

Learning experiences of undergraduate first-year dental and oral hygiene students at a South African dental university

SADJ June 2023, Vol. 79 No.4 p233-238
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ABSTRACT

Introduction

Students in higher education institutions endure many difficulties which may adversely affect their career choices, learning experience and academic success.

Aims and objectives

The aim of this study was to identify factors contributing to learning experiences of undergraduate dental and oral hygiene students during their first year of study at a South African dental university.

Design

Cross-sectional design that included quantitative and qualitative data.

Methods

An online questionnaire was used to capture the students' perceptions towards learning experiences and factors contributing to academic success. The sample consists of 84 first-year dental and oral hygiene students registered in the 2021 academic year.

Results

A total of 59 students responded (70%) and most of them reported to have problems with academic learning, time management, heavy workload and a negative attitude towards online lectures. Problems related to social learning included inability to make friends and lack of participation in university social activities, finances and accommodation. In terms of coping mechanisms, students utilised tutoring classes, sought advice from senior students, watched educational YouTube videos and applied for a study loan or bursary. Students reported to obtain emotional support from friends and family members and adopted a positive attitude resulting in committed self-motivation.

Conclusion

Most students had challenges with academic and social factors. Students requested they be assisted in time management skills and study skills, in coping mechanisms to deal with a demanding workload and having access to an educational psychologist.

Keywords

Dental students, oral hygiene students, teaching and learning, dental education

INTRODUCTION

Students in higher education institutions go through many difficulties which may adversely affect their career choices, learning experience and academic success.¹ For a first-year undergraduate student, university presents a foreign set of norms, traditions and a new academic language and environment. Evidence supports that most first-year undergraduate students encounter many challenges such as adapting to a university environment, coping with academic work, financial difficulties, personal problems and self-regulated learning.²

The teaching and learning at universities is very different compared to the schooling system and students have challenges dealing with this change in the teaching and learning styles.³ In addition, some students have difficulties coping with personal, emotional, financial and time management issues.⁴ As a result, many students find it hard to cope and this results in a relatively high failure rate.⁴ Considering the role of transition for first-year undergraduate students, it is important to gain insight into how the learning experience for these students is affected by the academic adjustments and the extent to which academic adjustment influences student success. This paper presents an investigation that focused on a selected university, school of dentistry students in transition to university to assess learning experiences and challenges, as well as the overall factors in coping strategies and optimism.

The aim of this study was to identify the learning experiences of undergraduate dental and oral hygiene students during their first year of study at the selected university.

METHODS

A cross-sectional study design was used to collect the data. Participants were selected by means of purposive sampling. There were 14 oral hygiene and 70 dental students who were registered in the 2021 academic year and all of them were invited to participate. Participants were recruited to the study in the beginning of their second year through class visits and the purpose of the study was

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explained to the class. A request to share the link with one module coordinator was made.

A secured link to an electronic questionnaire was then distributed via blackboard learning management system to only this sample group through registered module code and students could access the link securely and participate anonymously. No name was required when completing the questionnaire. This ensured anonymity was maintained. The questionnaire was in English and strictly anonymous. All information was confidential. The sample consisted of 84 first-year undergraduate students enrolled in the dental and oral hygiene programmes at a dental university in South Africa. Ethical approval was obtained from the Research Ethics Committee (REC 456/2021).

Questionnaire construction

The questionnaires were created using the Qualtrics® online platform. The questionnaires had an introductory page featuring the informed consent which introduced the researchers, provided a brief description of the study explaining the purpose, procedures and rights of participants, and asked participants' consent to participate in the study. This was self-developed questionnaire guided by previous studies that explored first-year students' experiences at university and modified to suit local context. Students were asked to reflect on and write about their learning experiences in the first year of study. The questionnaires were divided into three sections (A, B and C) where section A contained questions relating to expectations and transition to university; section B contained questions relating to adjustment in relation to academic and social factors; and section C contained questions asking about challenges students faced and coping mechanisms employed. Data captured within these sections included academic workload, peer engagement, teaching perceptions, study methods, factors contributing to academic success and suggestions and recommendations to overcome challenges. Demographic information on the participants such as age, gender, race and academic discipline was included in the questionnaire.

Data analysis

Responses were coded to identify major themes and patterns (Braun & Clarke, 2006). The data analysis process commenced with the first two authors reviewing the six steps of the data analysis method and gaining familiarity with the dataset. Data were independently analysed and coded for themes. The three authors convened to compare and discuss the codes and themes identified, allowing for triangulation and rigor within the data analysis process. All categories and themes were saturated. The questionnaire was primarily qualitative in nature; where responses were

clustered due to high number of similar answers, a quantified calculation was made to express that frequency.

RESULTS

A total of 59 students completed the questionnaire (response rate=70%) and their demographic data is reported in Table 1.

LEARNING EXPERIENCES AND CHALLENGES

Expectations and transition to university

More than half of respondents indicated that the transition from high school to university was challenging as noted in the following statements Pt 1: *"I expected to have a lot more time for friends and social life, where in reality I struggle to make time for that;* Pt 2: *"I thought it was going to be academically accommodating instead of having many things happen at once, where it's deadline after deadline and test after test, I didn't think I'd struggle with financial aid".* These statements were followed with comments such as Pt 3: *"It was hard to adjust, but once you get used to it, it feels normal. I just had to push through".*

A few students mentioned some positive expectations recorded as Pt 6: *"Vibrant campus atmosphere;* Pt 14: *"Opportunity to meet new people";* Pt 22: *"I expected the university to have high standards and to provide us with excellent education".*

Academic and social factors

Students were expected to explain in detail the experiences on how they adjusted to the academic and social environment of the university.

Time management

Most students had challenges with regard to time management as follows Pt 3: *"Too many assignments in one week and never enough time to study all the work".* Another student said Pt 17: *"Very stressful because about 3-4 modules would have assignments and test due at the same time or the same week, plus one had tests to study for. So, it felt heavy".*

Workload

Students found the university workload challenging and complicated reporting Pt 30: *"The amount of work from school to varsity was extremely overwhelming",* and Pt 26: *"The school did not prepare us according to workload".* Some students quoting phrases such as Pt 12: *"It is exhausting";* Pt 27: *"Intense workload";* Pt 33: *"Stressful";* Pt 40: *"Barely cope".*

Table 1: Response rate by participants in the study

Degree	Number of registered students	Response rate (%)	Age range in years	Gender
Oral hygiene	14	14 (100)	18-22	Female 8 (57%) Male 6 (42.86%)
Dentistry	70	45 (64.3)	19-31	Female 31 (44.29%) Male 14 (20%)
Combined	84	(59) 70	21 (\pm 3.02)	Female 39 (66%) Male 20 (34%)

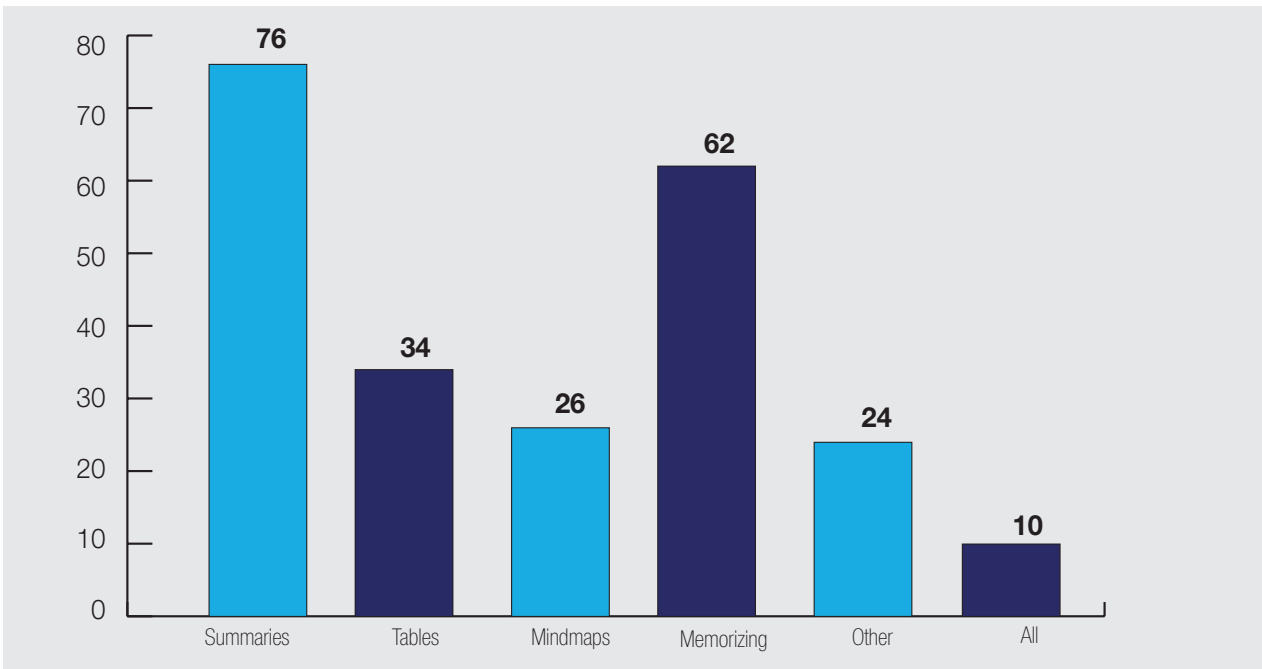


Figure 1. Students' preferred studying methods.

Online teaching

The Covid-19 pandemic caused a lot of sudden changes to the traditional teaching and learning activities and the closure of campus-wide activities brought undesirable distress for many students. Some students described the online teaching process as Pt 6: "I did enjoy the fact that it was online ... I was able to be more productive and focus without spending time on getting to campus", Pt 13: "I for one did not enjoy any online lectures, I wish for a physical class. But with the circumstances one had to make adjustments, and this is where recordings of lectures were a big help", Pt 20: "It was difficult to communicate online and understand concepts", Pt 24: "Being online the whole year discouraged me at times". Another student explained: Pt 32: "To this day I hate online classes and assessment. I do not feel like I am actively learning because I am a visual learner and online does not help to improve that so I had to study harder with less understanding".

Study methods

The majority of students preferred to work and learn on their own as they felt that they had more control on the outcome and learnt from their own mistakes. However, 31% reported they preferred working in a group, because they could exchange opinions and knowledge, collaborate ideas and motivate one another.

In terms of studying methods, the majority reported preferences in making summaries while others prefer to just memorise the concepts, with a very few students preferring to use a combination of studying methods as shown in Figure 1.

Overall, 79% students reported taking their own notes while 62% preferred to listen to recorded lectures when learning as shown in Figure 2.

SOCIAL FACTORS

These results were varied and some of the examples were Pt 32: "Not having a relationship with everyone in class made me felt like an outsider and it became difficult to

communicate and relate with my classmates as we didn't get the time to know each other". Some of the responses included Pt 44: "I can say it's really hard to be a first-year student, having to adjust to a new place, being taught electronically, meeting new people, everything seems to be overwhelming and one can go through depression if they bottle up things and never share their academic problems and address them".

Students responded about social difficulties experienced due to Covid-19 restrictions such as Pt 11: "Social environment in first year was not great, because we were fully online and social activities were not allowed". The majority of students commented that it was difficult to socialise and make acquaintance with fellow students as all classes were online in their first year and communication mostly took place over WhatsApp. For example, one student reported Pt 5: "I loved having people around me but online learning made it very hard to meet people".

Challenges

The majority of students commented they struggled to adjust and to keep a balance between academic and social life, Pt 44: "I found it difficult to adjust which affected my grades negatively". Another challenge commented on in relation to difficult adjustment was balancing time and workload, Pt 11: "Because I have to work to help pay for my studies it did influence the time I could spend studying and that makes my marks fluctuate".

Some students explained Pt 32: "The challenges were studying online and trying to stay focused and motivated"; Pt 15: "Studying online/online learning is a lot more difficult than you think it is", "Connection issues which affected some of my lecture sessions". The noted negative experiences of students with online were indicated Pt 5: "Because of the little in-person contact we had in first year, I did not have the confidence to ask assistance from my lecturers as I did not see them often". Most students further reported difficulties with access to Wi-Fi and unstable internet connections and trying to stay focused during online classes.

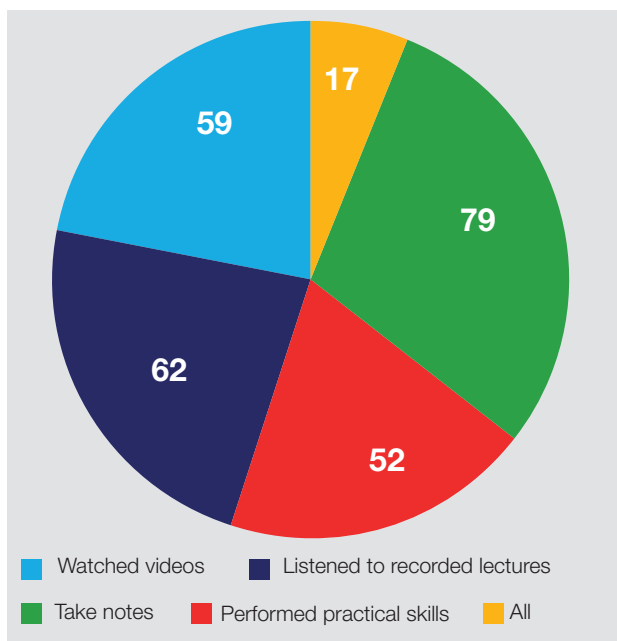


Figure 2. Methods of learning

Additionally, self-motivation and a lack of guidance and support from academic staff was also a challenging factor for many students. Students reported Pt 10: "Lecturers do not communicate with each other and thus we end up having assignments/tests due on the same day". The optimistic experiences included Pt 19: "It was hard to get back marks that weren't good. It really broke my motivation and many times I have wondered if the degree is for me if I am doing so poorly. Luckily, I am still here and am glad I did not give up after getting bad marks".

Students also experienced various challenges with regard to transport, finances and accommodation, Figure 3. Even though some respondents mentioned that they had no financial problems, some merely responded "none" while others gave explanations such as Pt 11: "I missed out on a few classes in first semester because I did not have accommodation". Some students experienced difficulties with finances and reported that Pt 12: "The study costs were more expensive and it was difficult to pay".

Coping mechanisms

Some students reported to dedicate more time to study, preparation before class and follow-up after class, Pt 19: "Had to work hard to prepare in time, created a study timetable to plan their tests, assignments and examinations"; other statements included Pt 15: "These require a lot more planning and discipline than we had in school. Assignments are started as soon as they become available and detailed study schedule made and updated every week".

In response to how they manage to cope with workload, students reported that Pt 6: "I divided most of my work into chunks; in that way I could keep up to date with my work and not fall that much behind"; Pt 24: "I learned to manage my time and become more disciplined; making sure I keep up with the work by attending classes helped to manage workload"; Pt 20: "Being consistent in my commitment to learning".

Utilisation of tutorial classes, use of mentors and student advisers and senior students were some of the reported

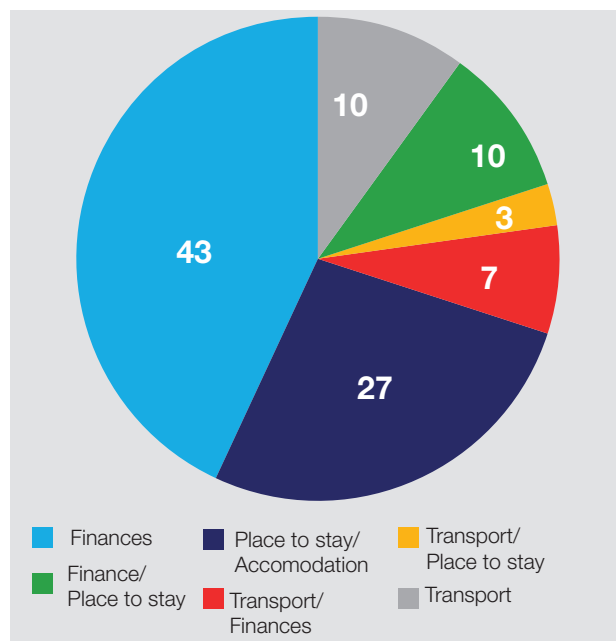


Figure 3. Challenges experienced as first-year students.

mechanisms students commented were helpful for them, Pt 21: "I wasn't sure how to approach some modules, so I asked my mentor for advice, which helped a lot"; "attending tutorial classes helped". While other students commented Pt 15: "I had to adjust, it is what it is. No choice"; Pt 12: "I tried creating a timetable but it didn't work because I didn't follow it, so I just did what needed to be done whenever I could".

Moreover, to cope with the finances and other additional challenges, students reported they took initiatives such as Pt 11: "Have to work to help pay for my studies and that does become very draining". Most students added Pt 15: "Communicate with other students about transport"; Pt 17: "Tried making up a budget for myself"; Pt 18: "Find accommodation closer to campus"; "Move into a flat with flatmates". While others indicated Pt 28: "Got study loans and bursary".

Some of the responses in relation to coping mechanism included Pt 12: "Emotional support, friends and fellow students"; Pt 6: "Positive mindset and supportive family"; "Hard work". Similarly, another student explained Pt 24: "It was hard to cope, but once you get used to it, it feels normal". Other students further made choice to Pt 27: "Attend less parties and focus on work over the weekend"; Pt 40: "I had to make huge adjustments, including leaving sports".

Factors contributing to academic success

As in the previous reporting, most students reported Pt 6: "Planning ahead of time and putting in extra hours to study", and students taking the responsibility of "Making sure they attend all classes and keep track of assessments that need to be done". Additional comments were Pt 42: "Planning ahead, dedication and embracing the transition from high school to university"; Pt 43: "Starting in advance and not procrastinating helps to reduce stress". Other students explained Pt 44: "Good time management and a good balance".

Other efforts included a study group, watching YouTube videos, emphasising the use of mentors and utilising tutors

by giving examples such as *"Getting guidance from fellow students and senior students"*. In explaining the social factors contributing to their academic success, students mentioned they received Pt 6, Pt10: *"Social supports from friends and family"*; *"Constant motivation by students in higher years"*; *"Having more interactive contact sessions with the lecturers"*.

Even though there were some contradicting perceptions regarding academic support, a certain extent of support from academic staff was also mentioned by some students. Students' responses included Pt 12: *"Not always assisted when you needed help, some lecturers would help but others wouldn't"*; Pt 13: *"We didn't know our lecturers since it was online"*; contrary, other students' responses were such as Pt 23: *"Our lecturers were very willing to help if we had any problems and would give us tutorials for lectures we didn't understand"*; Pt 14: *"The lecturers were always eager to assist with everything, and they always reminded us of that. However, I didn't use them because I didn't have direction, I was just taking everything as is"*.

Regarding the suggestions and recommendations going forward, many students suggested Pt 11: *"Training of students in time management and study skills and how to cope with workload"*. Some responses of students attested to the need for an educational psychologist such as in Pt 5: *"Perhaps regular workshops where students can be taught to deal with emotional and mental strain could be implemented, we could be taught about what burnout is, how to identify it and what to do once we have experienced it"*; Pt 13: *"Perhaps clarifying how to approach modules instead of just giving classes would help"*.

Other responses expressed the idea of adopting Pt 15: *"Positive attitude"* and opting to *"Study hard and sticking to the planned study schedule"*. One student explained Pt 24: *"Requires a lot of discipline which was hard at first but made a personal timetable"*. Other students commented Pt 36: *"I had a calendar with when I should study what and by when I should finish what. It really improved my productivity and felt very organised"*.

DISCUSSION

A total of 59 students completed the questionnaire (response rate=70%) and the majority (66%) were female. This suggests that dental and oral hygiene professions are possibly mostly occupied by females. The mean age was 21 years and this was expected as students who enter university are usually between 18 and 24 years old. There were a few dental students who had completed a previous degree and hence they had a higher mean age compared to the majority who entered university immediately after finishing high school.

Consistent with other studies, participants in this study reported that there were pressures transitioning into a university environment which resulted in them making huge lifestyle adjustments.^{6,7,8} Specifically, the intense workload, study context and inability to cope, suggesting that the high school environment did not prepare them for this transition phase; as mentioned in the report of the Council of Higher Education (CHE) and other studies.^{3,9,10}

Beside the major concerns of transition from students, some of their responses relating to their expectations were

positive – they referred to the university as a vibrant campus, an institution with a good system and social atmosphere. According to a similar study, some first-year students cannot develop a sense of belonging to the university environment when some social and academic expectations are not adequately met.¹¹ Hence students' expectations need to be gauged and plans put in place to try to address them as these could assist with the transition to university.

It must be noted that this university has several departments in place with programmes to assist students in transitioning into the university environment, including running extended orientations for students to highlight the various support services on offer. These strategies help to foster a sense of belonging to the university environment and improve the psychosocial transition of first-year students.¹² This was confirmed by a study which reported that the induction programmes play an important part in reducing the gap between students' expectations and experiences and this programme should include topics ranging from academic skills to wellness and stress management.¹³

This was also reported by other studies which showed that first-year students identified workload and an inability to manage their time effectively as their primary concerns.^{14,15} The results also suggested that there was a need for lecturers to communicate expectations to students well in advance of deadlines so that students do not feel pressurised to perform at the last minute.¹⁴ However, there may also be a need for students to plan and organise themselves better to meet deadlines, suggesting a mutual relationship between lecturers and students which is required.

While students were generally satisfied with the availability of online technologies, some expressed frustration trying to access Wi-Fi services, unstable internet connection, difficulty to stay focused for long online learning duration and, at times, difficult communication either with lecturers or with peer students which was in line with Ang's study.²

Students in this study concurred with other similar studies that reported that having perseverance and passion was directly proportional to the amount of academic success a person can achieve and a lack of motivation (intrinsic and extrinsic) had a negative effect on academic performance.^{16,17}

Similar studies found that study skills influence academic performance and students with poor study habits were more likely to have adjustment problems in the transition from secondary school to university.¹⁶ Certain personality traits as reported by Bowden, Tickle and Naumann that have a positive effect on academic success include diligence, persistence, willingness, motivation, sociability and being self-disciplined.¹⁸

Most students had similar ideas and opinions regarding factors contributing to their academic success. It was clear that students understood they were responsible for their own success, as mentioned by Bergery *et al.*¹⁹ Their roles included adequate planning, working hard daily, being diligent, asking questions or seeking advice, preparing for class and revising notes and attending classes. Peer support and mentoring also emerged as a key driver to enhance the learning experiences of first-year students in addition to support from lecturers as described by other

authors.¹⁹⁻²⁰ Lorenzetti *et al* found that the majority of students who participated in peer support programmes benefited from these programmes, not only academically but also socially, psychologically and career wise.²¹ These active learning methods help to improve the generic skills of students to better prepare them for their future careers.

Key areas that determine a satisfactory learning experience include interacting with lecturers and student peers, quality of teaching and training, lifestyle and university environment, having family or friends who can provide emotional support and assist with challenges around finances, transport and study skills relieves pressure.^{12,20} This is in accordance with Bosman, who stated that succeeding academically cannot be done without support from families, friends and the academic institution.²² By recognising and understanding the factors that contribute to first-year students' learning experiences, universities can better improve the quality of higher education for their students. An understanding of these factors can also help first-year students to better adapt to the university environment.

CONCLUSION

Many students had experienced the transition from high school to university as difficult suggesting that they were not adequately prepared for the workload at tertiary level. Besides the major concern of funding from most students, other factors contributing to students' challenges included transport and accommodation. The participants requested they be assisted in time management and study skills, coping mechanisms to deal with a demanding workload and having access to an educational psychologist.

RECOMMENDATIONS

The university could set up different initiatives, ranging from introductory courses on approaches to learning to activities targeted to engaging first-year students with peers and staff. These could include student orientation programmes and welcome week activities such as rag. Also include first-year learning communities such as academic mentoring and open walk-ins to institution support centres. And these activities could be done not only at the beginning of the year, but perhaps again in the mid-year period.

REFERENCES

1. Briggs ARJ, Clark J, Hall I. Building bridges: understanding student transition to university. *Qual High Educ.* 2012; 18: 3-21
2. Ang CS, Lee KF, Dipolog-Ubanan GF. Determinants of first-year student identity and satisfaction in higher education: A quantitative case study. *SAGE Open.* 2019; 9(2): p.2158244019846689
3. Spaull N. South Africa's education crisis: The quality of education in South Africa 1994-2011. Johannesburg: Centre for Development and Enterprise. 2013; 21(1):1-65
4. De Clercq M, Galand B, Frenay M. Transition from high school to university: a person-centered approach to academic achievement. *European Journal of psychology of education.* 2017; 32: 39-59
5. Coertjens L, Brahm T, Trautwein C, Lindblom-Ylänne S. Students' transition into higher education from an international perspective. *Higher Education.* 2017; 73: 357-69
6. Van Rooij EC, Jansen EP, van de Grift WJ. First-year university students' academic success: the importance of academic adjustment. *European Journal of psychology of education.* 2018 33:749-67
7. McGhie V. Entering university studies: identifying enabling factors for a successful transition from school to university. *Higher Education.* 2017;73: 407-22
8. Bayaga A, Lekena LL, Selepe C, du Plessis A, Bignaut S, Morar T. Academic, social and economic experiences of first-year students: case study. *South African Journal of Higher Education.* 2022; 36(2): 8-24
9. Council on Higher Education 2013. A proposal for undergraduate curriculum reform in South Africa: the case for a flexible curriculum structure. In Report of the Task Team on undergraduate curriculum structure. Pretoria: Council on Higher Education
10. Deen A, Leonard L. Exploring potential challenges of first year student retention and success rates: A case of the School of Tourism and Hospitality, University of Johannesburg, South Africa. *African Journal for Physical, Health Education, Recreation and Dance.* 2015; 233-241
11. Tenkorang S, Forde LD, Nyarko-Sampson E. Academic and Personal-Social Adjustment Challenges of University of Cape Coast Freshmen. 2020
12. Chalapati S, Leung R, Chalapati N. Exploring factors affecting first-year students' learning experiences: A case study of a private university in Taiwan. *Student Success.* 2018; 9(4): 25-39
13. Yan Z, Sendall P. First Year Experience: How We Can Better Assist First-Year International Students in Higher Education. *Journal of International Students.* 2016; 6(1): 35-51
14. Lekena LL, Bayaga A. Trend analysis of first year student experience in university. *South African Journal of Higher Education.* 2018; 32(2): 157-175
15. Gresse A, Stansbury C. Determining factors of academic success of first year BSc dietetics students. *South African Journal of Higher Education.* 2021; 35(6):121-137
16. Liu Y, S Hou. Potential reciprocal relationship between motivation and achievement: A longitudinal study. *School Psychology International.* 2018; 39(1): 38-55
17. Fennie T, Mayman Y, van Louw C, Useh E, Kombora M. Psychosocial factors impacting the college adjustment of undergraduate students: A scoping review. *Journal of Psychology in Africa.* 2020; 30(2): 96-105
18. Bowden JH, Tickle L, Naumann K. The four pillars of tertiary student engagement and success: a holistic measurement approach. *Studies in Higher Education.* 2021; 46(6): 1207-1224
19. Bergey BW, Parrila RK, Laroche A, Deacon SH. Effects of peer-led training on academic self-efficacy, study strategies, and academic performance for first-year university students with and without reading difficulties. *Contemporary Educational Psychology.* 2019; 56: 25-39
20. Komarraju M, Karau S, Schmeck R, Avdic A. The Big Five personality traits, learning styles and academic achievement. *Personality and Individual Differences.* 2011; 51(4): 427-477
21. Lorenzetti DL, Shipton L, Nowell L, Jacobsen M, Lorenzetti L, Clancy T, Paolucci EO. A systematic review of graduate student peer mentorship in academia. *Mentoring & Tutoring: Partnership in Learning.* 2019; DOI: 10.1080/13611267.2019.1686694
22. Bosman A. The relationship between student academic achievement and student learning styles in a multicultural senior school (Doctoral dissertation, University of South Africa). 2015.
23. Braun V, Clarke V (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology.* 3, 77-101

CPD questionnaire on page 280

The Continuing Professional Development (CPD) section provides for twenty general questions and five ethics questions. The section provides members with a valuable source of CPD points whilst also achieving the objective of CPD, to assure continuing education. The importance of continuing professional development should not be underestimated, it is a career-long obligation for practicing professionals.

