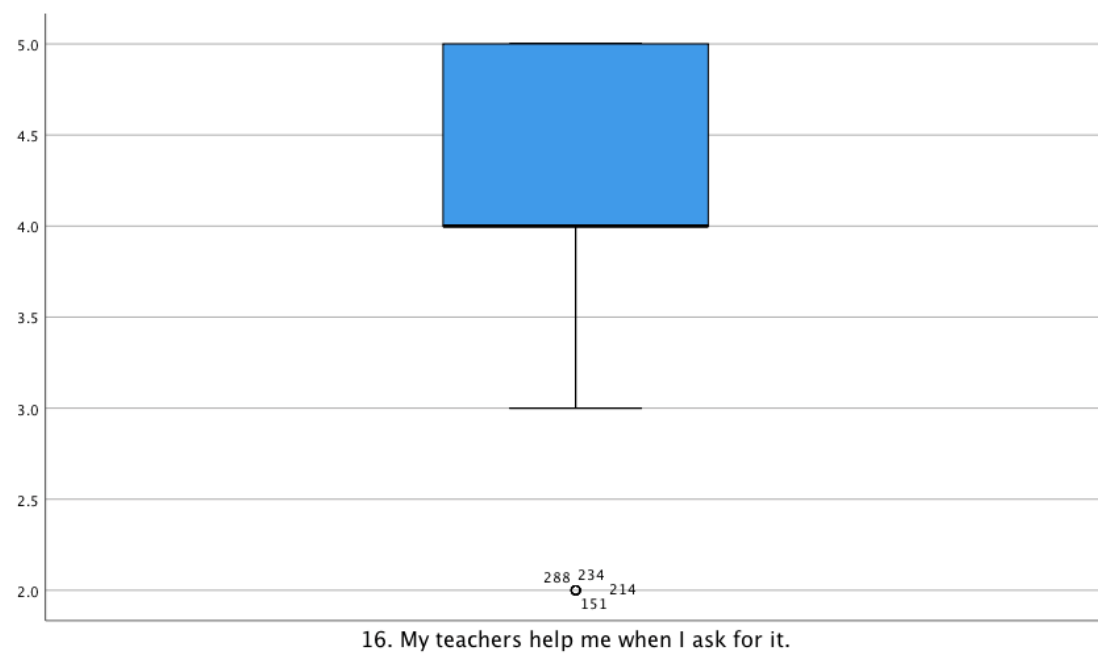
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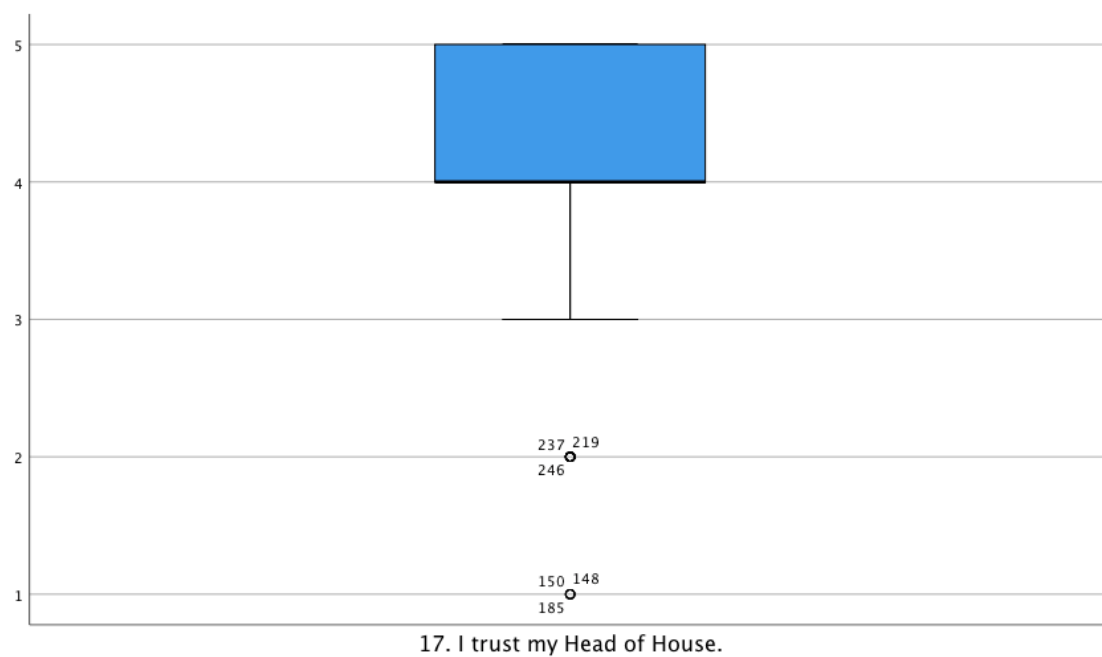
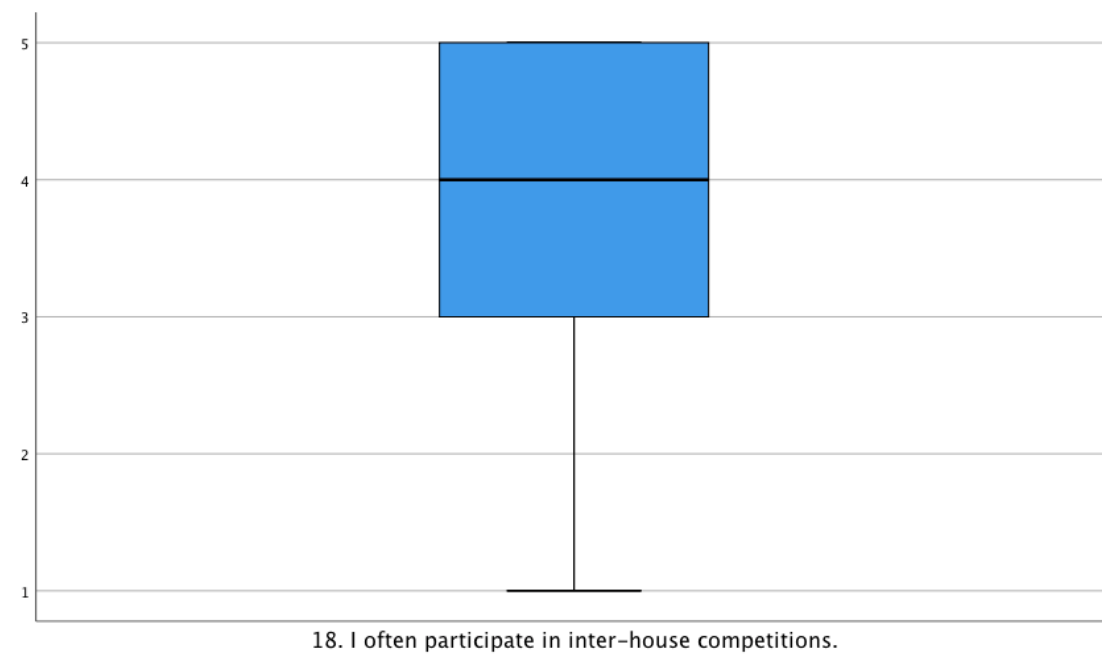


Boxplot I 14

For item 14

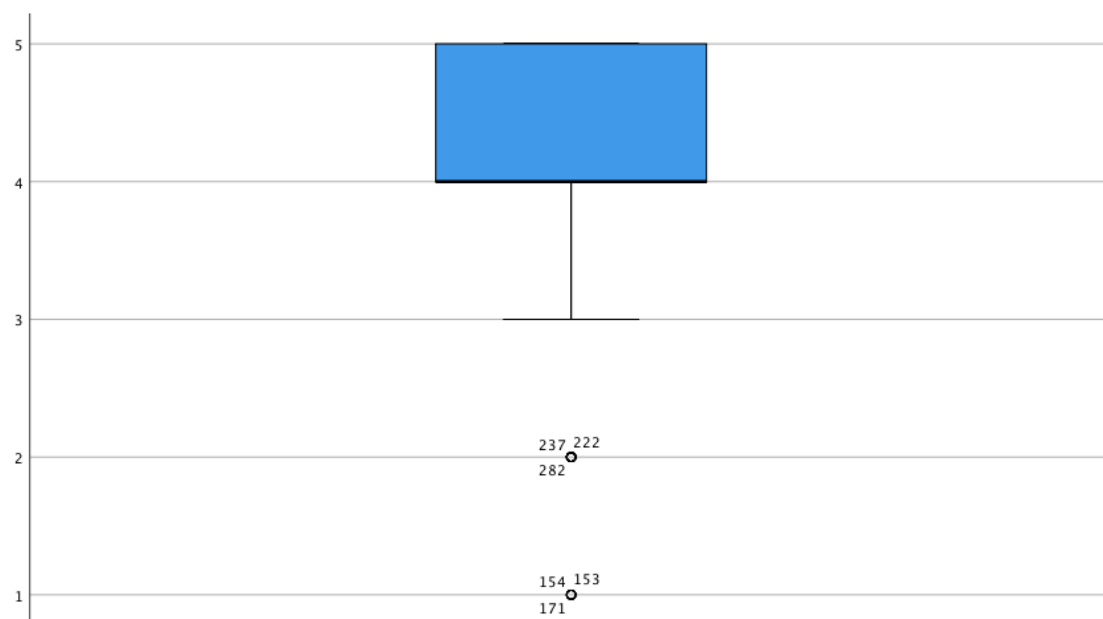


*Boxplot I 15**For item 15**Boxplot I 16**For item 16*

*Boxplot I 17**For item 17**Boxplot I 18**For item 18*

Boxplot I 19

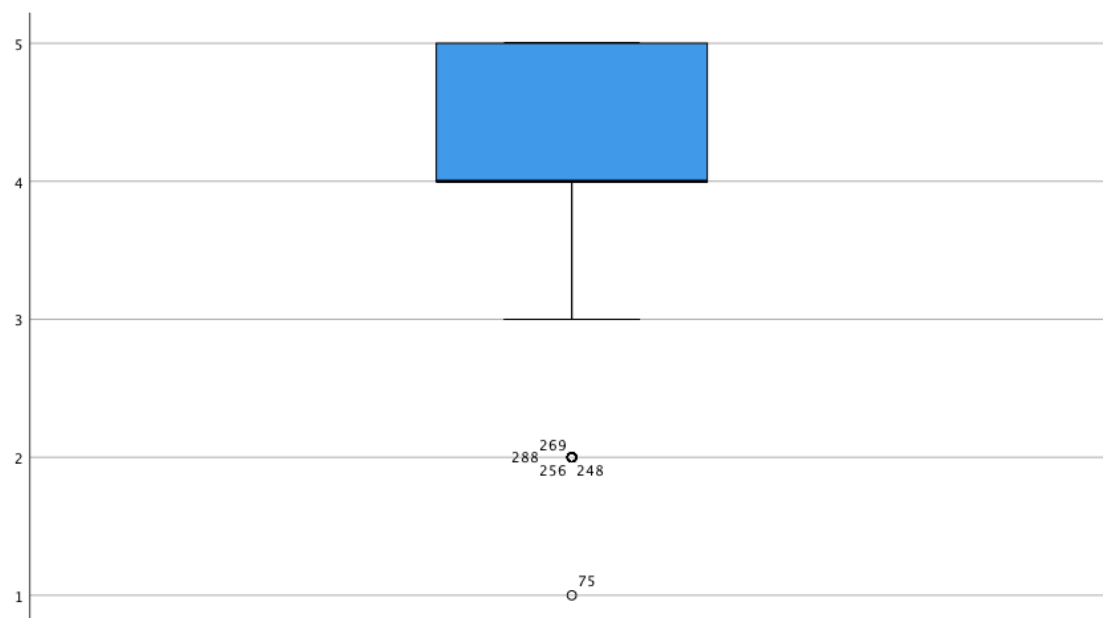
For item 19



19. Teachers at this school care about their students.

Boxplot I 20

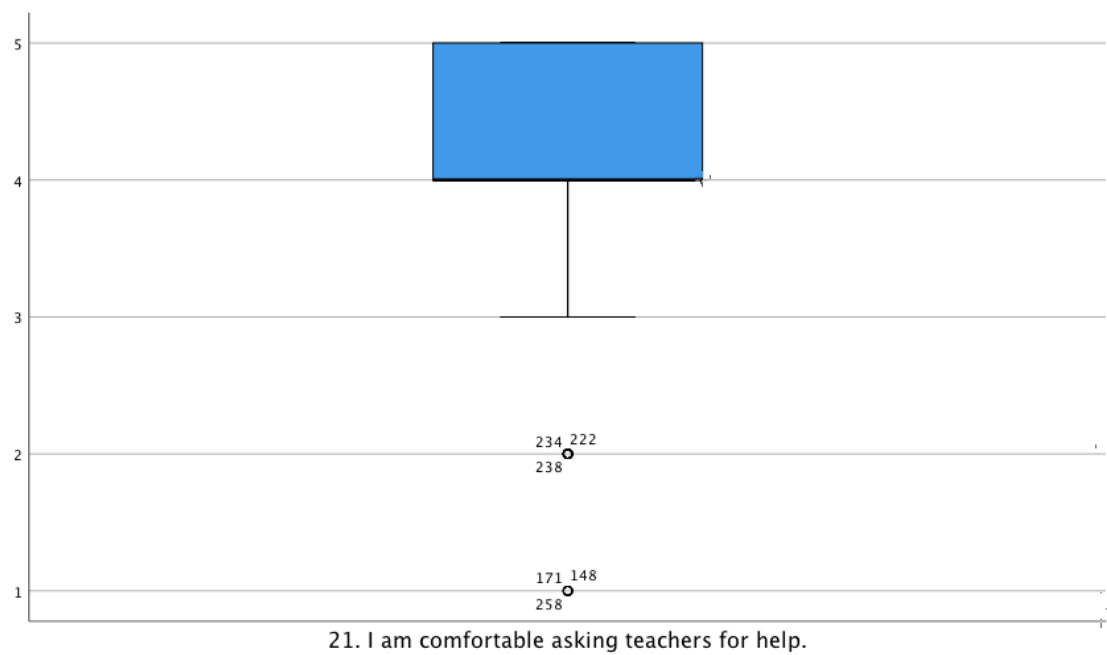
For item 20



20. I feel like I belong in my house.

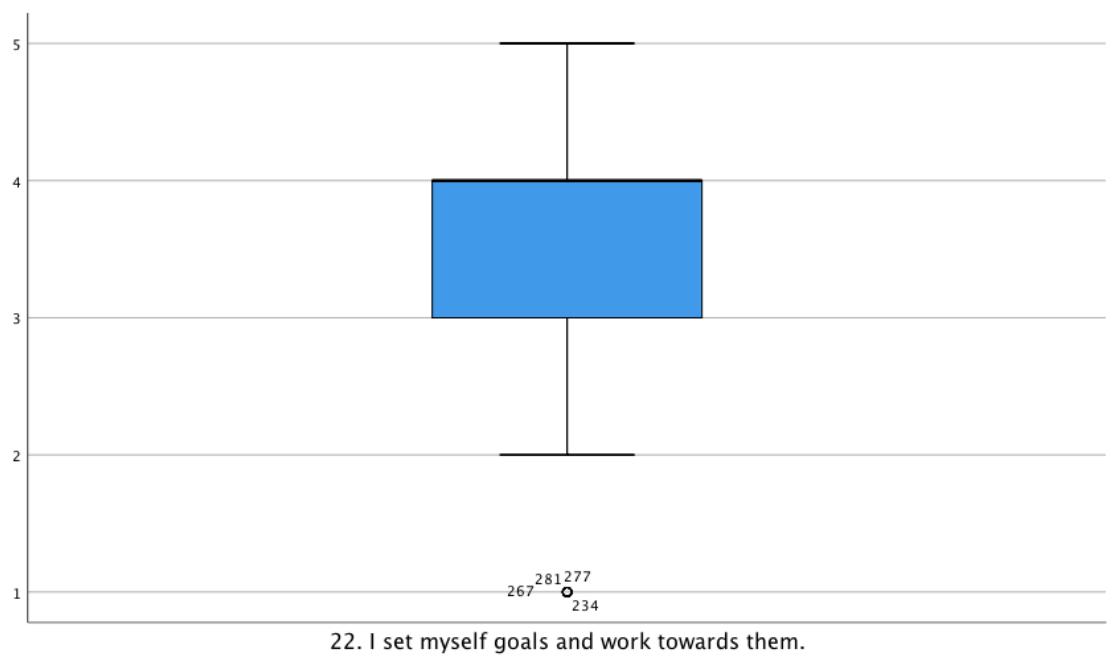
Boxplot I 21

For item 21



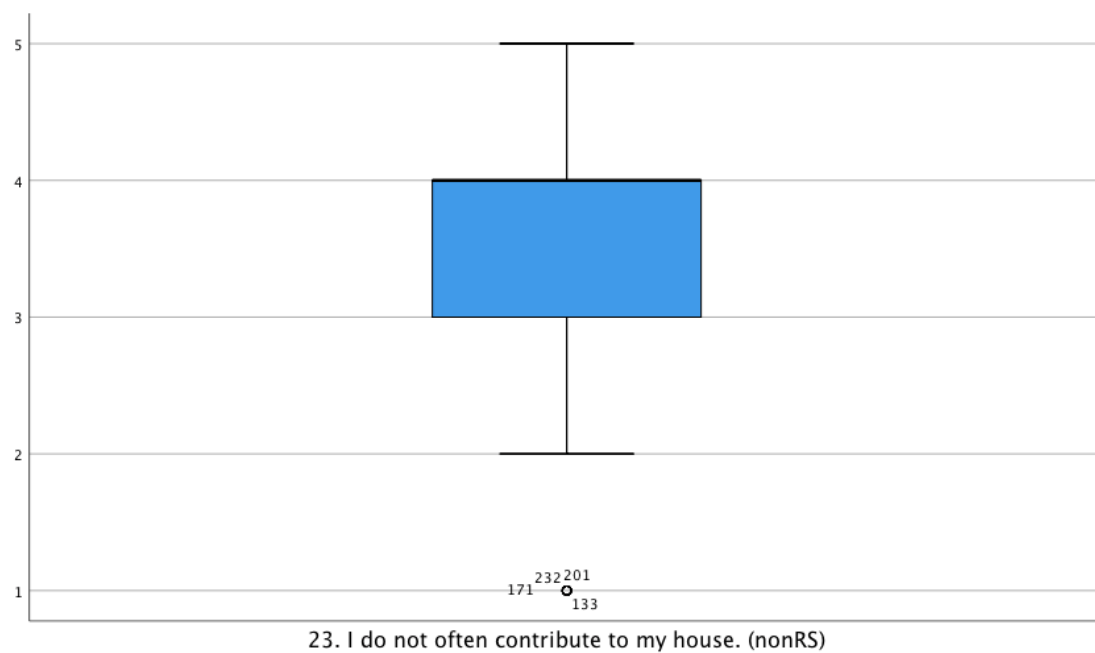
Boxplot I 22

For item 22



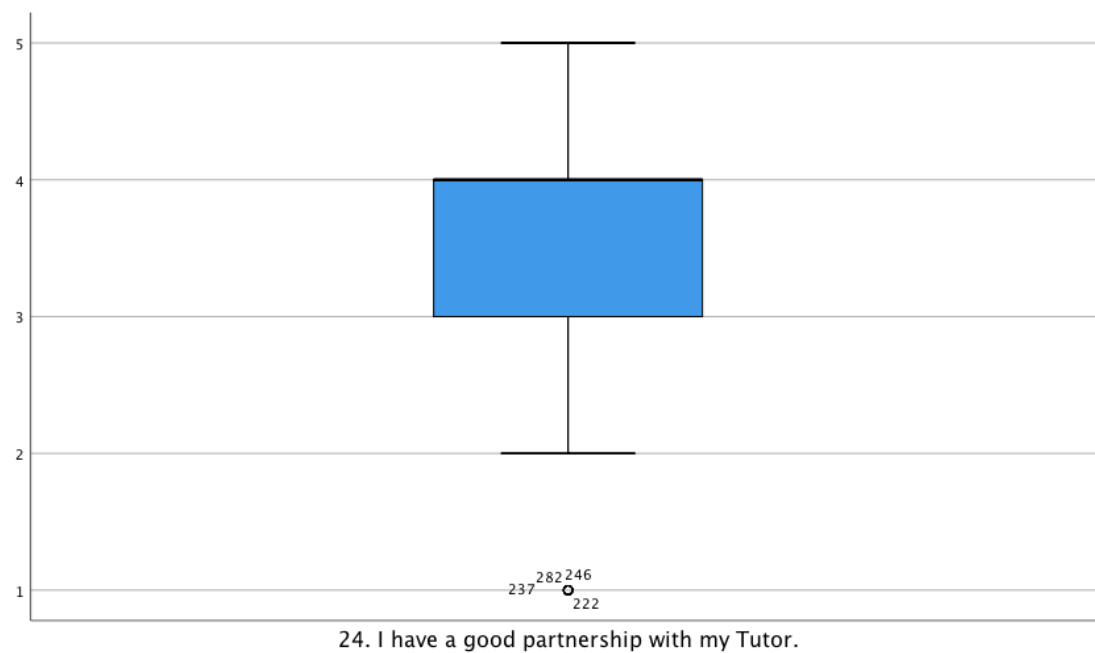
Boxplot I 23

For item 23



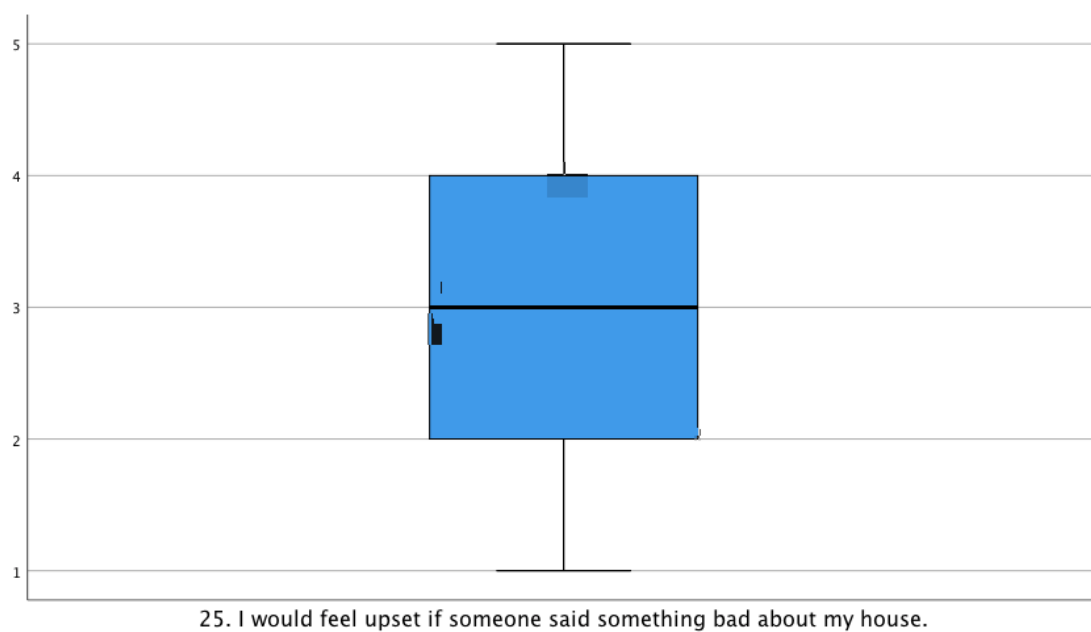
Boxplot I 24

For item 24



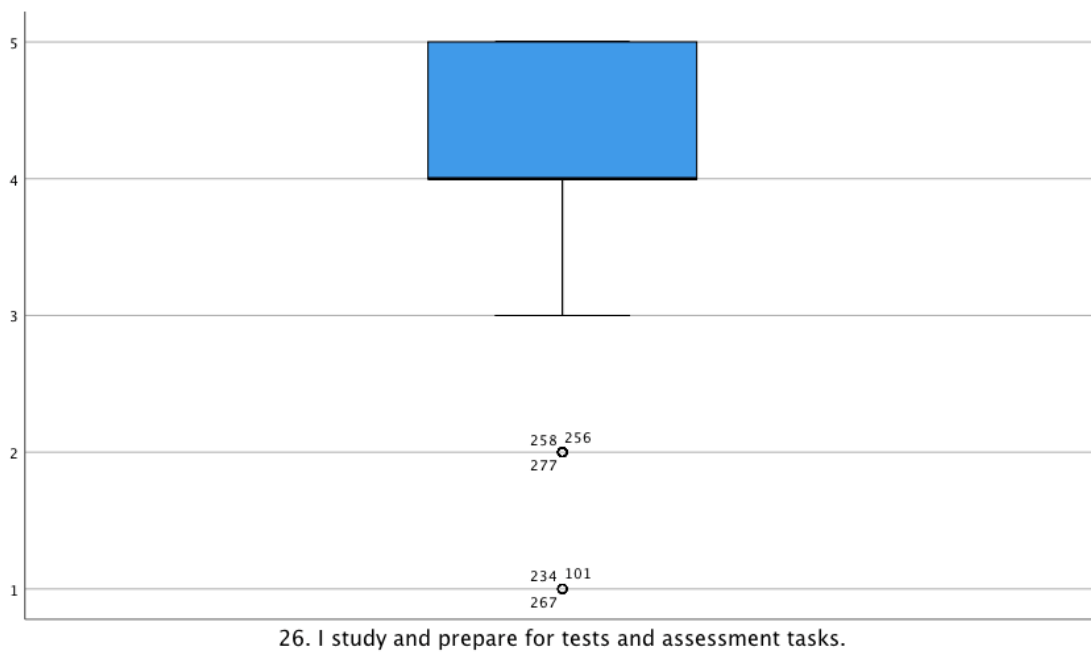
Boxplot I 25

For item 25



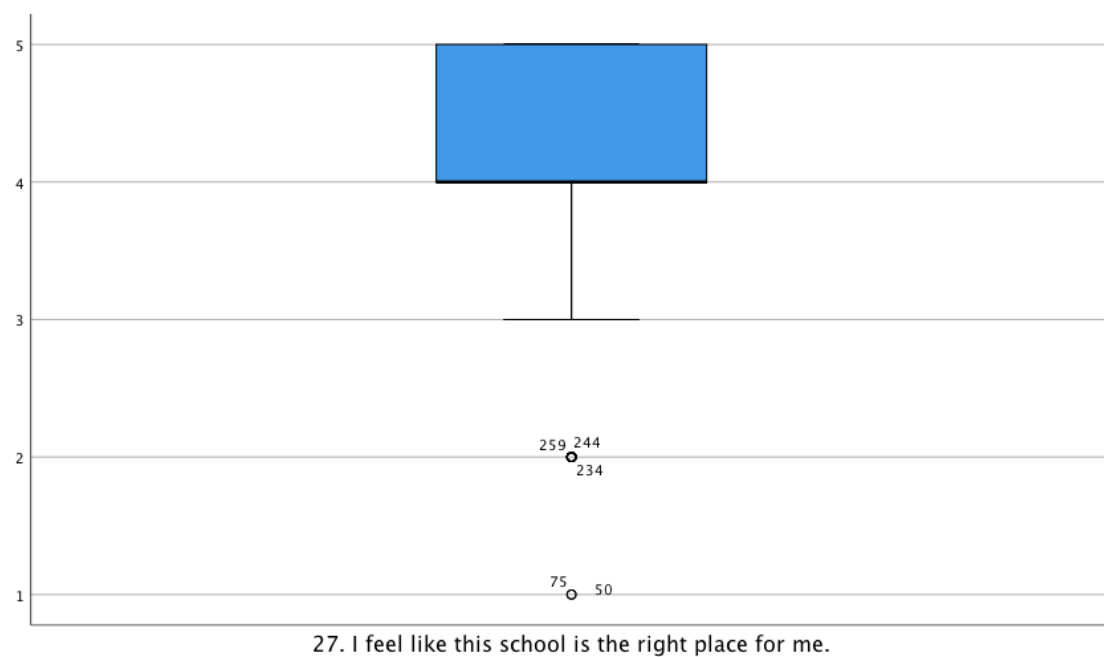
Boxplot I 26

For item 26



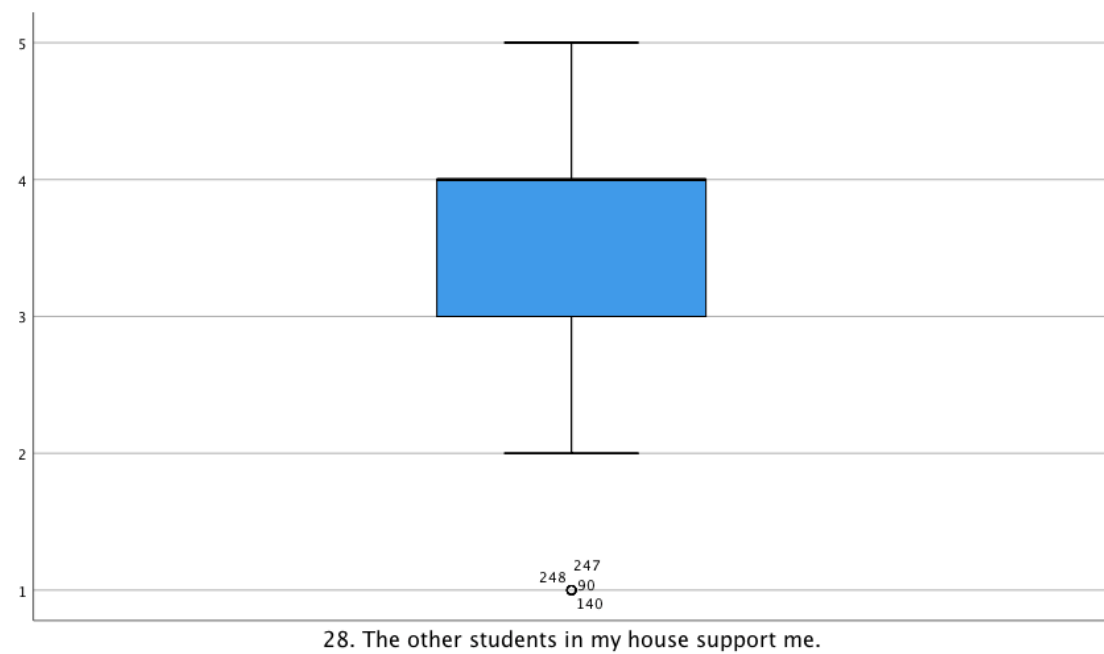
Boxplot I 27

For item 27



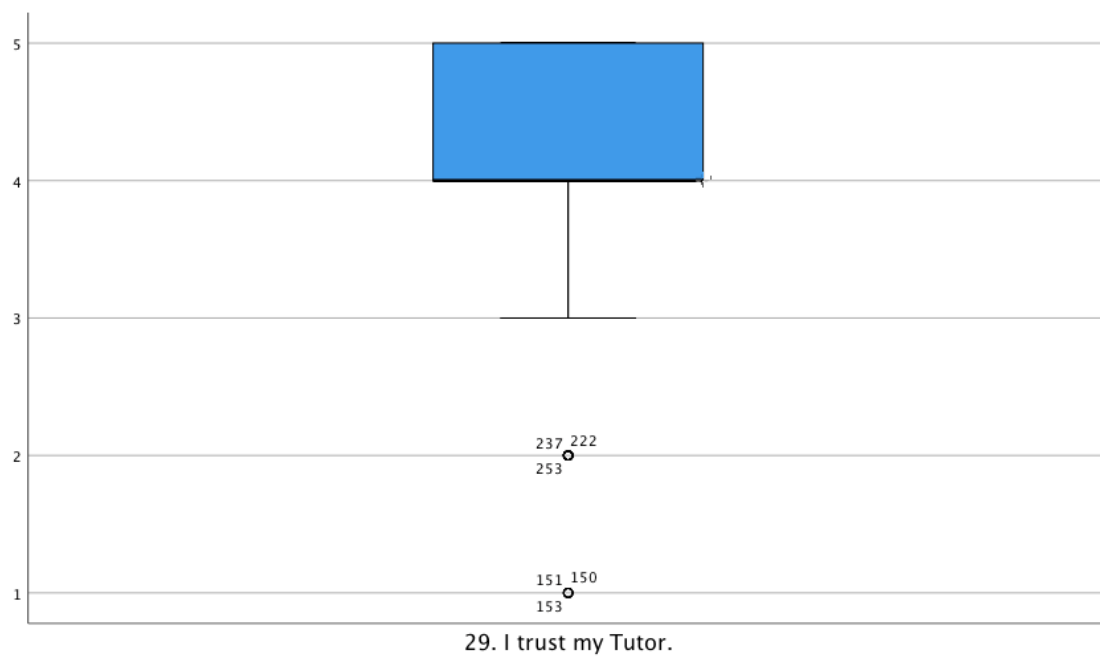
Boxplot I 28

For item 28



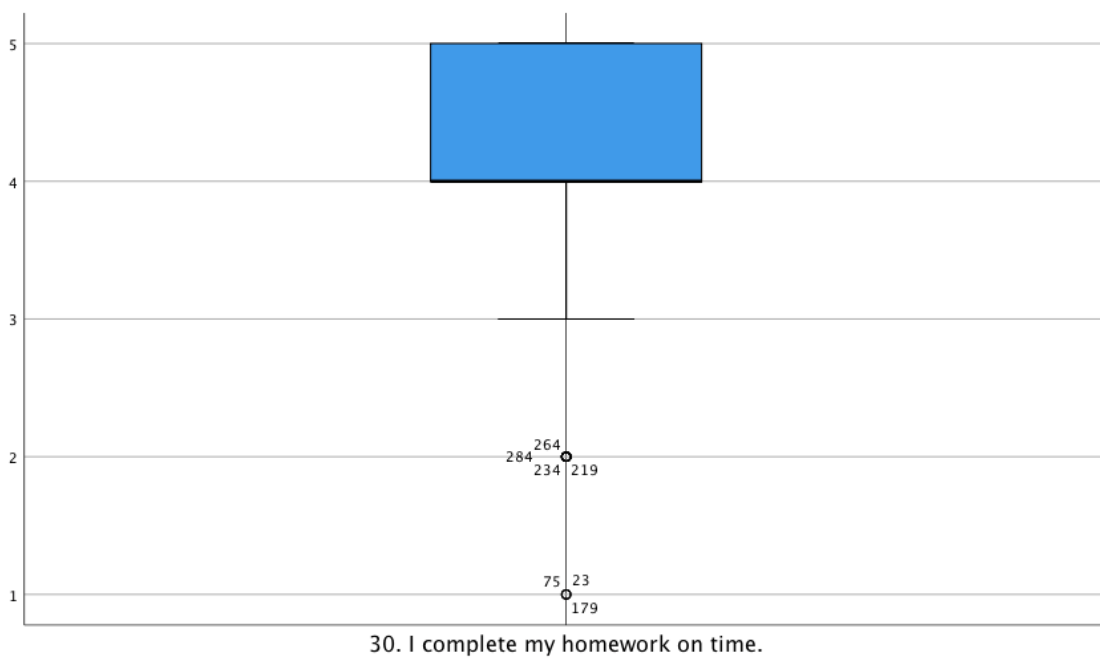
Boxplot / 29

For item 29



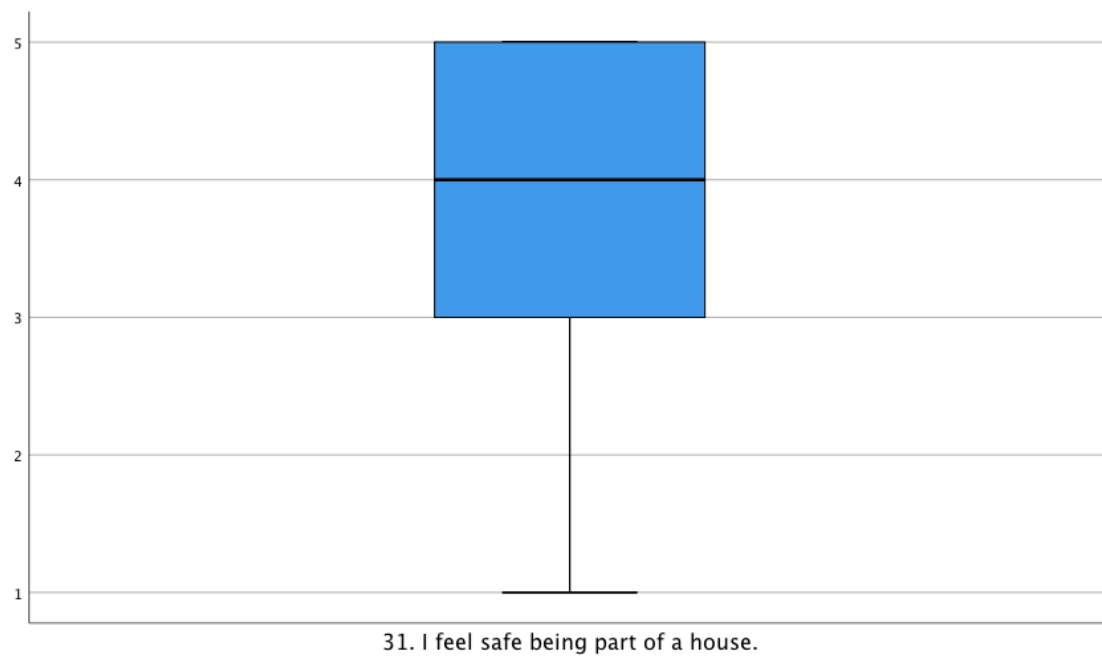
Boxplot / 30

For item 30



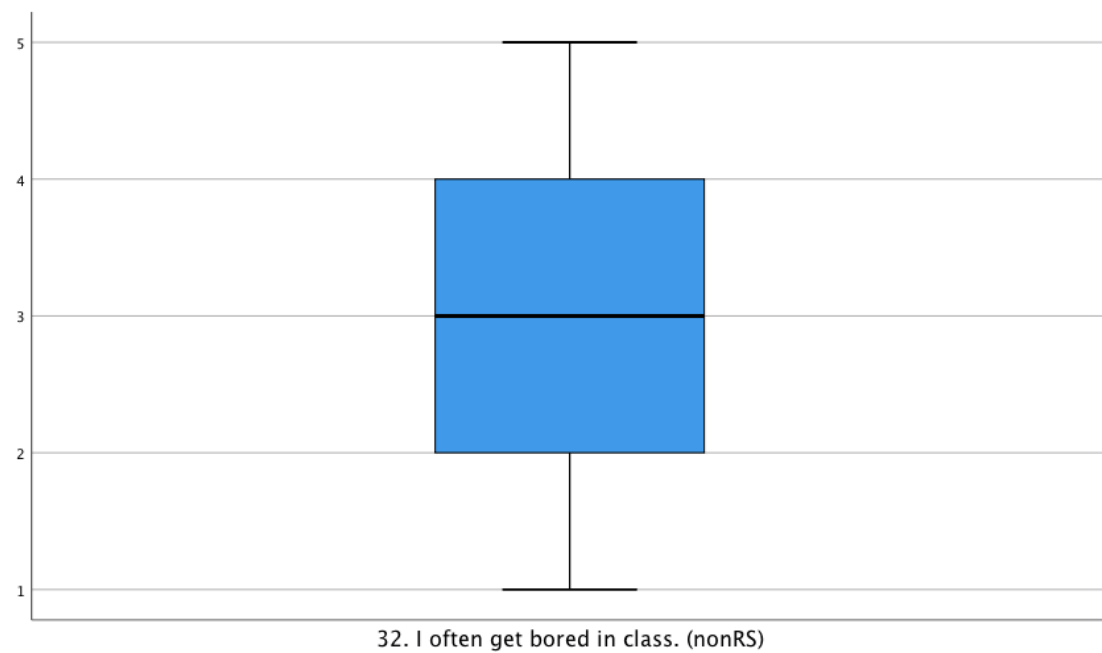
Boxplot I 31

For item 31



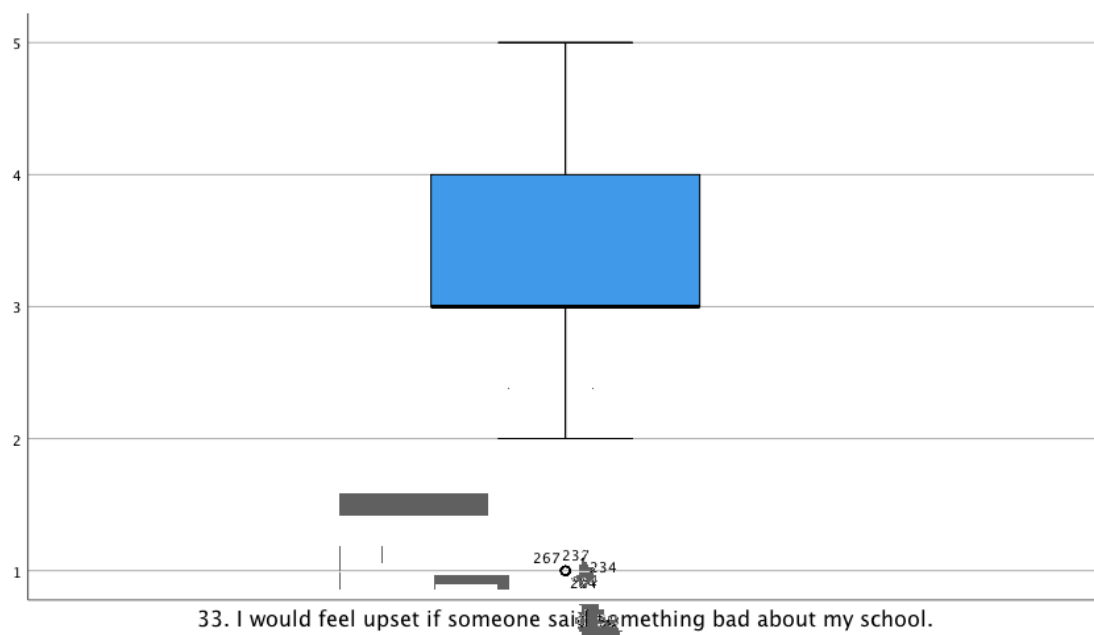
Boxplot I 32

For item 32



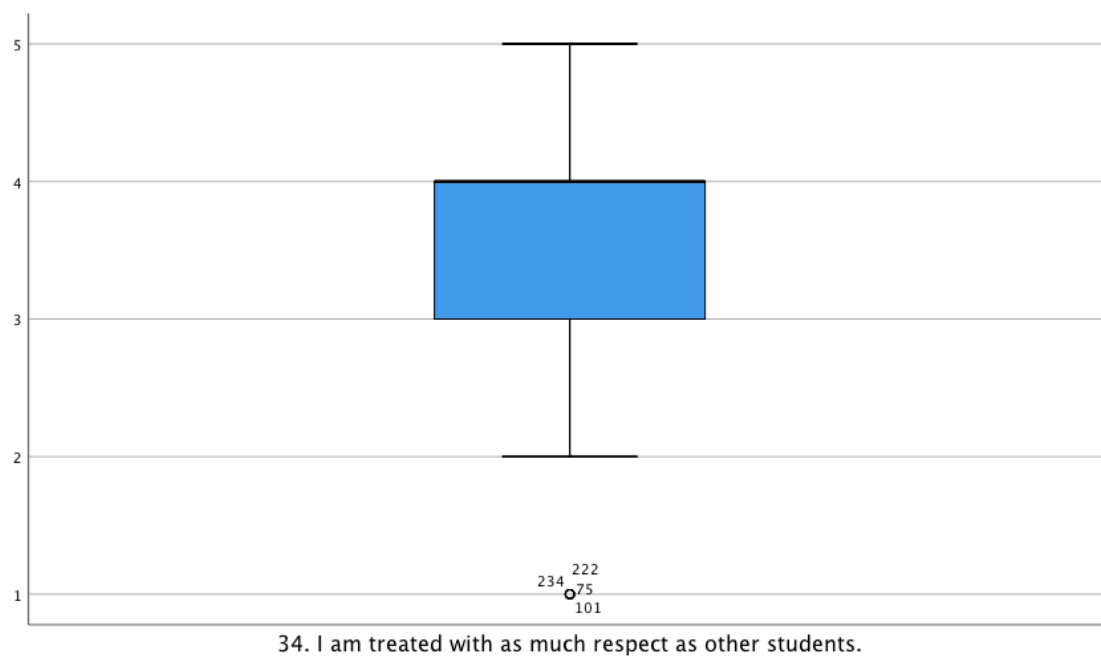
Boxplot I 33

For item 33



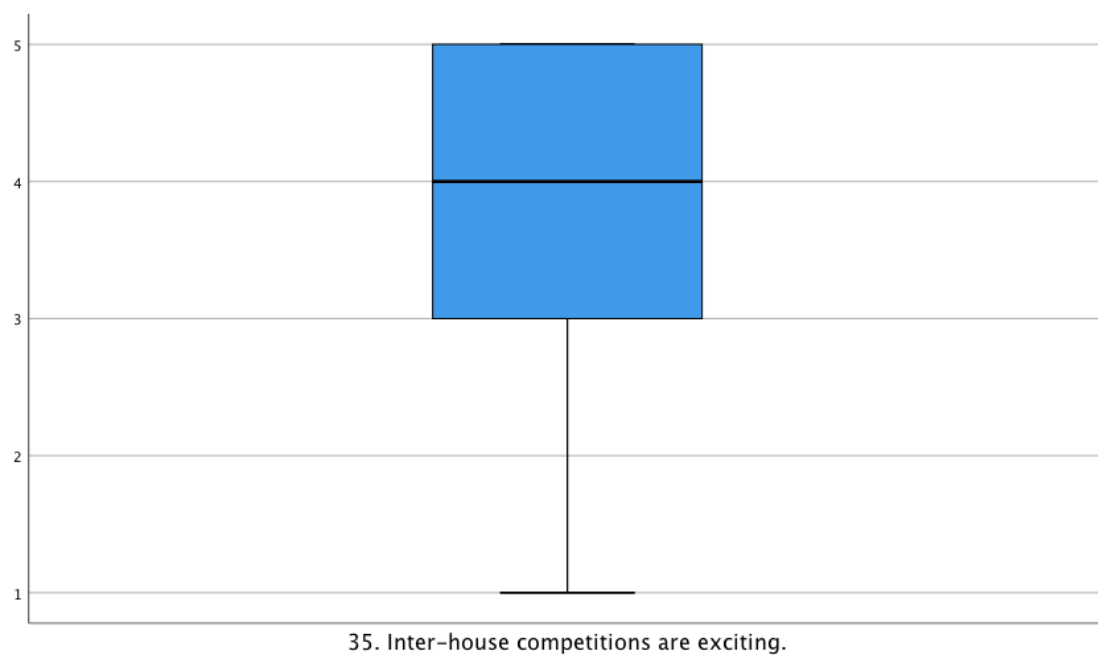
Boxplot I 34

For item 34



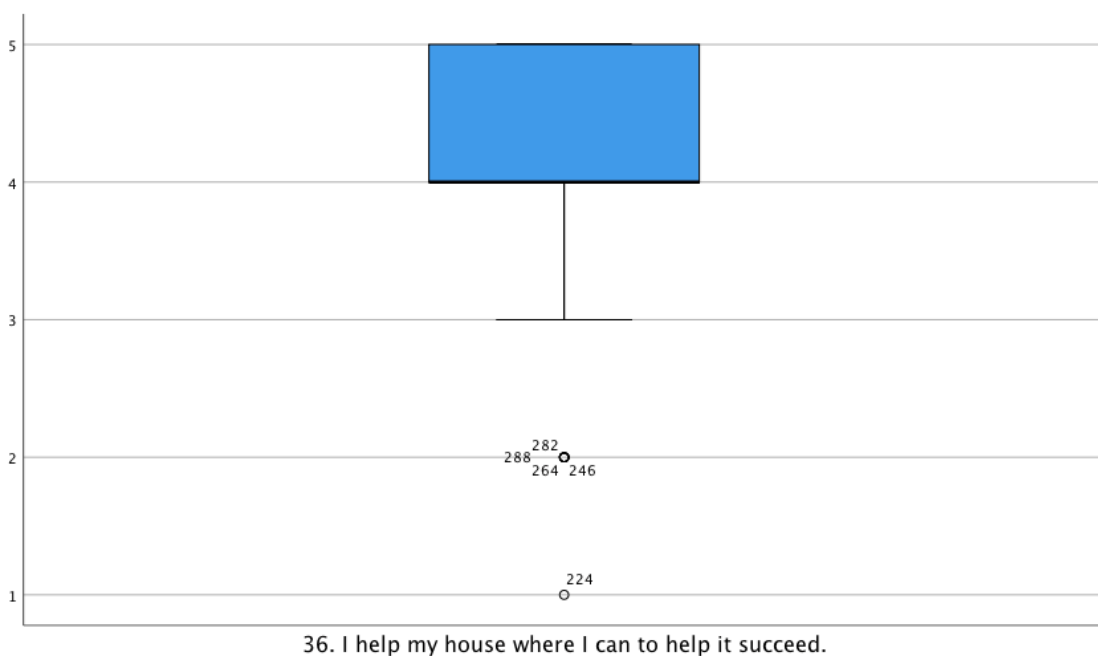
Boxplot I 35

For item 35



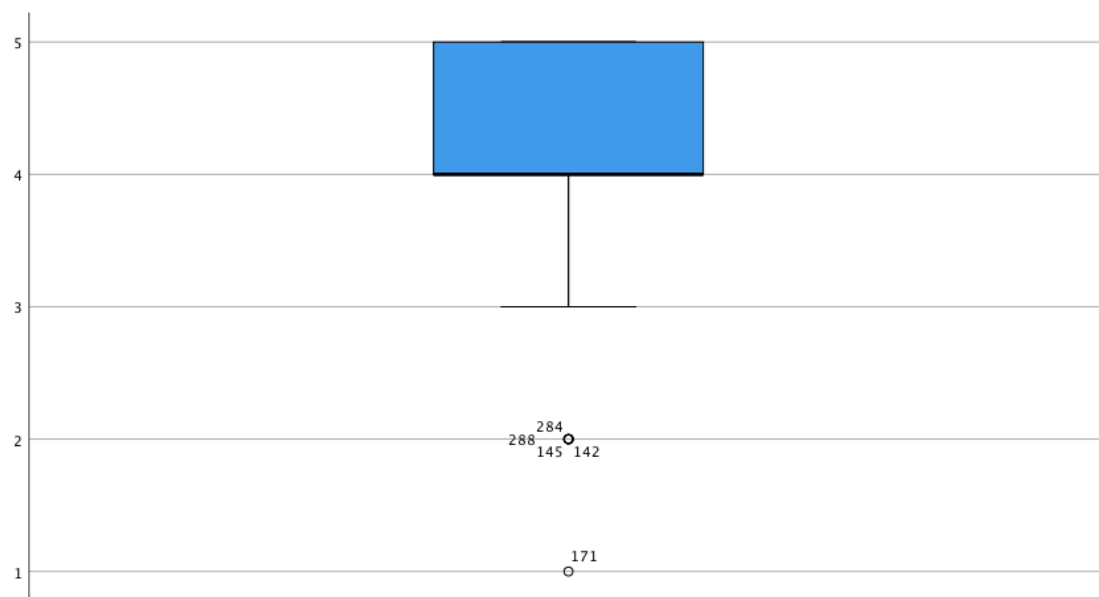
Boxplot I 36

For item 36



Boxplot I 37

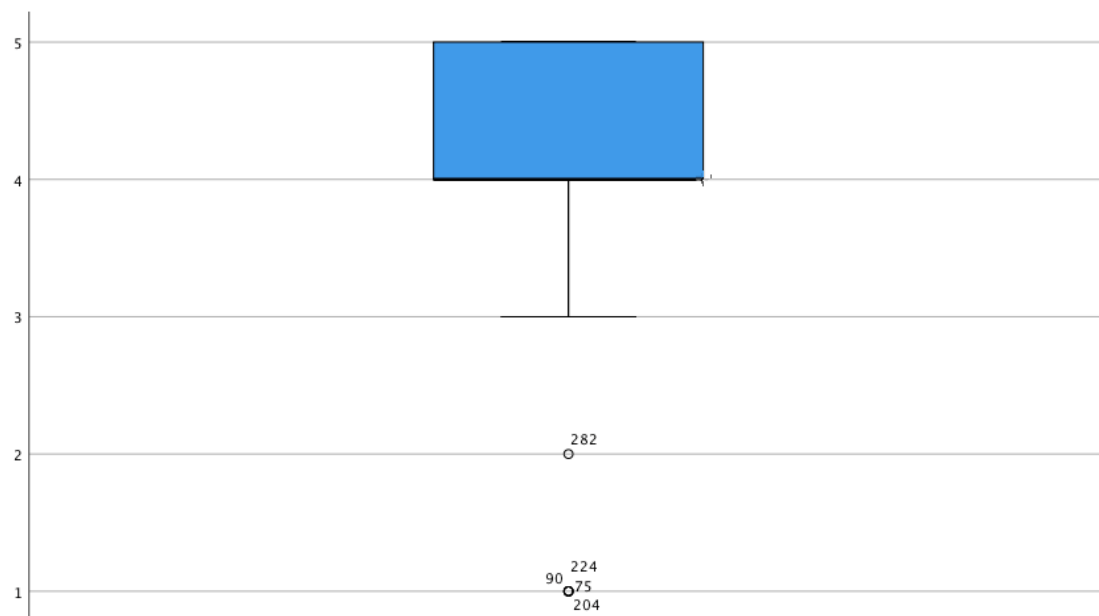
For item 37



37. Overall I respect and get along well with other students.

Boxplot I 38

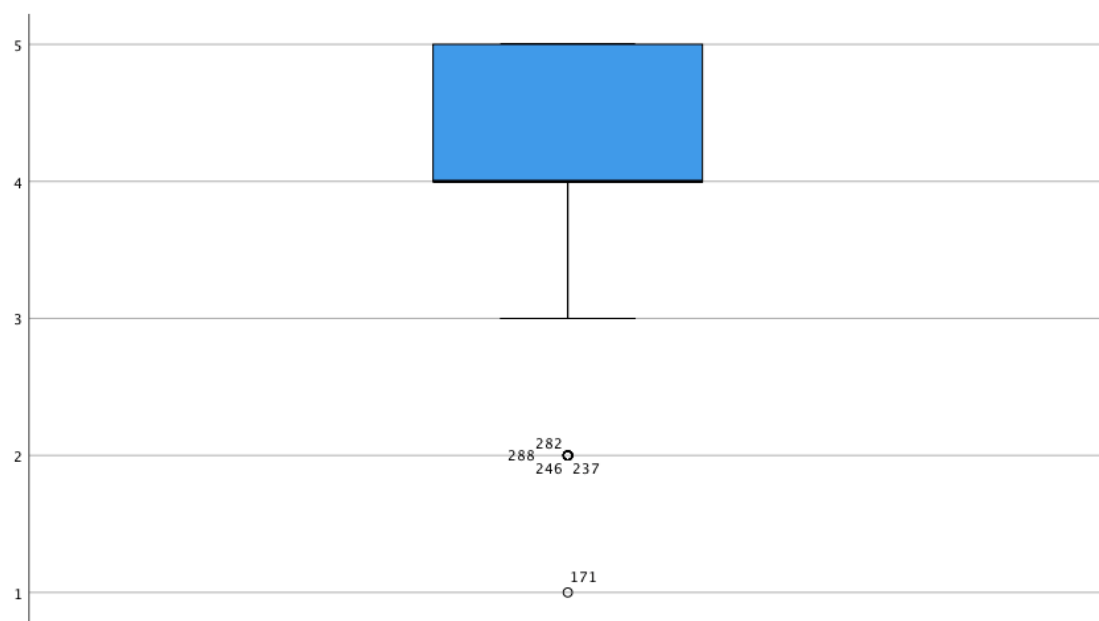
For item 38



38. I want my house to win.

Boxplot I 39

For item 39



Appendix J: List of Abbreviations and Acronyms

In order of appearance within the thesis.

Abbreviation/Acronym	Explanation
HSAS	House System Assessment Survey
SLC	Small Learning Community
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
SES	Socio-Economic Status
SRC	Student Representative Council
NAPLAN	National Assessment Program – Literacy and Numeracy
ACARA	Australian Curriculum, Assessment and Reporting Authority
ICSEA	Index of Community Socio-Educational Advantage
IV	Independent Variable
DV	Dependent Variable
LISRES-Y	Life Stressors and Social Resources Inventory - Youth
VCE	Victorian Certificate of Education
VET	Vocational Education and Training
VCAL	Victorian Certificate of Applied Learning
MANOVA	Multivariate Analysis of Variance
TAFE	Tertiary and Further Education
CFI	Comparative Fit Index
TLI	Tucker-Lewis Index
NNFI	Non-Normed Fit Index
RMSEA	Root Mean Square Error of Approximation
HI	Upper bound of a two-sided 90% confidence interval
LO	Lower bound of a two-sided 90% confidence interval
MI	Modification Indices
Tukey's HSD test	Tukey's Honestly Significant Difference test
VIF	Variance Inflation Factor
BIDR Scale	Balanced Inventory of Desired Responding Scale
SDS-17 Scale	Social Desirability Scale - 17