Research article

A Comparative Study of the Academic Performance of Resident and Non-resident Students at a Rural South African University

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Abstract

Lack of sufficient accommodation in many South African universities has forced many students to reside outside the campus and commute to attend classes as commuter students. Research indicates that living on campus is related to gains in social and personal competence. The level of competence gained may help students living on campus (resident students) to be more successful in their courses. The purpose of this study was to compare the academic performance of resident and non-resident students at a university in Limpopo Province. The study employed a survey design. Systematic sampling and snowball sampling methods were used to select 1 769 participants from both resident and non-resident students. A questionnaire was used to collect data. The main finding from this study is that the academic performance of resident students is slightly better than that of non-resident students – hence, residing on campus is an advantage. The study concludes that campus environment, student involvement as well as student academic and social integration into the institution tend to account for effects of living on-campus versus living off-campus. Furthermore, academic and social integration of students at university are essential for study commitment, success and preventing students from dropping out. The study recommends that future research should focus on the direct influence of resident versus commuter status on such outcomes as degree aspiration, satisfaction with university and institutional persistence.

Keywords
accommodation; commitment; commuter; integration; involvement; learning environment; perception; persistence; resident students; university

Introduction

The dawn of democracy in 1994 saw an increase in demand for access to higher education in South Africa. Higher Education Institutions (HEIs) had to provide sufficient accommodation as more students were studying away from home. However, most
universities could not cater for the increased numbers of students seeking university accommodation. The increased demand for quality accommodation in the South African higher education sector has been a serious matter of contention amongst students and student bodies (Gopal & Van Niekerk, 2018). Jansen and Dube (2013) report that between 2009 and 2013, the South African higher education sector experienced 39 student protests over student housing. As a direct consequence of these protests, the Minister of Higher Education, Dr Blade Nzimande, set up a task team in 2011 to investigate the national student housing crisis. The objective of the task team was to investigate the magnitude of student accommodation challenges and to offer a well-motivated solution for redressing the accommodation problem in South African universities. The task team found that the severe shortage of accommodation is causing the vast majority of students to seek off-campus accommodation which is often in unsafe areas and in unacceptable conditions (DHET, 2011).

The provision of accessible, decent and safe accommodation in South African universities is of importance for academic success of students, especially those from rural and poor backgrounds. Many students, particularly those studying in historically Black institutions, have been experiencing a shortage of accommodation on university campuses. As a result, students are forced to stay in accommodation outside the university, while others are housed inside the campus, although both resident and non-resident students are expected to complete their studies in record time. Amole (1997) defines resident students as those residing in the university residences during their studies and day students as students who reside outside the university campus; non-resident students include those residing in their own homes or in hired accommodation outside the university. It was indicated that resident students have more benefits, like access to ancillary buildings, sports facilities, religious activities and clubs, than day students. According to Timmons (2014), resident students enjoy such benefits as being able to to attend classes punctually and access to the library for longer periods, whereas non-resident students residing far from their campus, encounter difficulties in these aspects. Non-resident students, therefore, spend extensive time travelling before they arrive at the university.

Many educators believe that there should be close proximity between the living and learning environments in order to produce intellectuals who are socially integrated and mentally sound (Oluwaseyi, 2015). According to O’Toole, Peterson and Wetzel (1999), living off-campus diverts the students’ time and attention towards other obligations which may deprive them of the opportunity to “develop a sense of place”. Lutta (2008) assessed a number of factors related to the retention of students at a university in southern U.S.A. He found that over 75% of the students who did not return to the university for their third year lived off-campus, that is, they were commuter students. Newbold, Melita and Forbus (2011) conducted an analysis of commuter versus residential students’ performance which indicated that there were several key differences between the two groups. Their results indicated that commuter students live more of their lives in the off-campus setting, and thus their support resources are likely to be off-campus as well. Students living on campus have greater access to resources, like counsellors, advisers and fellow students when
faced with any problem they may have. Astin (1985) found that, as compared to commuters, resident students had more interaction with faculty and peers, had more opportunities of involvement in extracurricular activities, were more satisfied with college, had higher degree aspirations, were less likely to drop out and were more likely to obtain a bachelor’s degree after four years of college. Pascarella (1984) assessed the effects of residential living on four outcomes measures: educational aspirations, satisfaction with college, rate of progress through college, and intentions to persist after two years. Pascarella also found that living on campus versus commuting had no significant direct effect on any of the four measures. The influence of residence was nevertheless indirect and influenced by levels of involvement with faculty and peers (Pascarella, 1984). Similarly, Abrahamowicz (1988) examined the effects of involvement in college activities at a commuter institution. He found large differences in perceptions of, and satisfaction with, the college experience between students who participated in student organisations and those who did not. He concluded that many of the potentially negative effects of commuting could be alleviated by encouraging participation in student activities (Abrahamowicz, 1988).

A study conducted by Kuh, Gonyea and Palmer (2001) indicated that living on campus was related to gains in social and personal competencies. The level of competence gained may help resident students to be more successful in their courses. By contrast, commuter students were found to have slightly lower levels of interaction with faculty members and were less likely to be involved in co-curricular activities, such as clubs and internships (Kuh, Gonyea & Palmer, 2001). When commuter students compare themselves to their peers on campus, they might feel that they are at a disadvantage in terms of skills development. They may also feel that they are not involved in the essential activities of the university (Nelson, Nisra, Sype & Mackie, 2016). This may discourage these non-resident students and influence their commitment to continuing with their studies. Norris, Philhours and Hudson (2006) conducted an analysis of business students’ study habits. They divided the research subjects into two groups: campus-centred students (CCS) and life-centred students (LCS). Campus-centred students lived on-campus while life-centred students lived off-campus. Their results indicated that campus-centred students had slightly higher grade-point averages (GPAs) and higher self-reported levels of academic performance.

Wilmes and Quade (cited in Jacoby, 1989) identified the following needs and concerns of commuter students:

- **Transportation issues**: The most common concerns shared by commuter students are those related to transportation to campus, such as fixed transportation schedules, transportation costs and finding alternative means of transportation. In general, commuting is demanding in terms of time and energy.
- **Integrating support systems**: Commuter students derive their support off-campus from parents, siblings and friends in the community. Students have to negotiate with family members and friends to establish priorities and responsibilities and to allocate time. These negotiations are more difficult if significant others have no knowledge of the challenges and opportunities of higher education. In our African culture, for example, female students may be expected to do household
chores after classes. It is important for institutions to provide opportunities for these students to learn about and to participate appropriately in campus life.

- **Developing a sense of belonging:** Commuter students often lack a sense of belonging, of “feeling wanted” by the institution. In most cases, institutions do not provide adequate opportunities for commuter students to develop relationships with faculty, staff and other students. As a result, students do not feel connected to a place where they have no significant relationships.

- **Multiple life roles:** Being a student is only one of several important and demanding roles in life. Commuter students include full-time students who live at home with their parents as well as fully employed adults who live with their spouses and children and attend classes as part-time students. So, some commuter students work and many have responsibilities for managing households and for caring for children, siblings or older relatives. It is therefore important that any information about campus activities is made available to them in a timely manner so that they can decide if they need to participate.

The purpose of this study was to compare the academic performance of resident and non-resident students at a university in Limpopo Province. The authors deemed it fit to do this research in a predominantly residential institution to find out if commuting to university affects commuter students’ academic performance.

**Theoretical Frameworks**

**The ecosystem model**

According to Jacoby (1989), the ecosystem model indicates that unsatisfactory educational outcomes may be the result of a deficit in the environment rather than in the student. The ecosystems model is based on the beliefs that every student possesses the potential for a variety of behaviours and that a given campus environment may encourage or inhibit one or more of these behaviours. Jacoby (1989) further posits that the wide range of individual differences amongst students requires the creation of a variety of campus sub-environments. Banning and Hughes (1986) are of the opinion that successful campus design according to the ecosystems model must consider the diversity of students, and depends upon participation of all campus members, including students, faculty and staff. The ecosystem design process demands institutional change to improve the working relationship between commuter students and the campus. For example, the institution can adjust its patterns of scheduling courses and hours of operation in order to enable commuter students to attend classes or to use services without hassles (Banning & Hughes, 1986).

**Involvement, talent development and integration**

Jacoby (1989) declares that “the more time and efforts students invest in their learning process and the more intensely they engage in their own education, the greater will be their growth, achievement and satisfaction with the college experience and their persistence
toward attainment of their educational goals”. The concept of students’ involvement, incorporated into a talent-development view of higher education, holds that a high-quality institution is one that facilitates maximum growth amongst its students and that records that growth through appropriate assessment procedures (Astin, 1985). Learning and personal growth occur best in institutional environments where students’ talents can be identified and developed. Tinto (1987) points out that a model for understanding the process of student withdrawal is based on the degree of social and intellectual integration within the institution. This model postulates that a student’s background characteristics at the time of entry influence initial commitments to the institution and to graduation. This combination of background characteristics and initial commitments in turn influences the student’s academic and social integration into the institution. Students decide to leave when they are not adequately integrated into the academic and social areas of the institution, and their background characteristics influence the decision to withdraw only indirectly (Tinto, 1987).

Transition theory

According to Jacoby (1989), a transition can be an event, such as when a first-entering student enrols in a local university while living at home. Jacoby further states that transitions change the ways individuals view themselves and alter their roles, routines and relationships within the family, the community and the institution of higher education. A transition is therefore not so much a matter of change as it is the individual’s perception of the change (Jacoby, 1989). It is important that university staff be aware of the fact that some of their students, especially first years, are in a transition period and they should be prepared to assist them in adjusting to their new roles, challenges and relationships.

Methodology

Research approach and design

The present study was based on the positivist paradigm. Positivism is an approach to social research that seeks to apply the natural science model of research to investigations of social phenomena and explanations of the social world (De Vos et al., 2011). According to Babbie and Mouton (2001), positivists believe that an objective reality exists outside of personal experience that has demonstrable and immutable laws and mechanisms that can reveal cause-and-effect relationships. Positivism maintains that it is possible and essential for the researcher to adopt a distant, detached, neutral and non-interactive position (Morris, 2006). The researchers adopted a quantitative approach for this study. Quantitative research is a type of research that explains phenomena by collecting numerical data that are analysed using mathematically based methods (Creswell, 2012). The analyses consist of breaking down the data into parts to answer the research questions. Quantitative research operates with less detail than qualitative methods, but with a wider scope and more generalised level of explanation (Payne & Payne, 2004). The study employed a survey design. According to Creswell (2012), a survey design is a procedure in quantitative research in which the
researcher administers a survey or questionnaire to a group of people to identify trends in attitudes, opinions, behaviours or practices. The design was chosen because it is convenient for acquiring factual information about a large group of individuals (McMillan & Schumacher, 2010).

Participants

The study used systematic sampling method to select 924 participants from the population of all resident students at the university. In addition, the researcher asked selected participants (resident students) to identify day students who had registered for the same degree programmes to participate in the study; this procedure is known as snowball sampling (Creswell, 2012). Eight hundred and forty-five (845) day students were thereby selected to participate in the study, making a total of 1,769 participants.

Data collection

A questionnaire was used to collect data. The questionnaire had two sections: Section 1 consisted of questions on biographical data of the participants and Section 2 consisted of closed-ended and open-ended questions on living and study conditions in students’ places of residence, on-campus and off-campus. The questionnaire was given to an experienced statistician to establish its content and construct validity before it was administered to the participants. The questionnaires were hand-delivered to all selected participants, with the help of research assistants. Four male research assistants distributed 1,030 questionnaires in male on-campus residences while five female research assistants distributed 1,015 questionnaires in female on-campus residences; hence, the total number of questionnaires distributed in both male and female on-campus residences was 2,045. Questionnaires amounting to nearly half of this total were distributed to day students by research assistants. A total of 1,882 completed questionnaires were collected from both resident and non-resident students. This amounted to 86% of the questionnaires that were distributed and was regarded as a good return rate. In order to compare the academic performance of the participating students, performance records were requested from the Management Information System (MIS) office at the University.

Data analysis

The Statistical Package for Social Sciences (SPSS) was used to analyse data. Chi-square tests of association were used to investigate (i) if there was an association between the responses to certain questions and the status of the student and (ii) whether, if a student passes all their courses or not is dependent on the status of the student. A t-test for independent samples was used to investigate if, on average, the academic achievement of resident and non-resident students was the same.
Ethical considerations

Participants were informed about the purpose of the research. Their participation was voluntary and they were informed of their right to withdraw from the study at any time. Participants’ identities were confidential as they did not use their names. Permission to conduct the study was sought from the University’s Research Ethics Committee.

Results

The academic performance data of resident and non-resident students for 2016 were obtained from the university’s Management Information System (MIS) office. The data sets contained the number of subjects that each student enrolled for in 2016, the number of subjects passed, and the average mark across all the subjects. These records were then merged with data generated from the questionnaire using the SSPS software. The student number was used as the key variable for matching the records. The table below gives the summary of the number of courses that the students enrolled for and the number of courses passed.

Table 1: Number of subjects enrolled and passed

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-resident students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects enrolled</td>
<td>439</td>
<td>1</td>
<td>14</td>
<td>9.31</td>
<td>2.682</td>
</tr>
<tr>
<td>Subjects Passed</td>
<td>439</td>
<td>1</td>
<td>14</td>
<td>8.29</td>
<td>3.000</td>
</tr>
<tr>
<td><strong>Resident students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects enrolled</td>
<td>556</td>
<td>1</td>
<td>18</td>
<td>9.29</td>
<td>2.918</td>
</tr>
<tr>
<td>Subjects Passed</td>
<td>556</td>
<td>0</td>
<td>18</td>
<td>8.44</td>
<td>3.252</td>
</tr>
</tbody>
</table>

For non-resident students, the number of courses enrolled in ranged between 1 and 14. The mean was 9.31 with a standard deviation of 2.682. The number of courses passed had a similar range with a slightly lower mean of 8.29 and a standard deviation of 3.00. For resident students, the number of courses enrolled in ranged between 1 and 18. The mean was 9.29 with a standard deviation of 2.918. The number of courses ranged between zero and 18 with a slightly lower mean of 8.44 and a standard deviation of 3.252. The table below gives summary statistics for the average marks.

Table 2: Average marks

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average marks</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day students</td>
<td>439</td>
<td>60.55</td>
<td>7.151</td>
<td>0.341</td>
</tr>
<tr>
<td>Resident students</td>
<td>556</td>
<td>61.59</td>
<td>7.870</td>
<td>0.334</td>
</tr>
</tbody>
</table>

The mean score for non-resident students was 60.55 with a standard deviation of 7.151. For resident students, the mean score was 61.59 with a standard deviation of 7.870.
Thus, resident students marginally outperformed the day students. A t-test for independent samples was used to ascertain if the difference in the average scores is significant. The key assumption underpinning the need of the t-test is that the data should be normally distributed. The histogram below shows that the distribution of the average scores does not show a serious deviation from the normal distribution, hence we could proceed to use a t-test.

![Histogram of final exam scores](image)

**Figure 1: Histogram of final exam scores**

The results of the t-test show that there is a significant difference in the mean score of day students and resident students ($P$-value = 0.00) and the difference is in favour of resident students. The lower and upper limits for the 95% confidence interval for estimating the actual difference in the mean scores for day students and resident students are 1.26 and 3.14. We are therefore 95% confident that in the population of these students, the average mark scored by a resident student is about 1.26 to 3.14% higher than that of non-resident students. The mean difference between the scores is 2.20%. The main finding from this study is that the academic performance of resident students is slightly better than that of non-resident students.

**Discussion**

A study by Noble, Flynn, Lee and Hilton (2007) found that the college learning climate is improved by on-campus living and exposure to other student-enhancement programmes. Schuch and Upcraft (2001) regard student residences as places where learning can be extended and practised, as well as assisting the development of interpersonal relations and leadership skills. The same authors further state that residences hence have an educational
influence on student development, both academically and socially. Khurshid, Tanveer and Qasmi (2012) conducted a study to investigate the relationship between the academic achievement and study habits of resident students and day students at a university in Islamabad, Pakistan. Day students obtained higher mean scores on a study skills inventory as well as on academic achievement than resident students. The study found that resident students had problems such as living away from home and difficulty in time management when studying. On the other hand, day students had proper study facilities available at their homes, and these enabled them to gain full concentration when studying and consequently they obtained higher academic achievement. Miller and Winston (1991) are of the opinion that the residential setting may be one of the most powerful forces influencing students’ behaviour and ultimate success during their undergraduate years. Pascarella, Terenzini and Blimling (in Gopal & Van Niekerk, 2018) assert that residence halls promote a variety of desirable academic outcomes by enhancing students’ involvement and engagement with their institutions.

Jones et al. (2008) interviewed students who lived in different university residences in South Africa. The interviews confirmed that suitable, safe and affordable accommodation on the university campus was the ideal for students to be able to study effectively and access the universities’ resources, such as libraries, computer centres and student support services. However, the students interviewed reported varying experiences of living in residence, describing both advantages and difficulties. On the one hand, advantages were that particularly first-year students found it easier to socialise and adjust to campus life. On the other hand, common problems reported were high noise levels, which made it difficult to study at times, rooms that were uncomfortably small for sharing, the high price of residence meals and a lack of cooking facilities. Some of the students in the sample also reported that, especially in their first year, they had felt socially alienated by being labelled as poor by their relatively better-off peers in residence, although this abated in continuing years. In the Ministerial Committee Report of the Department of Higher Education and Training (DHET, 2011), most institutions of higher learning indicated that they provide a variety of academic support programmes in student residences; these programmes include mentoring and tutoring, peer education, career guidance, and relationship guidance. The DHET report further indicates that “being housed in a safe, well-managed residence is both socially and academically beneficial for students, particularly those from poorer backgrounds”. It is, therefore, important that an institution of higher learning should provide well-maintained and secure residences, including creating opportunities for learning within the residences.

In terms of theoretical underpinnings, the findings of this study would appear to support the notion that living on-campus substantially and positively influences a student’s degree of interpersonal, social integration with both peers and faculty members during university or college study (Pascarella, 1984). Pascarella further states that it is the level of social integration, and not the mere fact of residing on-campus that directly influences university outcomes. This finding is consistent with that of Pascarella and Terenzini (1980) who focused on the developmental influences of different types of on-campus residence arrangements. They found that living on-campus may significantly influence college
outcomes, but the influence appears to manifest less through direct effects than through dramatic differences in the extent to which residents and commuters become integrated into the social system of the institution.

Based on data collected annually from first-entering students, Jacoby (1989) found that living in a campus residence as a first-year student was associated with reduced possibilities for dropping out. Similarly, living at home with parents negatively affected persistence when compared with living on campus. Amongst the most significant positive effects of living on campus versus commuting were involvement in extracurricular activities, interaction with faculty members, achievement in academic studies, leadership development, career development, social life, and satisfaction with the undergraduate experience (Jacoby, 1989). Amongst the implications for educational policymakers is the need for institutions to provide opportunities to increase commuter students’ involvement. Bitzer (2009) points out that the successful academic and social integration of first-year students in higher education settings is important with regard to study commitment, study success and preventing early dropouts. Tinto (1987) has shown that the level of institutional and programmatic integration has a major influence on both student commitment and study success. Similarly, Jarvis, Holford and Griffin (1998) have pointed to the close relationship between student integration and motivation.

Limitations of the Study
The findings of this study cannot be generalised to other institutions of higher learning as it was conducted at a rural university with its unique context. If a similar study is conducted in different universities in South Africa, generalisation from the findings could be more sensible and reliable. Furthermore, this study covered a period of one year. It would be more beneficial to investigate students’ academic performance over a longer period.

Conclusion
The results of the study show that a larger percentage of resident students passed all the courses they enrolled for as compared to non-resident students. The literature has shown that non-resident students are disadvantaged by several factors such as the need to commute to the university, insufficient time to consult support resources and less interaction with staff members and fellow students. Campus environment, student involvement as well as student academic and social integration into the institution tend to mediate, or account for, the effects of living on-campus versus living off-campus on academic performance. In addition, it has been shown that academic and social integration of students in institutions of higher learning is essential for students’ commitment, success and preventing early student departure. Finally, future research might focus on the direct influence of resident versus commuter status on such outcomes as degree aspiration, satisfaction with university and institutional persistence.
References


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