

RESEARCH ARTICLE

The Effect of the Covid-19 Pandemic on Students and the Living and Learning Spaces at a South African University

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Abstract

In March 2020, the South African President Mr Cyril Ramaphosa announced a national lockdown due to the rising cases of the Covid-19 pandemic. As a result, some of the higher education institutions closed under lockdown level 5 and strategies had to be developed to adapt to the “new norm”. Consequently, students and the living and learning spaces in South Africa were affected, necessitating therefore that transformation in all spheres takes place. This study, through a qualitative research design, investigated the effect of Covid-19 on students and the living and learning spaces at a selected university in South Africa. Fifteen students and ten Residence Advisors (RAs) were telephonically interviewed. The results revealed that the living and learning spaces had been significantly transformed by the Covid-19 pandemic. The operations of these spaces had been compelled to change in order to comply with the Covid-19 regulations, such that student learning was shifted from face-to-face to online learning. This meant more time spent indoors, stricter measures now in place and the RA roles having been broadened to ensure that they also monitor compliance. The study also noted that even after the pandemic, things will still take time to get back to normal. This article concludes that Covid-19 has had a huge effect on the living and learning spaces as well as students at the selected university and that both students and staff should play their roles effectively to ensure that everyone remains safe.

Keywords

advising; Covid-19; living and learning; residence life; student affairs

Introduction

According to Jones Lang Lasalle (2016), there is a huge demand for student accommodation in Africa due to an increased enrolment rate. Therefore, most students opt to reside in the accommodation offered by the institution whether insourced or outsourced. Student accommodation or residences refer to a living place provided by institutions (DHET, 2015).

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For the purposes of this study the student residences will be termed 'living and learning spaces'. The living and learning spaces characterise the concepts of learning while living in the university's shared spaces. Furthermore, this is a concept used in integrating the accommodation and academic aspect in student development. There is limited literature on student living and learning, particularly in Africa. Gopal and Van Niekerk (2018) argue that the demand for student housing in South Africa is very high, mostly due to limited institutions of higher learning as well as uncondusive learning environments at home.

Parameswaran and Bowers (2014) and Tshimangadzo, Nkhangweleni Azwitamisi and Tshifhiwa (2020) note that studies have shown that students who reside in university learning and living spaces perform better in all aspects of life than those who do not stay in residences. A study conducted by Eurostudent (2011) concluded that students residing in university residences are likely to see studying as their main occupation, and this in turn, it is believed, "may have a positive effect on their duration of study and grades". There are factors which can substantiate the reasons for student success while residing in residences. The reasons can be due to the social and educational programmes implemented in the residences which facilitate student development in all aspects. Swartz (2010) contends that student living and learning communities are strategically crucial as they are ideal locations for both learning and teaching and recreational and social life, consequently creating a sense of community, "a home away from home". Wartz (2010) argues that students in living and learning spaces ought to have four crucial functions namely:

- A leadership function – the living and learning spaces are a training ground for student leadership
- A pedagogical function – living and learning spaces are places of teaching and learning, induction, and orientation.
- A social function – the living and learning space is a place where students have fun which is crucial to student life and engagement; and
- A cultural function – societies and clubs are strongest in living and learning spaces (Swartz, 2010).

Each of the foregoing forms an important element in the development of each student, and therefore speaks to the richness of the living and learning spaces in fostering a developmental agenda.

According to Gopal and Van Niekerk (2018), living and learning spaces build unity and commonness of purpose. Thus, first-year students look up to their seniors, and find the support and encouragement that accrue from loyalty to the living and learning spaces. Students from rural communities find residences a vital bridge to the complexities and uncertainties of a large institution. Pascarella and Terenzini (2005) attest that research suggests that living in an on-campus residence when doing a four-year university degree has a positive impact on student performance, adjustment, and retention. Therefore, with the emergence of a pandemic like Covid-19, which makes social distancing mandatory, research must be conducted to assess if staying on-campus still has a positive impact on student performance. Residence students are exposed to numerous extracurricular activities which in turn promote self-growth, thus leading to improved performance.

A study conducted by Pascarella and Terenzini (2005) further revealed that living in university residences from the first year of study increases the chances of completion on time by 12%, and students regarded 'at risk students' are well nurtured due to an increase of social interaction. There are numerous advantages of living in the institution's living and learning spaces for students and these include that students interact more frequently and informally with academic peers and staff. For instance, most staff employed as residence advisors are university academic staff. Hence, they are able to interact informally with the students, making it easier for students to approach them whenever they need assistance and guidance. Students residing in the university living and learning spaces participate in more on-campus activities than those who do not. More on-campus activities are facilitated on the residences and the accessibility is easier for students who reside in on-campus residences.

Students in living and learning spaces are more likely to persist and graduate since most tutors live in the same spaces, hence making it easier to oversee their development and learning. Living and learning spaces also facilitate improved psychological development for students, hence reducing the rates of suicidal thoughts and mental health challenges experienced by students. It is of paramount importance to also note that in the living and learning spaces there are "living and learning" programmes which are implemented to enhance the integration of cultural, physical, social, intellectual and spiritual growth of students in a way that each complements the other. Ultimately, the students will attach more importance to intellectual values, liberalism, secularism, and aesthetics.

The Transformation of Living and Learning Spaces due to Covid-19

Covid-19 has left no living and learning space in the South African universities unaffected, and its consequences are felt. The impact Covid-19 has had on living and learning spaces and on students is huge and deeply felt. Universities are still trying to cope with developing or strengthening the systems of living and learning, and ensuring that students still be exposed to as much knowledge as possible. According to Mohamedbhai (2020), to be able to contain the spread of the virus and also ensure that the lockdown measures are followed, there was no choice for the African countries but to close education institutions (higher education institutions). Mohamedbhai (2020) further states that higher education institutions have had to ensure that their programmes are delivered online through distance learning to all their students with the use of information and communication technology (ITS).

One of the huge transformations that has taken place in living and learning spaces, is that where Covid-19 has accelerated the digital transformation of higher education, universities have been forced to develop virtual cultures. Classes are now online for the rest of the year 2020 as universities have been forced to stop being physically operational (Martin-Barbero, 2020). Due to this, higher education institutions have had to make sure that learning continues, and this has led to disturbances of the lives of many (Martin-Barbero, 2020). Martin-Barbero (2020) states that this transformation has led to the inequalities between the students with resources and those without access to the resources.

According to Makhanya (2020), before the Covid-19 pandemic, South African universities depended on contact teaching. This made teaching seem equal to all. However, students come from different socio-economic backgrounds and no student should be marginalised, so universities must ensure that they cater for all their students (Makhanya, 2020).

Transformation in living spaces has been well observed. According to Mzileni (2020), there is a lack of the infrastructure in the townships and villages of South Africa, that is required for students to function accordingly. Furthermore, in terms of the learning experience, it is well noted that many communities and households are non-conducive spaces for students and hence the universities were made conceptual residential institutions for the utilisation of face-to-face contact learning (Mzileni, 2020). Universities are aware that regardless of the advancements in technology and the innovations contributed thus far, the undergraduate students still require to be hosted physically in on-campus residences in order to concentrate well on their studies (Mzileni 2020). However, the reality is that not all the students residing in on-campus residences in general have high concentration levels. Research by Mzileni (2020) shows that, over 15 000 campus residence students under normal circumstances would have high concentration level when off-campus. Mzileni (2020) further states that, for students with lower concentration levels it has been hard to facilitate seamless teaching, and due to this, universities have had to use their own resources every day to transport students (that under normal circumstances reside in on-campus residences) from off-campus to campuses and provide Wi-Fi connectivity to all students who live off-campus. (Mzileni, 2020). Some universities are unable to provide all required resources to all students. Consequently, the transformation Covid-19 has brought to living and learning spaces has had quite a significant impact on students as evidenced by having to move the normal learning process from lecture venues to online learning. Students also having to adhere to health protocols, most of which are new to them, and stretch the resources of institutions, thus exacerbates the fault-lines where mainly the poor and destitute students are struggling even more.

Conceptual Framework

This study will be based on a conceptual framework on e-resilience in education by Van der Laar (2020). This framework was developed as the response to the ‘shock’ caused by the Covid-19 pandemic in the higher education sector’s teaching and learning. This framework is relevant to this study because the living and learning spaces have shown resilience to the pandemic through the incorporation of technology. As shown in Figure 1, the framework comprises four levels that are nested and interact together and shape e-resilience of the educational systems after a ‘shock’ (Van der Laar, 2020). The first layer (Dark blue) is the resilience at an individual level. Layer two (Purple) is the resilience at the programme level. The third layer (Green) highlights the resilience at an institutional level and finally layer four (Pink) reveals the resilience at the macro level. Students and residence advisors have been affected by the pandemic on a personal level in most facets of their lives. However, mechanisms had to be developed to ensure that everyone copes. The use of technology

has affected many students, thus support from the institutional level is very crucial. Marota (2020) further reveals that during this pandemic institutions of higher learning need to upskill their staff so that they will be able to assist students as well. For this study, the importance of upskilling of the residence advisors is crucial as they are the ones who will be dealing with the students on a daily basis since contact classes are still prohibited. Hence the relevance of this conceptual framework.

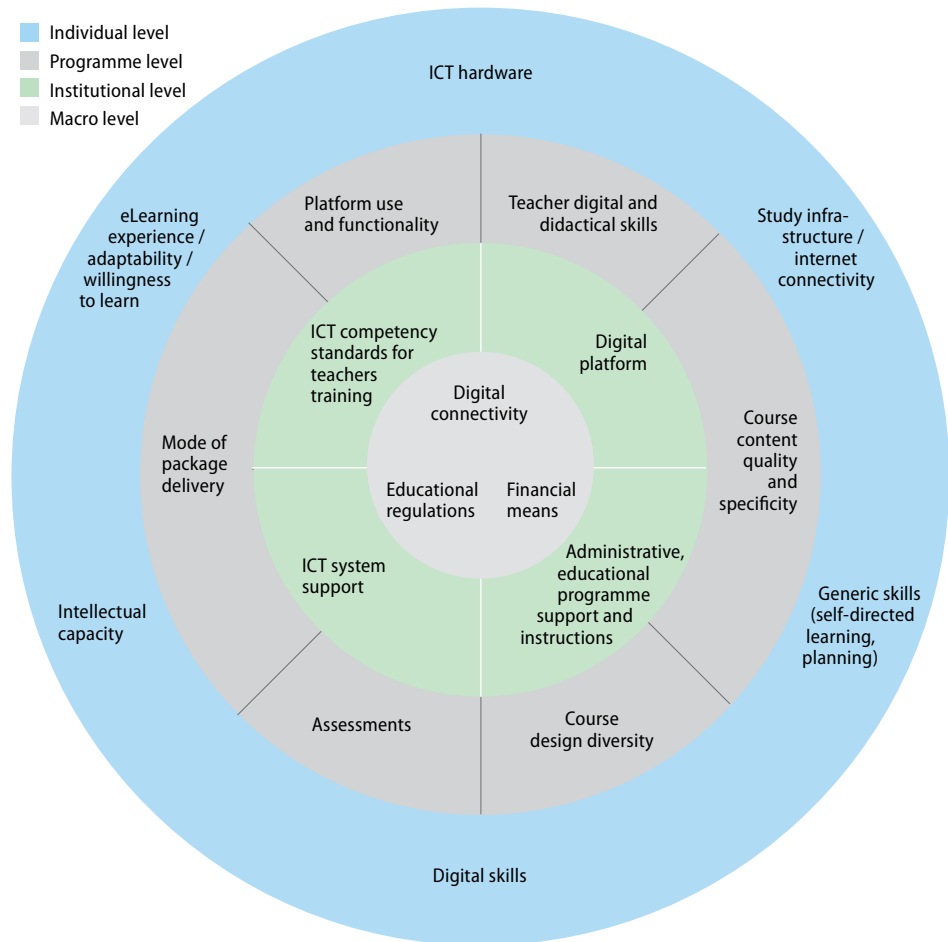


Figure 1: E-resilience in education conceptual framework
(Source: after Van de Laar, 2020)

Research Methodology

The study was conducted at a University of Technology in South Africa. A qualitative research design and methodological approach through purposive sampling was utilised. Ames, Glenton and Lewin (2019) define purposive sampling as a non-probability sampling aimed at producing the sample that can be logically assumed to be representative of the

population. The main goal of purposive sampling is to focus on particular characteristics of a population that are of interest, which will best enable researchers to answer the research questions. This sampling method was used for the study as the students and residence advisors are representative of the entire population and they were chosen from various residences. The participants for the study consist of 15 students and 10 Residence Advisors (RAs), and of the 15 students, 2 were Student Residence Assistants (SRAs). Student participants were identified through residence advisors from various residences in Durban. The RAs were personally contacted by the researchers as they are also RAs at the selected institution. The participants comprised female and male undergraduate students residing both in insourced and outsourced residences in Durban and their RAs. It is of paramount importance to note that most of the participants were from outsourced residences as shown in Table 1. This is because there are more outsourced residences than insourced at the selected institution. The age group of the student participants ranged from 19-32 as shown in Table 1.

Table 1: Student participants summary

Number of participant (students)	Age	Level of study	Insource/outsourced residence
Participant 1	23	3	Outsource
Participant 2	24	1	Insource
Participant 3	32	3	Outsource
Participant 4	19	1	Insource
Participant 5	20	1	Outsource
Participant 6	22	4	Outsource
Participant 7	22	21	Outsource
Participant 8	23	3	Insource
Participant 9	20	2	Insource
Participant 10	21	2	Outsource
Participant 11	30	4	Outsource
Participant 12	23	3	Outsource
Participant 13	21	2	Outsource
Participant 14	25	3	Outsource
Participant 15	19	1	Insource

Due to Covid-19 and the emphasis on maintaining social distancing, data was collected telephonically, where all participants were called during the time that their individual interview was set to suit their availability. This data collection method was appropriate for this study because the researchers and participants managed to interact, and it was easy to reach out to respondents from various residences without seeing them face to face. The interviews lasted between 10 and 15 minutes. All participants were requested to sign consent forms via email which gave permission for their participation. The interviews

were recorded, subsequently transcribed verbatim and coded. Pseudonyms were used by the researchers in all instances to circumvent any possible link to participants. A narrative enquiry method was used to explain the students' and RAs' views on the effect of Covid-19 on the living and learning spaces and how these spaces have been transformed due to the pandemic and the national lockdown.

Ethical Considerations

Permission to conduct this study was obtained from the selected institution and the department of student housing and residence life. Ethical clearance was obtained through the selected institution's research ethics committee. Students and RAs were subsequently approached, and their participation was voluntary. Privacy and confidentiality were maintained throughout the study.

Data Analysis

Themes were identified from the transcribed interviews. Four major themes emerged from the interview with the students and three themes also emerged from the interviews with the RAs. The themes are reflected in Table 2.

Table 2: Emerging Themes

	Students	Residence Advisors
1.	Introduction of online learning	Phasing of students into residences
2.	Improved hygiene	The issue of accessing PPEs
3.	Increased stress levels	Internet connectivity issues and studying in the residences
4.	Insufficient resources	

Introduction of online learning

All the participants indicated that the introduction of online learning was a huge effect of the Covid-19 pandemic. As a result of the national lockdown and Covid-19 the selected institution introduced blended learning which is defined by Ibrahim and Nat (2019) as an "effective approach to the passive knowledge engagement of a massive number of students, which also increases learning outside the traditional face-to-face learning environment". There was a huge transformation amongst students as they were not used to solely relying on online learning.

This online thing is a huge trouble for me as am not used to this, even at rez I don't have time to breathe, this is my fourth year here and this is the hardest year, am really drowning. (P6)

This online learning is not for us. (P10, P2, 15)

Personally I am used to working in a group and I like asking my lecturers questions in class, but with this online learning it is very hard to even ask the questions as that hand icon on my team's class just disappears and I end up not asking anything, technology is still difficult but am getting there slowly but surely. (P11)

Participant 12 also highlighted this: *“Even though online learning is a challenge, I think my lecturers are trying very hard. I even send them WhatsApp messages and they do respond hence it’s not that bad.”*

These respondents attest that one major effect of the Covid-19 pandemic was a shift from face-to-face lectures to online lectures which meant that even when they are in their residences, they have to attend classes which requires huge commitment and dedication.

Improved hygienic behaviour

The participants revealed that they are more conscious about their hygiene due to the Covid-19 pandemic. Sang and Dewi (2020) state that hand hygiene is extremely crucial in preventing the spread of the Covid-19 virus.

Covid-19 actually transformed me to be clean freak. (P3)

Most of the respondents stipulated that everyone is now aware of the importance of being clean and everyone is playing their part in ensuring that all areas are clean and sanitised. P4 revealed that:

Am really shocked that even our cleaners are doing a splendid job, before Covid-19 our kitchens were always dirty. I don’t want to even mention the bathrooms, but since we came back from home under level 3 of the lockdown, I can really see a change. All the places are clean and even me and my roommate we make sure we sanitise again before getting into the room, we want to be safe.

WHO (2020) concluded that, for the spread of the virus to be minimised, everyone should adhere to the stipulated hygienic protocols. Therefore, it is quite interesting to note that students in the living and learning spaces are actually adhering to the protocols. Hence, the change in their hygienic behaviour would mean even after the pandemic good hygienic behaviour will still be maintained.

Increased stress levels

According to WHO (2020), It is normal to feel sad, stressed, confused, scared or angry during a crisis. Most of the participants indicated that after a month on national lockdown they have been stressed as well as bored. At level 5 of the lockdown, the participants indicated that they were at home and after a month of staying indoors and doing nothing they started getting stressed.

Just by watching news and seeing those figures rising day after day, made me anxious. (P2)

Khosravi (2020) posits that pandemics impose a spectrum of psychological impacts and at the individual level, these adverse effects can cause new psychiatric symptoms and intensify the pre-existing mental illnesses.

Khosravi (2020) further notes that in such a condition, society members may undergo some negative experiences, such as fear and anxiety about falling ill or dying and feelings of helplessness. In South Africa, students started returning to campus residence under lockdown level 3 and only 33% were the first cohort.

When I came back to campus under level 3 I was the only one in my floor, I have never been scared in life, I thought of going back home but I couldn't as I was supposed to attend classes, it seemed like I was seeing things in the residence, I was traumatised to the extent of resorting to bingeing. I had no one to talk to and being stuck alone in the room is quite stressful. (P4)

It is crucial to note that under normal circumstances programmes were implemented in the residences to facilitate the living and learning aspect. Due to Covid-19 and social distancing no social or educational programmes have been implemented and previous studies have shown that living and learning programmes enhance student well-being. Therefore, without those programmes students will not be developed or assisted on how to deal with stress during a pandemic. Wahl (2013) concurs that Living and Learning programmes improve student learning, development and success at higher education level. Consequently, due to the Covid-19 pandemic, contact programmes were halted thus disadvantaging the students.

... we used to have programs [sic] at res and they were very helpful, we used to meet with each other and socialise thus easing our minds but with this corona we cannot do that and its bad, I don't know if the online programs [sic] will be effective enough. (P14)

Additionally, when asked if things will get back to normal anytime soon, most students believe that things will take time to get back to normal. Hence the institution should devise strategies that can last for a long time and not only serve short-term purposes.

Student housing should think of ways for us to have our residence programs online as the way we are living is a new normal and we should adapt, its gonna [sic] take a lot of time for things to get back to normal, we are still going to be wearing masks... (P7)

Insufficient resources

It is crucial to note that most of the participants who resided in outsourced residences indicated that there was a shortage of resources in their residences.

Our landlord just bought the sanitizers on the first week of our arrival and we are now buying our own sanitizers, at least the institution gave us masks. (P11)

Those who reside in insourced residences highlighted that everything is provided for them.

We have all the resources that we need, I just don't like that I get checked every time I come inside the gate even after 2 minutes, they still check my temperature. (P15)

DHET (2015) notes that there is a huge increase in the number of students who get accepted to study in the universities in South Africa, hence the rise in demand for student accommodation as well. The institution under study outsources 90% of their student accommodation and the landlords are responsible for providing all the resources required by the students to enhance the living and learning. However, the participants in most outsourced residences indicated that Wi-Fi is a challenge, especially during this period where it is needed the most, and there are no sanitisers and in some rooms with three people residing in a single room.

Phasing in of students into residences

As the students are slowly being brought back to campus in a phased in manner, most of the residence advisors are experiencing challenges with adapting to the new normal way of living with the students as they state that there are so many new rules and regulations that they need to ensure they themselves and students adhere to.

The transformation is mainly noted on a communication basis as well as on an interaction basis between students and the residence advisors. Before the pandemic and the lockdown, all residences had programmes running to ensure students engage in residences they are assigned to, but since they have been phased during the pandemic, that engagement is no longer there.

... since my students have come back the interaction is no longer the same, I am starting to feel that my relationship with them is more stricter and I am not happy about that, because when they see me they think I will be hard on them with keeping to the rules and regulation. (R4)

I had so many programmes that I had organised especially since I was a new residence advisor, but now I cannot implement those programmes because we can no longer have physical interactions, but we hope we can prepare to move them to be virtual. (R7)

The issue of accessing PPEs

Most residence advisors mentioned several times during their different interviews that they are facing challenges with accessing things like masks and sanitisers and this is making their work difficult in the residences.

... the hugest [sic] transformation of this pandemic is having to constantly wash hands or sanitise them. This becomes hard when such is not regularly provided in the residence. Also the masks are an issue as some students do not wear them and have to be constantly reminded, then you end up feeling like you are on their back, but you know how significant it is to ensure to limit the spread of the virus. (R1)

Internet connectivity issues and studying in the residences

The university is now defined as no longer the building, but it is now where students reside, this being a very huge transformation. The students in the residences now have their lectures online in their rooms, they also have their tests and exams virtually in their rooms and for this to be progressive and effective they require good internet connectivity. Most residence advisors mentioned the issue of the lack of connectivity as most residences' Wi-Fi signals are not of good strength. Due to this issue, most students are struggling to study in the residences, and because of this most students end up going outside of the residence to find facilities like municipal libraries to have connection, and due to this they end up being more susceptible to the virus and increase the chances of exposure in the residences.

... most students since they have returned have been coming to me and complained about the WiFi connectivity, stating that how are they expected to keep up with their school work if the WiFi connection in the residence is so poor, another student even went further and told me that

the transformation of blended learning is so difficult on them since they cannot connect properly like the rest of their classmates. This then means that these students are mainly behind with their schoolwork. (R5)

Discussion

This study aimed to reveal the effect of the Covid-19 pandemic on the living and learning spaces and students at a South African university. It was conducted during the period of the lockdown on levels 3 and 2. The following findings are evident from data presented:

- that the main transformation issues with residence advisors were those of policies and protocols of the phasing in of students back into residences,
- and the issue of PPEs in the residence,
- as well as the internet connection issues and studying in the residences.

According to Badrick (2017), about the internet connectivity issues, it cannot be denied that what attracts and keeps students retained is the matter of how strong the Wi-Fi connectivity is in that area. Badrick (2017) further states that the university internet users expect connectivity that is sustained and will not fail them. Ntshingila (2020) states that since institutions started implementing the online learning protocols it was noted the living circumstances and finances of all students vary and some are not pleasurable, and the students from disadvantaged backgrounds suffer the most during this time. With the incorporation of Van de Laar's (2020) conceptual framework of e-resilience in higher education into this study, it has been shown that the shift to the use of technologies at the selected institution had a huge impact since 90% of the students emanate from marginalised backgrounds. Therefore, this was a huge transformation for the students as they are expected to be resilient despite the challenges faced.

The results further revealed that the students are dealing with a lot of issues which are leading to high stress levels. Centres for Disease Control and Prevention (2020) attest to the fact that social distancing is a public health action which can make people feel lonely and isolated and can thus increase stress and anxiety. Most students are currently staying in single or double rooms and no visitors are permitted at the institution under study and no gatherings are permitted. Hence, most students feel lonely – which can increase stress levels. It is crucial to note that both students and residence advisors at the selected institution are taking their health and hygiene seriously. All the participants indicated the need to stay safe and take charge of their health, which is a huge transformation for others – especially students who did not follow basic hygiene procedures before the pandemic. From the study, it is evident that services are differently provided in outsourced and insourced residences. Most students and RAs indicated that the landlords did not provide proper resources during the pandemic, for example, Wi-Fi and PPEs. It is crucial to note that in trying to address the challenge, the institution under study released a communiqué on 28 August 2020 indicating that if landlords do not provide proper resources in the living and learning spaces, the institution will use their budget to provide resources to the residences and the funds will be deducted from the landlord's account. With this measure taken, it is believed that some of the concerns raised by students and RAs will be rectified as they have been affecting their living and learning, respectively.

Conclusion

The study explored the various effects that Covid-19 has had on the living and learning spaces of students as well as residence advisors. The study indicated that the main issues that students were faced with since they were returned in a phased manner back into the living and learning environments, were the introduction of online learning which most struggled with at first, and the fact that hygiene was improved and increased which is a positive development. Some students stated that their stress levels were elevated in relation to coping with the transformation that was taking place in the living and learning spaces. The issue of insufficient resources was also noted, where most students did not have relevant or sufficient resources, which made it hard for them to cope with the transformation taking place. With the residence advisors, it was noted that the main issues were around the phased-in return of students into residences, where there was not a clear system of doing this. And this was a very clear indication that it was all due to the transformation from what was regarded as normal previously which is now regarded as a new normal of doing things within the living spaces of students. The other issue raised was the issue of accessing PPEs as most had not received proper directives regarding this matter. Internet connectivity issues and studying in the residences was the other main concern that was prominent between the students and the residence advisors. All these issues were due to the huge transformation in the learning and living spaces, due to Covid-19.

References

- Ames, H., Glenton, C. & Lewin, S. (2019). Purposive sampling in a qualitative evidence synthesis: A worked example from a synthesis on parental perceptions of vaccination communication. *BMC medical research methodology*, 19(1), 1-9. <https://doi.org/10.1186/s12874-019-0665-4>
- Badrick, C. (2017). Campus WIFI issues that can cause network failure. [Online]. <https://www.turn-keytechnologies.com/blog/article/5-campus-WIFI-issues-that-can-cause-network-failure>
- Centres for Disease Control and Prevention (2020). Coping with Stress. [Online]. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>
- DHET (Department of Higher Education and Training) (2015). *The Policy on the Minimum Norms and Standards for Student Housing at Public Universities*. South Africa: DHET.
- Eurostudent (2011). Social and economic conditions of student life in Europe: Synopsis of indicators. (Eurostudent IV 2008-2011). Hannover: Hochschul-Information's-System. [Online]. <https://www.eurostudent.eu/results/reports>
- Gopal, N. & Van Niekerk, C. (2018). Safety in student residences matters! *South African Journal of Higher Education*, 32(10), 172-188. <https://doi.org/10.20853/32-3-2524>
- Graham, P.A., Hurtado, S.S. & Gonyea, R. (2016). Living on campus: Does it still make a difference? Centre for Postsecondary Research, Indiana University Bloomington. [Online]. http://nsse.indiana.edu/pdf/presentations/2016/ACPA_2016_Graham_et_al_paper.pdf
- Ibrahim, M.M. & Nat, M. (2019). Blended learning motivation model for instructors in higher education institutions. *International Journal of Educational Technology in Higher Education*, 16(1), 1-21. <https://doi.org/10.1186/s41239-019-0145-2>
- Jones Lang Lasalle (JLL) (2016). Student housing: a new asset class in Sub-Saharan Africa. [Online]. <https://propertywheel.co.za/wp-content/uploads/2016/08/Student-housing-a-new-asset-class-in-SSA-August-2016.pdf>

- Khosravi, M (2020). Stress Reduction Model of COVID-19 Pandemic. *Iranian Journal of Psychiatry and Behavioural Sciences*, 26(7),1-3. <https://doi.org/10.5812/ijpbs.103865>
- Makhanya, M. (2020). COVID-19 will accelerate digital transformation in higher education sector. [Online]. <https://www.iol.co.za/the-star/opinion-analysis/opinion-COVID-19-will-accelerate-digital-transformation-in-higher-education-sector-89eff6d7-0194-4848-96ad-4704c114ea83>
- Marotta, J. (2020). Ensuring education while protecting the well-being of everyone. [Online]. <https://www.merit.unu.edu/on-the-virtual-frontline-ensuring-education-while-protecting-the-well-being-of-everyone/>
- Martin-Barbero, S. (2020). COVID-19 has accelerated the digital transformation of higher education. [Online]. <https://www.weforum.org/agenda/2020/07/COVID-19-digital-transformation-higher-education>
- Mohamedbhai, G. (2020). COVID-19:What consequences for higher education? [Online]. <https://www.universityworldnews.com/post.php?story=20200407064850279>
- Mzileni, P. (2020). How COVID-19 will affect students. [Online] <https://mg.co.za/education/2020-04-23-how-COVID-19-will-affect-students>
- Ntshingila, B. (2020, April 3). Disadvantaged university students on online learning: “Some don’t even own smartphones”. *Drum* [Online]. <https://www.news24.com/drum/news/disadvantaged-university-students-on-online-learning-some-dont-even-own-smartphones-20200403-2>
- Sang, P. & Dewi, S. (2020). Hygiene and Sanitation Challenge for COVID-19 Prevention in Indonesia. *Kesmas: National Public Health Journal, Special issue 1*, 6-13.
- Swartz, D. (2010). Presentation to the National Conference of the South African Chapter of the Association of College and University Housing Officers International. Unpublished PowerPoint Presentation, Durban.
- Tshimangadzo, S., Nkhangweleni, D., Azwitamisi, G. & Tshifhiwa, M. (2020). A comparative study of the academic performance of resident and non-resident students at a rural South African university. *Journal of Student Affairs in Africa*, 8(10), 1-12. <https://doi.org/10.24085/jsaa.v8i1.3468>
- Van de Laar, M. 2020. E-resilience in education: A conceptual framework. Policy brief: United Nations University.
- Wahl, W.P. 2013. Towards evaluating a higher education residence environment that is conducive to learning, development and success. *Journal of Higher Education in Africa/Revue de l'enseignement supérieur en Afrique*, 11(1-2), 53-69.

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